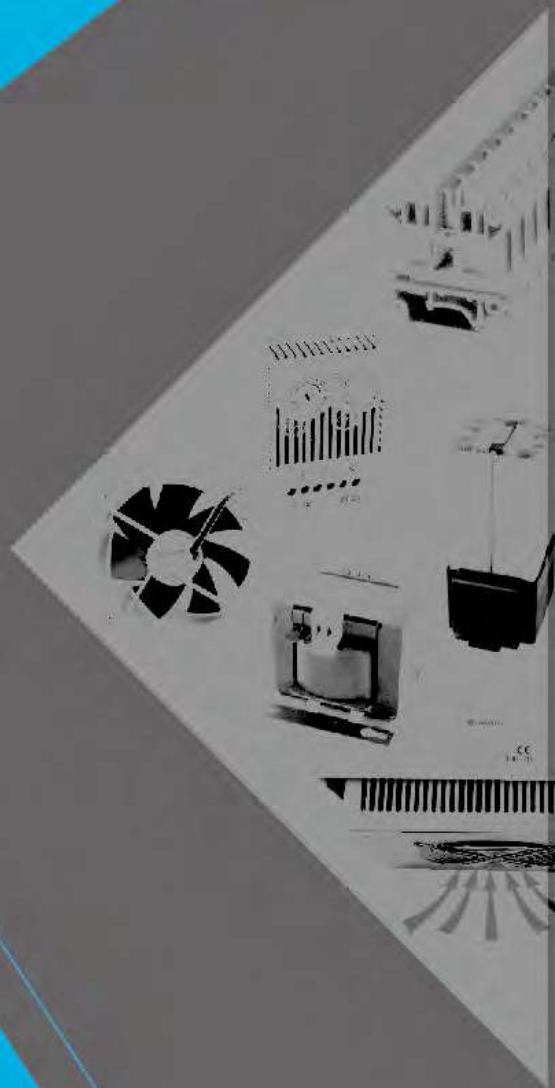




# Thermal Solution & Panel Accessories



Innovation - Quality - Global

## Thermal Solution & Panel Accessories



We are mainly dealing with low voltage electrical products for switchgear board and automation industry, such as panel filter and fan, panel heater, thermostat and hygostat for panel, flexible busbar, terminal block, din rail, wiring duct, etc. we are aiming to provide one- stop-solution for panel builder.

Now we are mainly exporting to European countries and Middle East Area, our products now are being well sold to more than 60 countries all over the world and we enjoy very good reputation in the market for the sake of our good quality and competitive prices, kind and prompt services to clients.

LINKWELL ELECTRIC policy is to offer a full support to Clients:

- pre-after sales assistance
- customized products
- fast delivery
- monitoring of customers' satisfaction

Rather than a supplier, LINKWELL ELECTRIC aims to be a Client's industrial PARTNER!

Our company always pays special attention to protecting the benefits of clients' so that both the clients and our company are able to gain the maximum benefits from the relations between us.

We warmly look forward to establishing, reinforcing and expanding long term fruitful relationship with the reliable clients all over the world.

Let's get busy and pull together to create a better future!

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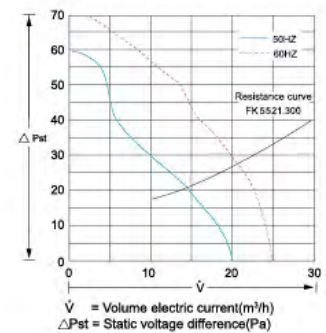
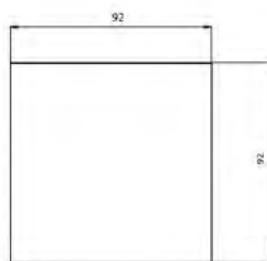
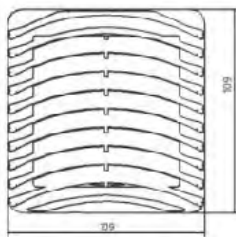
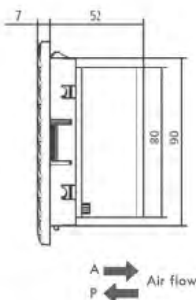
# Cabinet Ventilation



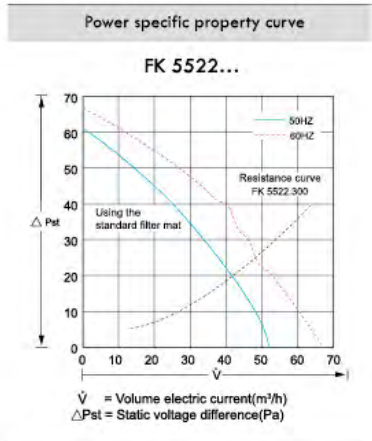
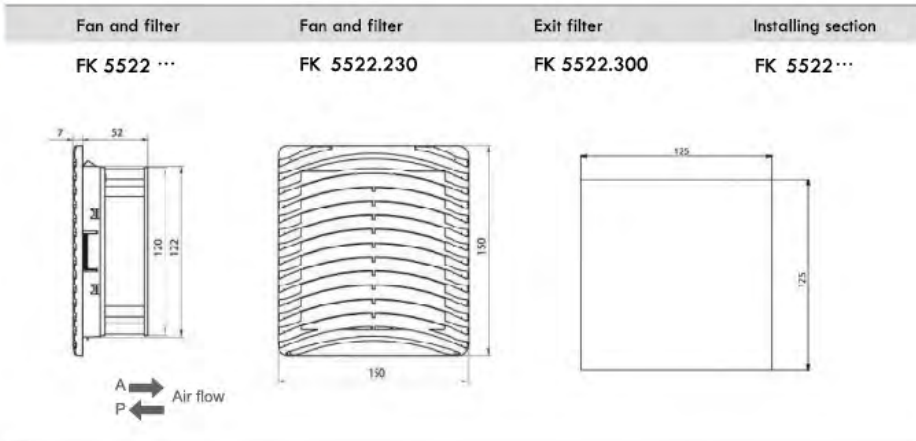
Cabinet Ventilation

| Fan and filter | Fan and filter | Exit filter | Installing section |
|----------------|----------------|-------------|--------------------|
| FK 5521 ...    | FK 5521.230    | FK 5521.300 | FK 5521 ...        |

| Power specific property curve |
|-------------------------------|
| FK 5521...                    |



| CODE                    |                   | Exit filter | Fan and filter  | Fan and filter  | Fan and filter |
|-------------------------|-------------------|-------------|-----------------|-----------------|----------------|
| TYPE                    | M.U               | FK5521.300  | FK5521.230      | FK5521.115      | FK5521.024     |
| Voltage/phase/frequency | V-ph-Hz           |             | 220-240/1/50-60 | 110-120/1/50-60 | 24DC           |
| Height/Width/Depth      | mm                | 109×109×21  | 109×109×59      | 109×109×59      | 109×109×59     |
| Power/Current           | W/A               |             | 13/0.07-0.08    | 15/0.13-0.15    | 9.6/0.4        |
| Temperature limits      | °C                |             | -10/+70         | -10/+70         | -10/+70        |
| Protection degree       | IP                | 54          | 54              | 54              | 54             |
| Noise level             | dB(A)             |             | 35              | 30              | 30             |
| Air flow                | m <sup>3</sup> /h |             | 35              | 35              | 100            |
| Air flow (+FK5521.300)  | m <sup>3</sup> /h |             | 24/27           | 24/27           | 70/70          |
| Air flow direction      |                   |             | A/P             | A/P             | A/P            |

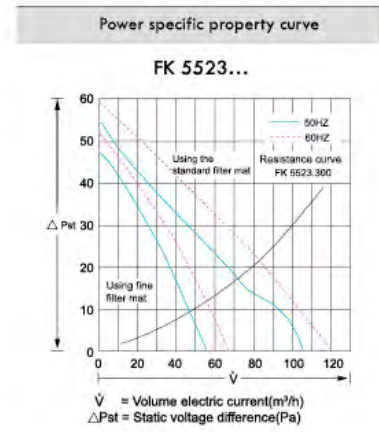
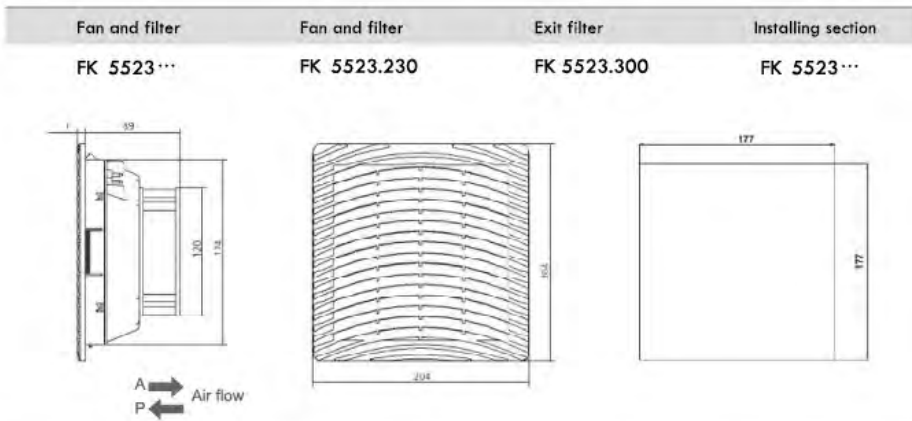


| CODE                    |                   | Exit filter | Fan and filter | Fan and filter  | Fan and filter |
|-------------------------|-------------------|-------------|----------------|-----------------|----------------|
| TYPE                    | M.U               | FK5522.300  | FK5522.230     | FK5522.115      | FK5522.024     |
| Voltage/Phase/Frequency | V-ph-Hz           |             | 230-1-50/60    | 115/1/50-60     | 24DC           |
| Height/Width/Depth      | mm                | 150×150×21  | 150×150×59     | 150×150×59      | 150×150×59     |
| Power/Current           | W/A               |             | 22-30/0.1-0.14 | 22-26/0.21-0.24 | 7.2/0.43       |
| Temperature limits      | °C                |             | -10/+70        | -10/+70         | -10/+70        |
| Protection degree       | IP                | 54          | 54             | 54              | 54             |
| Noise level             | dB(A)             |             | 45             | 45              | 45             |
| Air flow                | m <sup>3</sup> /h |             | 67             | 67              | 67             |
| Air flow (+FK5522.300)  | m <sup>3</sup> /h |             | 50/58          | 50/58           | 50/58          |
| Air flow direction      |                   |             | A/P            | A/P             | A/P            |

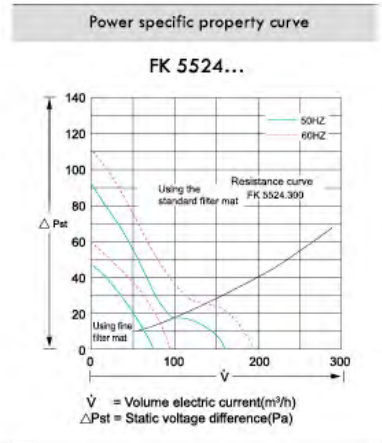
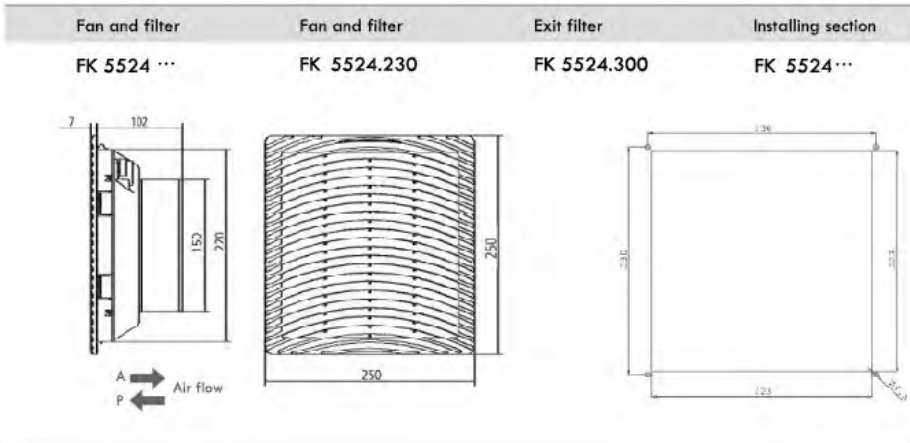
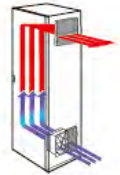
# IP54 FK55 series fan and filter



Cabinet Ventilation

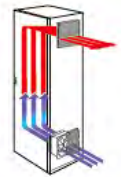


| CODE                    |                   | Exit filter | Fan and filter | Fan and filter  | Fan and filter |
|-------------------------|-------------------|-------------|----------------|-----------------|----------------|
| TYPE                    | M.U               | FK5523.300  | FK5523.230     | FK5523.115      | FK5523.024     |
| Voltage/Phase/Frequency | V-ph-Hz           |             | 230-1-50/1/60  | 115/1/50-60     | 24DC           |
| Height/Width/Depth      | mm                | 204×204×25  | 204×204×96     | 204×204×96      | 204×204×96     |
| Power/Current           | W/A               |             | 22-30/0.1-0.14 | 22-26/0.21-0.24 | 7.2/0.43       |
| Temperature limits      | °C                |             | -10/+70        | -10/+70         | -10/+70        |
| Protection degree       | IP                | 54          | 54             | 54              | 54             |
| Noise level             | dB(A)             |             | 45             | 45              | 45             |
| Air flow                | m <sup>3</sup> /h |             | 105/120        | 105/120         | 105/120        |
| Air flow (+FK5523.300)  | m <sup>3</sup> /h |             | 85/100         | 85/100          | 85/100         |
| Air flow direction      |                   |             | A/P            | A/P             | A/P            |

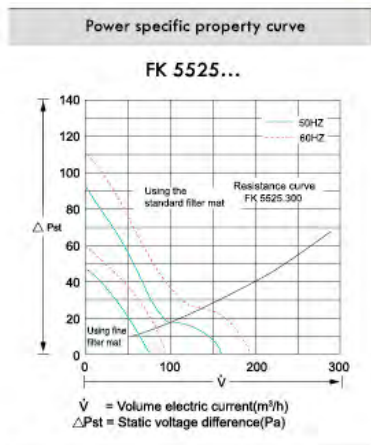
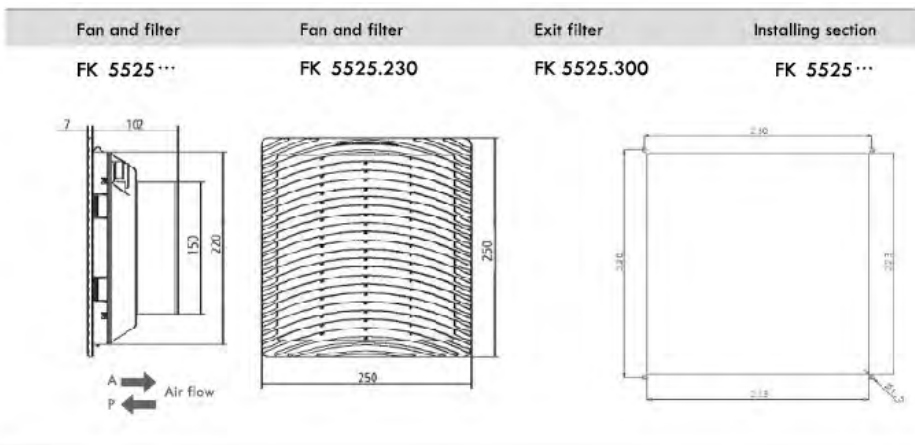


| CODE                    |                   | Exit filter | Fan and filter  | Fan and filter  | Fan and filter |
|-------------------------|-------------------|-------------|-----------------|-----------------|----------------|
| TYPE                    | M.U               | FK5524.300  | FK5524.230      | FK5524.115      | FK5524.024     |
| Voltage/Phase/Frequency | V-ph-Hz           |             | 230-1-50/60     | 115-1-50/60     | 24DC           |
| Height/Width/Depth      | mm                | 250×250×25  | 250×250×109     | 250×250×103     | 250×250×109    |
| Power/Current           | W/A               |             | 41-47/0.21-0.24 | 40-45/0.39-0.41 | 14/0.40        |
| Temperature limits      | °C                |             | -10/+70         | -10/+70         | -20/+70        |
| Protection degree       | IP                | 54          | 54              | 54              | 54             |
| Noise level             | dB(A)             |             | 50              | 50              | 50             |
| Air flow                | m <sup>3</sup> /h |             | 160/180         | 160/180         | 160/180        |
| Air flow (+FK5524.300)  | m <sup>3</sup> /h |             | 120/150         | 120/150         | 120/150        |
| Air flow direction      |                   |             | A/P             | A/P             | A/P            |

# IP54 FK55 series fan and filter



Cabinet Ventilation



| CODE                    |                   | Exit filter | Fan and filter  | Fan and filter | Fan and filter |
|-------------------------|-------------------|-------------|-----------------|----------------|----------------|
| TYPE                    | M.U               | FK5525.300  | FK5525.230      | FK5525.115     | FK5525.024     |
| Voltage/Phase/Frequency | V-ph-Hz           |             | 230-1-50/60     | 115-1-50/60    | 24DC           |
| Height/Width/Depth      | mm                | 250×250×25  | 250×250×109     | 250×250×103    | 250×250×109    |
| Power/Current           | W/A               |             | 46-59/0.28-0.33 | 42-47/0.50     | 15/0.40        |
| Temperature limits      | °C                |             | -10/+70         | -10/+70        | -20/+70        |
| Protection degree       | IP                | 54          | 54              | 54             | 54             |
| Noise level             | dB(A)             |             | 52              | 52             | 52             |
| Air flow                | m <sup>3</sup> /h |             | 230/265         | 230/265        | 230/265        |
| Air flow (+FK5525.300)  | m <sup>3</sup> /h |             | 170/230         | 170/230        | 170/230        |
| Air flow direction      |                   |             | A/P             | A/P            | A/P            |



FK5526.230 Fan and filter

Fan and filter  
FK 5526 ...

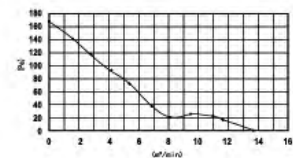
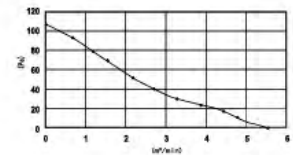
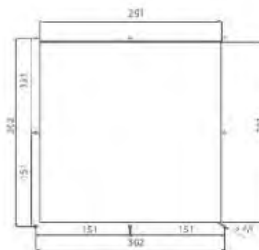
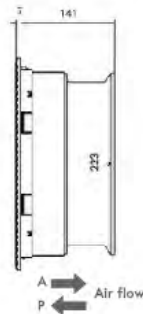
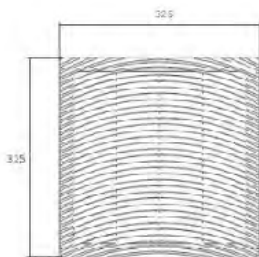
Fan and filter  
FK 5526.230

Exit filter  
FK 5526.300

Installing section  
FK 5526 ...

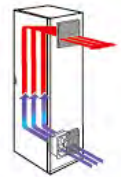
Power specific property curve

FK 5526...

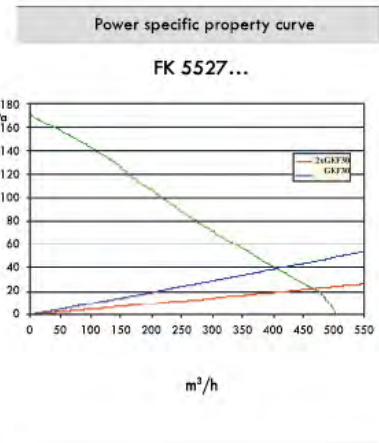
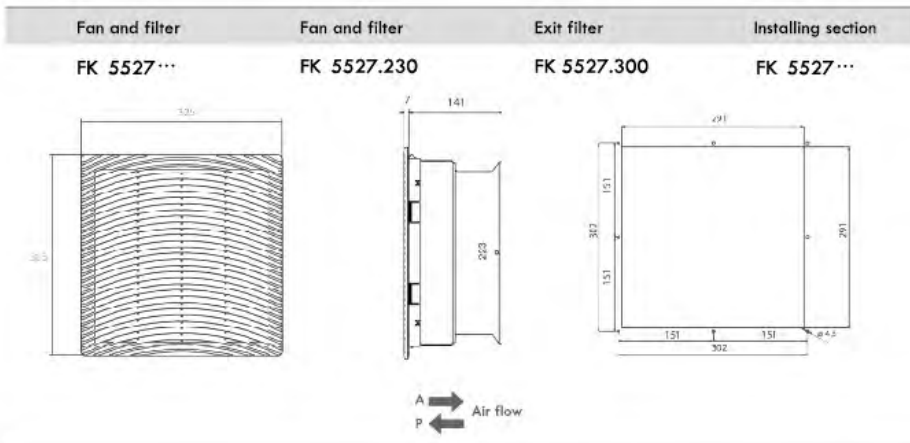


| CODE                    |         | Exit filter | Fan and filter | Fan and filter |
|-------------------------|---------|-------------|----------------|----------------|
| TYPE                    | M.U     | FK5526.300  | FK5526.230     | FK5526.115     |
| Voltage/Phase/Frequency | V-ph-Hz |             | 230-1-50/1/60  | 115/1/50-60    |
| Height/Width/Depth      | mm      | 325×325×25  | 325×325×141.5  | 325×325×141.5  |
| Power/Current           | W/A     |             | 63/0.29        | 61/0.61        |
| Temperature limits      | °C      |             | -10/+80        | -10/+80        |
| Protection degree       | IP      | 54          | 54             | 54             |
| Noise level             | dB(A)   |             | 59             | 59             |
| Air flow                | m³/h    |             | 550/600        | 550/600        |
| Air flow (+FK5526.300)  | m³/h    |             | 360/490        | 360/490        |
| Air flow direction      |         |             | A              | A              |

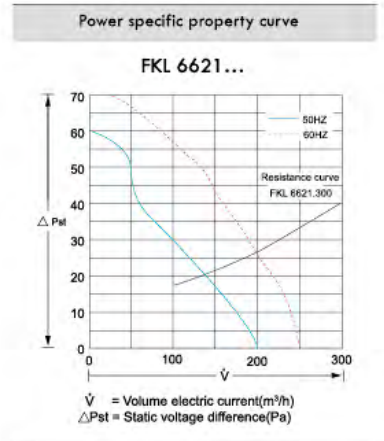
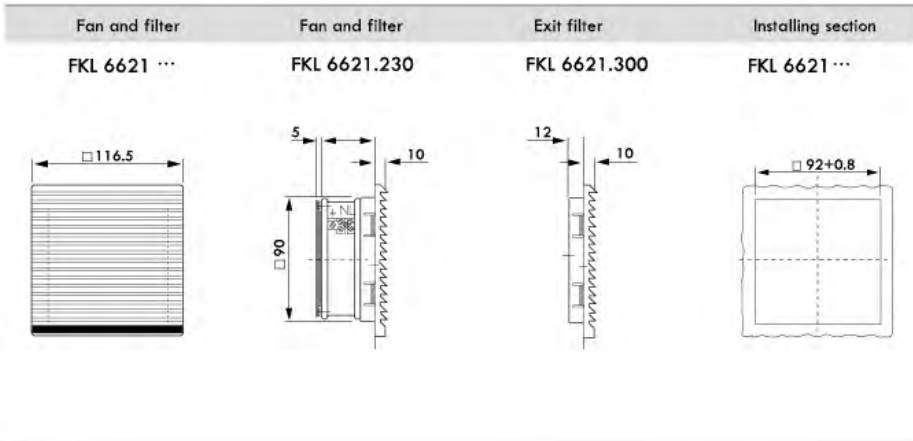
# IP54 FK55 series fan and filter



Cabinet Ventilation

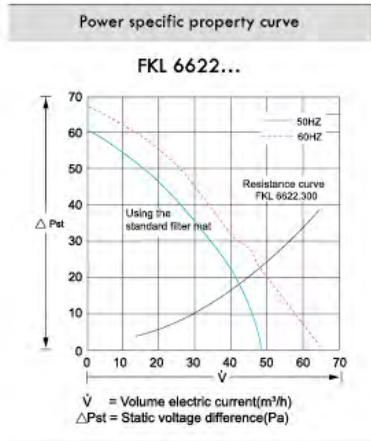
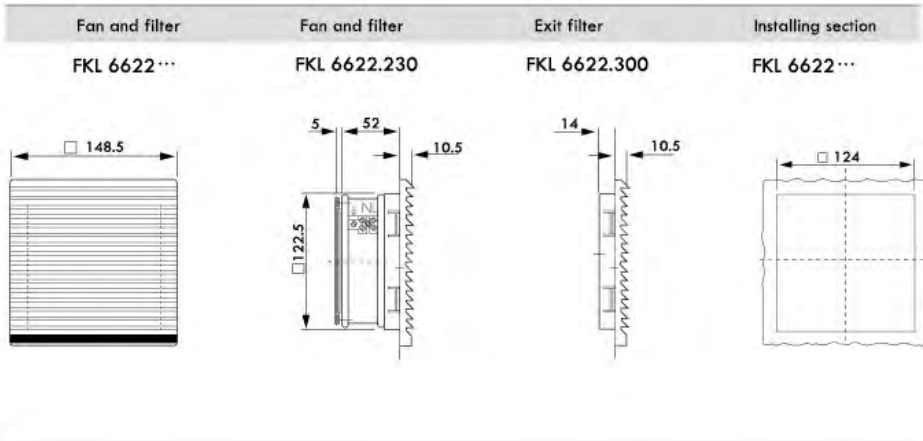


| CODE                    |                   | Exit filter | Fan and filter | Fan and filter |
|-------------------------|-------------------|-------------|----------------|----------------|
| TYPE                    | M.U               | FK5527.300  | FK5527.230     | FK5527.115     |
| Voltage/Phase/Frequency | V-ph-Hz           |             | 230-1-50/1/60  | 115/1/50-60    |
| Height/Width/Depth      | mm                | 325×325×25  | 325×325×140    | 325×325×140    |
| Power/Current           | W/A               |             | 50/0.26        | 50/0.46        |
| Temperature limits      | °C                |             | -10/+60        | -10/+60        |
| Protection degree       | IP                | 54          | 54             | 54             |
| Noise level             | dB(A)             |             | 59             | 59             |
| Air flow                | m <sup>3</sup> /h |             | 650/800        | 650/800        |
| Air flow (+FK5527.300)  | m <sup>3</sup> /h |             | 500/600        | 500/600        |
| Air flow direction      |                   |             | A              | A              |

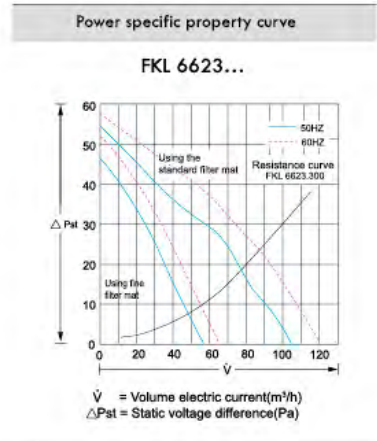
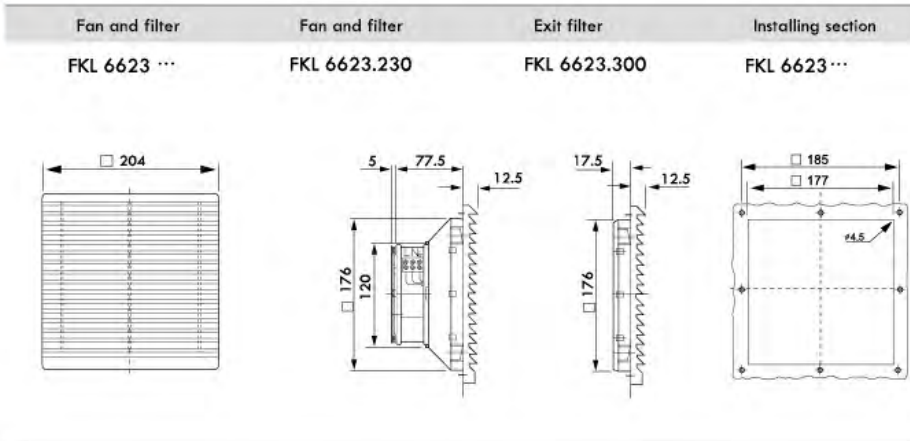


|  |                                       |              |             |
|--|---------------------------------------|--------------|-------------|
| Fan and filter                         | FKL6621.230                           | FKL6621.115  | FKL6621.024 |
| Voltage/Frequency                      | 230/50/60                             | 115/50/60    | 24(DC)      |
| Air flow,free blowing                  | 20/25m <sup>3</sup> /h                |              |             |
| Air flow<br>With Exit filter           | 1×FKL 6621.300:15/18m <sup>3</sup> /h |              |             |
| Axial fan                              | Self-start shielded pole motor        |              | DC motor    |
| Rated current                          | 0.08A                                 | 0.14A        | 0.18A       |
| Power                                  | 18W/15W                               | 16W/14W      | 4.3W        |
| Noise level                            | 37/41dB(A)                            |              |             |
| Scope of temperature                   | -10°C~+55°C                           |              |             |
| Exit filter                            | Type                                  | FKL 6621.300 |             |
| Contact us if special voltage required |                                       |              |             |

# FKL6622 series fan and filter

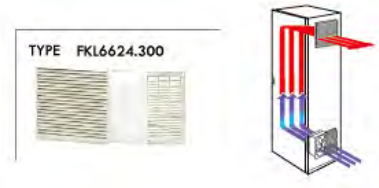


| Fan and filter                         | FKL6622.230                    | FKL6622.115   | FKL6622.024 |
|--|--------------------------------|---|-------------|
| Voltage/Frequency                      | 230/50/60                      | 115/50/60   | 24(DC)      |
| Air flow, free blowing                 |                                | 55/66m <sup>3</sup> /h  |             |
| Air flow With Exit filter              |                                | 1×FKL 6622.300:43/50m <sup>3</sup> /h<br>2×FKL 6622.300:48/55m <sup>3</sup> /h<br>1×FKL 6623.300:48/55m <sup>3</sup> /h |             |
| Axial fan                              | Self-start shielded pole motor |   | DC motor    |
| Rated current                          | 0.14A/0.10A                    | 0.24A/0.21A   | 0.30A       |
| Power                                  | 22W/30W                        | 22W/26W   | 7.2W        |
| Noise level                            |                                | 41/46dB(A)  |             |
| Scope of temperature                   |                                | -10°C~+55°C   |             |
| Exit filter                            | Type                           | FKL 6622.300  |             |
| Contact us if special voltage required |                                |   |             |

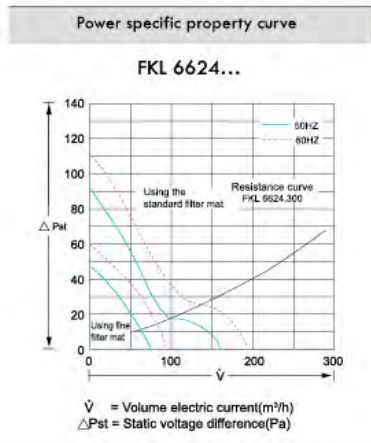
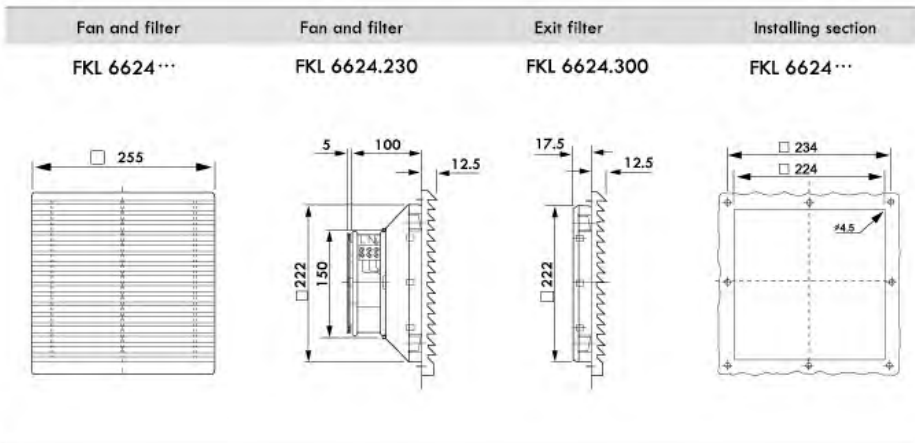


| Fan and filter                         | FKL6623.230   | FKL6623.115 | FKL6623.024 |
|--|---|-------------|-------------|
| Voltage/Frequency                      | 230/50/60   | 115/50/60   | 24(DC)      |
| Air flow, free blowing                 | 105/120m <sup>3</sup> /h  |             |             |
| Air flow With Exit filter              | 1×FKL 6623.300:71/82m <sup>3</sup> /h<br>2×FKL 6623.300:85/98m <sup>3</sup> /h<br>1×FKL 6625.300:78/90m <sup>3</sup> /h |             |             |
| Axial fan                              | Self-start shielded pole motor  |             | DC motor    |
| Rated current                          | 0.14A/0.10A   | 0.24A/0.21A | 0.30A       |
| Power                                  | 22W/30W   | 22W/26W     | 7.2W        |
| Noise level                            | 46/49dB(A)  |             |             |
| Scope of temperature                   | -10°C~+55°C   |             |             |
| Exit filter                            | Type  | FKL6623.300 |             |
| Contact us if special voltage required |   |             |             |

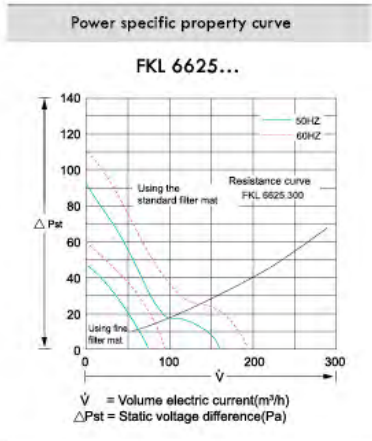
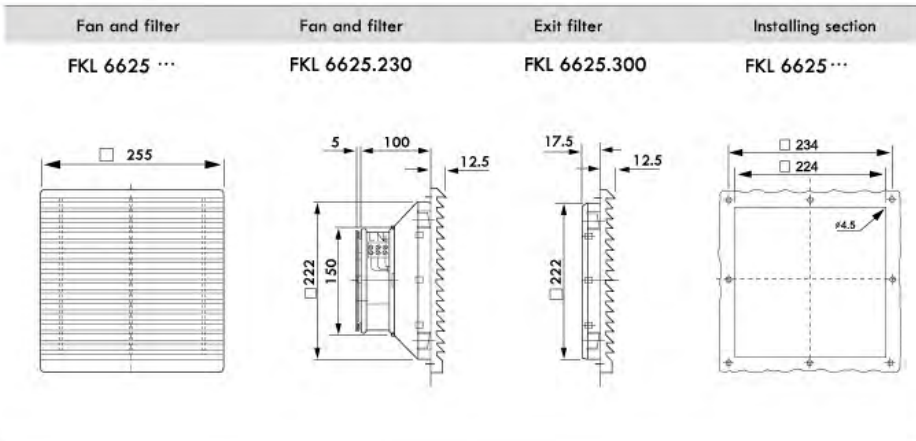
# FKL6624 series fan and filter



Cabinet Ventilation

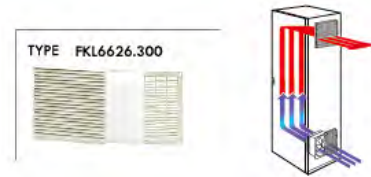


| Fan and filter                         | FKL6624.230  | FKL6624.115 | FKL6624.024 |
|--|--|-------------|-------------|
| Voltage/Frequency                      | 230/50/60  | 115/50/60   | 24(DC)      |
| Air flow, free blowing                 | 160/180m <sup>3</sup> /h   |             |             |
| Air flow With Exit filter              | 1×FKL 6624.300:95/115m <sup>3</sup> /h<br>2×FKL 6624.300:140/165m <sup>3</sup> /h<br>1×FKL 6626.300:130/155m <sup>3</sup> /h |             |             |
| Axial fan                              | Self-start shielded pole motor   |             | DC motor    |
| Rated current                          | 0.26A/0.21A  | 0.42A/0.39A | 0.58A       |
| Power                                  | 47W/59W  | 43W/48W     | 14W         |
| Noise level                            | 52/54dB(A)   |             |             |
| Scope of temperature                   | -10°C~+55°C  |             |             |
| Exit filter                            | Type   | FKL6625.300 |             |
| Contact us if special voltage required |  |             |             |



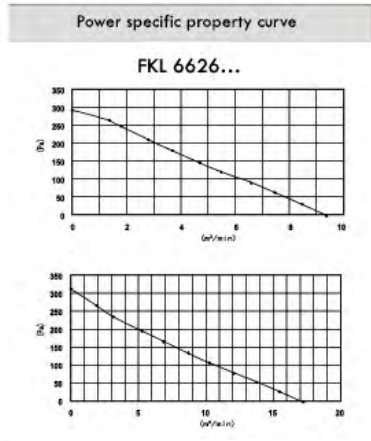
| Fan and filter                         | FKL6625.230   | FKL6625.115 | FKL6625.024 |
|--|---|-------------|-------------|
| Voltage/Frequency                      | 230/50/60   | 115/50/60   | 24(DC)      |
| Air flow, free blowing                 | 230/265m <sup>3</sup> /h  |             |             |
| Air flow With Exit filter              | 1×FKL 6625.300:170/205m <sup>3</sup> /h<br>2×FKL 6625.300:200/230m <sup>3</sup> /h<br>1×FKL 6626.300:190/215m <sup>3</sup> /h |             |             |
| Axial fan                              | Self-start shielded pole motor  |             | DC motor    |
| Rated current                          | 0.33A/0.28A   | 0.56A/0.50A | 0.58A       |
| Power                                  | 46W/59W   | 42W/47W     | 14W         |
| Noise level                            | 54/56dB(A)  |             |             |
| Scope of temperature                   | -10°C~+55°C   |             |             |
| Exit filter                            | Type  | FKL6625.300 |             |
| Contact us if special voltage required |   |             |             |

# FKL6626 series fan and filter

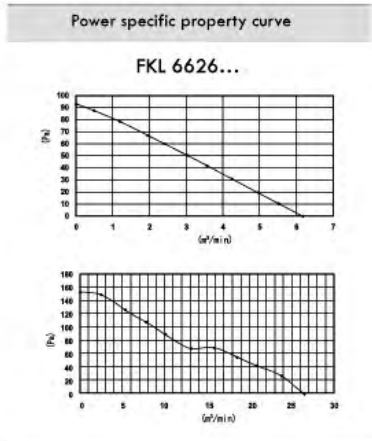
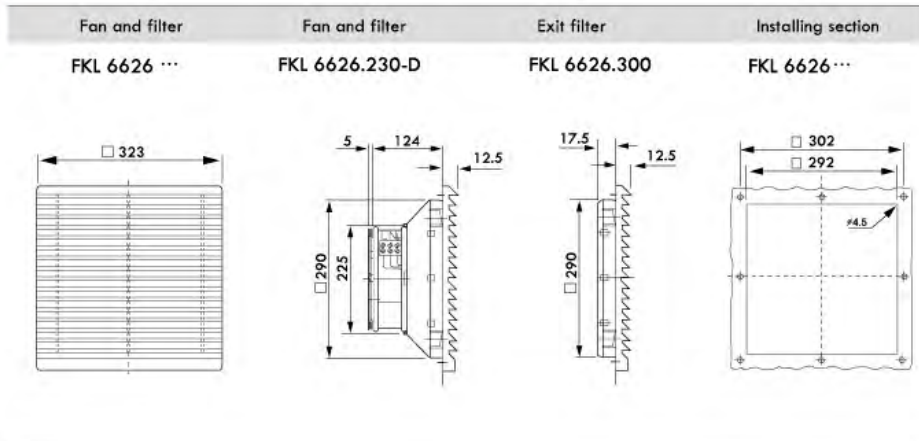


Cabinet Ventilation

| Fan and filter | Fan and filter | Exit filter  | Installing section |
|----------------|----------------|--------------|--------------------|
| FKL 6626...    | FKL 6626.230   | FKL 6626.300 | FKL 6626...        |
|                |                |              |                    |

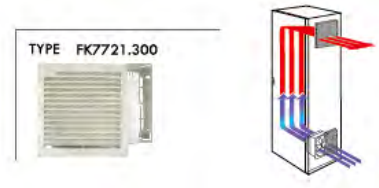


|  |  |             |
|--|--|-------------|
| Fan and filter                         | FKL6626.230  | FKL6626.115 |
| Voltage/Frequency                      | 230/50/60  | 115/50/60   |
| Air flow, free blowing                 | 500/560m <sup>3</sup> /h   |             |
| Air flow<br>With Exit filter           | 1×FKL 6626.300:360/390m <sup>3</sup> /h<br>2×FKL 6626.300:440/495m <sup>3</sup> /h |             |
| Axial fan                              | Capacitor operated   |             |
| Rated current                          | 0.29A/0.34A  | 0.61A/0.63A |
| Power                                  | 63W/79W  | 61W/71W     |
| Noise level                            | 59/61dB(A)   |             |
| Scope of temperature                   | -10°C~+55°C  |             |
| Exit filter                            | Type   | FKL6626.300 |
| Contact us if special voltage required |  |             |

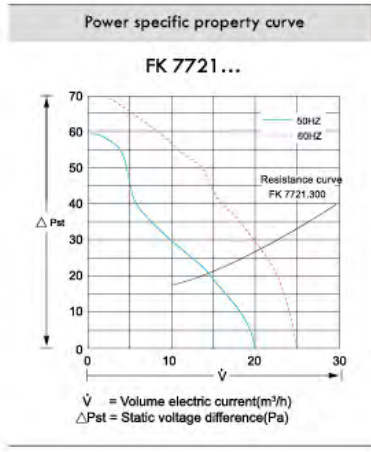
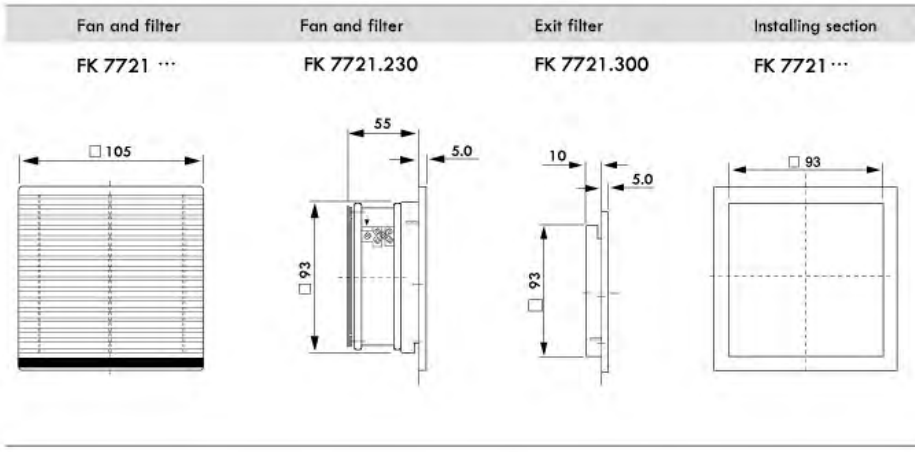


| Fan and filter                         | FKL6626.230-D  | FKL6626.115-D |
|--|--|---------------|
| Voltage/Frequency                      | 230/50/60  | 115/50/60     |
| Air flow, free blowing                 | 1200/1350m <sup>3</sup> /h   |               |
| Air flow<br>With Exit filter           | 1×FKL 6626.300:360/390m <sup>3</sup> /h<br>2×FKL 6626.300:440/495m <sup>3</sup> /h |               |
| Axial fan                              | Capacitor operated   |               |
| Rated current                          | 0.51A/0.70A  | 0.97A/1.36A   |
| Power                                  | 115W/160W  | 110W/155W     |
| Noise level                            | 59/68dB(A)   |               |
| Scope of temperature                   | -10°C~+55°C  |               |
| Exit filter                            | Type   | FKL6626.300   |
| Contact us if special voltage required |  |               |

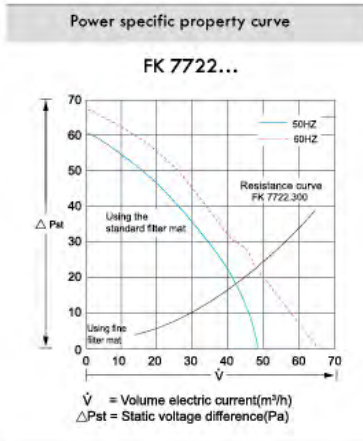
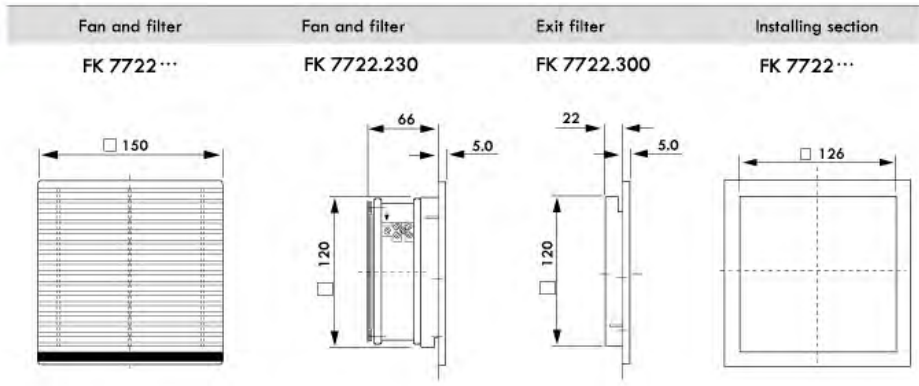
# FK7721 series fan and filter



Cabinet Ventilation



| Fan and filter                         | FK7721.230                           | FK7721.115 | FK7721.024 |
|--|--------------------------------------|------------|------------|
| Voltage/Frequency                      | 230/50/60                            | 115/50/60  | 24(DC)     |
| Air flow, free blowing                 | 20/25m <sup>3</sup> /h               |            |            |
| Air flow<br>With Exit filter           | 1×FK 7721.300:15/18m <sup>3</sup> /h |            |            |
| Axial fan                              | Self-start shielded pole motor       |            | DC motor   |
| Rated current                          | 0.07-0.09A                           | 0.13-0.16A | 0.18A      |
| Power                                  | 15W/12W                              | 15W/12W    | 4.3W       |
| Noise level                            | 41/46dB(A)                           |            |            |
| Scope of temperature                   | -10°C~+55°C                          |            |            |
| Exit filter                            | Type                                 | FK7721.300 |            |
| Contact us if special voltage required |                                      |            |            |



|  |                                |  |            |
|--|--------------------------------|--|------------|
| Fan and filter                         | FK7722.230                     | FK7722.115   | FK7722.024 |
| Voltage/Frequency                      | 230/50/60                      | 115/50/60  | 24(DC)     |
| Air flow, free blowing                 |                                | 55/66m <sup>3</sup> /h   |            |
| Air flow With Exit filter              |                                | 1×FK 7722.300:43/50m <sup>3</sup> /h<br>2×FK 7722.300:48/55m <sup>3</sup> /h |            |
| Axial fan                              | Self-start shielded pole motor |  | DC motor   |
| Rated current                          | 0.14A/0.10A                    | 0.24A/0.21A  | 0.42A      |
| Power                                  | 22W/30W                        | 22W/26W  | 7.2W       |
| Noise level                            |                                | 46/49dB(A)   |            |
| Scope of temperature                   |                                | -10°C~+55°C  |            |
| Exit filter                            | Type                           | FK7722.300   |            |
| Contact us if special voltage required |                                |  |            |

# FK7724 series fan and filter



FK 7724.230 Fan and filter

FK 7724.300 Exit filter

TYPE FK7724.300



Cabinet Ventilation

Fan and filter

Fan and filter

Exit filter

Installing section

FK 7724 ...

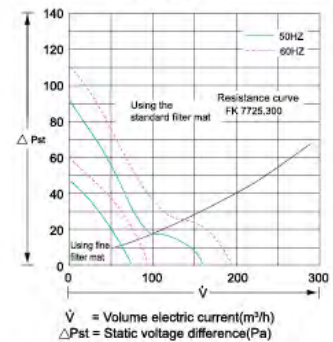
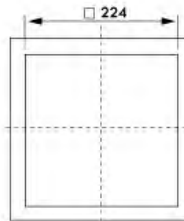
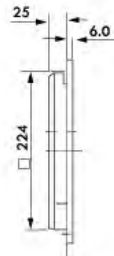
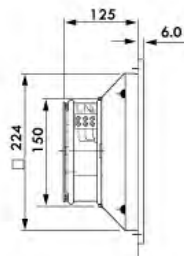
FK 7724.230

FK 7724.300

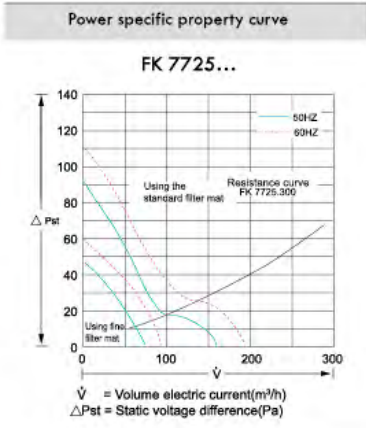
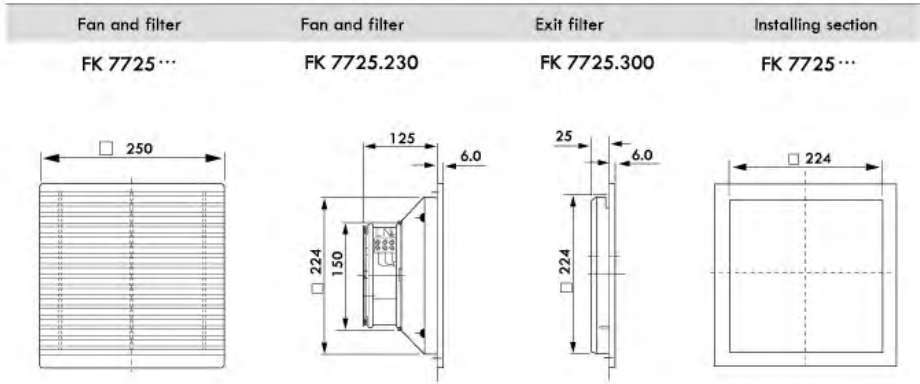
FK 7724 ...

Power specific property curve

FK 7724...



| Fan and filter                         | FK7724.230  | FK7724.115  | FK7724.024 |
|--|---|-------------|------------|
| Voltage/Frequency                      | 230/50/60   | 115/50/60   | 24(DC)     |
| Air flow, free blowing                 | 160/180m <sup>3</sup> /h  |             |            |
| Air flow With Exit filter              | 1×FK 7725.300:95/115m <sup>3</sup> /h<br>2×FK 7725.300:140/165m <sup>3</sup> /h |             |            |
| Axial fan                              | Self-start shielded pole motor  |             | DC motor   |
| Rated current                          | 0.26A/0.21A   | 0.42A/0.39A | 0.58A      |
| Power                                  | 47W/59W   | 43W/48W     | 14W        |
| Noise level                            | 54/56dB(A)  |             |            |
| Scope of temperature                   | -10°C~+55°C   |             |            |
| Exit filter                            | Type  | FK7724.300  |            |
| Contact us if special voltage required |   |             |            |

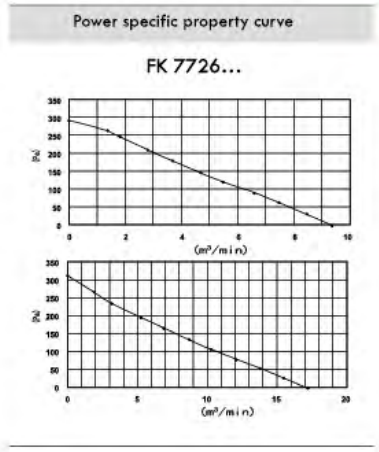
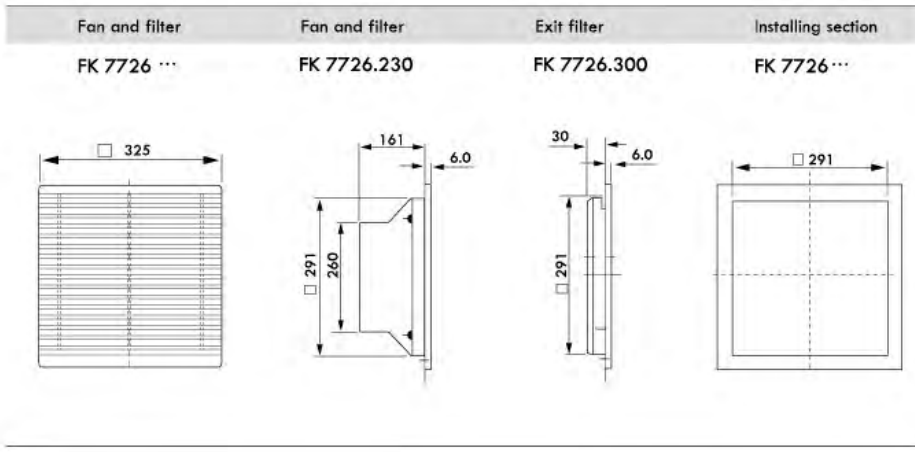


| Fan and filter                         | FK7725.230   | FK7725.115  | FK7725.024 |
|--|--|-------------|------------|
| Voltage/Frequency                      | 230/50/60  | 115/50/60   | 24(DC)     |
| Air flow, free blowing                 | 230/265m <sup>3</sup> /h   |             |            |
| Air flow With Exit filter              | 1×FK 7725.300:170/205m <sup>3</sup> /h<br>2×FK 7725.300:200/230m <sup>3</sup> /h |             |            |
| Axial fan                              | Self-start shielded pole motor   |             | DC motor   |
| Rated current                          | 0.33A/0.28A  | 0.56A/0.50A | 0.58A      |
| Power                                  | 46W/59W  | 42W/47W     | 14W        |
| Noise level                            | 54/56dB(A)   |             |            |
| Scope of temperature                   | -10°C~+55°C  |             |            |
| Exit filter                            | Type   | FK7725.300  |            |
| Contact us if special voltage required |  |             |            |

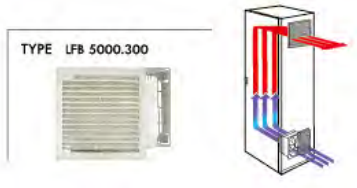
# FK7726 series fan and filter



Cabinet Ventilation

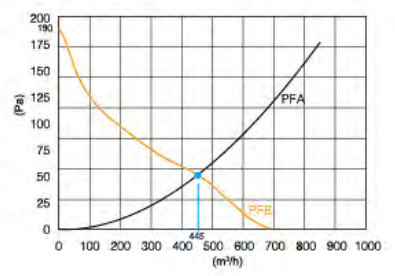
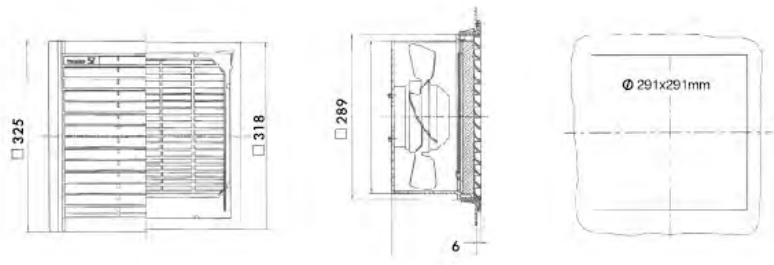


|  |  |             |
|--|--|-------------|
| Fan and filter                         | FK7726.230   | FK7726.115  |
| Voltage/Frequency                      | 230/50/60  | 115/50/60   |
| Air flow, free blowing                 | 1020/1050m <sup>3</sup> /h   |             |
| Air flow<br>With Exit filter           | 1×FK 7726.300:550/580m <sup>3</sup> /h<br>2×FK 7726.300:620/685m <sup>3</sup> /h |             |
| Axial fan                              | Capacitor operated   |             |
| Rated current                          | 0.55A/0.60A  | 1.40A/1.70A |
| Power                                  | 120W/138W  | 150W/180W   |
| Noise level                            | 68/71dB(A)   |             |
| Scope of temperature                   | -10°C~+55°C  |             |
| Exit filter                            | Type   | FK7726.300  |
| Contact us if special voltage required |  |             |



|                |                |             |                    |
|----------------|----------------|-------------|--------------------|
| Fan and filter | Fan and filter | Exit filter | Installing section |
| LFB 5000...    | LFB 5000.230   | FK 7726.300 | LFB 5000...        |

Power specific property curve  
LFB 5000...



|  |                    |              |
|--|--------------------|--------------|
| Fan and filter                         | LFB 5000.230       | LFB 5000.115 |
| Voltage/Frequency                      | 230/50/60          | 115/50/60    |
| Air flow, free blowing                 | 500/560m³/h        |              |
| Air flow With Exit filter              | 360/390m³/h        |              |
| Axial fan                              | Capacitor operated |              |
| Rated current                          | 0.29A/0.35A        | 0.61A/0.63A  |
| Power                                  | 120W/138W          | 150W/180W    |
| Noise level                            | 59/61dB(A)         |              |
| Scope of temperature                   | -10°C~+55°C        |              |
| Exit filter                            | Type               | FK 7726.300  |
| Contact us if special voltage required |                    |              |

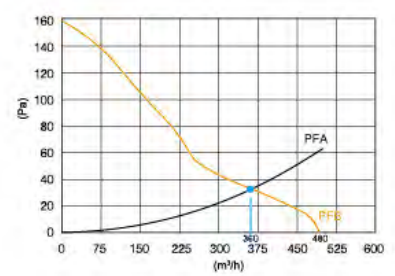
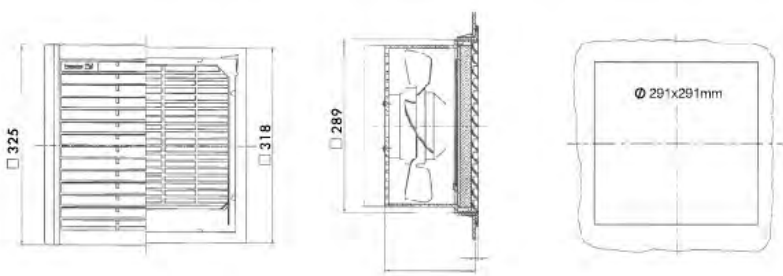
# LFB 7000 series fan and filter



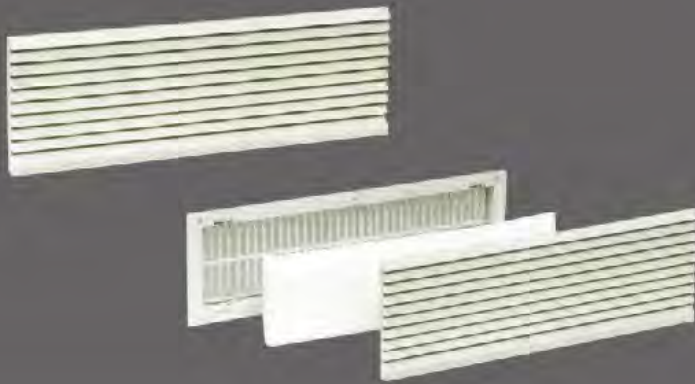
Cabinet Ventilation

| Fan and filter | Fan and filter | Exit filter | Installing section |
|----------------|----------------|-------------|--------------------|
| LFB 7000 ...   | LFB 7000.230   | FK 7726.300 | LFB 7000...        |

Power specific property curve  
LFB 7000...



|  |                            |              |
|--|----------------------------|--------------|
| Fan and filter                         | LFB 7000.230               | LFB 7000.115 |
| Voltage/Frequency                      | 230/50/60                  | 115/50/60    |
| Air flow, free blowing                 | 1200/1350m <sup>3</sup> /h |              |
| Air flow<br>With Exit filter           | 600/780m <sup>3</sup> /h   |              |
| Axial fan                              | Capacitor operated         |              |
| Rated current                          | 0.46A/0.60A                | 0.95A/1.20A  |
| Power                                  | 120W/138W                  | 150W/180W    |
| Noise level                            | 59/68dB(A)                 |              |
| Scope of temperature                   | -10°C~+55°C                |              |
| Exit filter                            | Type                       | FK 7726.300  |
| Contact us if special voltage required |                            |              |

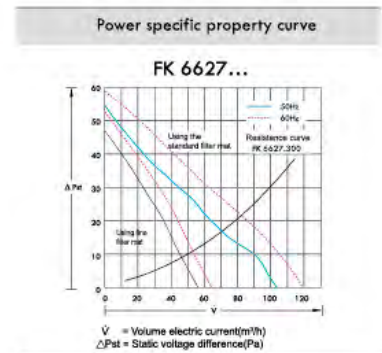
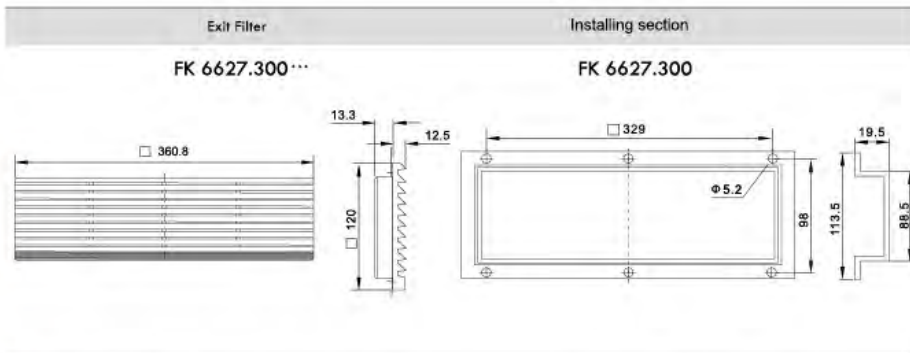


**Functions**

The big power axial fan can be installed in the way of "blow" or "pump". The rain-proofing function of ventilation cascade could prevent not only mechanical damage but also the entry of humidity. According to the EN60529/10.91, the protection can reach level IP54.

A spray-proof cover will make the protection level IP55. The filter mat can be easily changed by the trough-shaped handle on the leaf paling.

The non-woven fibre filter mats can filter dust grains of over 10 micrometers while the fine filter mats can filter dust grains of below 10 micrometers.



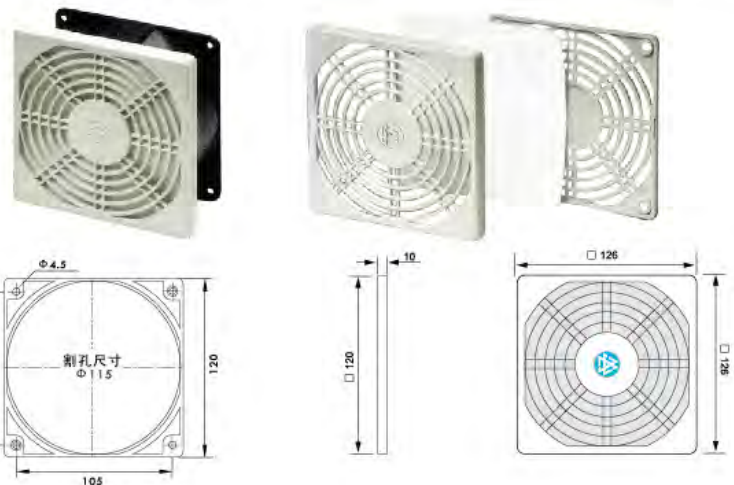
**Ultra-thin fan and filter**

**Type FK6628**

**Fan and Filter**

Type: FK6628.230

The filter fan is suitable for discharging high temperature load. The premise of using is the temperature of environment should be lower than the one of the inside case

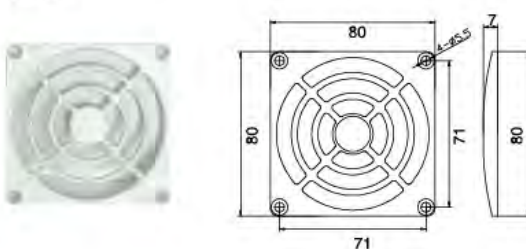


**Exit Filter**

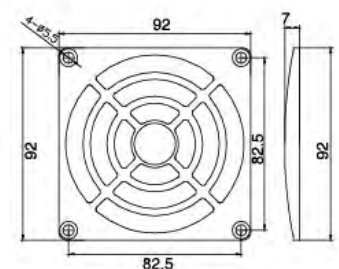
Type: FK6628.300

**Plastic Finger Guard For Fans**

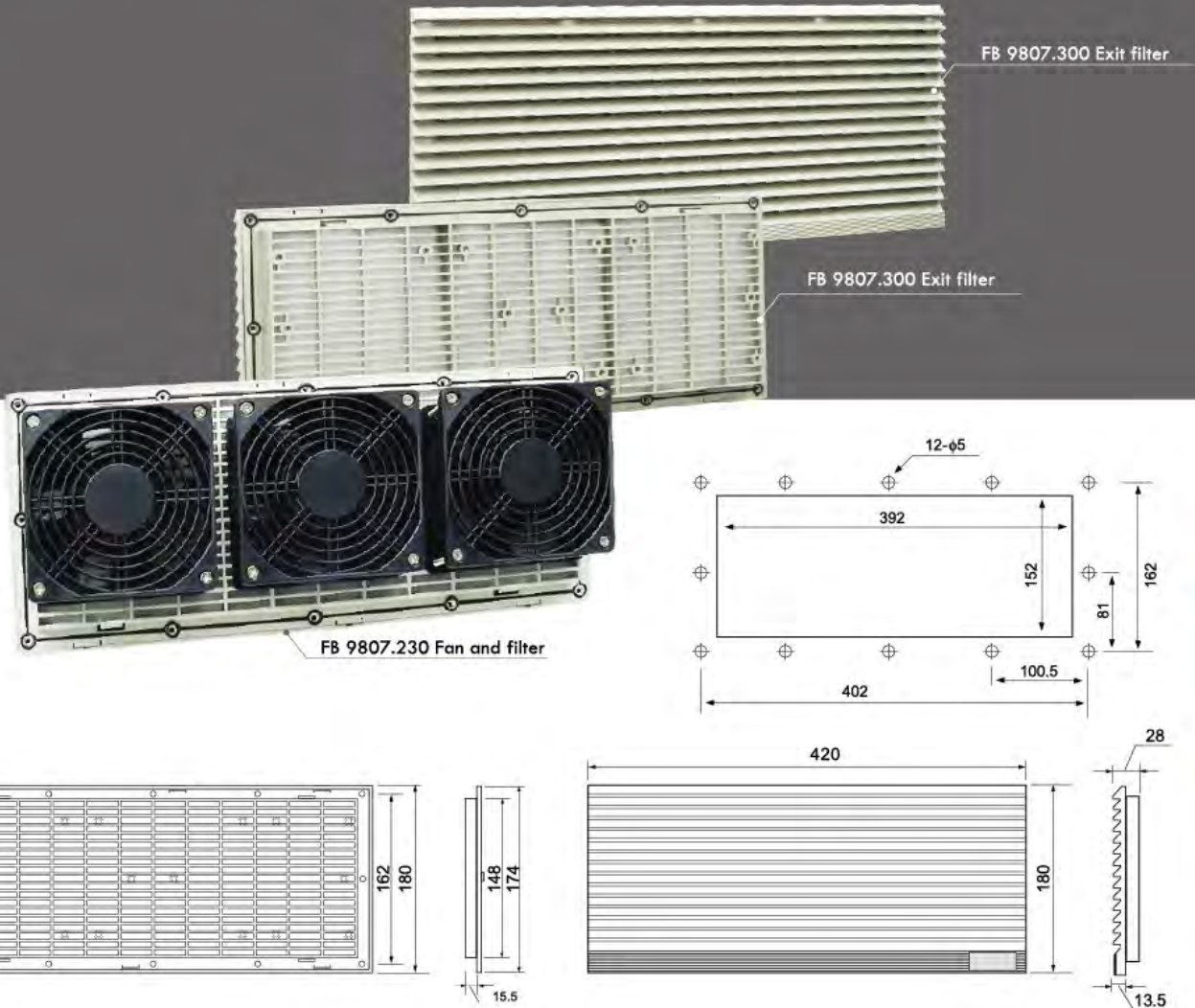
PFG-80



PFG-92



# FB9807 series fan and filter



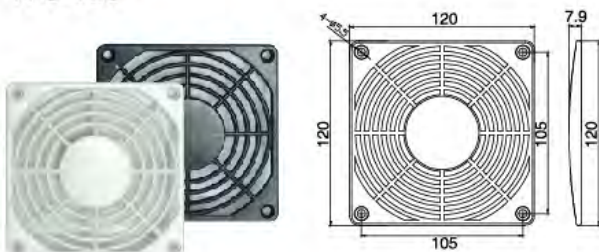
This filter can install 2 pieces F2E-162B-230, or 3 pieces F2E-120B-230

| Model  | Dimension        | Air flow                 | Wind speed | dust-removing |
|--------|------------------|--------------------------|------------|---------------|
| FB9807 | 420×180×13.5(mm) | 100.0m <sup>3</sup> /MIN | 2.0M/SEC   | 80%           |

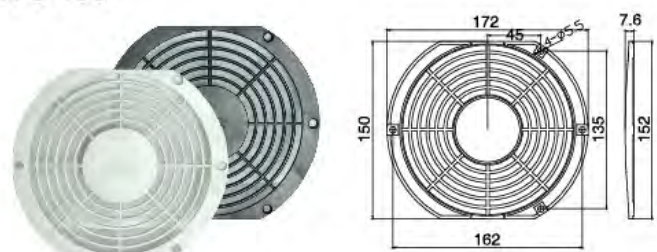
| Damage range                 | Temperature     | Material                         | IP   |
|------------------------------|-----------------|----------------------------------|------|
| 6.7~20 INCH-H <sub>2</sub> O | Indoor -10℃+85℃ | ABS (Anti-firing,UV)<br>94V-0 UL | IP44 |

## Plastic Finger Guard For Fans

PFG-120



PFG-150





| Item                         | Exit filter  | Fan and filter |                      |
|------------------------------|--|----------------|----------------------|
| Fan and filter               | FBL9803  | FBL9803-230    | FBL9803-115          |
| Designed working voltage V/H |  | 230/50/60      | 115/50/60            |
| Air flow, free blowing       | 105/120m <sup>3</sup> /h   |                |                      |
| Air flow With Exit filter    | 1 × FBL 9803: 71/82 m <sup>3</sup> /h<br>2 × FBL 9803: 85/98 m <sup>3</sup> /h |                |                      |
| Axial fan                    | Self-start screened magnetic pole motor  |                | Direct current motor |
| Rated current                |  | 0.12A<br>0.11A | 0.24A<br>0.23A       |
| Power                        |  | 19W/18W        | 19W/18W              |
| Noise level                  | 46/49dB(A)   |                |                      |
| Scope of temperature         | -10°C~+55°C  |                |                      |
| Exit filter                  | Type   | FBL9803        |                      |

It is possible to write to our company to consult if needing special voltage.

| Fan and filter | Fan and filter | Exit filter  | Installing section | Installing method |
|----------------|----------------|--------------|--------------------|-------------------|
| FBL 9803 ...   | FBL 9803.230   | FBL 9803.300 | FBL 9803 ...       | FBL 9803...       |
|                |                |              |                    |                   |



| Item  | Exit filter  | Fan and filter |                      |
|---|--|----------------|----------------------|
| Fan and filter  |  | FBL9804-230    | FBL9804-115          |
| Designed working voltage V/H  |  | 230/50/60      | 115/50/60            |
| Air flow, free blowing  | 120/128m <sup>3</sup> /h   |                |                      |
| Flux of air equip filter exported Include filtering pad of standard | 1 × FBL 9804: 71/82 m <sup>3</sup> /h<br>2 × FBL 9804: 85/98 m <sup>3</sup> /h |                |                      |
| Axial fan   | Self-start screened magnetic pole motor  |                | Direct current motor |
| Rated current   |  | 0.12A<br>0.11A | 0.24A<br>0.23A       |
| Power   |  | 19W/18W        | 19W/18W              |
| Noise level   | 46/49dB(A)   |                |                      |
| Scope of temperature  | -10°C~+55°C  |                |                      |
| Exit filter   | Type   | FBL9804        |                      |

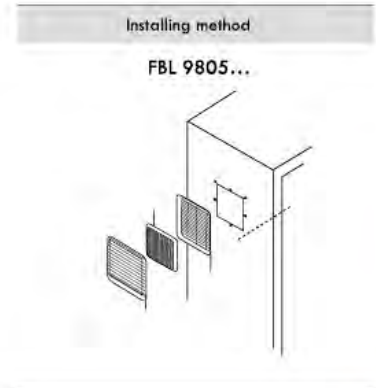
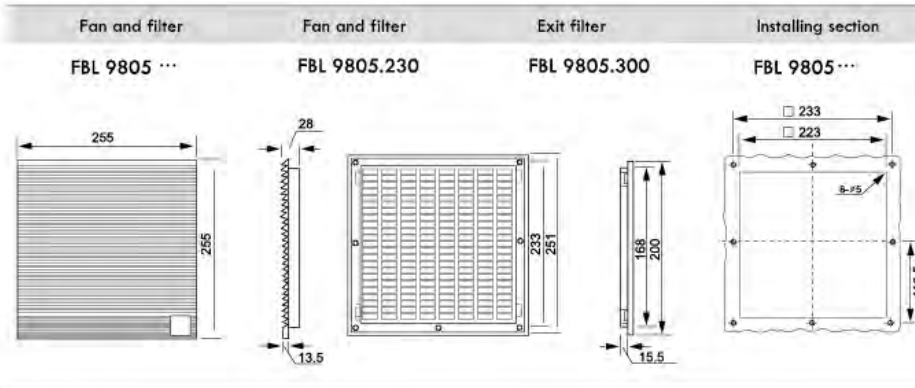
It is possible to write to our company to consult if needing special voltage.

| Fan and filter | Fan and filter | Exit filter  | Installing section | Installing method |
|----------------|----------------|--------------|--------------------|-------------------|
| FBL 9804 ...   | FBL 9804.230   | FBL 9804.300 | FBL 9804 ...       | FBL 9804...       |
|                |                |              |                    |                   |

## IP54 new FBL series fan and filter

| Item   | Exit filter  | Fan and filter |                      |
|--|--|----------------|----------------------|
| Fan and filter   | FBL9805  | FBL9805-230    | FBL9805-115          |
| Designed working voltage V/H   |  | 230/50/60      | 115/50/60            |
| Air flow, free blowing   | 190/220m <sup>3</sup> /h   |                |                      |
| Flux of air equip filter exported<br>Include filtering pad of standard | 1 × FBL 9805: 170/205 m <sup>3</sup> /h<br>2 × FBL 9805: 210/235 m <sup>3</sup> /h |                |                      |
| Axial fan  | Self-start screened magnetic pole motor  |                | Direct current motor |
| Rated current  |  | 0.28A<br>0.35A | 0.48A<br>0.55A       |
| Power  |  | 41W/38W        | 45W/52W              |
| Noise level  | 54/56dB(A)   |                |                      |
| Scope of temperature   | -10°C~+55°C  |                |                      |
| Exit filter  | Type   | FBL9805        |                      |

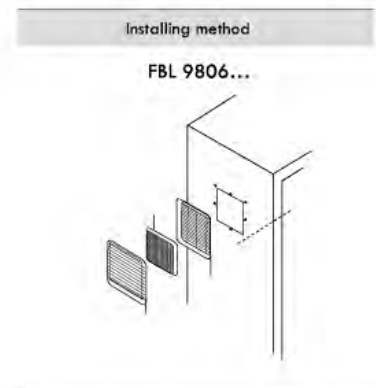
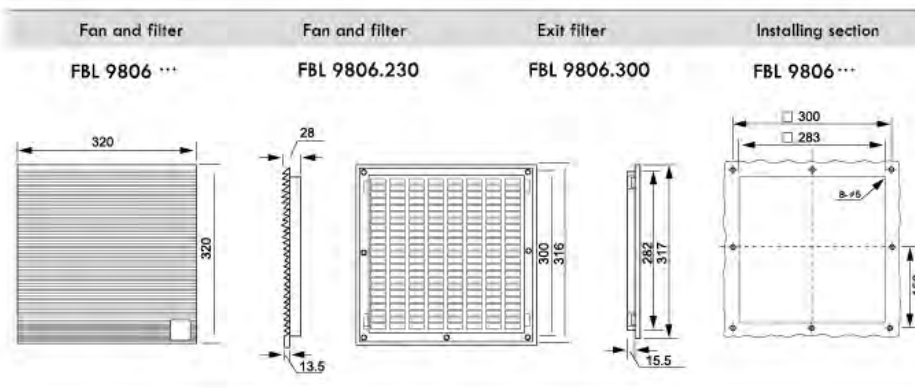
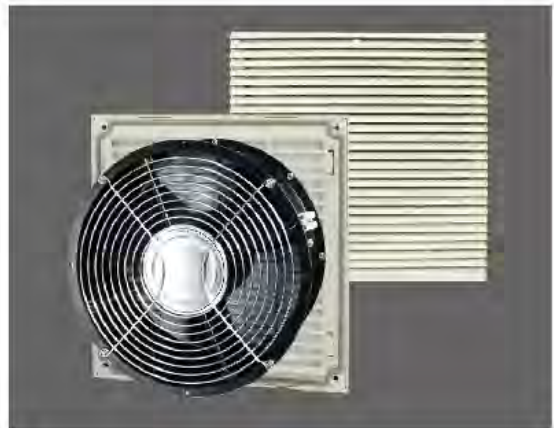
It is possible to write to our company to consult if needing special voltage.

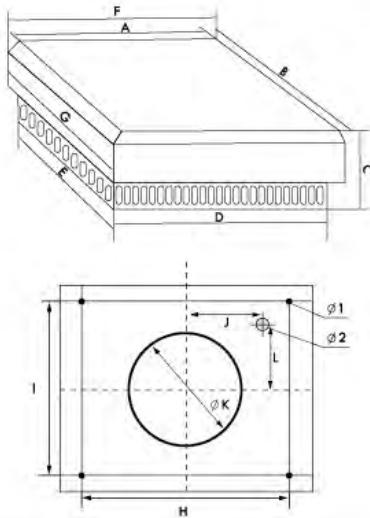
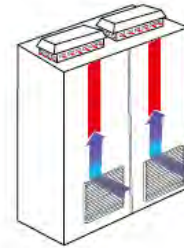


Cabinet Ventilation

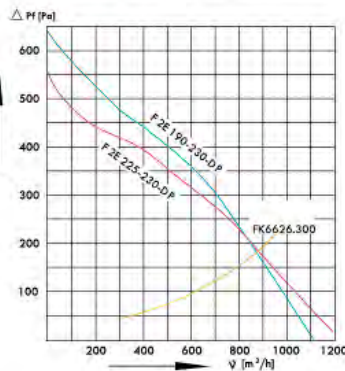
| Item   | Exit filter  | Fan and filter |                      |
|--|--|----------------|----------------------|
| Fan and filter   | FBL9806  | FBL9806-230    | FBL9806-115          |
| Designed working voltage V/H   |  | 230/50/60      | 115/50/60            |
| Air flow, free blowing   | 960/1020m <sup>3</sup> /h  |                |                      |
| Flux of air equip filter exported<br>Include filtering pad of standard | 1 × FBL 9806: 185/205 m <sup>3</sup> /h<br>2 × FBL 9806: 215/230 m <sup>3</sup> /h |                |                      |
| Axial fan  | Self-start screened magnetic pole motor  |                | Direct current motor |
| Rated current  |  | 0.16A<br>0.22A | 0.36A<br>0.40A       |
| Power  |  | 31W/33W        | 40W/48W              |
| Noise level  | 59/61dB(A)   |                |                      |
| Scope of temperature   | -10°C~+55°C  |                |                      |
| Exit filter  | Type   | FBL9806        |                      |

It is possible to write to our company to consult if needing special voltage.





Power specific property curve



#### Interior

The precondition to use the top fan is that the ambient temperature should be lower than the temperature required in the cabinet.

#### Function

The high-power centrifugal top fan can vent the high heat load by the greatest degree. The centrifugal fan not only can avoid the vortex vented by the general shield magnetic fan, but also can reduce the noise caused by the friction of air. The FK series of Exit Filter can be used in the inlet in order to prevent from entering the humidity and dust.

#### Design

The centrifugal top fan is larruping. It is handsome and it has the good function and reasonable structure. It also doesn't take up the interior space. It can well satisfy requirement of the present market with it's unique design.

| Type           | A/B | C   | D/E | F/G | H/I   | J    | ΦK  | Φ1  | Φ2 | L  |
|----------------|-----|-----|-----|-----|-------|------|-----|-----|----|----|
| F2E190-230-DP  | 270 | 130 | 267 | 310 | 226.8 | 98.4 | 195 | 7.8 | 15 | 97 |
| F2E 220-230-DP | 270 | 130 | 267 | 310 | 226.8 | 98.4 | 195 | 7.8 | 15 | 97 |
| F2E 225-230-DP | 270 | 130 | 267 | 310 | 226.8 | 98.4 | 195 | 7.8 | 15 | 97 |

| Exhauster on the top  | Type | F2E190-230-DP             | F2E220-230-DP             | F2E225-230-DP             |
|---|------|---------------------------|---------------------------|---------------------------|
| Voltage Frequency   |      | 230V 50/60HZ              | 230V 50/60HZ              | 230V 50/60HZ              |
| Air flow, Ventilation freely  |      | 570/620m³/h               | 860/900m³/h               | 1200/1340m³/h             |
| Flux of air equip filter exported Include filtering pad of standard |      | 1xFK6626.300              | 1xFK6626.300              | 1xFK6626.300              |
| Axle flow blower  |      | 456/496m³/h               | 688/540m³/h               | 960/1072m³/h              |
| Rated current   |      | Capacitance electromotion | Capacitance electromotion | Capacitance electromotion |
| Power   |      | 0.26A/0.34A               | 0.38A/0.40A               | 0.60A/0.88A               |
| Noise level   |      | 58/75W                    | 85/90W                    | 135/200W                  |
| Temperature range   |      | 62/64 dBA                 | 73/74 dBA                 | 69/71 dBA                 |
|   |      | -10°C~55°C                | -10°C~55°C                | -10°C~60°C                |

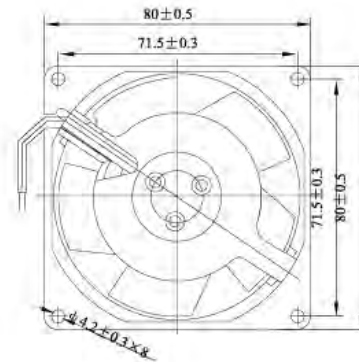
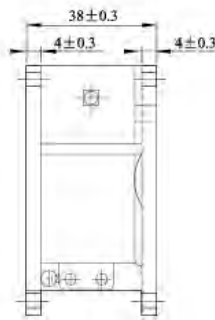
The quantity and size of the wind inlet filter can be decided according to the concrete requirement

## 80×80×38mm



|                                     |  |
|-------------------------------------|--|
| Motor Structure                     | Shaded pole motor.   |
| Safety                              | Impedance Protected  |
| Operation System                    | Dual high Precision ball bearings. (single sleeve bearing)                                       |
| Allowable Ambient Temperature Range | (under unconcretionary condition)<br>-20°C~+65°C(ball bearing) ,<br>-10°C~+45°C.(Sleeve bearing) |
| Insulation                          | B Class  |
| Protection Grade                    | IP34   |

| Type          | F2E-80S/B-230 | F2E-80S/B-115 |
|---------------|---------------|---------------|
| Bearing       | Sleeve/Ball   | Sleeve/Ball   |
| Voltage(V)    | 220/230       | 110/115       |
| Frequency(Hz) | 50/60         | 50/60         |
| Current(A)    | 0.06/0.07     | 0.13/0.15     |
| Power(w)      | 15/12         | 15/12         |
| Speed(RPM)    | 2600/3000     | 2600/3000     |
| Wind volume   | 45/55         | 45/55         |
| Noise dB(A)   | 29/35         | 29/35         |
| Weight(g)     | 335g          | 335g          |

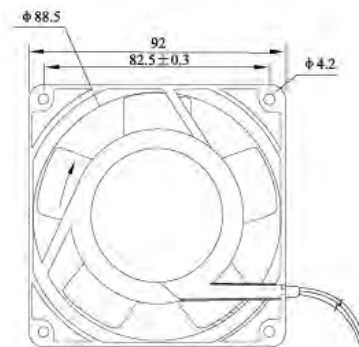
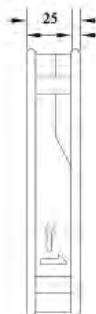


## 92×92×25mm



|                                     |  |
|-------------------------------------|--|
| Motor Structure                     | Shaded pole motor.   |
| Safety                              | Impedance Protected  |
| Operation System                    | Dual high Precision ball bearings (single sleeve bearing).                                       |
| Allowable Ambient Temperature Range | (under unconcretionary condition)<br>-20°C~+65°C(ball bearing) ,<br>-10°C~+45°C.(Sleeve bearing) |
| Insulation                          | B Class  |
| Protection Grade                    | IP34   |

| Type          | F2E-92S/B-230 | F2E-92S/B-115 |
|---------------|---------------|---------------|
| Bearing       | Sleeve/Ball   | Sleeve/Ball   |
| Voltage(V)    | 220/230       | 110/115       |
| Frequency(Hz) | 50/60         | 50/60         |
| Current(A)    | 0.07/0.08     | 0.12/0.14     |
| Power(w)      | 13.2/15.4     | 13.2/15.4     |
| Speed(RPM)    | 2200/2600     | 2200/2600     |
| Wind volume   | 60/68         | 60/68         |
| Noise dB(A)   | 29/35         | 29/35         |
| Weight(g)     | 255g          | 255g          |

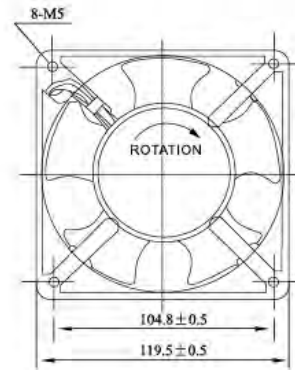
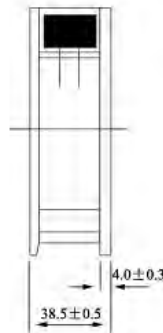


## 120×120×38mm



|                                     |  |
|-------------------------------------|--|
| Motor Structure                     | Shaded pole motor.   |
| Safety                              | Impedance Protected  |
| Operation System                    | Dual high Precision ball bearings. (single sleeve bearing)                                       |
| Allowable Ambient Temperature Range | (under unconcretionary condition)<br>-20°C~+65°C(ball bearing) ,<br>-10°C~+45°C.(Sleeve bearing) |
| Insulation                          | B Class  |
| Protection Grade                    | IP34   |

| Type          | F2E-120S/B-230 | F2E-120S/B-115 |
|---------------|----------------|----------------|
| Bearing       | Sleeve/Ball    | Sleeve/Ball    |
| Voltage(V)    | 220/230        | 110/115        |
| Frequency(Hz) | 50/60          | 50/60          |
| Current(A)    | 0.14/0.10      | 0.24/0.21      |
| Power(w)      | 22/30          | 23/26          |
| Speed(RPM)    | 2700/3100      | 2700/3100      |
| Wind volume   | 150/185        | 150/185        |
| Noise dB(A)   | 38/41          | 38/41          |
| Weight(g)     | 520g           | 520g           |

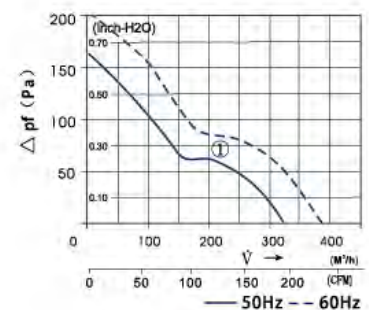
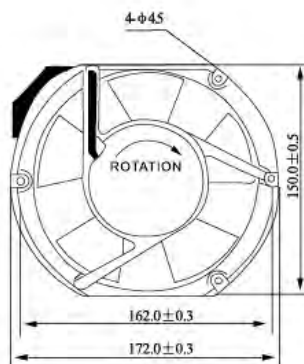
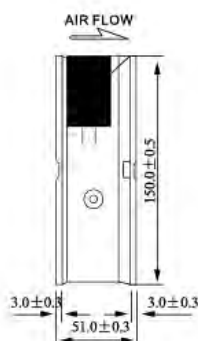


## 172×150×51mm



|                                     |  |
|-------------------------------------|--|
| Motor Structure                     | Shaded pole motor.   |
| Safety                              | Impedance Protected  |
| Operation System                    | Dual high Precision ball bearings (single sleeve bearing).                                       |
| Allowable Ambient Temperature Range | (under unconcretionary condition)<br>-20°C~+65°C(ball bearing) ,<br>-10°C~+45°C.(Sleeve bearing) |
| Insulation                          | B Class  |
| Protection Grade                    | IP34   |

| Type          | F2E-150S/B-230 | F2E-150S/B-115 |
|---------------|----------------|----------------|
| Bearing       | Sleeve/Ball    | Sleeve/Ball    |
| Voltage(V)    | 220/230        | 110/115        |
| Frequency(Hz) | 50/60          | 50/60          |
| Current(A)    | 0.21/0.24      | 0.39/0.43      |
| Power(w)      | 46/59          | 42/48          |
| Speed(RPM)    | 2800/3100      | 2800/3100      |
| Wind volume   | 280/320        | 280/320        |
| Noise dB(A)   | 38/41          | 38/41          |
| Weight(g)     | 920g           | 920g           |

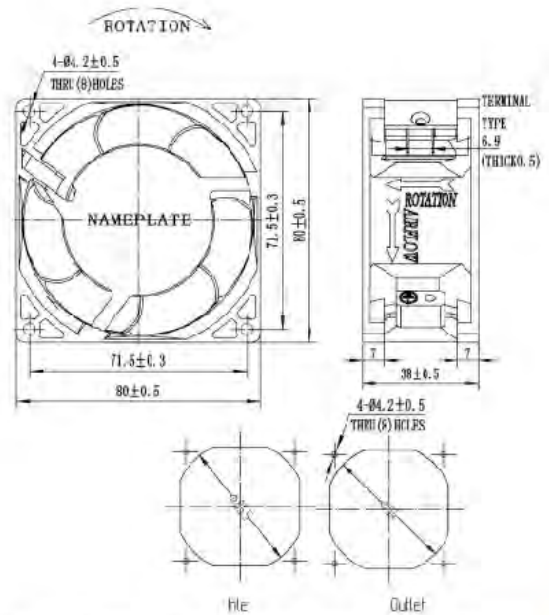


80×80×38mm



Metal Blades

|                       |  |
|-----------------------|--|
| Size                  | 80x80x38mm                                     |
| Airflow               | 42-54m <sup>3</sup> /hr 25-33CFM               |
| Weight                | 403g   |
| Noise                 | 28-36dBA                                       |
| Impeller              | Metal  |
| Frame                 | Aluminum Alloy                                 |
| Terminals             | 0.5mm  |
| Lead Wire             | Teflon 22#UL 1332(Optional)                    |
| Motor                 | Shaded Pole And External Rotor Induction Motor |
| Operating Temperature | -10°C~+105°C                                   |



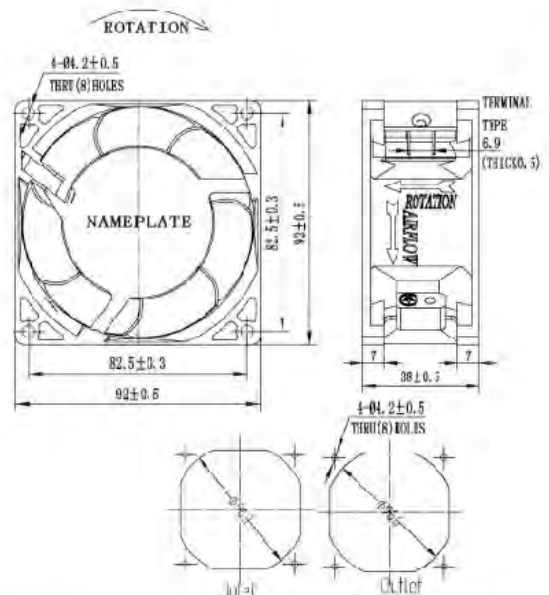
| Model                      | Bearing System | Voltage VAC | Freq. Hz | Current A | Power W | Speed RPM | Noise dBA | Air Flow           |       | Phase | Capacitor |
|----------------------------|----------------|-------------|----------|-----------|---------|-----------|-----------|--------------------|-------|-------|-----------|
|                            |                |             |          |           |         |           |           | M <sup>3</sup> /hr | CFM   |       |           |
| FL8038HA <sub>1</sub> B-7P | Ball           | 100/125     | 50/60    | 0.18      | 17/14   | 2700/3100 | 30/36     | 44/54              | 28/33 | 1     | /         |
| FL8038HA <sub>2</sub> B-7P |                | 200/240     | 50/60    | 0.1       | 17/14   | 2700/3100 | 30/36     | 44/54              | 28/33 | 1     | /         |
| FL8038MA <sub>1</sub> B-7P |                | 100/125     | 50/60    | 0.12      | 11      | 2300/2700 | 28/30     | 42/49              | 25/29 | 1     | /         |
| FL8038MA <sub>2</sub> B-7P |                | 200/240     | 50/60    | 0.07      | 11      | 2300/2700 | 28/30     | 42/49              | 25/29 | 1     | /         |

92×92×25mm



Metal Blades

|                       |  |
|-----------------------|--|
| Size                  | 92x92x38mm                                     |
| Airflow               | 71-91m <sup>3</sup> /hr 42-54CFM               |
| Weight                | 480g   |
| Noise                 | 35-40dBA                                       |
| Impeller              | Metal  |
| Frame                 | Aluminum Alloy                                 |
| Terminals             | 0.5mm  |
| Lead Wire             | Teflon 22#UL 1332(Optional)                    |
| Motor                 | Shaded Pole And External Rotor Induction Motor |
| Operating Temperature | -10°C~+105°C                                   |



| Model                      | Bearing System | Voltage VAC | Freq. Hz | Current A | Power W | Speed RPM | Noise dBA | Air Flow           |       | Phase | Capacitor |
|----------------------------|----------------|-------------|----------|-----------|---------|-----------|-----------|--------------------|-------|-------|-----------|
|                            |                |             |          |           |         |           |           | M <sup>3</sup> /hr | CFM   |       |           |
| FL9238HA <sub>1</sub> B-7P | Ball           | 100/125     | 50/60    | 0.18      | 17/14   | 2600/3000 | 38/40     | 78/91              | 46/54 | 1     | /         |
| FL9238HA <sub>2</sub> B-7P |                | 200/240     | 50/60    | 0.1       | 17/14   | 2600/3000 | 38/40     | 78/91              | 46/54 | 1     | /         |
| FL9238MA <sub>1</sub> B-7P |                | 100/125     | 50/60    | 0.12      | 11      | 2300/2700 | 35/40     | 71/85              | 42/50 | 1     | /         |
| FL9238MA <sub>2</sub> B-7P |                | 200/240     | 50/60    | 0.07      | 11      | 2300/2700 | 35/40     | 71/85              | 42/50 | 1     | /         |

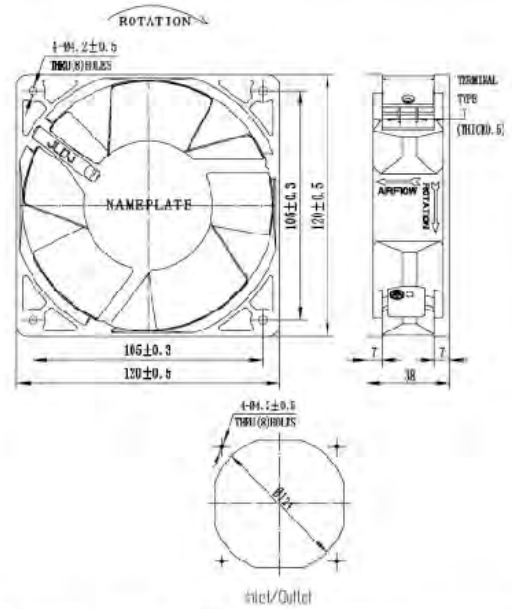
Cabinet Ventilation

**120x120x38mm**



Metal Blades

|                       |  |
|-----------------------|--|
| Size                  | 120x120x38mm                                   |
| Airflow               | 134-204m <sup>3</sup> /hr 79-120CFM            |
| Weight                | 600g   |
| Noise                 | 39-50dBA                                       |
| Impeller              | Metal  |
| Frame                 | Aluminum Alloy                                 |
| Terminals             | 0.5mm  |
| Lead Wire             | Teflon 22#UL 1332(Optional)                    |
| Motor                 | Shaded Pole And External Rotor Induction Motor |
| Operating Temperature | -10°C~+105°C                                   |



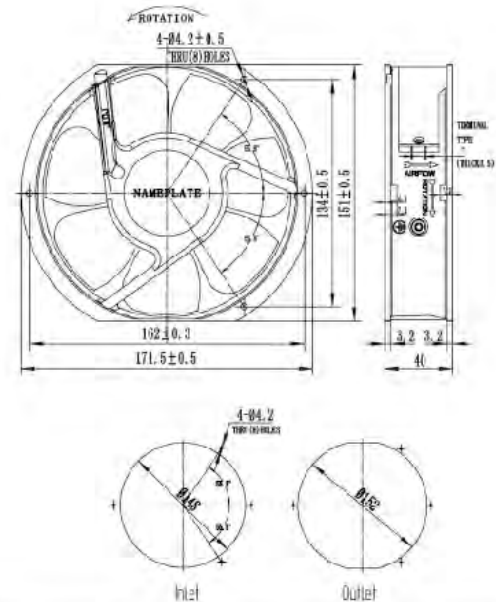
| Model                    | Bearing System | Voltage VAC | Freq. Hz | Current A | Power W | Speed RPM | Noise dBA | Air Flow           |         | Phase | Capacitor |
|--------------------------|----------------|-------------|----------|-----------|---------|-----------|-----------|--------------------|---------|-------|-----------|
|                          |                |             |          |           |         |           |           | M <sup>3</sup> /hr | CFM     |       |           |
| FL12038HA <sub>1</sub> B | Ball           | 100/125     | 50/60    | 0.21      | 21      | 2600/3000 | 46/50     | 180/204            | 106/120 | 1     | /         |
| FL12038HA <sub>2</sub> B |                | 200/240     | 50/60    | 0.11      | 19      | 2600/3000 | 46/50     | 180/204            | 106/120 | 1     | /         |
| FL12038MA <sub>1</sub> B |                | 100/125     | 50/60    | 0.21      | 17      | 2000/2200 | 39/41     | 134/149            | 79/87   | 1     | /         |
| FL12038MA <sub>2</sub> B |                | 200/240     | 50/60    | 0.10      | 16      | 2000/2200 | 39/41     | 134/149            | 79/87   | 1     | /         |

**172x150x38mm**



Metal Blades

|                       |  |
|-----------------------|--|
| Size                  | 172x150x38mm                                     |
| Airflow               | 348-390m <sup>3</sup> /hr 205-230CFM             |
| Weight                | 860g   |
| Noise                 | 56-59dBA   |
| Impeller              | Metal  |
| Frame                 | Aluminum Alloy                                   |
| Terminals             | 0.5mm  |
| Lead Wire             | Teflon 22#UL 1332(Optional)                      |
| Motor                 | Capacitor-Run And External Rotor Induction Motor |
| Operating Temperature | -10°C~+105°C                                     |



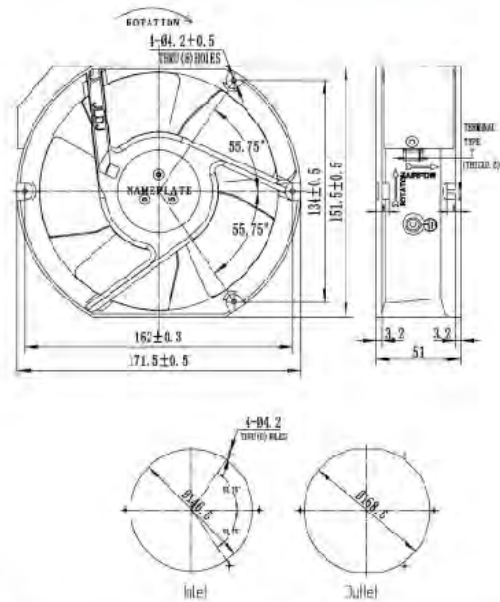
| Model                    | Bearing System | Voltage VAC | Freq. Hz | Current A | Power W | Speed RPM | Noise dBA | Air Flow           |         | Phase | Capacitor  |
|--------------------------|----------------|-------------|----------|-----------|---------|-----------|-----------|--------------------|---------|-------|------------|
|                          |                |             |          |           |         |           |           | M <sup>3</sup> /hr | CFM     |       |            |
| FL17040HA <sub>1</sub> B | Ball           | 100/125     | 50/60    | 0.2/0.2   | 24/24   | 2700/3200 | 56/59     | 348/390            | 205/230 | 1     | 3.3uf/250v |
| FL17040HA <sub>2</sub> B |                | 200/240     | 50/60    | 0.1/0.1   | 24/24   | 2700/3200 | 56/59     | 348/390            | 205/230 | 1     | 1uf/630v   |

172x150x51mm



Metal Blades

|                       |  |
|-----------------------|--|
| Size                  | 172x150x51mm                                     |
| Airflow               | 210-390m <sup>3</sup> /hr 205-230CFM             |
| Weight                | 900g   |
| Noise                 | 56-59dBA   |
| Impeller              | Metal  |
| Frame                 | Aluminum Alloy                                   |
| Terminals             | 0.5mm  |
| Lead Wire             | Teflon 22#UL 1332(Optional)                      |
| Motor                 | Capacitor-Run And External Rotor Induction Motor |
| Operating Temperature | -10°C~+105°C                                     |



| Model                     | Bearing System | Voltage VAC | Freq. Hz | Current A | Power W | Speed RPM | Noise dBA | Air Flow           |         | Phase | Capacitor  |
|---------------------------|----------------|-------------|----------|-----------|---------|-----------|-----------|--------------------|---------|-------|------------|
|                           |                |             |          |           |         |           |           | M <sup>3</sup> /hr | CFM     |       |            |
| FL17050HA,B               | Ball           | 100/125     | 50/60    | 0.38/0.34 | 37/35   | 2700/3200 | 54/57     | 357/419            | 210/247 | 1     | 3.3uf/250v |
| FL17050HA <sub>2</sub> ,B |                | 200/240     | 50/60    | 0.13/0.15 | 29/33   | 2700/3200 | 54/57     | 357/419            | 210/247 | 1     | 1uf/630v   |

Cabinet Ventilation

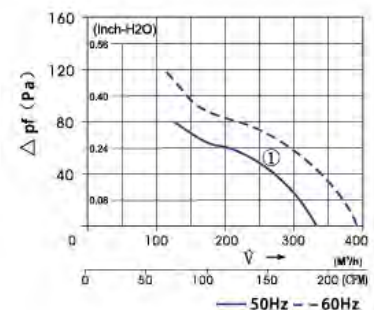
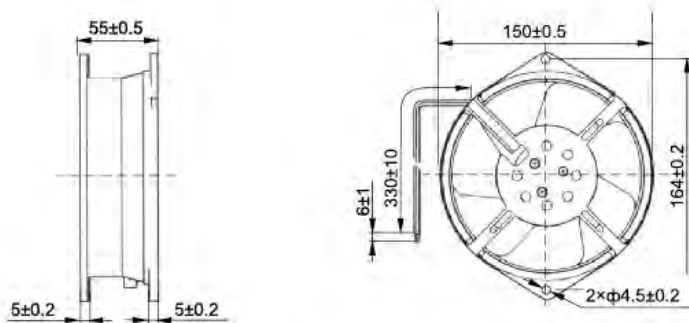
172x162x51mm



Metal Blades

|                                     |  |
|-------------------------------------|--|
| Motor Structure                     | Cage type structure motor.   |
| Safety                              | Impedance Protected  |
| Operation System                    | Dual high Precision ball bearings. (single sleeve bearing)                                       |
| Allowable Ambient Temperature Range | (under unconcretionary condition)<br>-20°C~+65°C(ball bearing) ,<br>-10°C~+45°C.(Sleeve bearing) |
| Insulation                          | B Class  |
| Protection Grade                    | IP34   |

| Type          | F2E-162B-230 | F2E-162B-115 |
|---------------|--------------|--------------|
| Bearing       | Ball         | Ball         |
| Voltage(V)    | 220/230      | 110/115      |
| Frequency(Hz) | 50/60        | 50/60        |
| Current(A)    | 0.20/0.26    | 0.42/0.51    |
| Power(w)      | 53/43        | 40/35        |
| Speed(RPM)    | 2700/3000    | 2700/3000    |
| Wind volume   | 325/380      | 325/380      |
| Noise dB(A)   | 48/52        | 48/52        |
| Weight(g)     | 1100g        | 1100g        |

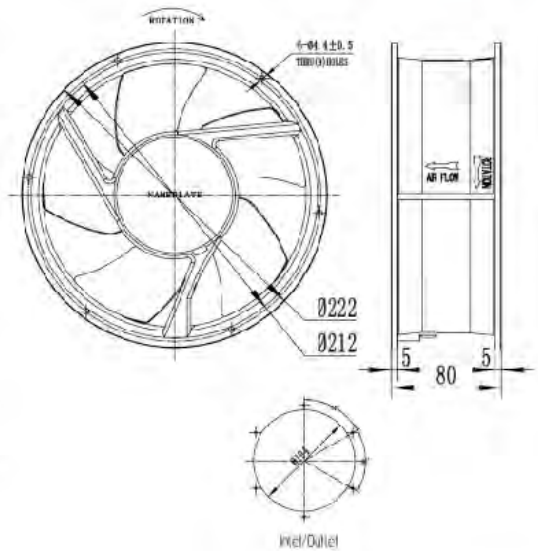


**Φ 220×80mm**



Metal Blades

|                       |  |
|-----------------------|--|
| Size                  | Φ220x80mm  |
| Airflow               | 849-925m <sup>3</sup> /hr 500-545CFM             |
| Weight                | 2000g  |
| Noise                 | 59-61 dBA  |
| Impeller              | Metal  |
| Frame                 | Aluminum Alloy                                   |
| Terminals             | 0.5mm  |
| Lead Wire             | Teflon 22#UL 1332(Optional)                      |
| Motor                 | Capacitor-Run And External Rotor Induction Motor |
| Operating Temperature | -10°C~+105°C                                     |



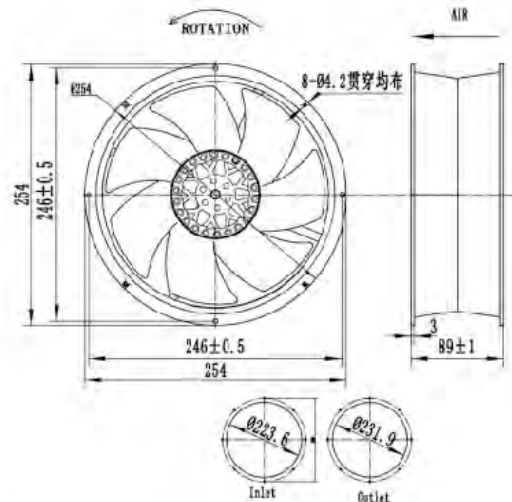
| Model                      | Bearing System | Voltage VAC | Freq. Hz | Current A | Power W | Speed RPM | Noise dBA | Air Flow           |         | Phase | Capacitor  |
|----------------------------|----------------|-------------|----------|-----------|---------|-----------|-----------|--------------------|---------|-------|------------|
|                            |                |             |          |           |         |           |           | M <sup>3</sup> /hr | CFM     |       |            |
| FL22080HA <sub>1</sub> B-C | Ball           | 100/125     | 50/60    | 0.58/0.65 | 67/77   | 2600/2800 | 59/61     | 849/925            | 500/545 | 1     | 4.0uf/250v |
| FL22080HA <sub>2</sub> B-C |                | 200/240     | 50/60    | 0.28/0.35 | 62/80   | 2600/2800 | 59/61     | 849/925            | 500/545 | 1     | 2uf/630v   |
| FL22080HA <sub>3</sub> B   |                | 380/420     | 50/60    | 0.25      | 65      | 2600/2800 | 59/61     | 849/925            | 500/545 | 3     | /          |
| FL22080HA <sub>6</sub> B-C |                | 380/420     | 50/60    | 0.25      | 65      | 2600/2800 | 59/61     | 849/925            | 500/545 | 1     | 1uf/630v   |

**Φ 254×89mm**



Metal Blades

|                       |  |
|-----------------------|--|
| Size                  | Φ254x89mm  |
| Airflow               | 1392-1528m <sup>3</sup> /hr 800-900CFM           |
| Weight                | 2600g  |
| Noise                 | 59-61dBA   |
| Impeller              | Metal  |
| Frame                 | Aluminum Alloy                                   |
| Terminals             | 0.5mm  |
| Lead Wire             | Teflon 22#UL 1332(Optional)                      |
| Motor                 | Capacitor-Run And External Rotor Induction Motor |
| Operating Temperature | -10°C~+105°C                                     |



| Model                         | Bearing System | Voltage VAC | Freq. Hz | Current A | Power W | Speed RPM | Noise dBA | Air Flow           |         | Phase | Capacitor  |
|-------------------------------|----------------|-------------|----------|-----------|---------|-----------|-----------|--------------------|---------|-------|------------|
|                               |                |             |          |           |         |           |           | M <sup>3</sup> /hr | CFM     |       |            |
| FL25489HA <sub>1</sub> B-C-7P | Ball           | 100/125     | 50/60    | 0.98/1.15 | 67/77   | 2700/3100 | 59/61     | 1392/1528          | 500/545 | 1     | 4.0uf/250v |
| FL25489HA <sub>2</sub> B-C-7P |                | 200/240     | 50/60    | 0.5/0.65  | 62/80   | 2700/3100 | 59/61     | 1392/1528          | 500/545 | 1     | 2.2uf/400v |
| FL25489HA <sub>3</sub> B-7P   |                | 380/420     | 50/60    | 0.25      | 65      | 2700/3100 | 59/61     | 1392/1528          | 500/545 | 3     | /          |
| FL25489HA <sub>6</sub> B-C-7P |                | 380/420     | 50/60    | 0.25      | 65      | 2700/3100 | 59/61     | 1392/1528          | 500/545 | 1     | 1uf/630v   |

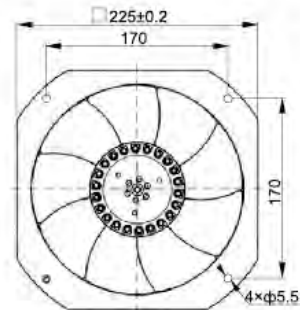
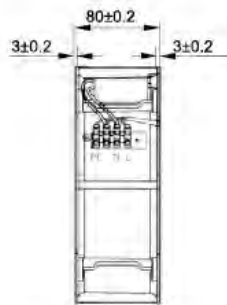
260×225×80mm



Metal Blades

|                                     |  |
|-------------------------------------|--|
| Motor Structure                     | Cage type structure motor.   |
| Safety                              | Impedance Protected  |
| Operation System                    | Dual high Precision ball bearings. (single sleeve bearing)                                       |
| Allowable Ambient Temperature Range | (under unconcretionary condition)<br>-20°C~+65°C(ball bearing) ,<br>-10°C~+45°C.(Sleeve bearing) |
| Insulation                          | B Class  |
| Protection Grade                    | IP34   |

| Type          | F2E-260B-230 | F2E-260B-115 |
|---------------|--------------|--------------|
| Bearing       | Ball         | Ball         |
| Voltage(V)    | 220/230      | 110/115      |
| Frequency(Hz) | 50/60        | 50/60        |
| Current(A)    | 0.34/0.29    | 0.63/0.61    |
| Power(w)      | 63/79        | 61/71        |
| Speed(RPM)    | 2450/2700    | 2500/2750    |
| Wind volume   | 915/1010     | 925/1030     |
| Noise dB(A)   | 59/61        | 59/61        |
| Weight(g)     | 2200g        | 2200g        |



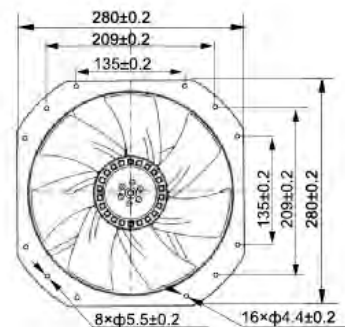
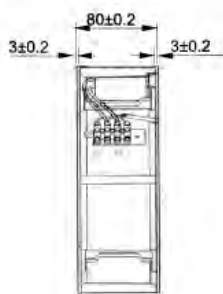
320×280×80mm



Metal Blades

|                                     |  |
|-------------------------------------|--|
| Motor Structure                     | Cage type structure motor.   |
| Safety                              | Impedance Protected  |
| Operation System                    | Dual high Precision ball bearings. (single sleeve bearing)                                       |
| Allowable Ambient Temperature Range | (under unconcretionary condition)<br>-20°C~+65°C(ball bearing) ,<br>-10°C~+45°C.(Sleeve bearing) |
| Insulation                          | B Class  |
| Protection Grade                    | IP34   |

| Type          | F2E-320B-230 | F2E-320B-115 |
|---------------|--------------|--------------|
| Bearing       | Ball         | Ball         |
| Voltage(V)    | 220/230      | 110/115      |
| Frequency(Hz) | 50/60        | 50/60        |
| Current(A)    | 0.46/0.60    | 0.95/1.20    |
| Power(w)      | 140/100      | 140/100      |
| Speed(RPM)    | 2500/2650    | 2480/2600    |
| Wind volume   | 1800/1950    | 1800/1950    |
| Noise dB(A)   | 68/70        | 68/70        |
| Weight(g)     | 2900g        | 2900g        |

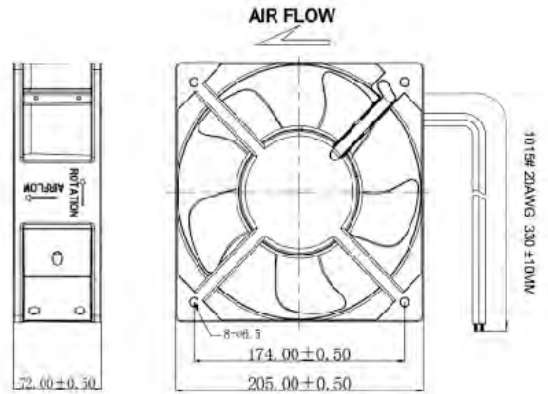


205×205×72mm



Metal Blades

|                       |                                       |
|-----------------------|---------------------------------------|
| Size                  | 205x205x72mm                          |
| Airflow               | 905-1248m <sup>3</sup> /hr 533-735CFM |
| Weight                | 2100g                                 |
| Noise                 | 61-68dBA                              |
| Impeller              | Metal                                 |
| Frame                 | Aluminum Alloy                        |
| Terminals             | 0.5mm                                 |
| Lead Wire             | Teflon 22#UL 1332(Optional)           |
| Motor                 | Capacitor-Run Induction Motor         |
| Operating Temperature | -10°C~+65°C                           |



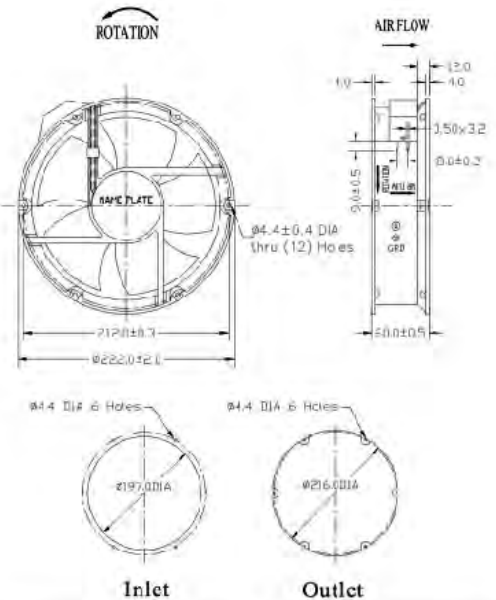
| Model                      | Bearing System | Voltage VAC | Freq. Hz | Current A | Power W | Speed RPM | Noise dBA | Air Flow           |         | Phase | Capacitor |
|----------------------------|----------------|-------------|----------|-----------|---------|-----------|-----------|--------------------|---------|-------|-----------|
|                            |                |             |          |           |         |           |           | M <sup>3</sup> /hr | CFM     |       |           |
| FL20572HA <sub>1</sub> B-C | Ball           | 100/125     | 50/60    | 0.8/0.9   | 88/98   | 2850/3250 | 61/68     | 905/1248           | 533/735 | 1     | 10uf/250v |
| FL20572HA <sub>2</sub> B-C |                | 200/240     | 50/60    | 0.35/0.45 | 68/78   | 2850/3250 | 61/68     | 905/1248           | 533/735 | 1     | 5uf/500v  |

Φ 200×60mm



Metal Blades

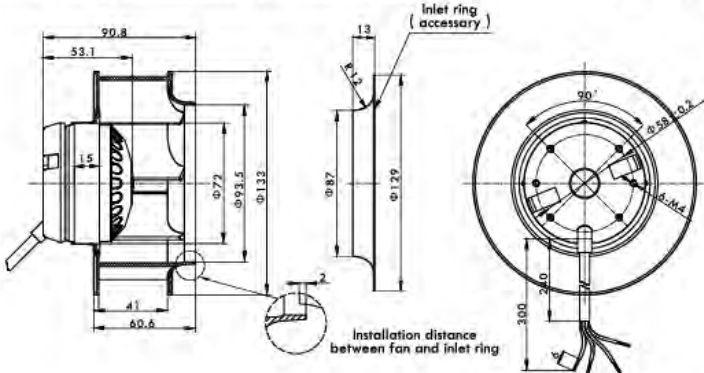
|                       |                                      |
|-----------------------|--------------------------------------|
| Size                  | Φ200x60mm                            |
| Airflow               | 730-824m <sup>3</sup> /hr 430-485CFM |
| Weight                | 1250g                                |
| Noise                 | 55-67dBA                             |
| Impeller              | Metal                                |
| Frame                 | Aluminum Alloy                       |
| Terminals             | 0.5mm                                |
| Lead Wire             | Teflon 22#UL 1332(Optional)          |
| Motor                 | Capacitor-Run Induction Motor        |
| Operating Temperature | -10°C~+65°C                          |



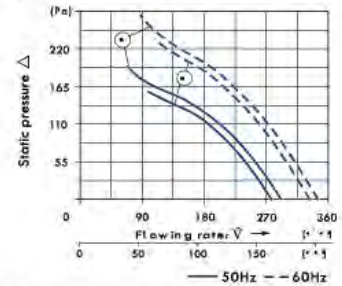
| Model                      | Bearing System | Voltage VAC | Freq. Hz | Current A | Power W | Speed RPM | Noise dBA | Air Flow           |         | Phase | Capacitor  |
|----------------------------|----------------|-------------|----------|-----------|---------|-----------|-----------|--------------------|---------|-------|------------|
|                            |                |             |          |           |         |           |           | M <sup>3</sup> /hr | CFM     |       |            |
| FL22060HA <sub>1</sub> B-C | Ball           | 100/125     | 50/60    | 0.42/0.46 | 50/60   | 2800/3100 | 55/67     | 730/824            | 430/485 | 1     | 3.3uf/630v |
| FL22060HA <sub>2</sub> B-C |                | 200/240     | 50/60    | 0.25/0.26 | 50/60   | 2800/3100 | 55/67     | 730/824            | 430/485 | 1     | 1.8uf/630v |

**Motor Structure:** External rotor motor  $\Phi 72\text{mm}$ .  
**Safety:** Thermally protected.  
**Operation System:** Dual high Precision ball bearings.  
**Dielectric Withstand Voltage:** AC 1,800V , at 0.5mA, 50/60 Hz.  
**Allowable Ambient Temperature and Humidity Range:**  
 (under unconcretionary state)  
 -25 ~+65 C (temperature) 10% ~+80%. (humidity)

**Insulation System:**  
 Design according to Class F of IEC61858 standard.  
**Protection Class:** IP44  
**Unit weight:** 0.66 kg  
**Capacitor Life:** A Class  
**Motor Life:** 60,000hrs at 25 C



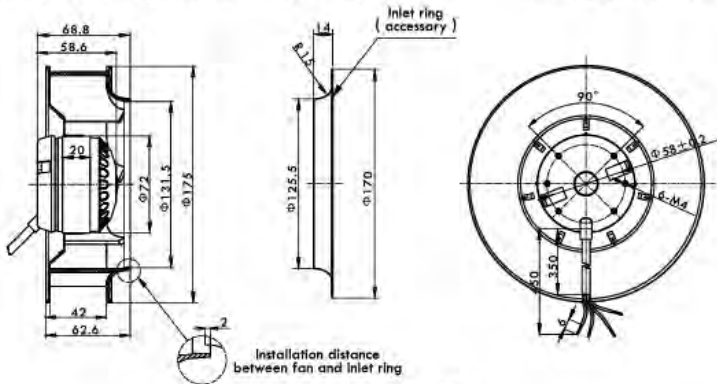
$\Phi 133 \times 41$



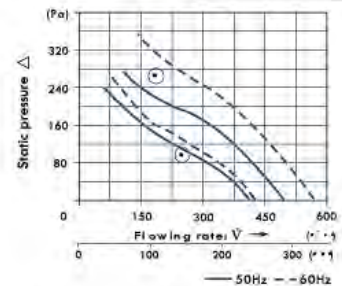
| Type        | Rated Voltage | Frequency | Current | Input Power | Speed | Max Air Flow |                   | Static Pressure | Noise |
|-------------|---------------|-----------|---------|-------------|-------|--------------|-------------------|-----------------|-------|
|             |               |           |         |             |       | CFM          | m <sup>3</sup> /h |                 |       |
| C2S-133.41A | 115           | 50        | 0.22    | 49          | 2740  | 171          | 290               | 260             | 56    |
|             |               | 60        | 0.25    | 53          | 3230  | 203          | 345               | 180             | 60    |
| C2E-133.41A | 230           | 50        | 0.11    | 24          | 2750  | 171          | 290               | 260             | 56    |
|             |               | 60        | 0.13    | 27          | 3200  | 203          | 345               | 180             | 60    |
| C2S-133.41C | 115           | 50        | 0.51    | 38          | 2650  | 162          | 275               | 240             | 55    |
|             |               | 60        | 0.42    | 35          | 3100  | 195          | 331               | 160             | 68    |
| C2E-133.41C | 230           | 50        | 0.25    | 36          | 2650  | 162          | 275               | 240             | 55    |
|             |               | 60        | 0.20    | 34          | 3100  | 195          | 331               | 160             | 58    |

**Motor Structure:** Outer rotor motor  $\Phi 72\text{mm}$ .  
**Safety:** Thermally protected.  
**Operation System:** Dual high Precision ball bearings.  
**Dielectric Withstand Voltage:** AC 1,800V , at 0.5mA, 50/60 Hz.  
**Allowable Ambient Temperature and Humidity Range:**  
 (under unconcretionary state)  
 -25 ~+75 C (temperature) 10% ~+80%. (humidity)

**Insulation System:**  
 Design according to Class F of IEC61858 standard.  
**Protection Class:** IP44  
**Unit weight:** 0.85 kg  
**Capacitor Life:** A Class  
**Motor Life:** 60,000hrs at 25 C



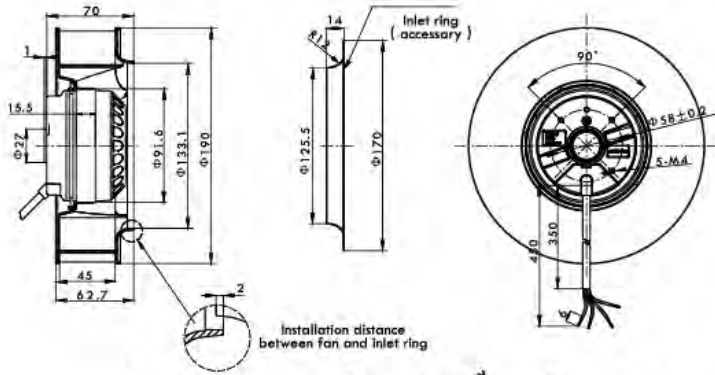
$\Phi 175 \times 42$



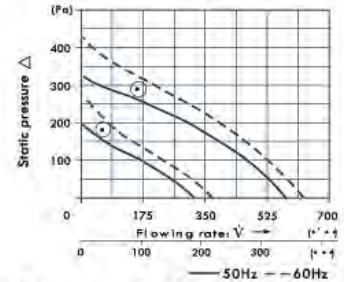
| Type        | Rated Voltage | Frequency | Current | Input Power | Speed | Max Air Flow |                   | Static Pressure | Noise |
|-------------|---------------|-----------|---------|-------------|-------|--------------|-------------------|-----------------|-------|
|             |               |           |         |             |       | CFM          | m <sup>3</sup> /h |                 |       |
| C2S-175.42B | 115           | 50        | 0.50    | 50          | 2600  | 289          | 490               | 260             | 63    |
|             |               | 60        | 0.46    | 52          | 3000  | 336          | 570               | 350             | 69    |
| C2E-175.42B | 230           | 50        | 0.25    | 49          | 2600  | 289          | 490               | 260             | 63    |
|             |               | 60        | 0.23    | 51          | 3000  | 336          | 570               | 360             | 68    |
| C2S-175.42C | 115           | 50        | 0.68    | 54          | 2400  | 254          | 430               | 250             | 61    |
|             |               | 60        | 0.62    | 52          | 2500  | 265          | 450               | 260             | 62    |
| C2E-175.42C | 230           | 50        | 0.34    | 55          | 2400  | 254          | 430               | 250             | 61    |
|             |               | 60        | 0.30    | 53          | 2500  | 265          | 450               | 260             | 62    |

Motor Structure: Outer rotor motor  $\Phi 92\text{mm}$ .  
 Safety: Thermally protected.  
 Operation System: Dual high Precision ball bearings.  
 Dielectric Withstand Voltage: AC 1,800V, at 0.5mA, 50/60 Hz.  
 Allowable Ambient Temperature and Humidity Range:  
 (under unconcretionary state)  
 -25 ~+75 °C (temperature) 10% ~+80%. (humidity)

Insulation System:  
 Design according to Class F of IEC61858 standard.  
 Protection Class: IP44  
 Unit weight: 1.27 kg  
 Capacitor Life: A Class  
 Motor Life: 60,000hrs at 25 °C



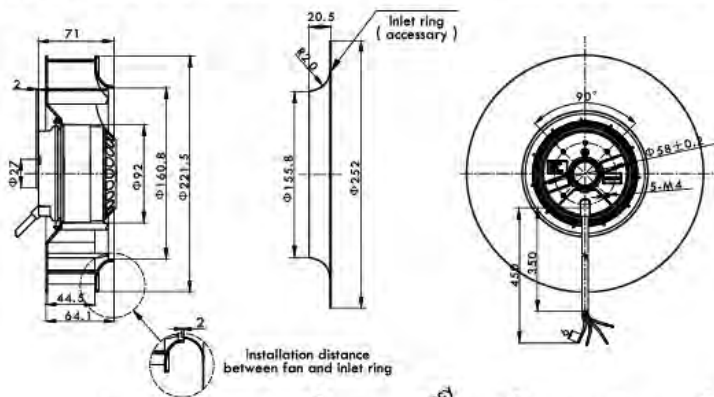
Ø 190x45



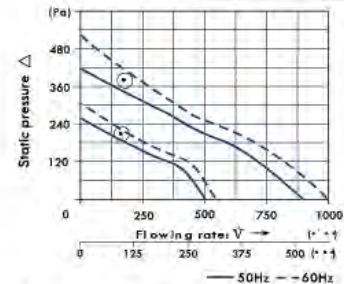
| Type        | Rated Voltage | Frequency | Current | Input Power | Speed                | Max. Air Flow |                   | Static Pressure | Noise |
|-------------|---------------|-----------|---------|-------------|----------------------|---------------|-------------------|-----------------|-------|
|             | V             | Hz        | (A)     | (W)         | (min <sup>-1</sup> ) | CFM           | m <sup>3</sup> /h | (Pa)            | (dB)  |
| C2S-190.45A | 115           | 50        | 0.62    | 60          | 2500                 | 336           | 570               | 325             | 62    |
|             |               | 60        | 0.65    | 70          | 2700                 | 366           | 620               | 420             | 64    |
| C2E-190.45A | 230           | 50        | 0.28    | 65          | 2500                 | 336           | 570               | 325             | 62    |
|             |               | 60        | 0.33    | 75          | 2700                 | 366           | 620               | 420             | 64    |
| C2D-190.45A | 400           | 50        | 0.17    | 61          | 2500                 | 336           | 570               | 325             | 62    |
|             |               | 60        | 0.19    | 72          | 2700                 | 366           | 620               | 420             | 64    |
| C4E-190.45A | 230           | 50        | 0.13    | 27          | 1400                 | 182           | 310               | 200             | 48    |
|             |               | 60        | 0.12    | 27          | 1600                 | 212           | 360               | 280             | 51    |

Motor Structure: Outer rotor motor  $\Phi 92\text{mm}$ .  
 Safety: Thermally protected.  
 Operation System: Dual high Precision ball bearings.  
 Dielectric Withstand Voltage: AC 1,800V, at 0.5mA, 50/60 Hz.  
 Allowable Ambient Temperature and Humidity Range:  
 (under unconcretionary state)  
 -25 ~+65 °C (temperature) 10% ~+80%. (humidity)

Insulation System:  
 Design according to Class F of IEC61858 standard.  
 Protection Class: IP44  
 Unit weight: 1.8 kg  
 Capacitor Life: A Class  
 Motor Life: 60,000hrs at 25 °C



Ø 220x44

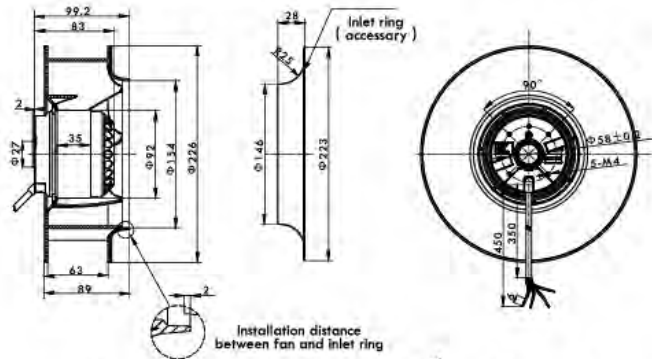


| Type        | Rated Voltage | Frequency | Current | Input Power | Speed                | Max. Air Flow |                   | Static Pressure | Noise |
|-------------|---------------|-----------|---------|-------------|----------------------|---------------|-------------------|-----------------|-------|
|             | V             | Hz        | (A)     | (W)         | (min <sup>-1</sup> ) | CFM           | m <sup>3</sup> /h | (Pa)            | (dB)  |
| C2S-220.44B | 115           | 50        | 0.95    | 98          | 2600                 | 528           | 896               | 420             | 72    |
|             |               | 60        | 1.10    | 120         | 2950                 | 590           | 1000              | 520             | 74    |
| C2E-220.44B | 230           | 50        | 0.46    | 98          | 2580                 | 525           | 890               | 420             | 72    |
|             |               | 60        | 0.51    | 118         | 2950                 | 590           | 1000              | 520             | 74    |
| C2D-220.44B | 400           | 50        | 0.29    | 100         | 2600                 | 528           | 896               | 420             | 72    |
|             |               | 60        | 0.35    | 125         | 3000                 | 600           | 1020              | 520             | 74    |
| C4E-220.44B | 230           | 50        | 0.23    | 48          | 1450                 | 295           | 500               | 250             | 62    |
|             |               | 60        | 0.24    | 58          | 1650                 | 336           | 570               | 300             | 65    |

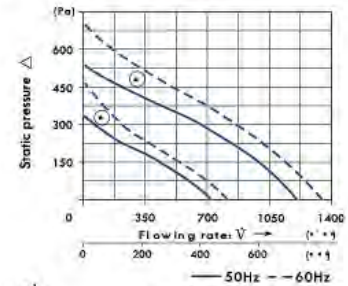


Motor Structure: Outer rotor motor  $\Phi 92\text{mm}$ .  
 Safety: Thermally protected.  
 Operation System: Dual high Precision ball bearings.  
 Dielectric Withstand Voltage: AC 1,800V, at 0.5mA, 50/60 Hz.  
 Allowable Ambient Temperature and Humidity Range:  
 (under unconcretionary state)  
 -25 ~+75 °C (temperature) 10% ~+80%. (humidity)

Insulation System:  
 Design according to Class F of IEC61858 standard.  
 Protection Class: IP44  
 Unit weight: 2.3 kg  
 Capacitor Life: A Class  
 Motor Life: 60,000hrs at 25 °C



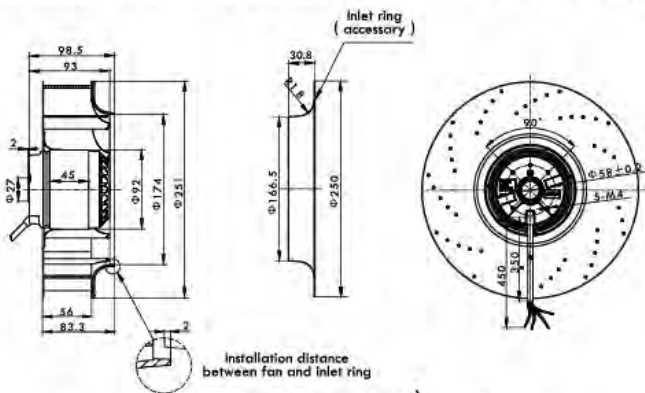
Ø 225x63



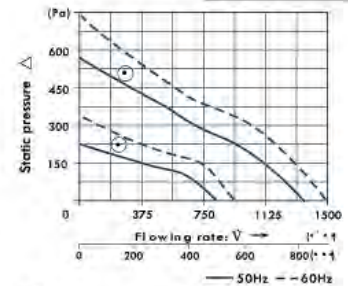
| Type        | Rated Voltage | Frequency | Current | Input Power | Speed                | Max Air Flow |                   | Static Pressure | Noise |
|-------------|---------------|-----------|---------|-------------|----------------------|--------------|-------------------|-----------------|-------|
|             | V             | Hz        | (A)     | (W)         | (min <sup>-1</sup> ) | CFM          | m <sup>3</sup> /h | (Pa)            | (dB)  |
| C2S-225.63C | 115           | 50        | 1.18    | 130         | 2650                 | 708          | 1200              | 550             | 69    |
|             |               | 60        | 1.53    | 168         | 2950                 | 791          | 1340              | 725             | 71    |
| C2E-225.63C | 230           | 50        | 0.62    | 135         | 2650                 | 708          | 1200              | 550             | 69    |
|             |               | 60        | 0.77    | 170         | 2950                 | 791          | 1340              | 725             | 71    |
| C2D-225.63C | 400           | 50        | 0.34    | 130         | 2500                 | 708          | 1200              | 550             | 69    |
|             |               | 60        | 0.44    | 170         | 2700                 | 791          | 1340              | 725             | 71    |
| C4E-225.63C | 230           | 50        | 0.30    | 65          | 1480                 | 419          | 710               | 320             | 61    |
|             |               | 60        | 0.37    | 80          | 1650                 | 483          | 818               | 440             | 63    |

Motor Structure: Outer rotor motor  $\Phi 92\text{mm}$ .  
 Safety: Thermally protected.  
 Operation System: Dual high Precision ball bearings.  
 Dielectric Withstand Voltage: AC 1,800V, at 0.5mA, 50/60 Hz.  
 Allowable Ambient Temperature and Humidity Range:  
 (under unconcretionary state)  
 -25 ~+75 °C (temperature) 10% ~+80%. (humidity)

Insulation System:  
 Design according to Class F of IEC61858 standard.  
 Protection Class: IP44  
 Unit weight: 2.9 kg  
 Capacitor Life: A Class  
 Motor Life: 60,000hrs at 25 °C



Ø 250x56

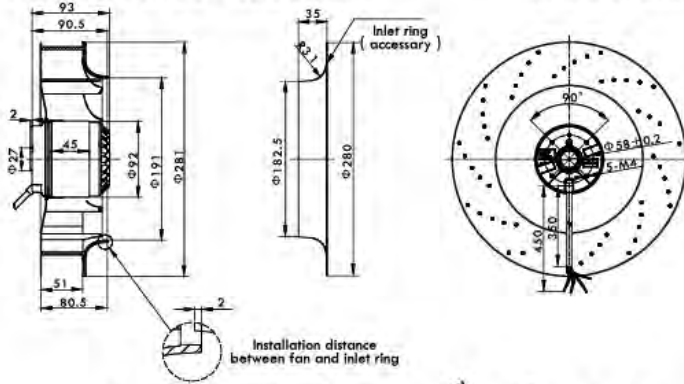


| Type        | Rated Voltage | Frequency | Current | Input Power | Speed                | Max Air Flow |                   | Static Pressure | Noise |
|-------------|---------------|-----------|---------|-------------|----------------------|--------------|-------------------|-----------------|-------|
|             | V             | Hz        | (A)     | (W)         | (min <sup>-1</sup> ) | CFM          | m <sup>3</sup> /h | (Pa)            | (dB)  |
| C2S-250.56A | 115           | 50        | 1.38    | 155         | 2600                 | 856          | 1450              | 580             | 74    |
|             |               | 60        | 1.90    | 208         | 2800                 | 897          | 1520              | 750             | 76    |
| C2E-250.56A | 230           | 50        | 0.70    | 152         | 2550                 | 856          | 1450              | 580             | 74    |
|             |               | 60        | 0.93    | 205         | 2750                 | 897          | 1520              | 750             | 76    |
| C4S-250.56B | 115           | 50        | 0.64    | 70          | 1400                 | 478          | 810               | 220             | 61    |
|             |               | 60        | 0.81    | 89          | 1600                 | 548          | 930               | 310             | 64    |
| C4E-250.56B | 230           | 50        | 0.32    | 70          | 1450                 | 484          | 820               | 220             | 61    |
|             |               | 60        | 0.39    | 88          | 1650                 | 555          | 940               | 310             | 64    |

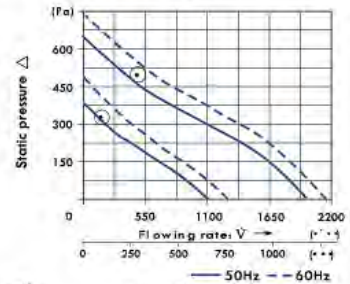
Cabinet Ventilation

Motor Structure: Outer rotor motor  $\Phi 92\text{mm}$ .  
 Safety: Thermally protected.  
 Operation System: Dual high Precision ball bearings.  
 Dielectric Withstand Voltage: AC 1,800V, at 0.5mA, 50/60 Hz.  
 Allowable Ambient Temperature and Humidity Range:  
 (under unconcretionary state)  
 -25 ~ +75 °C (temperature) 10% ~ +80%. (humidity)

Insulation System:  
 Design according to Class F of IEC61858 standard.  
 Protection Class: IP44  
 Unit weight: 3.2 kg  
 Capacitor Life: A Class  
 Motor Life: 60,000hrs at 25 °C



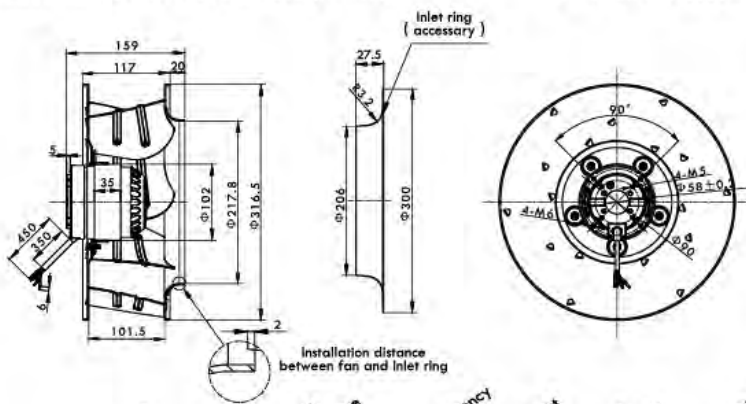
$\Phi 280 \times 51$



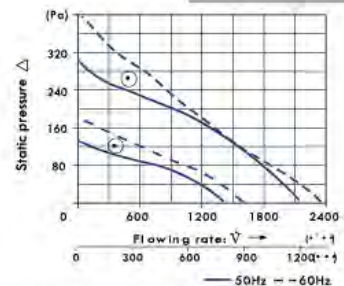
| Type        | Rated Voltage | Frequency | Current | Input Power | Speed                | Max Air Flow          | Static Pressure | Noise |
|-------------|---------------|-----------|---------|-------------|----------------------|-----------------------|-----------------|-------|
|             | V             | Hz        | (A)     | (W)         | (min <sup>-1</sup> ) | CFM m <sup>3</sup> /h | (Pa)            | (dB)  |
| C2E-280.51C | 230           | 50        | 1.03    | 230         | 2550                 | 1174 1990             | 700             | 72    |
|             |               | 60        | 1.30    | 305         | 2700                 | 1245 2110             | 750             | 75    |
| C4E-280.51C | 230           | 50        | 0.48    | 110         | 1400                 | 649 1100              | 380             | 63    |
|             |               | 60        | 0.64    | 145         | 1650                 | 760 1290              | 500             | 65    |
| C4S-280.51C | 115           | 50        | 0.98    | 115         | 1400                 | 649 1100              | 380             | 63    |
|             |               | 60        | 1.27    | 145         | 1650                 | 760 1290              | 500             | 65    |

Motor Structure: Outer rotor motor  $\Phi 102\text{mm}$ .  
 Safety: Thermally protected.  
 Operation System: Dual high Precision ball bearings.  
 Dielectric Withstand Voltage: AC 1,800V, at 0.5mA, 50/60 Hz.  
 Allowable Ambient Temperature and Humidity Range:  
 (under unconcretionary state)  
 -25 ~ +65 °C (temperature) 10% ~ +80%. (humidity)

Insulation System:  
 Design according to Class F of IEC61858 standard.  
 Protection Class: IP44  
 Unit weight: 3.8 kg  
 Capacitor Life: A Class  
 Motor Life: 60,000hrs at 25 °C



$\Phi 316 \times 102$



| Type         | Rated Voltage | Frequency | Current   | Input Power | Speed                | Max Air Flow          | Static Pressure | Noise |
|--------------|---------------|-----------|-----------|-------------|----------------------|-----------------------|-----------------|-------|
|              | V             | Hz        | (A)       | (W)         | (min <sup>-1</sup> ) | CFM m <sup>3</sup> /h | (Pa)            | (dB)  |
| C4E-315.101  | 230           | 50        | 0.50      | 110         | 1360                 | 1250 2120             | 300             | 59    |
|              |               | 60        | 0.65      | 150         | 1540                 | 1390 2370             | 400             | 62    |
| C4ED-315.101 | 230/400       | 50        | 0.62/0.33 | 136         | 1380                 | 1250 2120             | 300             | 59    |
|              |               | 60        | 0.58/0.32 | 137         | 1600                 | 1390 2370             | 400             | 62    |
| C4S-315.101  | 115           | 50        | 1.18      | 130         | 1370                 | 1250 2120             | 300             | 59    |
|              |               | 60        | 1.52      | 170         | 1550                 | 1390 2370             | 400             | 62    |
| C6E-315.101  | 230           | 50        | 0.32      | 68          | 940                  | 826 1400              | 130             | 48    |
|              |               | 60        | 0.37      | 83          | 1100                 | 968 1640              | 180             | 54    |



# Heater/Thermostat /Hygromat



**Benefits:**

- Integrated integration: AC input, AC output, offering convenience in use.
- With LED indicator, easier to recognize working state.
- Small size for a variety of applications.
- Stable long - time operating.
- ROHS compliant.

**Features:**

- Humidity control: If the relative humidity exceeds the value set on the humidity dial, the electric circuit is cut off. Return difference is 5 - 10% RH.
- Temperature control: If the ambient temperature rises above the value set on the temperature dial, the electric circuit is cut off. A tolerance of 1 - 3°C is allowed.
- Power: AC220V. Other voltage is alternative.
- Current: Max 46mA.
- Operating conditions: Temperature: - 10 to 50°C; Humidity: 40 - 90%RH.
- Storage conditions: Temperature: - 20 to 60°C; Humidity: 20 - 95%RH.
- Humidity sensor: Polymer humidity resistance.
- Temperature sensor: Bimetal sensor.

**Elements:**

- Set up the operation range by adjusting the knob. When the relative humidity drops below the value pre - set, the electric circuit is closed via terminal LED illuminates. When the relative humidity rises above the value pre - set, the electric circuit is cut off via terminal LED blacks out. In order to protect the loads not to work too frequently, the return difference is 5 - 10%RH, means the electric circuit is closed when the humidity drops 5 - 10% below more than the value pre - set.
- Set up the operation range by adjusting the knob. When the ambient temperature drops below the value pre - set, the electric circuit is closed via terminal LED illuminates. When the ambient temperature rises above the value pre - set, the electric circuit is opened via terminal LED blacks out.

|                                  |  |
|----------------------------------|--|
| Humidity switching difference    | 4%RH(±3% tolerance)  |
| Temperature switching difference | 7k(±4k tolerance)  |
| Temperature sensor element       | Bimetal sensor   |
| Relative humidity range          | 35% - 95%RH  |
| Temperature control contact mode | Step type contact point  |
| Humidity control contact mode    | Chang - over switch  |
| Mean life                        | 750,000 cycles   |
| Min Switching capacity           | 20VAC/DC 100m A  |
| Max Switching capacity           | 250VAC/DC 5(1)A DC30W  |
| Connection                       | 5 - pole terminal,clamping torque 0.5Nm<br>Max for solid wire 2.5mm <sup>2</sup> and stranded wire(with wire and ferrule) 1.5mm <sup>2</sup> |
| Installation                     | 35mm Din rail  |
| Casing                           | UL94V - 0, light grey  |
| Dimension                        | 70x63x40mm   |
| Weight                           | 90g  |
| Fitting position                 | Cabinet top  |
| Operating temperature            | 0 - +60°C(+32 - +140°F)  |
| Storage temperature              | - 20 - +80°C(- 4 - +176°F)   |
| Protection level                 | IP20   |

# KTO 011 / KTS 011 Thermostat

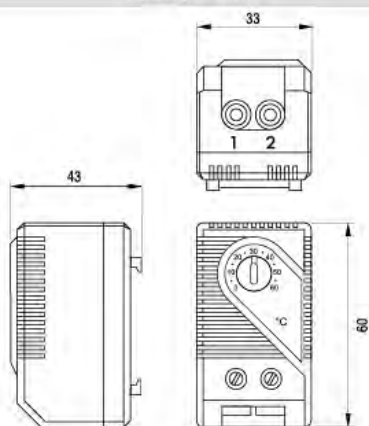


- Large setting range
- Small size
- Simple to mount
- High switching performance

**KTO 011:** Thermostat (normally closed); contact breaker for regulating heaters.

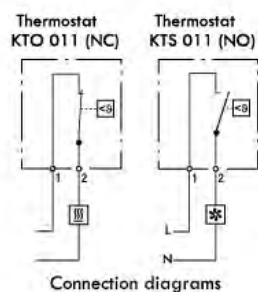
**KTS 011:** Thermostat (normally open); contact maker for regulating filter fans and heat exchangers or for switching signal device when temperature limit has been exceeded.

### Installing method

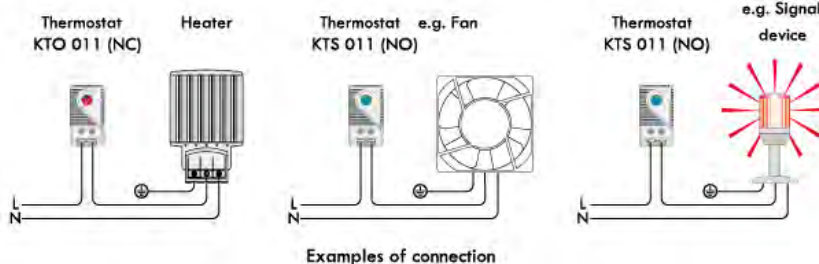


|                               |   |
|-------------------------------|---|
| Temperature range             | 0-60°C  |
| KTO 011 NC(Normally closed)   | When the temperature reaches the set value, open circuit  |
| KTS 011 NO(Normally open)     | When the temperature exceeds the set value action, closed circuit   |
| Switch temperature difference | 7K(±4K tolerance)   |
| Sensor element                | thermostatic bimetal  |
| Contact type                  | Snap-action   |
| Contact resistance            | < 10m ohm(Incidental connection line)   |
| Service life                  | >100,000 cycles   |
| Max. Switching capacity       | 250VAC,10(2)A   |
|                               | 120VAC,15(2)A   |
| Connection                    | 30WDC at 24VDC to 72VDC   |
|                               | 2-pole terminal, clamping torque 0.5Nm max.:<br>rigid wire 2.5mm <sup>2</sup> ,<br>stranded wire (with wire end ferrule) 1.5mm <sup>2</sup> |
| Casing                        | plastic according to UL94 V-0, light grey   |
| Installation                  | 35mm DIN Installation guide   |
| Dimensions                    | 60×33×43mm  |
| Weight                        | 40g   |
| fitting position              | variable  |
| Operating/Storage temperature | -20°C to +80°C  |
| Protection type               | IP20  |

Heater / Thermostat / Hygrostat



Heater  
 Filter fan,  
 Cooling equipment,  
 Signal device



|                             |  |  |                 |
|-----------------------------|--|--|-----------------|
| Setting range<br>0 to +60°C | Art. No. Contact Breaker (NC)<br>KTO 011 | Art. No. Contact Maker (NO)<br>KTS 011 | Approvals<br>CE |
|-----------------------------|--|--|-----------------|

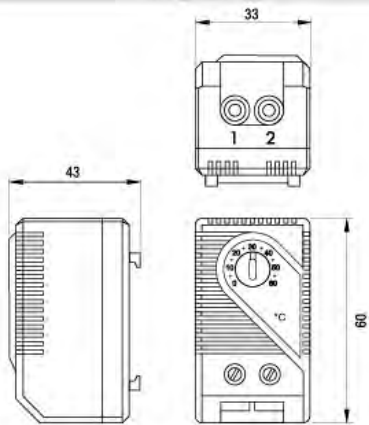


- Large setting range
- Small size
- Simple to mount
- High switching performance

**KTS 011-2:** Thermostat (normally closed); contact breaker for regulating heaters.

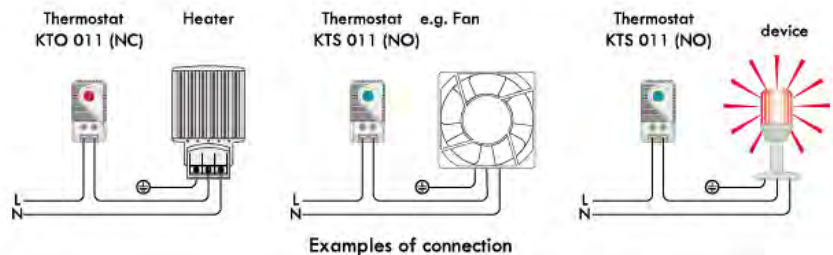
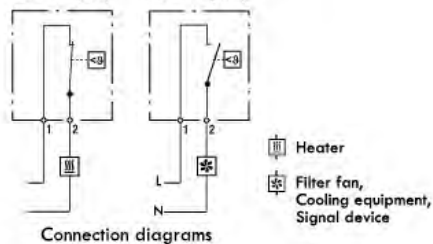
**KTO 011-2:** Thermostat (normally open); contact maker for regulating filter fans and heat exchangers or for switching signal device when temperature limit has been exceeded.

Installing method



|                               |   |
|-------------------------------|---|
| KTO 011-2 NC(Normally closed) | When the temperature reaches the set value, open circuit  |
| KTS 011-2 NO(Normally open)   | When the temperature exceeds the set value action, closed circuit   |
| Switch temperature difference | 7K(±4K tolerance)   |
| Sensor element                | thermostatic bimetal  |
| Contact type                  | Snap-action   |
| Contact resistance            | < 10m ohm(incidental connection line)   |
| Service life                  | >100,000 cycles   |
| Max. Switching capacity       | 250VAC,10(2)A   |
|                               | 120VAC,15(2)A   |
| Connection                    | 30WDC at 24VDC to 72VDC   |
|                               | 2-pole terminal, clamping torque 0.5Nm max.:<br>rigid wire 2.5mm <sup>2</sup> ,<br>stranded wire (with wire end ferrule) 1.5mm <sup>2</sup> |
| Casing                        | plastic according to UL94 V-0, light grey   |
| Installation                  | 35mm DIN Installation guide   |
| Dimensions                    | 60×33×43mm  |
| Weight                        | 40g   |
| fitting position              | variable  |
| Operating/Storage temperature | -20°C to +80°C  |
| Protection type               | IP20  |

Thermostat KTO 011 (NC)    Thermostat KTS 011 (NO)



| Setting range | Art. No. Contact Breaker (NC) | Art. No. Contact Maker (NO) | Approvals |
|---------------|-------------------------------|-----------------------------|-----------|
| 0 to +60°C    | 01140.0-00                    | 01141.0-00                  | CE        |
| -10 to +50°C  | 01142.0-00                    | 01143.0-00                  | CE        |
| +20 to +80°C  | 01159.0-00                    | 01158.0-00                  | CE        |
| 0 to +60°C    | 01146.9-00                    | 01147.9-00                  | CE        |

# ZR 011 Dual Thermostat



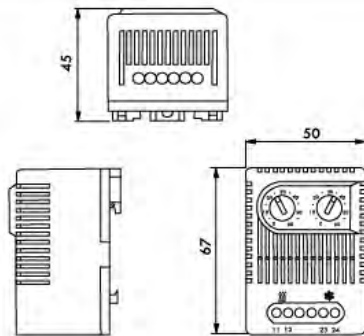
- NO and NC in one casing
- Separate adjustable temperatures
- High switching capacity
- Terminals easily accessible
- Clip Fixing

Two thermostats in one casing:

Thermostat(contact breaker, normally closed)for regulating heaters  
Thermostat(contact make, normally open) for regulating filter fans and heat exchangers or switching signal devices when temperature limit has been exceeded.

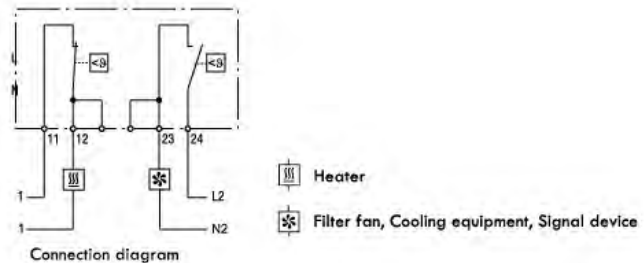
Heaters and cooling equipment can be switched independently from each other with a temperature offset a he usual change-over contacts.

Size chart



|                               |   |
|-------------------------------|---|
| Temperature range             | NO/NC:0-60°C  |
| Switch temperature difference | 7K(+4K tolerance)   |
| Sensor element                | thermostatic bimetal  |
| Contact type                  | Snap-action   |
| Contact resistance            | < 10m ohm   |
| Service life                  | >100,000 cycles   |
| Max. Switching capacity       | 250VAC,10(2)A<br>120VAC,15(2)A<br>DC 30W  |
| Connection                    | 4-pole terminal, clamping torque 0.5Nm max.:<br>rigid wire 2.5mm <sup>2</sup> ,<br>stranded wire (with wire end ferrule) 1.5mm <sup>2</sup> |
| Installation                  | 35mm DIN Installation guide   |
| Casing                        | UL94 V-0 Plastic, light gray  |
| Dimensions                    | 67×50×46mm  |
| Weight                        | 90g   |
| fitting position              | variable  |
| Operating/Storage temperature | -20°C to +80°C  |
| Protection type               | IP20  |

Thermostat  
ZR 011(NC/NO)



| Art. No. | Setting Range        |            | Setting Range      |            |
|----------|----------------------|------------|--------------------|------------|
| ZR 011   | Contact breaker (NC) | 0 to +60°C | Contact maker (NO) | 0 to +60°C |



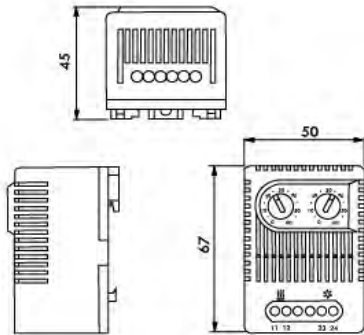
- NO and NC in one casing ■ Separate adjustable temperatures
- High switching capacity ■ Terminals easily accessible ■ Clip Fixing

Two thermostats in one casing:

Thermostat(contact breaker, normally closed)for regulating heaters  
Thermostat(contact make, normally open) for regulating filter fans and heat exchangers or switching signal devices when temperature limit has been exceeded.

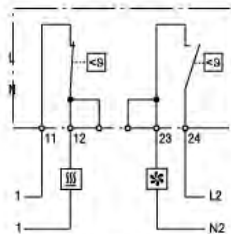
Heaters and cooling equipment can be switched independently from each other with a temperature offset as opposed to the usual change-over contacts.

Size chart



|                               |   |
|-------------------------------|---|
| Temperature range             | NO/NC:0-60°C  |
| Switch temperature difference | 7K(+4K tolerance)   |
| Sensor element                | thermostatic bimetal  |
| Contact type                  | Snap-action   |
| Contact resistance            | < 10m ohm   |
| Service life                  | > 100,000 cycles  |
| Max. Switching capacity       | 250VAC,10(2)A   |
|                               | 120VAC,15(2)A   |
| Connection                    | DC 30W  |
|                               | 4-pole terminal, clamping torque 0.5Nm max.:<br>rigid wire 2.5mm <sup>2</sup> ,<br>stranded wire (with wire end ferrule) 1.5mm <sup>2</sup> |
| Installation                  | 35mm DIN Installation guide   |
| Casing                        | UL94 V-0 Plastic, light gray  |
| Dimensions                    | 67×50×46mm  |
| Weight                        | 90g   |
| fitting position              | variable  |
| Operating/Storage temperature | -20°C to +80°C  |
| Protection type               | IP20  |

Thermostat  
ZR 011(NC/NO)

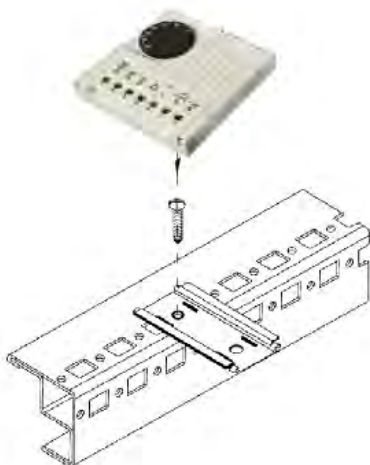
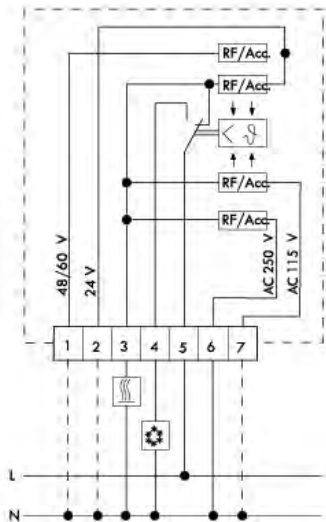


- Heater
- Filter fan, Cooling equipment, Signal device

Connection diagram

| Art. No. | Setting Range        |            | Setting Range      |            |
|----------|----------------------|------------|--------------------|------------|
| ZR 011-2 | Contact breaker (NC) | 0 to +60°C | Contact maker (NO) | 0 to +60°C |

# JWT6011 Enclosure Internal Thermostat



- Bi-metal controller as a temperature sensitive element with thermal feedback.
- Contact population: Single-pole change-over contact as a quick-break contact.
- Permissible contact load:  
Cat. 5 - 3 (heating) AC 10 (4\*) A, DC = 30 W Cat. 5 - 4 (cooling) AC 5 (4\*) A, DC = 30 W  
\* ( ) = inductive load at  $\cos \phi = 0.6$
- Setting range: 0 °C to + 60 °C
- Weight: 105g appr Size: 71x71x33.5mm Switch discrepancy: 1K  $\pm$  0.8K
- Voltage scope is wide, any type could be used from 24V to 230 V
- Time-saving connection, terminal block could be installed screw from outside
- Easy installation, could be installed to 35mm din rail vertically or horizontally, according to EN50 022,it could be clipped to TS/35 cabinet profile with its accessory adapter.

Application Especially suitable for controlling fan-and-filter units, heaters and heat exchangers, this thermostat can also be used as a signal generator for monitoring the enclosure internal temperature.

| Sensing element              | Bimetallic   |
|------------------------------|--|
| Shock configuration          | Conversion of electric shock as a transient unipolar switching elements  |
| Permissible contact load     | Cat. 5 - 3 (heating) AC 10 (4*) A, DC = 30 W Cat. 5 - 4 (cooling) AC 5 (4*) A, DC = 30 W * ( ) = inductive load at $\cos \phi = 0.6$ |
| Temperature adjustment range | 0°C to +60°C   |
| Rated voltage                | 230/115/60/48/24V (AC) 60/48/24V (DC)  |
| Weight                       | 105g   |
| Size                         | 71X71X33.5mm   |
| Switching difference         | 1K $\pm$ 0.8K  |

**Rated voltage**  
230/115/60/48/24V(AC)  
60/48/24V (DC)

| 48V<br>60V<br>N | 24V<br>N | ⚡ | ⚡⚡<br>⚡⚡ | (L1*)<br>L | (L2*)<br>250V<br>N | 115V<br>N |
|-----------------|----------|---|----------|------------|--------------------|-----------|
| 1               | 2        | 3 | 4        | 5          | 6                  | 7         |

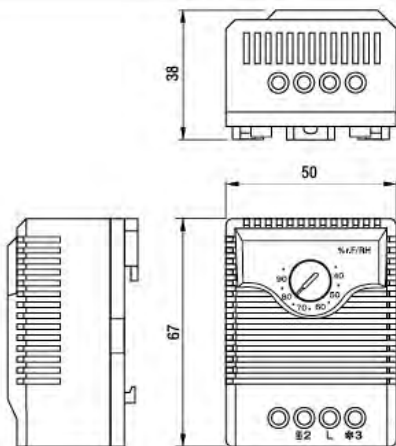
Heater/Thermostat/Hygrostat



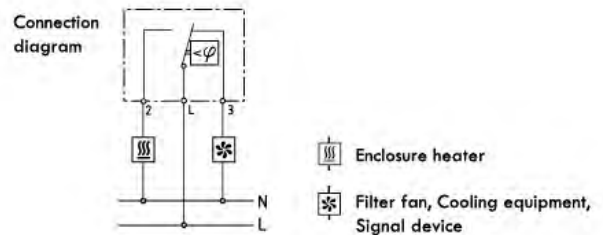
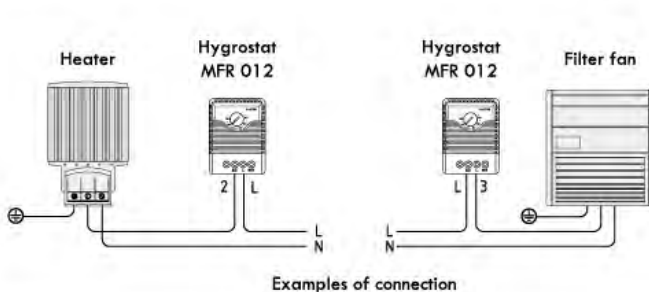
- Adjustable relative humidity
- Change-over contact
- High switching capacity
- Easily accessible terminals
- Clip fixing

The electromechanical hygrostat is designed to control enclosure heaters so that the dew point is raised when a critical relative humidity of 65% is exceeded. In this way condensation and corrosion in enclosures with electric/electronic components is effectively prevented.

**Connection**



|                               |   |
|-------------------------------|---|
| Switching error               | 4% RH ( $\pm 3\%$ tolerance)  |
| Relative humidity range       | 35%-95%   |
| Allow wind speed              | 1.5m/sec  |
| Contact type                  | Changeover contact  |
| Contact resistance            | < 10m ohm   |
| Service life                  | > 50,000 cycles   |
| Mix. Switching capacity       | 20V AC/DC 100 mA  |
| Max. Switching capacity       | 25 VAC, 5 A   |
| Connection                    | 3-pole terminal for 2.5mm <sup>2</sup> , clamping torque 0.5Nm max.: rigid wire 2.5mm <sup>2</sup> , stranded wire (with wire end ferrule) 1.5mm <sup>2</sup> |
| Installation                  | 35mm DIN Installation guide   |
| Casing                        | UL94 V-0 Plastic, light gray  |
| Dimensions                    | 67x50x38mm  |
| Weight                        | about 60g   |
| Fitting position              | variable  |
| Operating/Storage temperature | 0 ~ +60°C (+32 ~ +140°F) / -20 ~ +80°C (-4 ~ +176°F)  |
| Protection type               | IP20  |



|          |               |
|----------|---------------|
| Art. No. | Setting range |
| MFR 012  | 35 to 95% RH  |

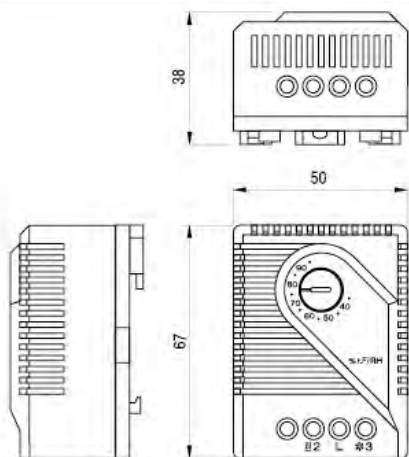
# MFR012-2 Mechanical Hygrostat



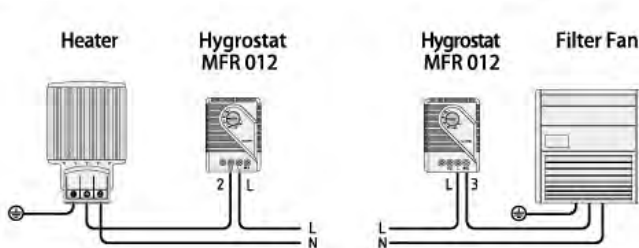
- Adjustable relative humidity
- Easily accessible terminals
- Change-over contact
- Clip fixing
- High switching capacity

The electromechanical hygrostat is designed to control enclosure heaters so that the dew point is raised when a critical relative humidity of 65% is exceeded. In this way condensation and corrosion in enclosures with electric/electronic components is effectively prevented.

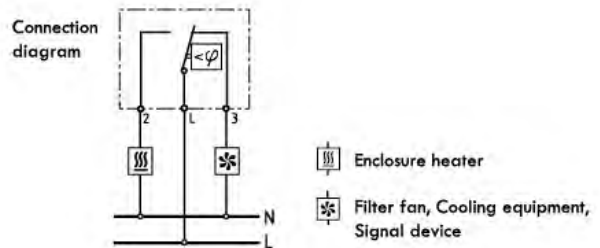
### Connection



|                                 |  |
|---------------------------------|--|
| Switch difference*              | 4% RH ( $\pm 3\%$ tolerance)   |
| Permissible air velocity        | 15m/sec.   |
| Contact type                    | change-over contact  |
| Service life                    | >50,000 cycles   |
| Mix. Switching capacity         | 250VAC, 5A 20WDC   |
| Max. Switching capacity         | 5AAC   |
| Connection                      | 3-pole terminal for 2.5mm <sup>2</sup> , clamping torque 0.5Nm max.:rigid wire 2.5mm <sup>2</sup> stranded wire (with wire end ferrule) 1.5mm <sup>2</sup> |
| Mounting                        | clip for 35mm DIN rail, EN 60715   |
| Casing                          | plastic according to UL94 V-0, light grey  |
| Dimensions                      | 67 x 50 x 38mm   |
| Weight                          | approx. 60g  |
| Fitting position                | variable   |
| Operating / Storage temperature | 0 to +60°C (+32 to +140°F) / -40 to +60°C (-40 to +140°F)  |
| Operating / Storage humidity    | max. 90% RH (non-condensing)   |
| Protection type                 | IP20   |
| Approvals                       | UL File No. E164102  |



Examples of connection



|          |               |
|----------|---------------|
| Art. No. | Setting range |
| MFR012-2 | 35 to 95% RH  |

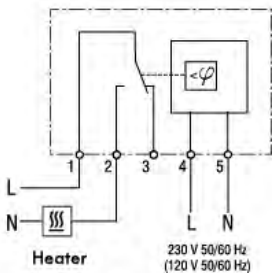
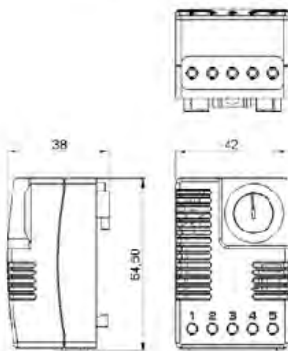
Heater / Thermostat / Hygrostat



- Temperature and humidity adjustable
- High switching capacity
- Optical operating display (LED)
- Clip fixing

The electronic hygrotherm senses the ambient temperature and relative humidity in an enclosure with electric / electronic components and turns on a heater (or alternatively a fan) at either set point, helping prevent the formation of condensation in the enclosure. The LED integrated in the adjustment knob on the active controller is lit when the connected device is in operation.

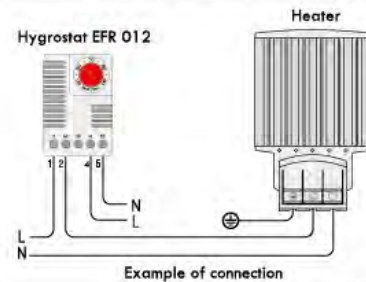
Size chart



Connection diagram

|  |  |
|--|--|
| Switch difference                      | 5% RH ( $\pm 1\%$ RH tolerance) at 25°C/77°F (50% RH)  |
| Reaction time                          | 5 sec.   |
| Contact type                           | change-over contact (relay)  |
| Service life                           | > 50,000 cycles  |
| Max. switching capacity (relay output) | 240VAC, 8(1.6) A ; 120VAC, 8 (1.6)A ; 100WDC at 24VDC  |
| EMC                                    | acc.to EN 55014-1-2, EN 61000-3-2, EN 61000-3-3  |
| Optical indicator                      | LED  |
| Connection                             | 5-pole terminal, clamping torque 0.5Nm max.rigid wire<br>2.5mm <sup>2</sup> stranded wire (with wire end ferrule) 1.5mm <sup>2</sup> |
| Mounting                               | clip for 35mm DIN rail, ( EN50022 )  |
| Casing                                 | UL94 V-0, light grey   |
| Dimensions                             | 64.5 x 42 x 38mm   |
| Weight                                 | approx. 70g  |
| Fitting position                       | vertical   |
| Operating / Storage temperature        | 0 to +60°C(+32 to +140°F) / -20 to +70°C(-4 to +158°F)   |
| Operating / Storage humidity           | max. 90 % RH (non-condensing)  |
| Protection type                        | IP20   |

| Art. No.    | Operating voltage | Setting range  |
|-------------|-------------------|----------------|
| 01 245.0-00 | 230VAC, 50/60Hz   | 40 to 90% RH   |
| 01 246.0-00 | 230VAC, 50/60Hz   | 65% RH pre-set |
| 01 245.9-00 | 120VAC, 50/60Hz   | 40 to 90% RH   |
| 01 246.9-00 | 120VAC, 50/60Hz   | 65% RH pre-set |



Example of connection

| Art. No.    | Operating voltage | Setting range  | Approvals |
|-------------|-------------------|----------------|-----------|
| 01 245.0-00 | 230VAC, 50/60Hz   | 40 to 90% RH   | CE        |
| 01 246.0-00 | 230VAC, 50/60Hz   | 65% RH pre-set | CE        |
| 01 245.9-00 | 120VAC, 50/60Hz   | 40 to 90% RH   | CE        |
| 01 246.9-00 | 120VAC, 50/60Hz   | 65% RH pre-set | CE        |

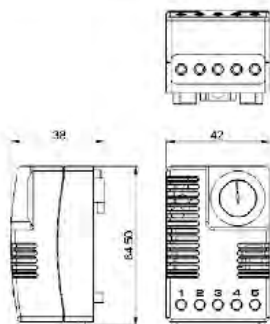
# ETR 011 Electronic Thermostat



- Large setting range
- Optical operating display (LED)
- Change-over contact
- Small hysteresis
- Clip fixing

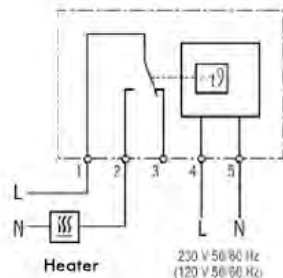
The electronic thermostat is used for controlling heating and cooling equipment, filter fans or signal devices. The thermostat registers the surrounding air and can switch both inductive and resistive loads via relay with change-over contact. The LED integrated in the adjustment knob is lit when the NC contact is closed (e.g. when a connected heater is operating).

Size chart

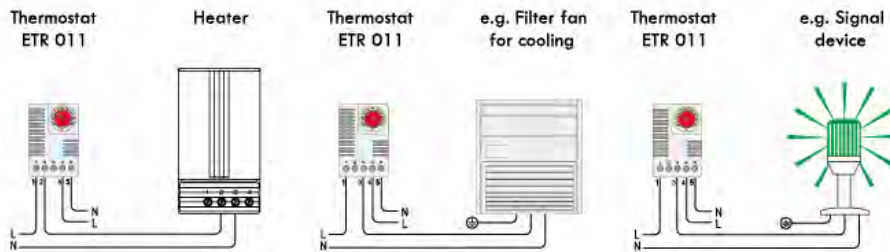


|  |   |
|--|---|
| Switch difference                      | 4K (±1K tolerance) at 20 °C/68 °F   |
| Sensor element                         | NTC   |
| Reaction time                          | 5 sec   |
| Contact type                           | change-over contact (relay)   |
| Service life                           | > 50,000 cycles   |
| Max. switching capacity (relay output) | 240VAC,8(1.6)A/120VAC,8(1.6)A 100WDC at 24VDC   |
| Max. Inrush current                    | 16AAC for 10 sec.   |
| Optical indicator                      | LED   |
| Connection                             | 5-pole terminal, clamping torque 0.5Nm max.; rigid wire 2.5mm <sup>2</sup> stranded wire (with wire end ferrule) 1.5mm <sup>2</sup> |
| Mounting                               | clip for 35mm DIN rail, EN 60715  |
| Casing                                 | plastic according to UL94 V-0, light grey   |
| Dimensions                             | 64.5 x 42 x 38mm  |
| Weight                                 | approx. 70g   |
| Fitting position                       | vertical  |
| Operating / Storage temperature        | -40 to +85°C (-40 to +185°F)  |
| Operating / Storage humidity           | max. 90 % RH (non-condensing)   |
| Protection type                        | IP20  |

| Art. No.   | Operating voltage | Setting range |
|------------|-------------------|---------------|
| 01131.0-00 | 230VAC, 50/60Hz   | -20 ~ 60°C    |



Connection diagram



Examples of connection

| Art. No.   | Operating voltage | Setting range | Approvals |
|------------|-------------------|---------------|-----------|
| 01131.0-00 | 230VAC, 50/60Hz   | -20 to 60°C   | CE        |

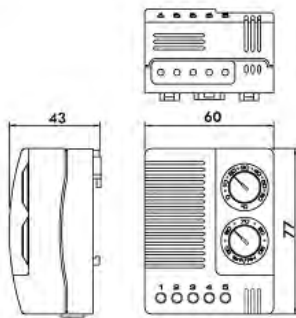
heater / thermostat / Hygrostat



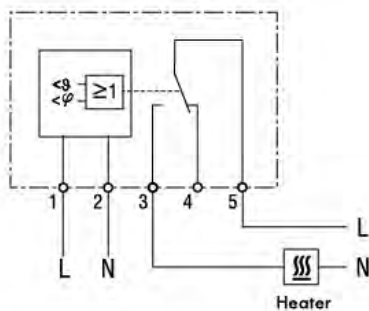
- Temperature and humidity adjustable
- High switching capacity
- Optical operating display (LED)
- Clip fixing

The electronic hygrotherm senses the ambient temperature and relative humidity in an enclosure with electric / electronic components and turns on a heater (or alternatively a fan) at either set point, helping prevent the formation of condensation in the enclosure. The LED integrated in the adjustment knob on the active controller is lit when the connected device is in operation.

Size chart

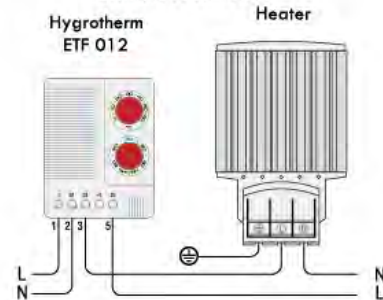


Connection diagram



|  |   |
|--|---|
| Switch difference (temperature)        | 2K ( $\pm 1$ K tolerance) at 25°C/77°F (50% RH)   |
| Switch difference (humidity)           | 4% RH ( $\pm 1$ % tolerance) at 25°C/77°F (50% RH)  |
| Reaction time (humidity)               | 5 sec.  |
| Contact type                           | change-over contact (relay)   |
| Contact resistance                     | < 10m ohm   |
| Service life                           | NC: 50,000 cycles<br>NO: 100,000 cycles<br>NC: 240VAC, 6(1)A<br>NO: 120VAC, 8(1.6)A   |
| Max. Switching capacity (relay output) | NC: 240VAC, 6(1)A<br>NO: 120VAC, 8(1.6)A<br>100WDC at 24VDC   |
| EMC                                    | acc.to EN 55014-1-2, EN 61000-3-2<br>EN 61000-3-3   |
| Optical indicator                      | LED   |
| Connection                             | 5-pole terminal for 2.5mm <sup>2</sup> , clamping torque 0.5Nm max,<br>rigid wire 2.5mm <sup>2</sup> stranded wire (with wire end ferrule) 1.5mm <sup>2</sup> |
| Mounting                               | clip for 35mm DIN rail, EN 60715  |
| Casing                                 | plastic according to UL94 V-0. light grey   |
| Dimensions                             | 77×60×43mm  |
| Weight                                 | approx. 0.2kg   |
| Fitting position                       | vertical  |
| Operating / Storage temperature        | 0 to +60°C ( +32°C to +140°F ) / -20°C to +80°C ( -4°C to +176°F )  |
| Protection type                        | IP20  |

Example of connection



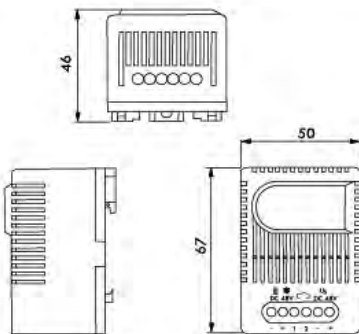
| Art. No.   | Operating voltage | Setting range temperature | Setting range humidity | Approvals |
|------------|-------------------|---------------------------|------------------------|-----------|
| 01230.0-00 | 230VAC, 50/60Hz   | 0 to +60°C                | 50 to 90% RH           | CE        |
| 01230.9-01 | 120VAC, 50/60Hz   | 0 to +60°C                | 50 to 90% RH           | CE        |

# Switch Module SM010 (24VDC+48VDC)



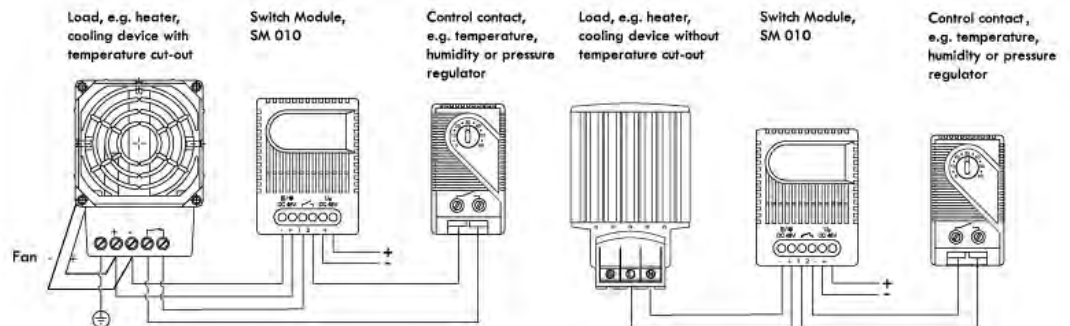
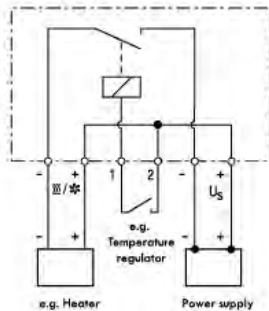
- High DC switching capacity
  - Variety of applications
  - Compact design
  - Simple connection
  - Clip fixing
- Switch module for switching DC appliances with high switching capacity. A Separate conventional switch contact is used as control (e.g. temperature regulator, humidity regulator). The switch module is available in 24VDC and 48VDC versions.

Size chart



|                               |   |
|-------------------------------|---|
| Contact type                  | contact maker, normally open(Relay/MOSFET)                                |
| Contact resistance            | < 10m ohm   |
| Service life                  | > 100 000 cycles  |
| EMC                           | acc. to EN 55014-1-2, EN 61000-3-2, EN 61000-3-3                          |
| Connection                    | 6-pole terminal, clamping torque 0.5Nm max, rigid wire 2.5mm <sup>2</sup> |
| Mounting                      | clip for 35mm DIN rail, EN50022   |
| Casing                        | plastic according to UL94 V-0, light grey                                 |
| Dimensions                    | 67 x 50 x 46mm  |
| Weight                        | approx, 85g   |
| Fitting position              | variable  |
| Operating/Storage temperature | -45 to +70°C (-49 to +158°F)  |
| Protection type               | IP20  |
| Certificate                   | VDE intended  |

| Art.No.    | Operating voltage. | Max.Switching capacity |
|------------|--------------------|------------------------|
| 01001.0-00 | 24VDC (20-28VDC)   | 28VDC 16A              |
| 01000.0-00 | 48VDC (38-56VDC)   | 56VDC 16A              |



| Art. No.   | Operating voltage | Max. switching capacity | Max. inrush current |
|------------|-------------------|-------------------------|---------------------|
| 01001.0-00 | 24VDC (20-28VDC)  | 28VDC 16A               | 16ADC               |
| 01000.0-00 | 48VDC (38-56VDC)  | 56VDC 16A               | 16ADC               |

Heater/Thermostat/Hygrosstat



### General

LKHP 20 series dehumidifier is designed specifically for the needs of the various cabinet anti-condensation, use thermoelectric semiconductor with high thermoelectric conversion efficiency, compact, high efficiency dehumidifier, can effectively prevent equipment insulation level decline due to condensation and attached filth on equipment insulating surface, avoid creepage and flashover accidents caused by condensation.

### Technical parameter

|                      |   |
|----------------------|---|
| Power supply         | AC/DC 110~220V±10%<br>DC 48V±10%; DC24V±10% |
| Humidity accuracy    | ±5%RH                                       |
| Temperature accuracy | ±1℃   |

### Advantage

- ◆ Compact, suitable for switchgear, small impact on the structure and layout of the cabinet.
- ◆ High humidity gas entering the dehumidifier will dew after contacted with thermoelectric semiconductor, and condensation will be discharge cabinet. It is a high efficiency dehumidifier.
- ◆ With strong ability of dehumidification, 30W power consumption to ensure 1m<sup>3</sup> switchgear internal humidity is maintained at 60% RH.
- ◆ Non-heat sources, can protect switch cabinet equipment. Dehumidification equipment in more traditional switchgear is heater, although certain dehumidifying effect, but the long-term use will due to high temperature that may cause switchgear equipment damage.
- ◆ Semiconductor dehumidifier can reduce the moisture content of unit volume, which can effectively prevent the generation of condensation; heater dehumidification mode only reduces the relative humidity and does not reduce the water content in a unit volume of air, so once match temperature conditions, condensation will happen.
- ◆ Automatic control based on temperature and humidity, can effectively reduce energy consumption.
- ◆ Dehumidification function failure alarm contact output.
- ◆ Semi-permanent lossless parts as the main components, long life, long-term use without maintenance.

### Model explanation

| Model     | Dehumidification<br>30℃ 85%RH | Cubage          | Humidity   | Temperature                                      | Power Supply       | Power | Dimension<br>H×W×D mm |
|-----------|-------------------------------|-----------------|--|--|--------------------|-------|-----------------------|
| LKHP20-A1 | 10ml/Hr                       | 1m <sup>3</sup> | ≥55%RH<br>Dehumidify<br>≤45%RH<br>Stop<br>Dehumidify | Suction air<br>≥50℃ or ≤5℃<br>Stop<br>Dehumidify | AC/DC 110~220V±10% | ≤30W  | 200×134×70.5          |
| LKHP20-B1 |                               |                 |  |  | DC 48V±10%         |       |                       |
| LKHP20-C1 |                               |                 |  |  | DC 24V±10%         |       |                       |
| LKHP20-A2 | 22ml/Hr                       | 2m <sup>3</sup> | Stop<br>Dehumidify                                   | Stop<br>Dehumidify                               | AC/DC 110~220V±10% | ≤60W  |                       |
| LKHP20-B2 |                               |                 |  |  | DC 48V±10%         |       |                       |
| LKHP20-C2 |                               |                 |  |  | DC 24V±10%         |       |                       |

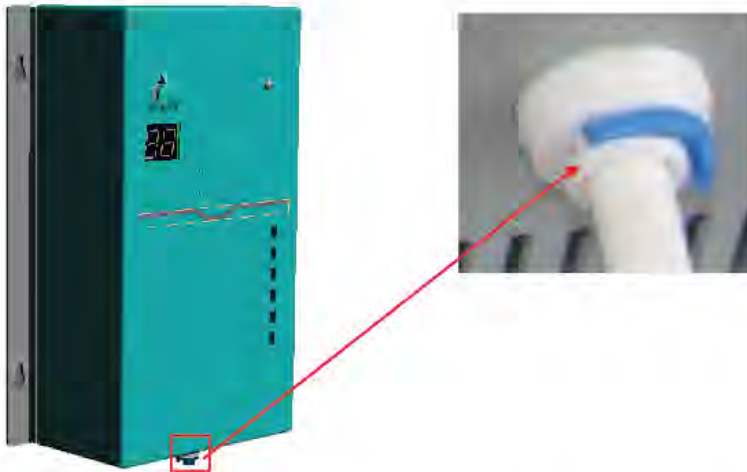
Note: If without control based on humidity and temperature, model is add "-NC", e.g. LKHP20-A1-NC.

**Terminal and Interface**

|           |   |   |
|-----------|---|---|
| Terminal  | 1、 2  | Power supply.1: L (+) ; 2: N(-)   |
|           | 3、 4  | Alarm output contact, Passive contact,AC250V 5A.<br>NO,close while function of dehumidifier is out of order.<br>Function out of order defined: Temperature sensor or humidity sensor fault; Duration of Dehumidifier work is over 24 hours, RH≥80%RH. |
| Indicator | Power indicator. On front panel of dehumidifier, lights up if power supply normal, Green. |   |
| Display   | Display windows display real-time humidity.   |   |

**Installation Instructions**

**6.1 Drainage tube installation**



**Drainage tube connector**

**Install drainage tube:** Drainage tube inserted into this connector, and put on the blue clamp to complete the installation

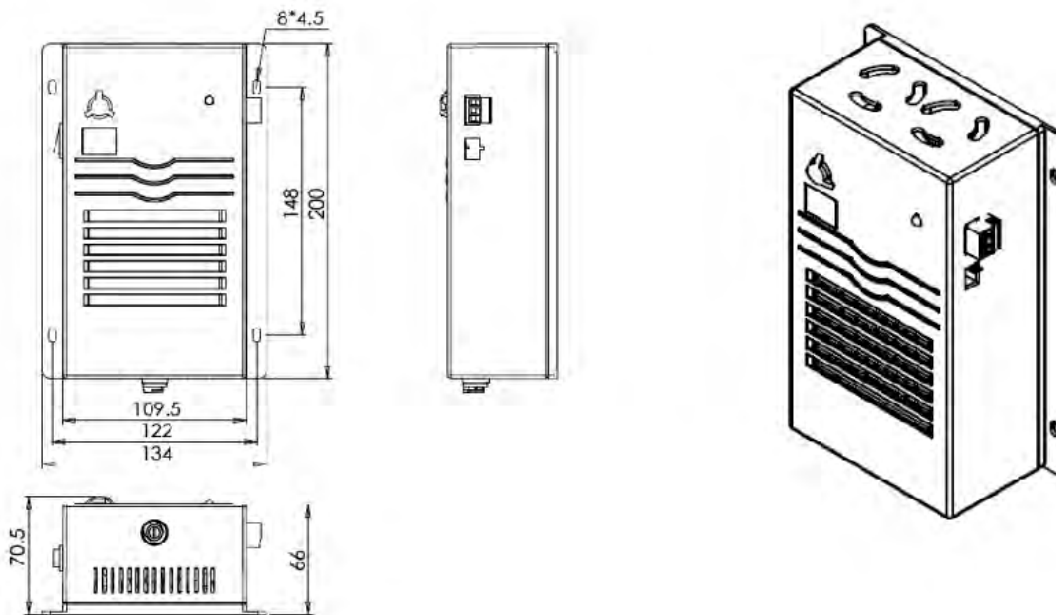
**Dismounting drainage tube:** Remove the blue clamp, draw out the drainage tube after press the white tube tongue to bottom. External diameter of drainage of tube is 6.5mm.

**Note:** Drainage tube should be kept straight, winding, and other end leads to the outer cabinet.

6.2 Please ensure the dehumidifier and the horizontal plane is vertical, not tilted installation.

6.3 10 cm space around the dehumidifier and other devices; guarantee that the blower outlet flow, shall not be covered.

**Dimension**



Heater/Thermostat/Hygrosat



**Features:**

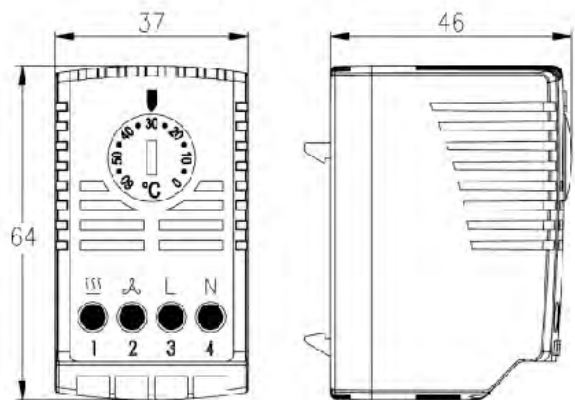
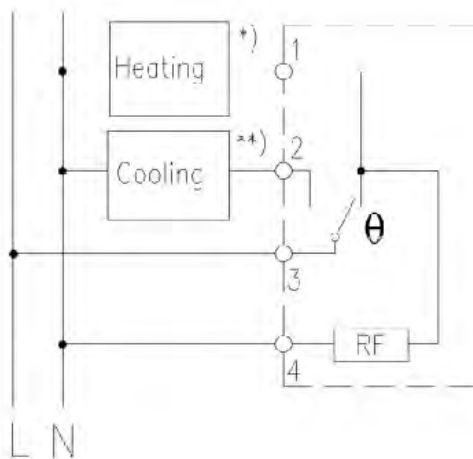
- Easily mounted on 35mm DIN rails with snap on attachment per EN50022

**Product Description:**

Temperature controller for controlling cabinet heaters, filter fans, slide-in fans, heat exchangers etc.

- Locking adjusting knob grey scale
- Standard thermic reduction

|                           |  |
|---------------------------|--|
| Storage temperature       | -20° bis + 80°C                                |
| Switching current         | 100-250VAC                                     |
| Heating (opened con.)     | 10 A (2) DC 30W                                |
| Cooling (closed con.)     | 5 A (2) DC 30W                                 |
| Switching hysteresis      | Approx. 5 K (with thermic reduction approx.1K) |
| Contact                   | 2 way  |
| Connection                | 4 screw terminals 2,5 mm <sup>2</sup>          |
| Sensor element            | Bimetal  |
| Service life time         | > 100.000 switching cycles                     |
| Temperature control range | 0...+60°C                                      |
| Surface finish            | Plastic light grey UL94VO                      |
| Dimension (WxHxD)         | 37x64x46mm                                     |
| Weight                    | 0.06 kg  |
| Protection type           | IP20   |



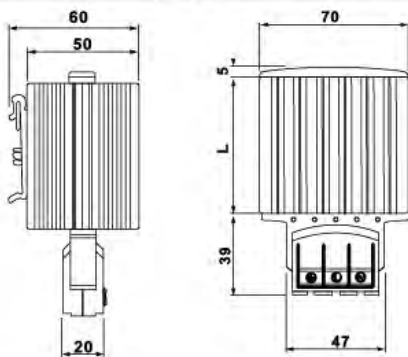
# HG140 Type Heater



- Pressure clamp connectors
- Dynamic heating up
- wide voltage range
- Temperature limiting
- Energy saving
- Clip fixing
- Quick installation

These heaters are used in enclosures where damage from condensation must be prevented or where the temperature may not fall below a minimum value. The aluminium profile heater body design has a chimney effect and distributes the heat evenly. The pressure clamp connectors save time and simplify installation.

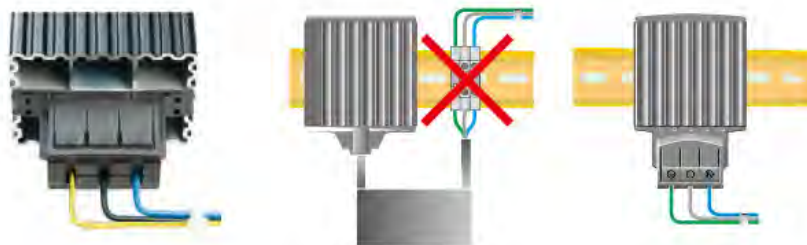
Size chart



|                                  |   |
|----------------------------------|---|
| Operating voltage                | 120-250V AC/DC  |
| Heating element                  | PTC resistor, self regulating and temperature limiting  |
| Heater body                      | extruded aluminium profile, anodised  |
| Connection casing                | 3 pressure clamps for stranded wire 0.5-1.5mm <sup>2</sup> (with wire and ferrule) and rigid wire 0.5-2.5mm <sup>2</sup> plastic according to UL94 V-0, black |
| Mounting                         | clip for 35mm DIN rail, EN 50022  |
| Fitting position                 | vertical  |
| Operating/Storage temperature    | -45 to +70°C (-49 to +158°F)  |
| Protection type/Protection class | IP20/I(earthed)   |
| Certificate                      | CE  |

Operating with voltages below 140V AC/DC reduces heating performance by approx, 10%

| Type   | Heating capacity | Inrush current max. | Length(L) (mm) | Weight (approx) |
|--------|------------------|---------------------|----------------|-----------------|
| HG 140 | 15W              | 1.5                 | 75             | 0.3             |
| HG 140 | 30W              | 3                   | 75             | 0.3             |
| HG 140 | 45W              | 3.5                 | 75             | 0.3             |
| HG 140 | 60W              | 2.5                 | 75             | 0.3             |
| HG 140 | 75W              | 4                   | 75             | 0.3             |
| HG 140 | 100W             | 4.5                 | 145            | 0.5             |
| HG 140 | 150W             | 9                   | 145            | 0.5             |

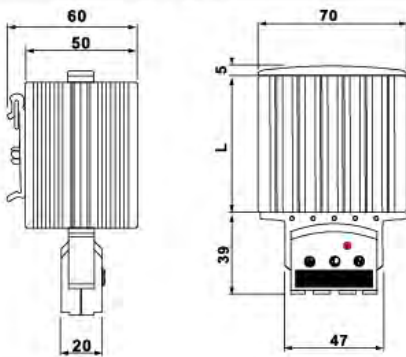




- Screw terminal connector
- Dynamic heating up
- wide voltage range
- Temperature limiting
- With indicator showing on/off
- Energy saving
- Clip fixing
- Quick installation

These heaters are used in enclosures where damage from condensation must be prevented or where the temperature may not fall below a minimum value. The aluminium profile heater body design has a chimney effect and distributes the heat evenly. The pressure clamp connectors save time and simplify installation.

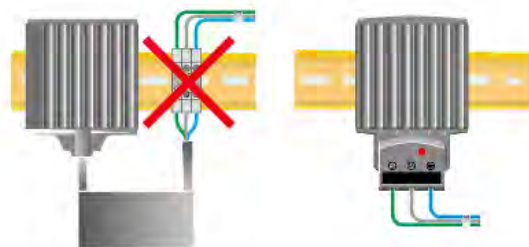
Size chart



|                                  |   |
|----------------------------------|---|
| Operating voltage                | 120-250V AC/DC  |
| Heating element                  | PTC resistor, self regulating and temperature limiting  |
| Heater body                      | extruded aluminium profile, anodised  |
| Connection casing                | 3 pressure clamps for stranded wire 0.5-1.5mm <sup>2</sup> (with wire and ferrule) and rigid wire 0.5-2.5mm <sup>2</sup> plastic according to UL94 V-0, black |
| Mounting                         | clip for 35mm DIN rail, EN 50022  |
| Fitting position                 | vertical  |
| Operating/Storage temperature    | -45 to +70°C (-49 to +158°F)  |
| Protection type/Protection class | IP20/I(earthed)   |
| Certificate                      | CE  |

Operating with voltages below 140V AC/DC reduces heating performance by approx, 10%

| Type   | Heating capacity | Inrush current max. | Length(L) (mm) | Weight (kg) |
|--------|------------------|---------------------|----------------|-------------|
| LK 140 | 15W              | 1.5                 | 65             | 0.2         |
| LK 140 | 30W              | 2.5                 | 65             | 0.2         |
| LK 140 | 45W              | 3                   | 65             | 0.2         |
| LK 140 | 60W              | 3.5                 | 65             | 0.2         |
| LK 140 | 75W              | 4                   | 65             | 0.2         |
| LK 140 | 100W             | 4.5                 | 145            | 0.4         |
| LK 140 | 150W             | 9                   | 145            | 0.4         |



# Small semiconductor Heater HGK 047 Series 10W to 30W

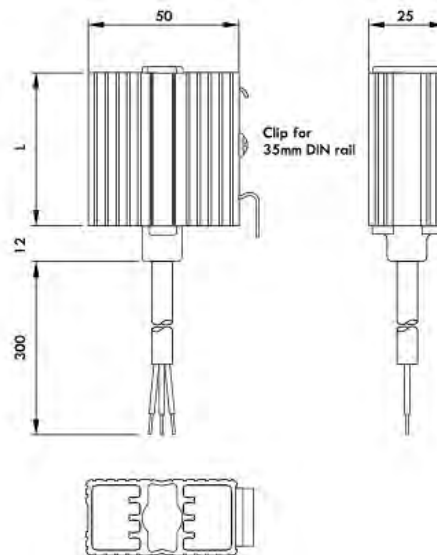
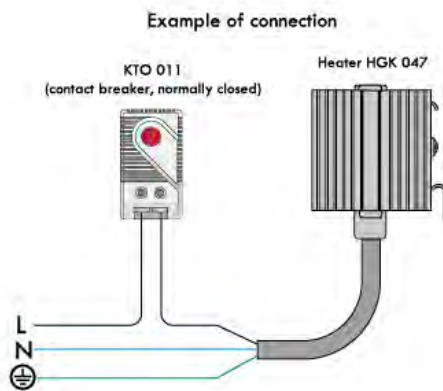


- Dynamic heating up
- Energy saving
- Wide voltage range
- Clip fixing

The heaters are used in enclosures where condensation is to be prevented or the temperature may not fall below a minimum value. In this way corrosion is avoided and an even temperature is ensured. The heaters are designed for permanent operation.

|                                    |  |
|------------------------------------|--|
| Heating element                    | PTC resistor - temperature limiting                    |
| Heater body                        | extruded aluminium profile, anodised                   |
| Mounting                           | clip for 35mm DIN rail, EN 60715                       |
| Fitting position                   | vertical airflow (air outlet up, connection on bottom) |
| Operating / Storage                | -45 to +70°C (-49 to +158°F)                           |
| Operating / Storage humidity       | max. 90% RH (non-condensing)                           |
| Protection type / Protection class | IP44 / I (earthed)                                     |
| Accessories                        | screw fixing   |
| Note                               | other voltages on request                              |

Heater / Thermostat / Hygrostat



| Art. No.   | Operating voltage            | Heating capacity <sup>1)</sup> | Inrush current max. | Pre-fuse T (time-delay) | Length (L) | Weight (approx.) | Connection                                      | Approvals |
|------------|------------------------------|--------------------------------|---------------------|-------------------------|------------|------------------|---|-----------|
| 04700.0-00 | 120-240V AC/DC <sup>2)</sup> | 10W                            | 1.0A                | 1A                      | 52mm       | 0.1kg            | 3 x 0.5mm <sup>2</sup> x 300mm cable (silicone) | CE        |
| 04701.0-00 | 120-240V AC/DC <sup>2)</sup> | 20W                            | 2.5A                | 2A                      | 60mm       | 0.2kg            | 3 x 0.5mm <sup>2</sup> x 300mm cable (silicone) | CE        |
| 04702.0-00 | 120-240V AC/DC <sup>2)</sup> | 30W                            | 3.0A                | 2A                      | 70mm       | 0.2kg            | 3 x 0.5mm <sup>2</sup> x 300mm cable (silicone) | CE        |
| 04700.9-00 | 110-120V AC/DC               | 10W                            | 1.0A                | 1A                      | 52mm       | 0.1kg            | 3 x AWG 20 x 300mm cable                        | CE        |
| 04701.9-00 | 110-120V AC/DC               | 20W                            | 1.5A                | 2A                      | 70mm       | 0.2kg            | 3 x AWG 20 x 300mm cable                        | CE        |
| 04702.9-00 | 110-120V AC/DC               | 30W                            | 1.5A                | 2A                      | 100mm      | 0.2kg            | 3 x AWG 20 x 300mm cable                        | CE        |

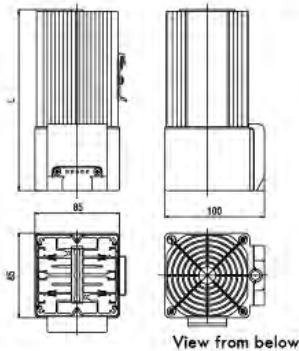
<sup>1)</sup> at 20°C (68°F) ambient temperature; <sup>2)</sup> (min. 110V, max 265V) Operating with voltages below 140V AC/DC reduces heating performance by approx. 10%.



- Compact Design
- Maintenance free
- Clip fixing
- Temperature safety cut-out
- Long service life

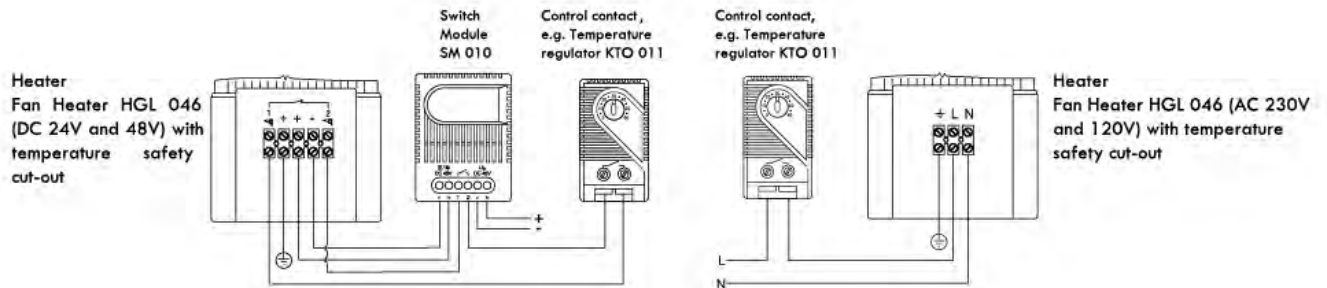
Compact fan heater prevents formation of condensation. The integrated high performance axial fan provides forced air circulation and so guarantees an even temperature in enclosures. With internal terminal connector.

Size chart



|                                  |  |
|----------------------------------|--|
| Operating voltage                | 230V AC 50/60Hz  |
| Heating element                  | PTC resistor, self regulating and temperature limiting   |
| Temperature safety cut-out       | to protect against overheating in case of fan failure  |
| Heater body                      | anodised extruded aluminium profile  |
| Surface temperature              | max. 75 °C(400W)   |
| Axial fan, ball bearing          | Airflow, free flow AC: 45m <sup>3</sup> /h (50HZ) or 54m <sup>3</sup> /h (60HZ)<br>DC: 54m <sup>3</sup> /h service life 50 000h at 25°C (77°F) |
| Connection                       | internal connection terminal 1.5mm <sup>2</sup><br>with strain relief clamping torque 0.8Nm max.   |
| Connection casing                | plastic according to UL94 V-0,black  |
| Mounting                         | clip for 35mm DIN rail, EN 50022   |
| Fitting position                 | vertical   |
| Operating/Storage temperature    | -45 to +70 °C(-49 to+158°F)  |
| Protection type/Protection class | IP20 / I (earthed)   |

| Type       | Operating voltage | Heating capacity | Length (L)  | Weight (approx.) |
|------------|-------------------|------------------|-------------|------------------|
| HGL046-250 | 230VAC, 50/60HZ   | 250W             | 85x182x85mm | 1.10kg           |
| HGL046-400 | 230VAC, 50/60HZ   | 400W             | 85x222x85mm | 1.40kg           |



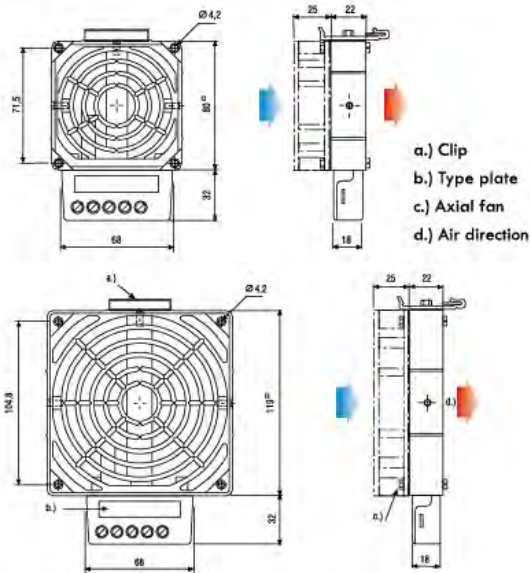
# HV/HVL 031 Heater



- Compact / Flat design
- High air through-flow
- Temperature safety cut-out
- Clip fixing

Compact high-performance fan heater prevents formation of condensation and frost and provides an evenly distributed interior air temperature in enclosures with electric/electronic components. This fan heater is available without fan (HV 031) and with fan (HVL 031).

Size chart



**Important!** Heater may only be operated together with fan. Danger of overheating!

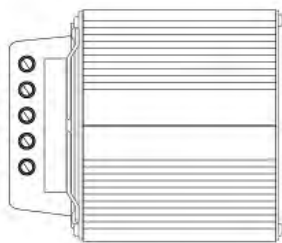
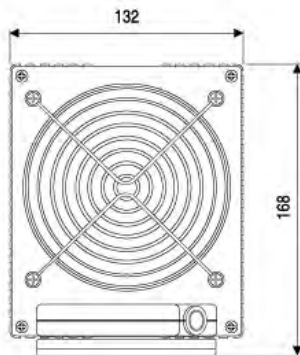
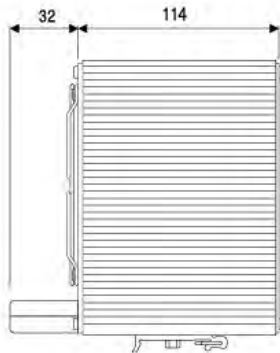
|                                  |   |
|----------------------------------|---|
| HV 031                           | Heater without fan (fan mounting kit included)                        |
| HVL 031                          | Heater with fan   |
| Heating element                  | high performance cartridge  |
| Temperature safety cut-out       | to protect against overheating in case of fan failure                 |
| Heater body                      | die-cast aluminium(glass bead blasted)                                |
| Connection                       | 3-pole screw connector 2.5mm <sup>2</sup> , clamping toeque 0.8Nm max |
| Connection casing                | plastic according to UL94 V-0, BLACK                                  |
| Mounting                         | clip for 35mm DIN rail, EN50022                                       |
| Fitting position                 | horizontal  |
| Operating/Storage temperature    | -45 to +70°C / (-49 to +158°F)  |
| Protection type/Protection class | IP20/1 (earthed)  |
| Service life                     | service life 50,000h at 25°C / (77°F)                                 |
| Connection(axial fan)            | 2-pole screw connector 2.5mm <sup>2</sup> (L2/N2)                     |

| Art.no.HV 031  | Art.no.HV 031   | Heating capacity | Dimensions   | Weight(approx.) |
|----------------|-----------------|------------------|--------------|-----------------|
| 230vac,50/60Hz | 120 vac,50/60Hz |                  |              |                 |
| 03100.0-00     | 03100.9-00      | 100W             | 80×112×22mm  | 0.40kg          |
| 03101.0-00     | 03101.9-00      | 150W             | 80×112×22mm  | 0.40kg          |
| 03110.0-00     | 03110.9-00      | 200W             | 119×151×22mm | 0.50kg          |
| 03111.0-00     | 03111.9-00      | 300W             | 119×151×22mm | 0.50kg          |
| 03112.0-00     | 03112.9-00      | 400W             | 119×151×22mm | 0.50kg          |

| Art.no.HVL 031 | Art.no.HVL 031  | Heating capacity | Airflow min          | Dimensions   | Weight(approx.) |
|----------------|-----------------|------------------|----------------------|--------------|-----------------|
| 230vac,50/60Hz | 120 vac,50/60Hz |                  | free flow            |              |                 |
| 03102.0-00     | 03102.9-00      | 100W             | 35m <sup>3</sup> /h  | 80×112×47mm  | 0.60kg          |
| 03103.0-00     | 03103.9-00      | 150W             | 35m <sup>3</sup> /h  | 80×112×47mm  | 0.60kg          |
| 03113.0-00     | 03113.9-00      | 200W             | 108m <sup>3</sup> /h | 119×151×47mm | 0.90kg          |
| 03114.0-00     | 03114.9-00      | 300W             | 108m <sup>3</sup> /h | 119×151×47mm | 0.90kg          |
| 03115.0-00     | 03115.9-00      | 400W             | 108m <sup>3</sup> /h | 119×151×47mm | 0.90kg          |



## Fan Assisted PTC Heaters



|                               |   |      |             |           |           |           |
|-------------------------------|---|------|-------------|-----------|-----------|-----------|
| Heating Capacity              |   | W    | 800W        | 1000W     | 1200W     | 1500W     |
| Aticte number                 | 230   | V/HZ | 800.0-00    | 1000.0-00 | 1200.0-00 | 1500.0-00 |
|                               | 110   |      | 800.9-00    | 1000.9-00 | 1200.9-00 | 1500.9-00 |
| Max. current                  |   | A    | 8.0         | 9.0       | 12.0      | 13.0      |
| Heating element               | PTC   |      |             |           |           |           |
| Thermal protection            | Thermal out out fuse in cose of fan failure   |      |             |           |           |           |
| Radiater                      | Extruded aluminium profile, anodized  |      |             |           |           |           |
| Axial fan                     | Ball bearing, service life 50.000 hrs at 25°C(77°F),<br>air flow rate 35m³/h, free flow |      |             |           |           |           |
| Electrical connections        | 5 screw terminals for stranded or rigid wire 2.5mm²                                     |      |             |           |           |           |
| Terminal block                | plastic according to V-0, black   |      |             |           |           |           |
| Protection class IEC          | Class°C ,Earthed  |      |             |           |           |           |
| Protection degree EN80529     | IP20  |      |             |           |           |           |
| Operating/Storage temperature | -25/+70°C   |      |             |           |           |           |
| Mounting                      | clip for 35MM DIN rail, EN 50022  |      |             |           |           |           |
| Fitting position              | vertical  |      |             |           |           |           |
| Dimensions H*W*D              |   | mm   | 132×168×146 |           |           |           |
| Weight                        |   | KG   | 1.5         |           |           |           |
| Conformity                    | CE  |      |             |           |           |           |



DA 084



DA 284

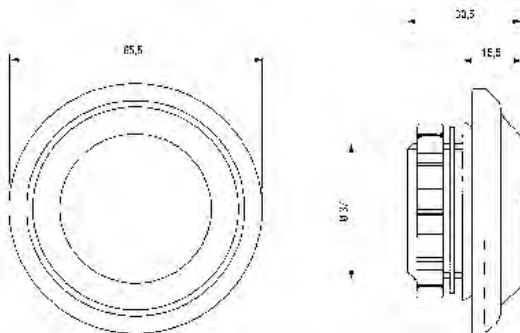
- High degree of protection
- Easy to install

It has become more and more important to provide a protected enclosure environment for valuable and crucial electrical and electronic components. In a tightly closed enclosure, pressure differentials can occur during extreme temperature variations. The specially designed pressure compensation device DA 084 permits a controlled change in pressure and avoids the entering of dust and water. The pressure compensation device is suitable for the use in enclosures and housings in accordance with DIN EN 62208.

|                                 |                                    |
|---------------------------------|------------------------------------|
| Mounting                        | PG 29 thread with union nut        |
| Material                        | plastic according to UL94 V-0      |
| Air interface                   | approx. 7cm <sup>2</sup>           |
| Dimensions                      | Ø 65.5x30.5mm                      |
| Operating / Storage temperature | -45 to +70°C (-49 to +158°F)       |
| Art. No.                        | DA 084                             |
| Description                     | mount pressure compensation device |
| Protection type                 | IP45                               |
| 1 packing unit                  | 2 pieces                           |
| Weight                          | 31g/pieces                         |

#### Installation

Make cut-out Ø 37 mm in enclosure wall and mount pressure compensation device with nut. Please make sure that the sealing gasket is put in place on the outer side panel of the enclosure. For optimal pressure compensation we recommend to use two devices on opposite sides towards the top of the enclosure.



| Art. No.   | Protection type | 1 packing unit | Weight (approx.) |
|------------|-----------------|----------------|------------------|
| 08400.0-04 | IP55            | 2 pieces       | 62g (31g/piece)  |

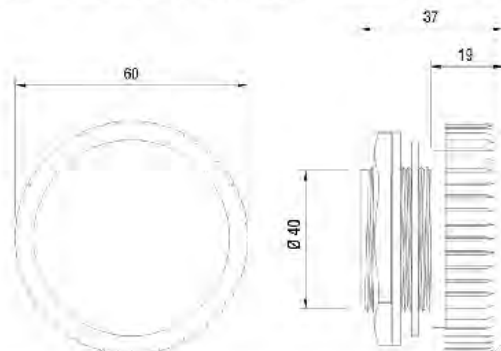
- High degree of protection
- Easy to install
- Waterproof membrane

Pressure differentials in enclosures with a high degree of protection are a result of internal and external temperature changes. In the case of negative pressure or partial vacuum, dust and humidity can enter the enclosure through the door seal. When the air inside the enclosure cools down, condensation may occur because the humidity cannot escape the enclosure. The easy-to-install pressure compensation device DA 284 provides compensation of pressure at a protection degree of IP66. Even with a slight overpressure, a waterproof membrane inside the plug allows the humidity to escape whilst blocking water and dirt from entering the enclosure.

|                               |   |
|-------------------------------|---|
| Mounting                      | thread M40 x 1.5 with nut                       |
| Torque                        | 5Nm (max. 10Nm)                                 |
| Depth in enclosure            | approx. 16mm                                    |
| Sealing                       | sealing gasket NBR                              |
| Filter                        | waterproof membrane                             |
| Air permeability              | 1200l/h at a pressure difference of min. 70mbar |
| Dimensions                    | Ø 60 x 37mm                                     |
| Fitting position              | variable  |
| Operating/Storage temperature | -35 to +70°C (-31 to +158°F)                    |

#### Installation

Make cut-out Ø 40.5+0,5mm in enclosure wall and mount pressure compensation device with nut. Please make sure that the sealing gasket is put in place on the outer side panel of the enclosure. For optimal pressure compensation we recommend to use two devices on opposite sides towards the top of the enclosure.



| Art. No.   | Protection type | 1 packing unit | Weight (approx.) |
|------------|-----------------|----------------|------------------|
| 28400.0-00 | IP66/IPX9K      | 2 pieces       | 90g (45g/piece)  |



# Terminal Connection

- Space saving: compact
- Tinned copper block: high conductivity
- IP 20 protection/UL finger-safe: improved safety
- Cable fixing screw diameters >95% fill ratio: excellent electrical contact, safe connections
- Visual inspection of wire: confirmation of connection
- Hinged or removable cover: easy wiring
- Clip-on DIN rail or mount to panel with screws: easy fixing

### Attachment



### LK-80A CE RoHS

80A IEC 60947-7-1

85 Amp (UL certification application)

Modular: keeping only one input, the blocks can be connected in parallel using a jumper wire. Easily double or triple the neutral.

| Metric system | mm <sup>2</sup> |    |  | I(N.m) |
|---------------|-----------------|----|--|--------|
|               | 6...16          | x1 |  | 3.5    |
|               | 2.5...6         | x4 |  | 1.2    |
|               | 2.5...16        | x2 |  | 3.5    |

| U.S. Regulations | AWG    |    |  | Torque |
|------------------|--------|----|--|--------|
|                  | 16...4 | x1 |  | 19.5   |
|                  | 16...8 | x4 |  | 10.6   |
|                  | 16...4 | x2 |  | 19.5   |

- I=80 A IEC
- I=85 A UL/CSA
- low KA rms Is: 3
- IPk KA: 22
- UL: 690V IEC
- Vin: 600 V UL



Installation Hole: 54mm



### LK-125A CE RoHS

125A IEC 60947-7-1

150 Amp (UL certification application)

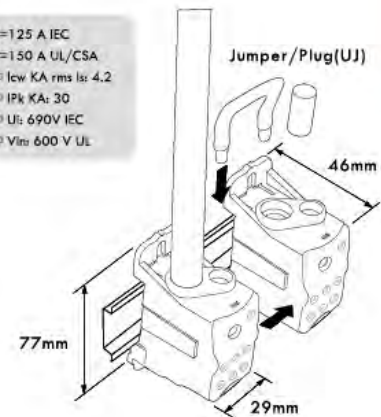
Modular: keeping only one input, the blocks can be connected in parallel using a jumper wire. Easily double or triple the neutral.

| Metric system | mm <sup>2</sup> |        |  | I(N.m) |
|---------------|-----------------|--------|--|--------|
|               | 10...35         | x1     |  | 8.5    |
|               | 6...16**        | x1     |  | 3.5    |
|               | 2,5...16        | x6  x4 |  | 3.5    |

\*\* or common jumper

| U.S. Regulations | AWG     |    |  | Torque |
|------------------|---------|----|--|--------|
|                  | 8...1/0 | x1 |  | 57     |
|                  | 14...4  | x1 |  | 31     |
|                  | 14...4  | x6 |  | 31     |

- I=125 A IEC
- I=150 A UL/CSA
- low KA rms Is: 4.2
- IPk KA: 30
- UL: 690V IEC
- Vin: 600 V UL



Installation Hole: 64mm



### LK-160A CE RoHS

160A IEC 60947-7-1

200 Amp (UL certification application)

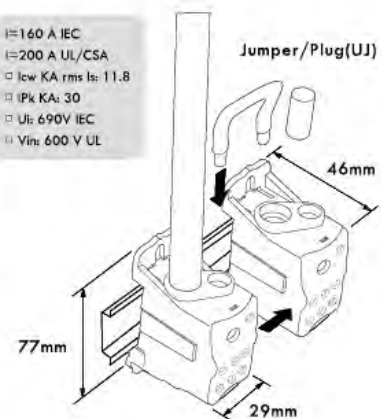
Modular: keeping only one input, the blocks can be connected in parallel using a jumper wire. Easily double or triple the neutral.

| Metric system | mm <sup>2</sup> |        |  | I(N.m) |
|---------------|-----------------|--------|--|--------|
|               | 10...70         | x1     |  | 8.5    |
|               | 6...16**        | x1     |  | 3.5    |
|               | 2,5...16        | x6  x4 |  | 3.5    |

\*\* or common jumper

| U.S. Regulations | AWG     |    |  | Torque |
|------------------|---------|----|--|--------|
|                  | 8...3/0 | x1 |  | 75     |
|                  | 14...4  | x1 |  | 31     |
|                  | 14...4  | x6 |  | 31     |

- I=160 A IEC
- I=200 A UL/CSA
- low KA rms Is: 11.8
- IPk KA: 30
- UL: 690V IEC
- Vin: 600 V UL



Installation Hole: 64mm



**LK-250A** CE RoHS  
**250A IEC 60947-7-1**  
**255 Amp** ( UL certification application )

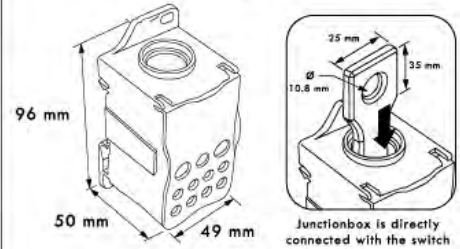
Modular:allows versatile building of power blocks single pole, two pole,three pole or four pole.

| Metric system | mm <sup>2</sup> | mm <sup>2</sup> |    | I(N.m) |
|---------------|-----------------|-----------------|----|--------|
|               | 35...120        |                 | x1 | 19     |
|               | 6...35          | 6...25          | x2 | 4.4    |
|               | 2.5...16        | 2.5...16        | x5 | 2.7    |
|               | 2.5...10        | 2.5...10        | x4 | 2.7    |

| U.S. Regulations | AWG           |    | Torque |
|------------------|---------------|----|--------|
|                  | 6...250 Kcmil | x1 | 221    |
|                  | 14...1        | x2 | 39     |
|                  | 14...4        | x5 | 24     |
|                  | 14...6        | x4 | 24     |

- I=250 A IEC
- I=255 A UL/CSA
- Icw KA rms Is: 24.5
- IPk KA: 51
- Ui: 690V IEC
- Vm: 600 V UL

Flexible with TF 250A busbar connection with the TH



Installation Hole:85×29mm



**LK-400A** CE RoHS Conform to  
**400A IEC 60947-7-1**  
**335 Amp** ( UL certification application )

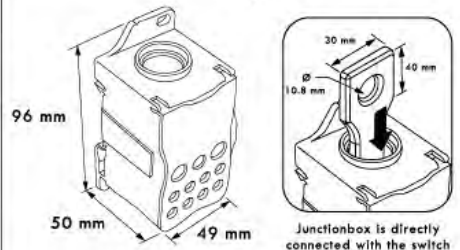
Modular:allows versatile building of power blocks single pole, two pole,three pole or four pole.

| Metric system | mm <sup>2</sup> | mm <sup>2</sup> |    | I(N.m) |
|---------------|-----------------|-----------------|----|--------|
|               | 95...185        |                 | x1 | 25     |
|               | 6...35          | 6...25          | x2 | 4.4    |
|               | 2.5...16        | 2.5...16        | x5 | 2.7    |
|               | 2.5...10        | 2.5...10        | x4 | 2.7    |

| U.S. Regulations | AWG             |    | Torque |
|------------------|-----------------|----|--------|
|                  | 3/0...400 Kcmil | x1 | 221    |
|                  | 14...1          | x2 | 39     |
|                  | 14...4          | x5 | 24     |
|                  | 14...6          | x4 | 24     |

- I=400 A IEC
- I=335 A UL/CSA
- Icw KA rms Is: 24.5
- IPk KA: 51
- Ui: 690V IEC
- Vm: 600 V UL

Flexible with TF 400A busbar connection with the TH



Installation Hole:85×29mm



**LK-500A** CE RoHS  
**500A IEC 60947-7-1**  
**520 Amp** ( UL certification application )

Modular:allows versatile building of power blocks single pole, two pole,three pole or four pole.

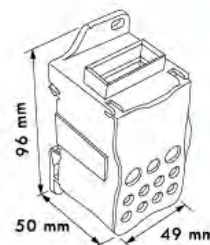
| Metric system | mm <sup>2</sup>      | mm <sup>2</sup>      |    | I(N.m) |
|---------------|----------------------|----------------------|----|--------|
|               | 4x15.5x0.8 ...8x24x1 | 4x15.5x0.8 ...8x24x1 |    | 10     |
|               | 6...35               | 6...25               | x2 | 4.4    |
|               | 2.5...16             | 2.5...16             | x5 | 2.7    |
|               | 2.5...10             | 2.5...10             | x4 | 2.7    |

| U.S. Regulations | AWG                  |    | Torque |
|------------------|----------------------|----|--------|
|                  | 4x15.5x0.8 ...8x24x1 |    | 88.5   |
|                  | 14...1               | x2 | 39     |
|                  | 14...4               | x5 | 24     |
|                  | 14...6               | x4 | 24     |

- I=500 A IEC
- I=520 A UL/CSA
- Icw KA rms Is: 24.5
- IPk KA: 51
- Ui: 690V IEC
- Vm: 600 V UL

TH flexible busbar

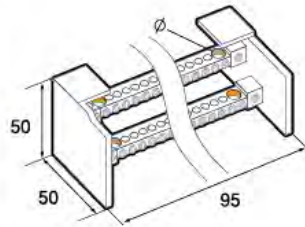
|  |                |
|--|----------------|
|  | 4 x 15.5 x 0.8 |
|  | 6 x 15.5 x 0.8 |
|  | 2 x 20 x 1     |
|  | 3 x 20 x 1     |
|  | 4 x 20 x 1     |
|  | 5 x 20 x 1     |
|  | 6 x 20 x 1     |
|  | 2 x 24 x 1     |
|  | 3 x 24 x 1     |
|  | 4 x 24 x 1     |
|  | 5 x 24 x 1     |
|  | 6 x 24 x 1     |
|  | 8 x 24 x 1     |



Installation Hole:85×29mm

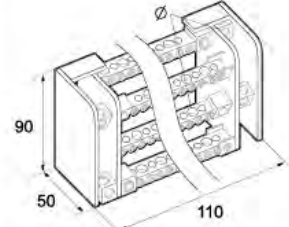


UK 207



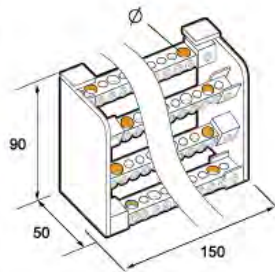
| Type  | Size  | Terminals per pole   |
|---|---|--|
| UK207   | Solid core lead<br>multistrand lead<br>[mm <sup>2</sup> ] | 2 pole   |
| EN60947-1<br>CE (CCC) Certificate               | 1.5-6mm <sup>2</sup><br>6-16mm <sup>2</sup>               | 94x50 x44mm  |
| KA rating pead<br>Max. Current100A Voltage 500V | For  type   | 1 x 16mm <sup>2</sup><br>1 x 25mm <sup>2</sup><br>5 x 6mm <sup>2</sup> |

UK 407



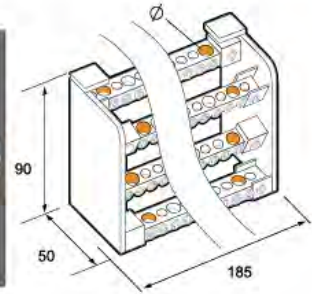
| Type  | Size  | Terminals per pole   |
|---|---|--|
| UK407   | Solid core lead<br>multistrand lead<br>[mm <sup>2</sup> ]                             | 4 pole   |
| EN60947-1<br>CE (CCC) Certificate               | 1.5-6mm <sup>2</sup> 6-16mm <sup>2</sup><br>2.5-6mm <sup>2</sup> 10-25mm <sup>2</sup> | 109x50 x85mm   |
| KA rating pead<br>Max. Current100A Voltage 500V | For  type   | 1 x 16mm <sup>2</sup><br>1 x 25mm <sup>2</sup><br>5 x 6mm <sup>2</sup> |

UK 411



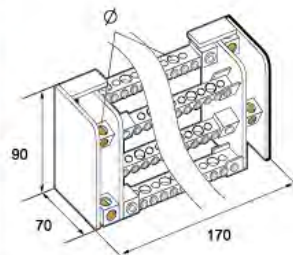
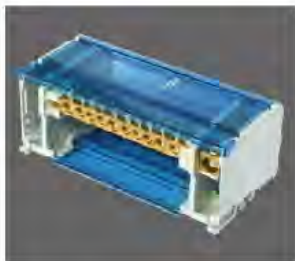
| Type  | Size  | Terminals per pole   |
|---|---|--|
| UK411   | Solid core lead<br>multistrand lead<br>[mm <sup>2</sup> ]   | 4 pole   |
| EN60947-1<br>CE (CCC) Certificate               | 1.5-6mm <sup>2</sup> 6-16mm <sup>2</sup><br>10-16mm <sup>2</sup> 10-25mm <sup>2</sup><br>10-35mm <sup>2</sup> | 147x50 x85mm   |
| KA rating pead<br>Max. Current100A Voltage 500V | For  type   | 3 x 16mm <sup>2</sup><br>1 x 25mm <sup>2</sup><br>7 x 6mm <sup>2</sup> |

UK 415



| Type  | Size  | Terminals per pole  |
|---|---|---|
| UK415   | Solid core lead<br>multistrand lead<br>[mm <sup>2</sup> ]   | 4 pole  |
| EN60947-1<br>CE (CCC) Certificate               | 1.5-6mm <sup>2</sup> 6-16mm <sup>2</sup><br>10-25mm <sup>2</sup> 2.5-6mm <sup>2</sup><br>10-35mm <sup>2</sup> | 182x50 x85mm  |
| KA rating pead<br>Max. Current100A Voltage 500V | For  type   | 3 x 16mm <sup>2</sup><br>1 x 25mm <sup>2</sup><br>11 x 6mm <sup>2</sup> |

UK 412



**4 pole 160A EN 60947-1**      Icw kA rms Is: 4.5  
**UK-412 160A - 11 Terminal**      IPk kA: 20  
 Ui: 500V  
 Installation Hole: 45mm

|  | mm <sup>2</sup> | mm <sup>2</sup> |    | Ø   | (N.m) |
|--|-----------------|-----------------|----|-----|-------|
|  | 10...50         | 10...50         | x1 | 12  | 8-10  |
|  | 10...35         | 10...25         | x3 | 8,5 | 2-3   |
|  | 2,5...16        | 1,5...16        | x8 | 7   | 2-3   |

Terminal Connection



### KE60 Universal Terminal for Al/Cu Conductors

#### Technical Specification

Conductor Cross-section(mm<sup>2</sup>) : 1.5-16 mm<sup>2</sup>

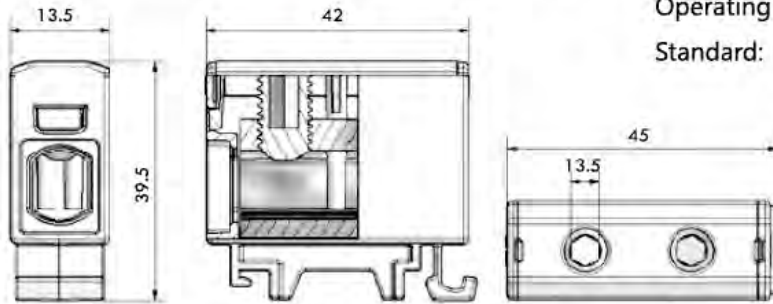
Housing: Polyamide

Mounting: DIN rail

Screw: Hexagon, 4mm

Operating Temperature (°C): Max 80°C

Standard: EN61238-1, EN60947-7-2



| Model no. | Code    | Color        | Pole                                   | Tighten torque(Nm)            | Nominal Current(A) | Nominal Voltage(V) | Weight ( g ) |
|-----------|---------|--------------|--|-------------------------------|--------------------|--------------------|--------------|
| KE60.1    | 1914100 | Grey         | 1 pole<br>Al/Cu 1.5-16 mm <sup>2</sup> | 1.5Nm(1.5 mm <sup>2</sup> )   | 85A                | 1000V              | 15           |
| KE60.2    | 1914101 | Blue         |  | 3.5Nm(2.5-6 mm <sup>2</sup> ) |                    |                    |              |
| KE60.3    | 1914102 | Yellow/Green |  | 7Nm(10-16 mm <sup>2</sup> )   |                    |                    |              |



### KE61.4 3pole Universal Terminal for Al/Cu Conductors

#### Technical Specification

Pole: 3 pole

Conductor Cross-section(mm<sup>2</sup>) :

Cu 2.5-50 mm<sup>2</sup> Al 6-50 mm<sup>2</sup>

Conductor Size (AWG): 1/0-6

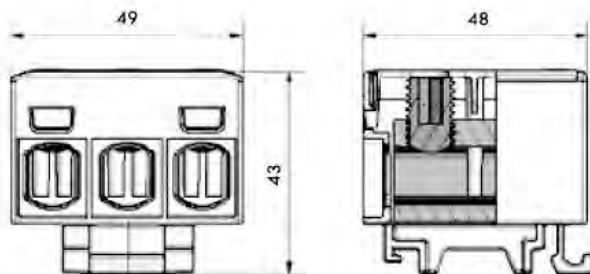
Housing: Polyamide

Mounting: DIN rail

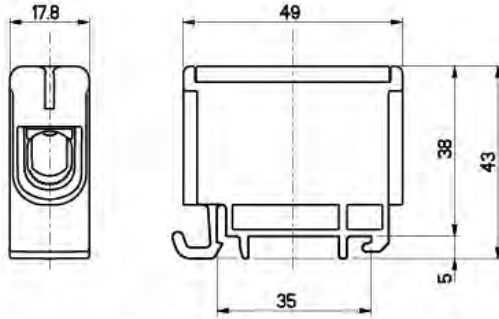
Screw: Hexagon, 5mm

Operating Temperature (°C): Max 80°C

Standard: EN61238-1, EN60947-7-2



| Model no. | Code    | Color        | Pole                                   | Tighten torque(Nm)          | Nominal Current(A) | Nominal Voltage(V) | Weight ( g ) |
|-----------|---------|--------------|--|-----------------------------|--------------------|--------------------|--------------|
| KE61.4    | 1914109 | Grey         | 3 pole<br>Al/Cu 2.5-50 mm <sup>2</sup> | 4Nm(2.5-4 mm <sup>2</sup> ) | Cu 160A<br>Al 145A | 800V               | 35           |
| KE61.5    | 1914110 | Blue         |  | 12Nm(6-50 mm <sup>2</sup> ) |                    |                    |              |
| KE61.6    | 1914111 | Yellow/Green |  |                             |                    |                    |              |



## KE61 Universal Terminal for Al/Cu Conductors

### Technical Specification

Conductor Cross-section(mm<sup>2</sup>) :

Cu 2.5-50 mm<sup>2</sup> Al 6-50 mm<sup>2</sup>

Conductor Size (AWG): 1/0-6

Housing: Polyamide

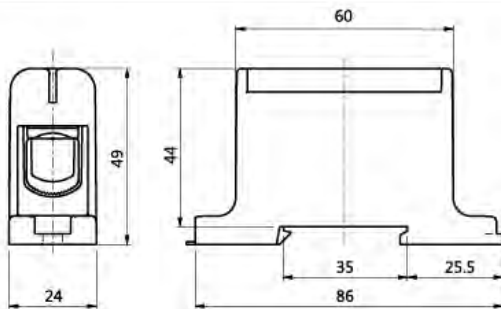
Mounting: DIN rail

Screw: Hexagon, 5mm

Operating Temperature (°C): Max 80°C

Standard: EN61238-1, EN60947-7-2

| Model no. | Code    | Color        | Pole                                  | Tighten torque(Nm)   | Nominal Current(A) | Nominal Voltage(V) | Weight ( g ) |
|-----------|---------|--------------|---------------------------------------|--|--------------------|--------------------|--------------|
| KE61.1    | 1914103 | Grey         | 1 pole<br>Al/Cu2.5-50 mm <sup>2</sup> | 4Nm(2.5-4 mm <sup>2</sup> )<br>12Nm(6-50 mm <sup>2</sup> ) | Cu 160A<br>Al 145A | 800V               | 35           |
| KE61.2    | 1914104 | Blue         |                                       |  |                    |                    |              |
| KE61.3    | 1914105 | Yellow/Green |                                       |  |                    |                    |              |



## KE62 Universal Terminal for Al/Cu Conductors

### Technical Specification

Conductor Cross-section(mm<sup>2</sup>) : 16-95 mm<sup>2</sup>

Conductor Size (AWG): 4/0-4

Housing: Polyamide

Mounting: DIN rail

Screw: Hexagon, 5mm

Operating Temperature (°C): Max 80°C

Standard: EN 61238-1, EN 60947-7-1

| Model no. | Code    | Color        | Pole                                 | Tighten torque(Nm) | Nominal Current(A) | Nominal Voltage(V) | Weight ( g ) |
|-----------|---------|--------------|--------------------------------------|--------------------|--------------------|--------------------|--------------|
| KE62.1    | 1914113 | Grey         | 1 pole<br>Al/Cu16-95 mm <sup>2</sup> | 20Nm               | Cu 245A<br>Al 220A | 800V               | 90           |
| KE62.2    | 1914114 | Blue         |                                      |                    |                    |                    |              |
| KE63.3    | 1914115 | Yellow/Green |                                      |                    |                    |                    |              |



### KE63 Universal Terminal for Al/Cu Conductors

#### Technical Specification

Conductor Cross-section(mm<sup>2</sup>) : 35-150 mm<sup>2</sup>

Conductor Size (AWG): 300-2

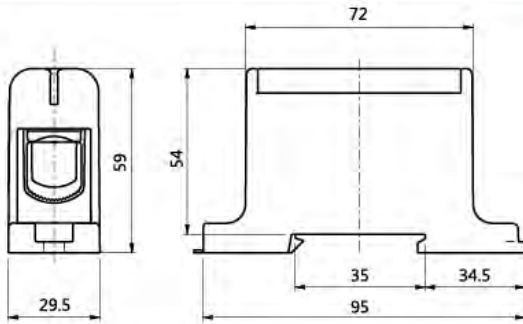
Housing: Polyamide

Mounting: DIN rail

Screw: Hexagon, 8mm

Operating Temperature (°C): Max 80°C

Standard: SFS 2663



| Model no. | Code    | Color        | Pole                                   | Tighten torque(Nm)   | Nominal Current(A) | Nominal Voltage(V) | Weight (g) |
|-----------|---------|--------------|--|--|--------------------|--------------------|------------|
| KE63.1    | 1914118 | Grey         | 1 pole<br>Al/Cu 35-150 mm <sup>2</sup> | 14Nm(35-95mm <sup>2</sup> )<br>24Nm(120-150mm <sup>2</sup> ) | Cu 320A<br>Al 290A | 750V               | 160        |
| KE63.2    | 1914119 | Blue         |  |  |                    |                    |            |
| KE63.3    | 1914120 | Yellow/Green |  |  |                    |                    |            |



### KE64 Universal Terminal for Al/Cu Conductors

#### Technical Specification

Conductor Cross-section(mm<sup>2</sup>) : 35-240 mm<sup>2</sup>

Conductor Size (AWG): 500-3/0

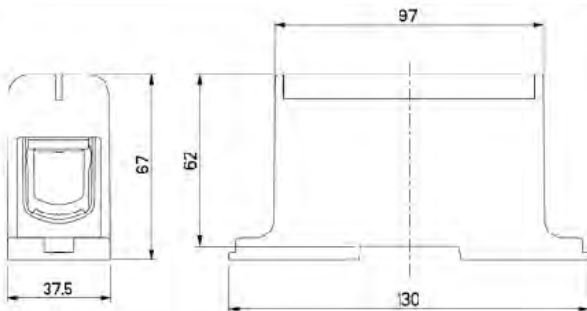
Housing: Polyamide

Mounting: Screw

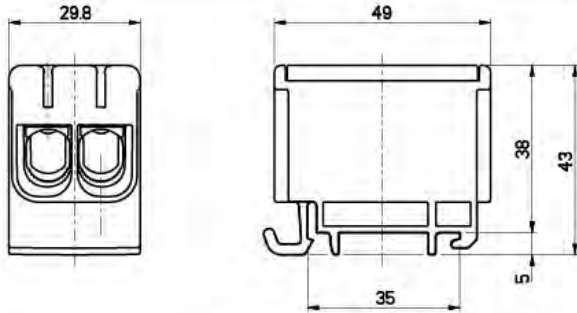
Screw: Hexagon, 8mm

Operating Temperature (°C): Max 80°C

Standard: EN 61238-1, EN 60947-7-1



| Model no. | Code    | Color        | Pole                                   | Tighten torque(Nm)  | Nominal Current(A) | Nominal Voltage(V) | Weight (g) |
|-----------|---------|--------------|--|---|--------------------|--------------------|------------|
| KE64.1    | 1914130 | Grey         | 1 pole<br>Al/Cu 35-240 mm <sup>2</sup> | 12Nm(35-70mm <sup>2</sup> )<br>40Nm(95-240mm <sup>2</sup> ) | Cu 425A<br>Al 380A | 800V               | 305        |
| KE64.2    | 1914131 | Blue         |  |   |                    |                    |            |
| KE64.3    | 1914132 | Yellow/Green |  |   |                    |                    |            |



## KE66 Universal Terminal for Al/Cu Conductors

### Technical Specification

Conductor Cross-section(mm<sup>2</sup>) :

Cu 2.5-50 mm<sup>2</sup> Al 6-50 mm<sup>2</sup>

Conductor Size (AWG): 1/0-6

Housing: Polyamide

Mounting: DIN rail

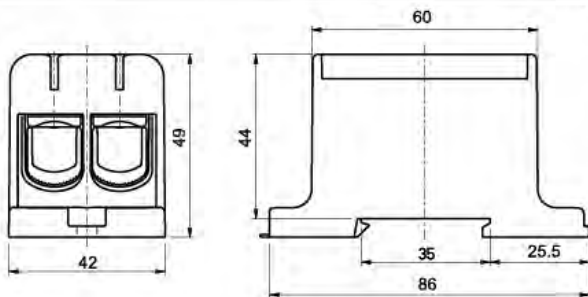
Number of termination points : 4

Screw: Hexagon, 5mm

Operating Temperature (°C): Max 80°C

Standard: EN 61238-1, EN 60947-7-1

| Model no. | Code    | Color        | Pole                                   | Tighten torque(Nm)   | Nominal Current(A) | Nominal Voltage(V) | Weight (g) |
|-----------|---------|--------------|--|--|--------------------|--------------------|------------|
| KE66.1    | 1914106 | Grey         | 1 pole<br>Al/Cu 2.5-50 mm <sup>2</sup> | 4Nm(2.5-4 mm <sup>2</sup> )<br>12Nm(6-50 mm <sup>2</sup> ) | Cu 160A<br>Al 145A | 800V               | 60         |
| KE66.2    | 1914107 | Blue         |  |  |                    |                    |            |
| KE66.3    | 1914108 | Yellow/Green |  |  |                    |                    |            |



## KE67 Universal Terminal for Al/Cu Conductors

### Technical Specification

Conductor Cross-section(mm<sup>2</sup>) : 16-95 mm<sup>2</sup>

Conductor Size (AWG): 4/0-4

Housing: Polyamide

Mounting: DIN rail

Number of termination points : 4

Screw: Hexagon, 8mm

Operating Temperature (°C): Max 80°C

Standard: EN 61238-1, EN 60947-7-1

| Model no. | Code    | Color        | Pole                                  | Tighten torque(Nm) | Nominal Current(A) | Nominal Voltage(V) | Weight (g) |
|-----------|---------|--------------|---------------------------------------|--------------------|--------------------|--------------------|------------|
| KE67.1    | 1914125 | Grey         | 1 pole<br>Al/Cu 16-95 mm <sup>2</sup> | 20 Nm              | Cu 245A<br>Al 220A | 800V               | 165        |
| KE67.2    | 1914126 | Blue         |                                       |                    |                    |                    |            |
| KE67.3    | 1914127 | Yellow/Green |                                       |                    |                    |                    |            |



### KE68 Universal Terminal for Al/Cu Conductors

#### Technical Specification

Conductor Cross-section(mm<sup>2</sup>) : 35-150 mm<sup>2</sup>

Conductor Size (AWG): 300-2

Housing: Polyamide

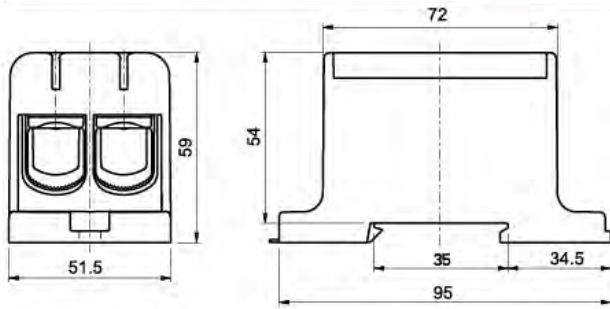
Mounting: DIN rail

Number of termination points : 4

Screw: Hexagon, 8mm

Operating Temperature (°C): Max 80°C

Standard: EN 61238-1, EN 60947-7-1



| Model no. | Code    | Color        | Pole                                  | Tighten torque(Nm)   | Nominal Current(A) | Nominal Voltage(V) | Weight ( g ) |
|-----------|---------|--------------|---------------------------------------|--|--------------------|--------------------|--------------|
| KE68.1    | 1914124 | Grey         | 1 pole<br>Al/Cu35-150 mm <sup>2</sup> | 20 Nm (35-95mm <sup>2</sup> )<br>30 Nm (120-150mm <sup>2</sup> ) | Cu 320A<br>Al 290A | 800V               | 290          |
| KE68.2    | 1914125 | Blue         |                                       |  |                    |                    |              |
| KE68.3    | 1914126 | Yellow/Green |                                       |  |                    |                    |              |



### KE69 Universal Terminal for Al/Cu Conductors

#### Technical Specification

Conductor Cross-section(mm<sup>2</sup>) : 35-240 mm<sup>2</sup>

Conductor Size (AWG): 500-3/0

Housing: Polyamide

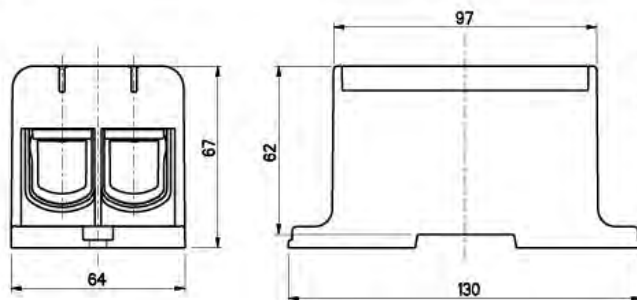
Mounting: Screw

Number of termination points : 4

Screw: Hexagon, 8mm

Operating Temperature (°C): Max 80°C

Standard: EN 61238-1, EN 60947-7-1



| Model no. | Code    | Color        | Pole                                   | Tighten torque(Nm)  | Nominal Current(A) | Nominal Voltage(V) | Weight ( g ) |
|-----------|---------|--------------|--|---|--------------------|--------------------|--------------|
| KE69.1    | 1914133 | Grey         | 1 pole<br>Al/Cu 35-240 mm <sup>2</sup> | 12 Nm (35-70mm <sup>2</sup> )<br>45 Nm (95-240mm <sup>2</sup> ) | Cu 425A<br>Al 380A | 800V               | 550          |
| KE69.2    | 1914134 | Blue         |  |   |                    |                    |              |
| KE69.3    | 1914135 | Yellow/Green |  |   |                    |                    |              |





CE RoHS



## LUK 2.5B

solid cross section: 0.2-4mm<sup>2</sup>  
 stranded cross section: 0.2-2.5mm<sup>2</sup> IEC 60947-7-1  
 size: T6.2×H40.6×W42.6 Zack Strip(ZB6)  
 rated current: 32A rated voltage: 800V



CE RoHS



## LUK 3N

solid cross section: 0.2-4mm<sup>2</sup>  
 stranded cross section: 0.2-2.5mm<sup>2</sup> IEC 60947-7-1  
 size: T5.2×H46×W42.7 Zack Strip(ZB5)  
 rated current: 32A rated voltage: 800V

|                             |                                |  |                             |                             |
|-----------------------------|--------------------------------|--|-----------------------------|-----------------------------|
| (1)end cover : T1.5mm       | grey                           |  | D-LUK 2.5                   | D-LUK 4/10                  |
| (2)fixed bridge :           | 2 poles<br>3 poles             |  | FBI 10-6                    | FBI 10-5                    |
| (3)insertion bridge poles:  | 2 poles<br>3 poles<br>10 poles |  | EB 2-6<br>EB 3-6<br>EB 10-6 | EB 2-5<br>EB 3-5<br>EB 10-5 |
| (4)switching jumper         |                                |  | LUSBR 2-7                   |                             |
| (5)separating plate         |                                |  |                             | TS-K                        |
| (6)partition plate : T1.5mm |                                |  | ATP-LUK                     |                             |
| (7)end clamp                |                                |  | E/LUK                       | E/LUK                       |

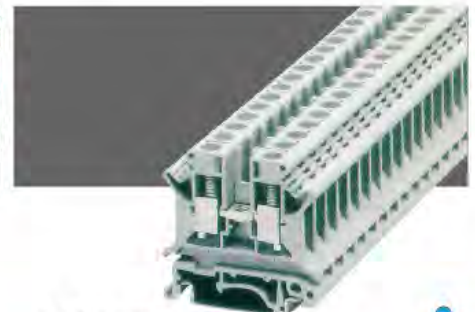


CE RoHS



## LUK 5N

solid cross section: 0.2-6mm<sup>2</sup>  
 stranded cross section: 0.2-4mm<sup>2</sup> IEC 60947-7-1  
 size: T6.2×H46.2×W42.6 Zack Strip(ZB6)  
 rated current: 41A rated voltage: 800V



CE RoHS



## LUK 6N

solid cross section: 0.2-10mm<sup>2</sup>  
 stranded cross section: 0.2-6mm<sup>2</sup> IEC 60947-7-1  
 size: T8.2×H46×W42.7 Zack Strip(ZB8)  
 rated current: 57A rated voltage: 800V

|                             |                                |  |                             |                             |
|-----------------------------|--------------------------------|--|-----------------------------|-----------------------------|
| (1)end cover : T1.5mm       | grey                           |  | D-LUK 4/10                  | D-LUK 4/10                  |
| (2)fixed bridge :           | 2 poles<br>3 poles             |  | FBI 10-6                    | FBI 10-8                    |
| (3)insertion bridge poles:  | 2 poles<br>3 poles<br>10 poles |  | EB 2-6<br>EB 3-6<br>EB 10-6 | EB 2-8<br>EB 3-8<br>EB 10-8 |
| (4)switching jumper         |                                |  | LUSBR 2-7                   | LUR 2-8/13                  |
| (5)separating plate         |                                |  | TS-K                        | TS-K                        |
| (6)partition plate : T1.5mm |                                |  | ATP-LUK                     | ATP-LUK                     |
| (7)end clamp                |                                |  | E/LUK                       | E/LUK                       |



CE RoHS



## LUK 10N

solid cross section: 0.5-1.6mm<sup>2</sup> stranded cross section: 0.5-1.0mm<sup>2</sup>  
 size: T10.2×H42.8×W42.5 IEC 60947-7-1  
 rated current: 76A rated voltage: 800V Zack Strip(ZB10)

|   |      |  |                                |
|---|------|--|--------------------------------|
| (1)end cover : T1.5mm                                     | grey |  | D-LUK 4/10                     |
| (2)fixed bridge : 2 poles<br>3 poles                      |      |  | FBI 10-10                      |
| (3)insertion bridge poles: 2 poles<br>3 poles<br>10 poles |      |  | EB 2-10<br>EB 3-10<br>EB 10-10 |
| (4)switching jumper                                       |      |  |                                |
| (5)separating plate                                       |      |  | TS-K                           |
| (6)partition plate : T1.5mm                               |      |  | ATP-LUK                        |
| (7)end clamp  |      |  | E/LUK                          |



CE RoHS



## LUK 16N

solid cross section: 2.5-25mm<sup>2</sup> stranded cross section: 4-16mm<sup>2</sup>  
 size: T12.2×H52.2×W42.5 IEC 60947-7-1  
 rated current: 100A rated voltage: 800V Zack Strip(ZB10)



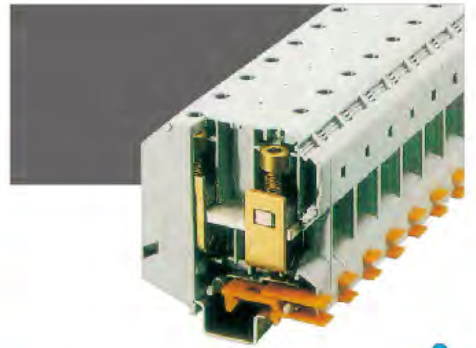
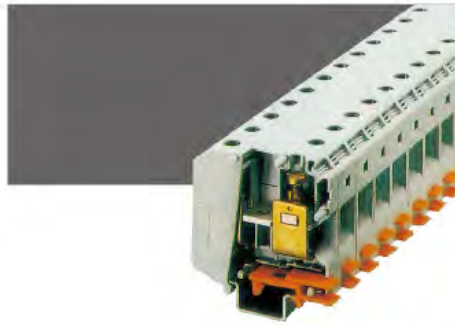
CE RoHS



## LUK 35N

solid cross section: 10-35mm<sup>2</sup> stranded cross section: 10-35mm<sup>2</sup>  
 size: T15.2×H52.7×W50.7 IEC 60947-7-1  
 rated current: 125A rated voltage: 800V Zack Strip(ZB10)

|   |      |  |                                |                                |
|---|------|--|--------------------------------|--------------------------------|
| (1)end cover : T1.5mm                                     | grey |  | D-LUK 16                       |                                |
| (2) fixed bridge  |      |  | FBI 10-12                      | FBI 2-15<br>FBI 3-15           |
| (3)insertion bridge poles: 2 poles<br>3 poles<br>10 poles |      |  | EB 2-12<br>EB 3-12<br>EB 10-12 | EB 2-15<br>EB 3-15<br>EB 10-15 |
| (4)switching jumper                                       |      |  | TS-K                           | TS-K                           |
| (5)partition plate : T1.5mm                               |      |  | ATP-LUK                        |                                |
| (6)end clamp  |      |  | E/LUK                          | E/LUK                          |



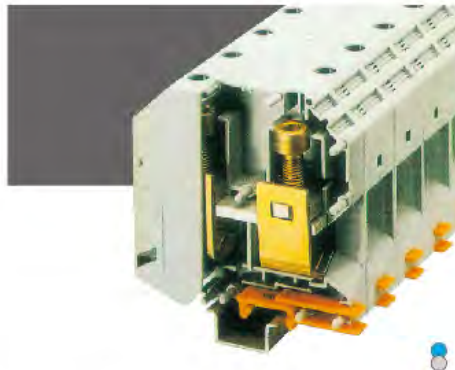
## LUKH 50

solid cross section: 16-50mm<sup>2</sup> stranded cross section: 25-50mm<sup>2</sup>  
 size: T20×H76.2×W71.2 IEC 60947-7-1  
 rated current: 150A rated voltage: 1000V Zack Strip(ZB10)

## LUKH 95

solid cross section: 25-95mm<sup>2</sup> stranded cross section: 35-95mm<sup>2</sup>  
 size: T25×H91×W83.9 IEC 60947-7-1  
 rated current: 232A rated voltage: 1000V Zack Strip(ZB10)

|                   |                    |  |            |                    |
|-------------------|--------------------|--|------------|--------------------|
| Insertion bridge: | 2 poles<br>3 poles |  |            | EB 2-25<br>EB 3-25 |
| Din Rail type     |                    |  | E/AL-NS 35 | E/AL-NS 35         |



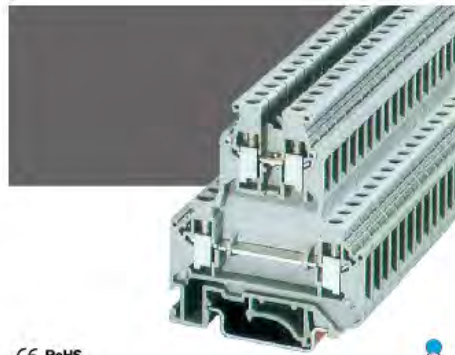
## LUKH 150

solid cross section: 35-150mm<sup>2</sup> stranded cross section: 50-150mm<sup>2</sup>  
 size: T31.5×H111.2×W100.1 IEC 60947-7-1  
 rated current: 309A rated voltage: 1000V Zack Strip(ZB10)

## LUKH 240

solid cross section: 70-240mm<sup>2</sup> stranded cross section: 70-240mm<sup>2</sup>  
 size: T36×H122.5×W101.5 IEC 60947-7-1  
 rated voltage: 1000V Zack Strip(ZB10)

|                   |                    |  |                    |            |
|-------------------|--------------------|--|--------------------|------------|
| Insertion bridge: | 2 poles<br>3 poles |  | EB 2-31<br>EB 3-31 |            |
| Din Rail type     |                    |  | E/AL-NS 35         | E/AL-NS 35 |



CE RoHS

## LUKK 5

solid cross section: 0.2-4mm<sup>2</sup> stranded cross section: 0.2-4mm<sup>2</sup>  
 size: T6.2×H61.2×W56.5 IEC 60947-7-1  
 rated current: 32A rated voltage: 500V Zack Strip(ZB6)

|  |                                |  |                             |
|--|--------------------------------|--|-----------------------------|
| (1) end cover                          | grey                           |  | D-LUKK 3/5                  |
| (2) space compensation plate           | grey                           |  | DG-LUKK 3/5                 |
| (3) space compensation plate           |                                |  | DP-LUKK 3/5                 |
| (4)insertion bridge poles:             | 2 poles<br>3 poles<br>10 poles |  | EB 2-6<br>EB 3-6<br>EB 10-6 |
| (5) with insulation pads bridge pieces |                                |  | FBI 10-6                    |

## Fuse Terminal Block



## LUK 5-HESI

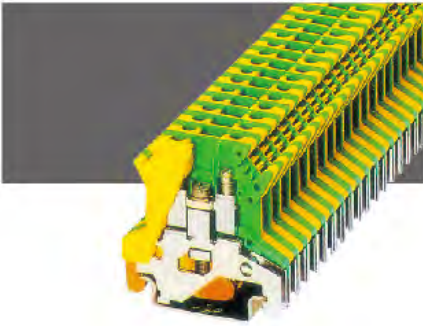
solid cross section: 0.2-4mm<sup>2</sup> stranded cross section: 0.2-4mm<sup>2</sup>  
 size: T8.2×H46.2×W72.6 IEC 60947-7-1  
 rated current: 6.3A rated voltage: 800V Zack Strip(ZB8)



## LUK 10-DREHSI

solid cross section: 0.5-16mm<sup>2</sup> stranded cross section: 0.5-16mm<sup>2</sup>  
 size: T12.3×H55×W61.5 IEC 60947-7-1  
 rated current: 10A rated voltage: 800V Zack Strip(ZB8)

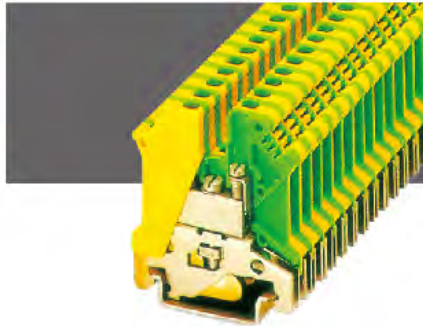
|  |   |                  |                                |
|--|---|------------------|--------------------------------|
| For fuse 5x20, indicators are optional |   |                  | LUK10-DREHSI 5×20              |
| Consumed current with indicator        | 15-24 V AC/DC<br>3.5-7.5 mA                     |                  | LUK10-DREHSILED 24 5×20        |
| Consumed current with indicator        | 110-250 V AC/DC<br>1.5-3.5 mA AC, 0.2-0.8 mA DC |                  | LUK10-DREHSILED 250 5×20       |
| Consumed current with indicator        | 15-24 V AC/DC<br>3.5-7.5 mA                     | LUK5-HESILED 24  |                                |
| Consumed current with indicator        | 110-250 V AC/DC<br>1.5-3.5 mA AC/0.2-0.8 mA DC  | LUK5-HESILED 250 |                                |
| (1) fixed bridge                       |   |                  | FBI 10-12                      |
| (2)insertion bridge poles:             | 2 poles<br>3 poles<br>10 poles                  |                  | EB 2-8<br>EB 3-8<br>EB 10-8    |
|  |   |                  | EB 2-12<br>EB 3-12<br>EB 10-12 |



## LUSLKG 2.5

solid cross section: 0.2-4mm<sup>2</sup>  
 stranded cross section: 0.2-2.5mm<sup>2</sup>  
 size: T6.2×H42×W42.9

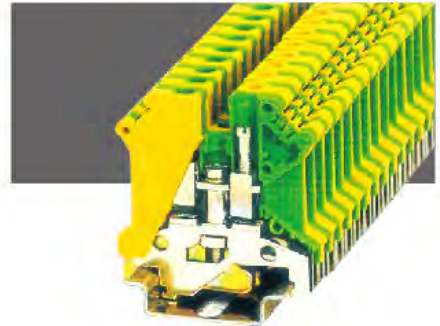
IEC 60947-7-2  
 Zack Strip(ZB6)



## LUSLKG3

solid cross section: 0.2-4mm<sup>2</sup>  
 stranded cross section: 0.2-2.5mm<sup>2</sup>  
 size: T5.2×H46×W42.9

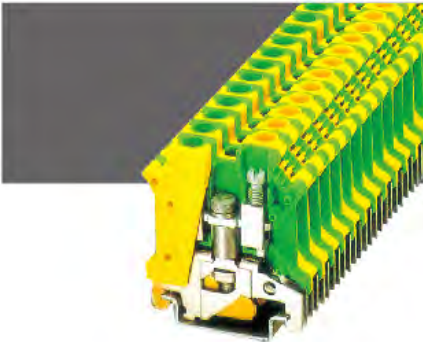
IEC 60947-7-2  
 Zack Strip(ZB5)



## LUSLKG 5

solid cross section: 0.2-4mm<sup>2</sup>  
 stranded cross section: 0.2-4mm<sup>2</sup>  
 size: T6.2×H46×W43.1

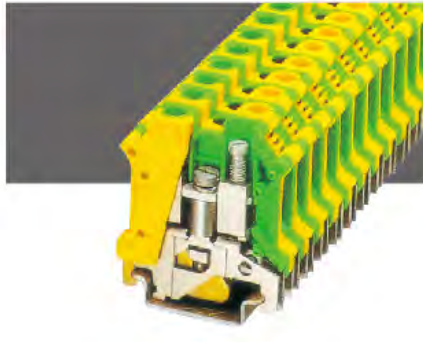
IEC 60947-7-2  
 Zack Strip(ZB6)



## LUSLKG 6

solid cross section: 0.2-10mm<sup>2</sup>  
 stranded cross section: 0.2-6mm<sup>2</sup>  
 size: T8.2×H46×W42.6

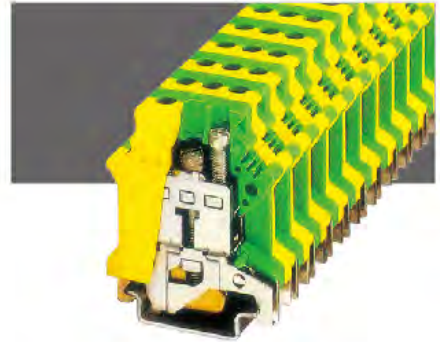
IEC 60947-7-2  
 Zack Strip(ZB8)



## LUSLKG 10

solid cross section: 0.5-16mm<sup>2</sup>  
 stranded cross section: 0.5-10mm<sup>2</sup>  
 size: T10.2×H46×W42.4

IEC 60947-7-2  
 Zack Strip(ZB10)



## LUSLKG 16

solid cross section: 2.4-25mm<sup>2</sup>  
 stranded cross section: 4-16mm<sup>2</sup>  
 size: T12.2×H46×W43.1

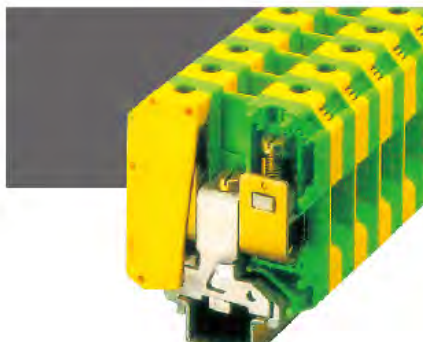
IEC 60947-7-2  
 Zack Strip(ZB10)



## LUSLKG 35

solid cross section: 10-35mm<sup>2</sup>  
 stranded cross section: 10-35mm<sup>2</sup>  
 size: T15.2×H62×W50.3

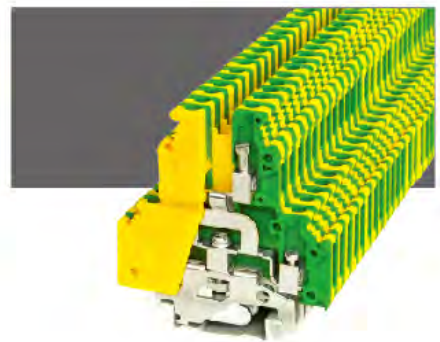
IEC 60947-7-2  
 Zack Strip(ZB10)



## LUSLKG 50

solid cross section: 16-50mm<sup>2</sup>  
 stranded cross section: 25-50mm<sup>2</sup>  
 size: T20.5×H83.5×W71

IEC 60947-7-2  
 Zack Strip(ZB10)



## LUKK5-PE

solid cross section: 0.2-4mm<sup>2</sup>  
 stranded cross section: 0.2-4mm<sup>2</sup>  
 size: T6.2×H63×W56.8

IEC 60947-7-2  
 Zack Strip(ZB6)

## LSAK(SAK)series



### LSAK 2.5EN

|                      |               |
|----------------------|---------------|
| Approval             | CE RoHS       |
| Insulating Material  | PA66          |
| Inflammability Class | UL 94 V0      |
| Connection Standard  | IEC 60947-7-1 |

### LSAK 4EN

|                      |               |
|----------------------|---------------|
| Approval             | CE RoHS       |
| Insulating Material  | PA66          |
| Inflammability Class | UL 94 V0      |
| Connection Standard  | IEC 60947-7-1 |

### LSAK 6EN

|                      |               |
|----------------------|---------------|
| Approval             | CE RoHS       |
| Insulating Material  | PA66          |
| Inflammability Class | UL 94 V0      |
| Connection Standard  | IEC 60947-7-1 |

|                        |  |                                      |                                      |
|------------------------|--|--------------------------------------|--------------------------------------|
| size                   | T6.1×H40.4×W40.9                       | T6.5×H45.3×W40.6                     | T7.9×H45×W39.9                       |
| rated current/voltage  | 24A/800V                               | 32A/800V                             | 41A/800V                             |
| stranded cross section | 0.2mm <sup>2</sup> -2.5mm <sup>2</sup> | 0.2mm <sup>2</sup> -4mm <sup>2</sup> | 0.2mm <sup>2</sup> -6mm <sup>2</sup> |
| packing                | 50                                     | 50                                   | 50                                   |
| connection type        | screw connection                       | screw connection                     | screw connection                     |
| Din Rail type          | TS 35/7.5, TS 35/15, TS 32             | TS 35/7.5, TS 35/15, TS 32           | TS 35/7.5, TS 35/15, TS 32           |

|  |                                    |                                  |                                  |
|--|------------------------------------|----------------------------------|----------------------------------|
| (1)end cover: T1.5mm                                       | AP 2.5                             | AP 4-10                          | AP 4-10                          |
| (2) Centre type jumper bar: 10 potential, 3,5,10 potential | 2.5 EN<br>Q2poles, 3poles, 10poles | 4 EN<br>Q2poles, 3poles, 10poles | 6 EN<br>Q2poles, 3poles, 10poles |
| (3)end clamp   | LEW 35                             | LEW 35                           | LEW 35                           |
| (4)Continuous number of printing                           | DEK 5/6(1...10)                    | DEK 6(1...10)                    | DEK 6(1...10)                    |



### LSAK 10EN

|                      |               |
|----------------------|---------------|
| Approval             | CE RoHS       |
| Insulating Material  | PA66          |
| Inflammability Class | UL 94 V0      |
| Connection Standard  | IEC 60947-7-1 |

### LSAK 16EN

|                      |               |
|----------------------|---------------|
| Approval             | CE RoHS       |
| Insulating Material  | PA66          |
| Inflammability Class | UL 94 V0      |
| Connection Standard  | IEC 60947-7-1 |

### LSAK 35EN

|                      |               |
|----------------------|---------------|
| Approval             | CE RoHS       |
| Insulating Material  | PA66          |
| Inflammability Class | UL 94 V0      |
| Connection Standard  | IEC 60947-7-1 |

|                        |                                       |                                       |                                      |
|------------------------|---------------------------------------|---------------------------------------|--------------------------------------|
| size                   | T10×H45.2×W40.5                       | T12×H51.2×W50.3                       | T18.2×H61.6×W58.5                    |
| rated current/voltage  | 57A/800V                              | 76A/800V                              | 125A/800V                            |
| stranded cross section | 0.5mm <sup>2</sup> -10mm <sup>2</sup> | 0.5mm <sup>2</sup> -16mm <sup>2</sup> | 10mm <sup>2</sup> -35mm <sup>2</sup> |
| packing                | 50                                    | 50                                    | 50                                   |
| connection type        | screw connection                      | screw connection                      | screw connection                     |
| Din Rail type          | TS 35/7.5, TS 35/15, TS 32            | TS 35/7.5, TS 35/15, TS 32            | TS 35/7.5, TS 35/15, TS 32           |

|  |                                   |                                   |                                   |
|--|-----------------------------------|-----------------------------------|-----------------------------------|
| (1)end cover: T1.5mm                                       | AP 4-10                           | AP 16                             | AP 35                             |
| (2) Centre type jumper bar: 10 potential, 3,5,10 potential | 10 EN<br>Q2poles, 3poles, 10poles | 16 EN<br>Q2poles, 3poles, 10poles | 35 EN<br>Q2poles, 3poles, 10poles |
| (3)end clamp   | LEW 35                            | LEW 35                            | LEW 35                            |
| (4)Continuous number of printing                           | DEK 6(1...10)                     | DEK 6(1...10)                     | DEK 6(1...10)                     |

## LSAK(SAK)series



### LSAK 70/35

Insulating Material PA66  
Inflammability Class IEC 60947-7-1

### LDK 4QV/35

Insulating Material PA66  
Inflammability Class IEC 60947-7-1

### LASK1 EN

Insulating Material PA66  
Inflammability Class IEC 60947-7-1

|  |                                      |                                      |                                      |
|--|--------------------------------------|--------------------------------------|--------------------------------------|
| size   | T22×H78×W75                          | T6×H60×W54.6                         | T8.1×H39×W52.1                       |
| rated current/voltage  | 192A/800V                            | 32A/500V                             | 6.3A/500V                            |
| stranded cross section                                       | 25mm <sup>2</sup> -70mm <sup>2</sup> | 0.2mm <sup>2</sup> -4mm <sup>2</sup> | 0.2mm <sup>2</sup> -4mm <sup>2</sup> |
| packing  | 50                                   | 50                                   | 50                                   |
| connection type  | screw connection                     | screw connection                     | screw connection                     |
| Din Rail type  | TS 35/7.5, TS 35/15                  | TS 35/7.5, TS 35/15                  | TS 35/7.5, TS 35/15, TS 32           |
| (1)end cover: T1.5mm   | AP 70/35                             | AP DK 4                              | AP-LASK 1                            |
| (2) Centre type jumper bar:<br>10 potential,3,5,10 potential | 70<br>Q2poles, 3poles, 10poles       | DK4<br>Q2poles, 3poles, 10poles      |                                      |
| (3)end clamp   | LEW 35                               | LEW 35                               | LEW 35                               |
| (4)Continuous number of printing                             | DEK 6(1...10)                        | DEK 6(1...10)                        | DEK 6(1...10)                        |

## EK series



### EK 2.5/35

Insulating Material PA66  
Inflammability Class IEC 947-7-1

### EK 4/35

Insulating Material PA66  
Inflammability Class IEC 947-7-1

### EK 6/35

Insulating Material PA66  
Inflammability Class IEC 947-7-1

|                        |  |                                      |                                      |
|------------------------|--|--------------------------------------|--------------------------------------|
| size                   | T6×H36.5×W56.8                         | T7×H40.3×W57.4                       | T6×H40.4×W57.1                       |
| stranded cross section | 0.2mm <sup>2</sup> -2.5mm <sup>2</sup> | 0.2mm <sup>2</sup> -4mm <sup>2</sup> | 0.2mm <sup>2</sup> -6mm <sup>2</sup> |
| packing                | 50                                     | 50                                   | 50                                   |
| connection type        | screw connection                       | screw connection                     | screw connection                     |
| Din Rail type          | TS 35/7.5, TS 35/15                    | TS 35/7.5, TS 35/15                  | TS 35/7.5, TS 35/15                  |



### EK 10/35

Insulating Material PA66  
Inflammability Class IEC 60947-7-1

### EK 16/35

Insulating Material PA66  
Inflammability Class IEC 60947-7-1

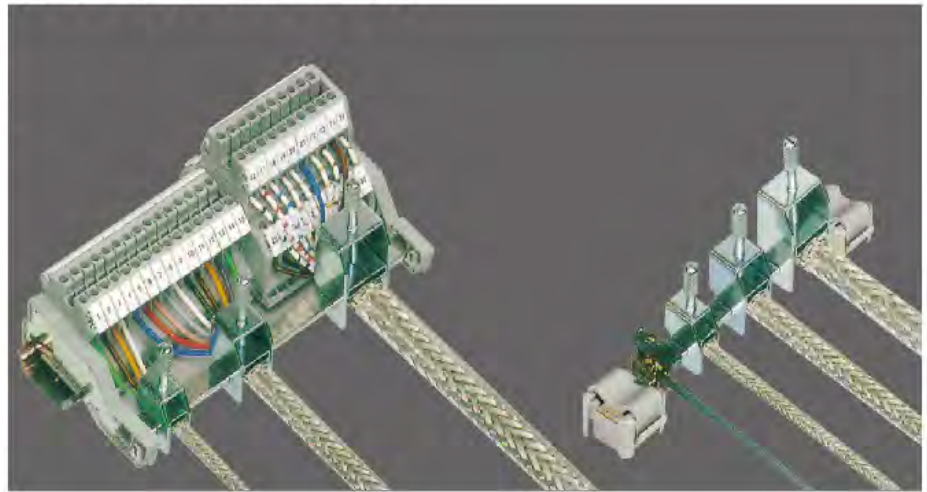
### EK 35/35

Insulating Material PA66  
Inflammability Class IEC 60947-7-1

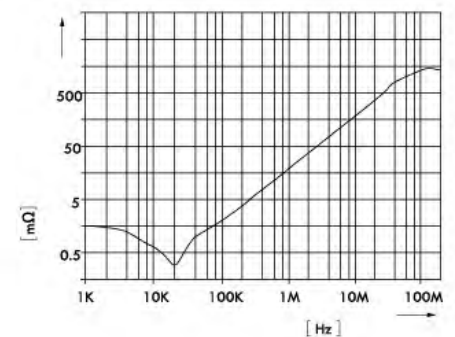
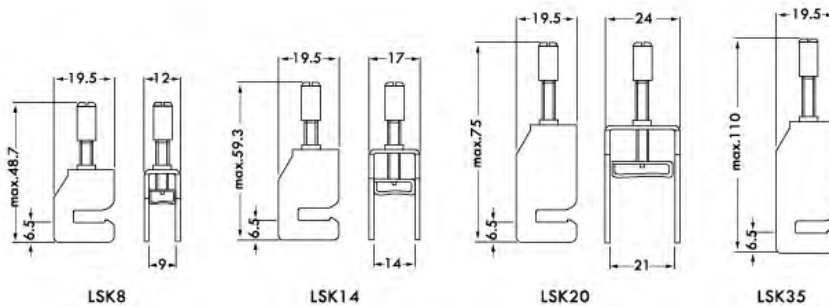
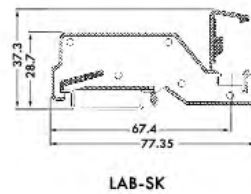
|                        |                                       |                                       |                                      |
|------------------------|---------------------------------------|---------------------------------------|--------------------------------------|
| size                   | T10×H40.3×W56.8                       | T12×H46.5×W57.2                       | T16×H56.6×W58.6                      |
| stranded cross section | 0.5mm <sup>2</sup> -10mm <sup>2</sup> | 0.5mm <sup>2</sup> -16mm <sup>2</sup> | 10mm <sup>2</sup> -35mm <sup>2</sup> |
| packing                | 50                                    | 50                                    | 50                                   |
| connection type        | screw connection                      | screw connection                      | screw connection                     |
| Din Rail type          | TS 35/7.5, TS 35/15                   | TS 35/7.5, TS 35/15                   | TS 35/7.5, TS 35/15                  |

**LSK 8 LSK 14 LSK 20 LSK 35**

Shielding terminal block can be easily used with the holder LAB-SK. It is convenient to install by connecting with busbar.



|   | Model       | Cable Diameter          | Packing |
|---|-------------|-------------------------|---------|
| (1) Holder: installing with 10 x 3mm busbar     | LSK 8       | φ 8mm                   | 10      |
|   | LSK 14      | φ 14mm                  | 10      |
|   | LSK 20      | φ 20mm                  | 10      |
|   | LSK 35      | φ 35mm                  | 10      |
|   | LAB-SK      |                         | 10      |
| (2) Copper busbar: 10 x 3mm, 1000mm, Tin plated | NLS-CU 3/10 | I <sub>max</sub> : 140A | 10      |
| (3) Insulating holder:                          | AB/SS       |                         | 10      |



## SFZ/SKL EMC Shield clamps



### Product description

The shield clamps SFZ/SKL range are used for shielding single cables in combination with strain relief. Simple to use and effective shielding of cables.

Cables are secured with a cable tie. Strain relief in accordance with VDE standards is achieved.

For assembly on 35 mm DIN rails.

| Type           | Order No. | Shield diameter | PU |
|----------------|-----------|-----------------|----|
| SFZ   SKL 3-5  | 36855     | 3.0-5.0mm       | 10 |
| SFZ   SKL 6-8  | 36860     | 6.0-8.0mm       | 10 |
| SFZ   SKL 9-11 | 36865     | 9.0-11.0mm      | 10 |

### Advantages

- Simple and tool-free assembly
- Cost effective solution
- Strain relief of the cable with shielding in a single device
- Optimal contact of the cable shielding
- Permanent and continuous spring pressure on the cable shield, adjustment of spring load not necessary

#### Material

Spring steel zinc-plated

SF-/SFZ-foot Spring steel

Terminal Connection

## SF/SKL EMC Shield clamps



### Product description

The shield clamps SKL range are used for shielding single cables.

Simple to use and effective shielding of cables.

For assembly on 35 mm DIN rails.

| Type          | Order No. | Shield diameter | PU |
|---------------|-----------|-----------------|----|
| SF   SKL 3-5  | 36244     | 3.0-5.0mm       | 10 |
| SF   SKL 6-8  | 36245     | 6.0-8.0mm       | 10 |
| SF   SKL 9-11 | 36246     | 9.0-11.0mm      | 10 |

### Advantages

- Optimal contact of the cable shield
- Simple and tool-free assembly
- Permanent and continuous spring pressure on the cable shield - adjustment of the pressure is not necessary
- Space saving by an optimized arrangement
- Cost effective solution

#### Material

Spring steel zinc-plated

SF-foot Spring steel

## LFZ/SKL EMC Shield clamps



### Product description

SKL shield clamps can be used for shielding single cables. The shield clamps enable an easy to use and reliable shielding of cables.

Cables are secured with a cable tie. Strain relief in accordance with VDE standards is achieved.

Shield clamps are easily attached to mounting plates via screw.

| Type           | Order No. | Shield diameter | Fixing hole | PU |
|----------------|-----------|-----------------|-------------|----|
| LFZ   SKL 3-5  | 36915     | 3.0-5.0mm       | 4.1 mm      | 10 |
| LFZ   SKL 6-8  | 36920     | 6.0-8.0mm       | 4.1 mm      | 10 |
| LFZ   SKL 9-11 | 36925     | 9.0-11.0mm      | 4.1 mm      | 10 |

### Advantages

- Integrated strain relief
- Optimal contact of the cable shielding
- Simple and tool-free assembly
- Permanent and continuous pressure on the cable shield - no adjustment of the spring load required
- Cost effective solution

#### Material

Spring steel zinc-plated

## Clamping yoke

The electromagnetic compatibility (EMC) of electrical machines and installations has become a very important aspect. These are available in different versions.

Material: Steel

### LK 2X2-6



#### Dimensions and weights

|                      |       |
|----------------------|-------|
| Length               | 24 mm |
| Width                | 15 mm |
| Height               | 18 mm |
| Net weight           | 9.9 g |
| Cable diameter, min. | 2 mm  |
| Cable diameter, max. | 6 mm  |

### LK 3-8



#### Dimensions and weights

|                      |       |
|----------------------|-------|
| Length               | 26 mm |
| Width                | 13 mm |
| Height               | 18 mm |
| Net weight           | 9 g   |
| Cable diameter, min. | 3 mm  |
| Cable diameter, max. | 8 mm  |

### LK 3-8 FM4



#### Dimensions and weights

|                      |         |
|----------------------|---------|
| Length               | 50 mm   |
| Width                | 14.5 mm |
| Height               | 26 mm   |
| Net weight           | 17.5 g  |
| Cable diameter, min. | 3 mm    |
| Cable diameter, max. | 8 mm    |

### LK 4-13.5



#### Dimensions and weights

|                      |         |
|----------------------|---------|
| Length               | 24 mm   |
| Width                | 15 mm   |
| Height               | 18 mm   |
| Net weight           | 15.5 g  |
| Cable diameter, min. | 4 mm    |
| Cable diameter, max. | 13.5 mm |

Material: Steel

**LK 4-13.5 FM4**

**Dimensions and weights**

|                      |          |
|----------------------|----------|
| Length               | 50.5 mm  |
| Width                | 20.5 mm  |
| Height               | 31.5 mm  |
| Net weight           | 21.941 g |
| Cable diameter, min. | 4 mm     |
| Cable diameter, max. | 13.5 mm  |

**LK 10-20**

**Dimensions and weights**

|                      |          |
|----------------------|----------|
| Length               | 40 mm    |
| Width                | 25 mm    |
| Height               | 26 mm    |
| Net weight           | 29.848 g |
| Cable diameter, min. | 10 mm    |
| Cable diameter, max. | 20 mm    |

**LK 10-20 FM4**

**Dimensions and weights**

|                      |         |
|----------------------|---------|
| Length               | 50.5 mm |
| Width                | 25 mm   |
| Height               | 40 mm   |
| Cable diameter, min. | 10 mm   |
| Cable diameter, max. | 20 mm   |

**LK 15-32**

**Dimensions and weights**

|                      |        |
|----------------------|--------|
| Length               | 64 mm  |
| Width                | 36 mm  |
| Height               | 32 mm  |
| Net weight           | 80.8 g |
| Cable diameter, min. | 15 mm  |
| Cable diameter, max. | 32 mm  |

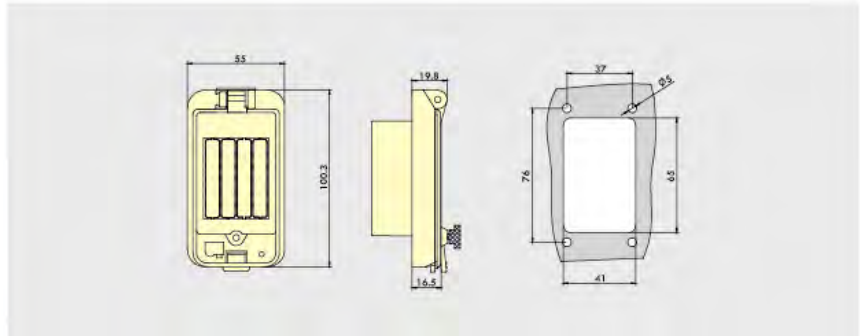
**LK 15-32 FM4**

**Dimensions and weights**

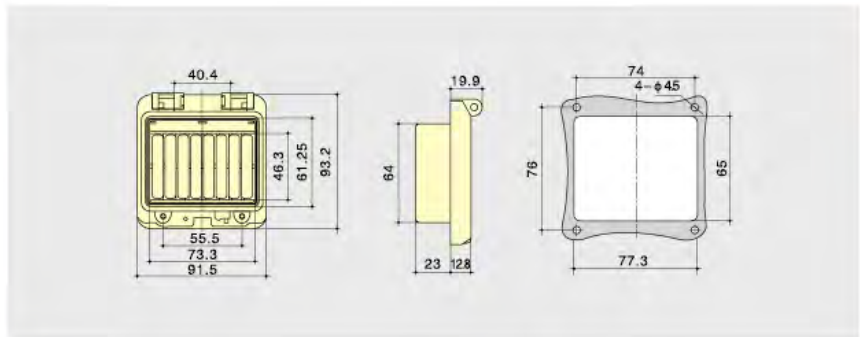
|                      |         |
|----------------------|---------|
| Length               | 50.5 mm |
| Width                | 34.5 mm |
| Height               | 64 mm   |
| Cable diameter, min. | 15 mm   |
| Cable diameter, max. | 32 mm   |

# LK08 series Inspection Window for Enclosures

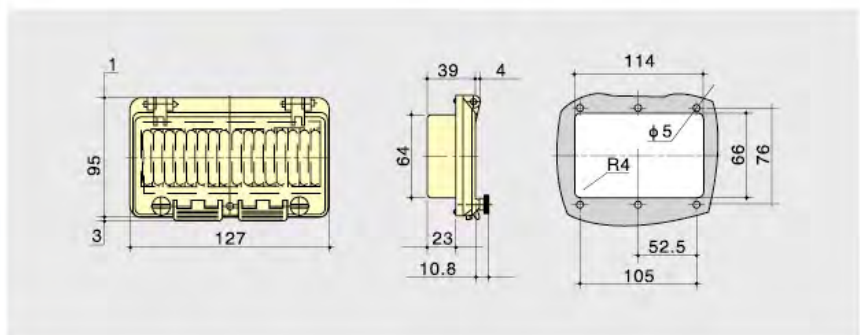
It is applicable for special waterproof ,dustproof and corrosion-proof locations  
 Executive standard: IEC60529 IP67  
 EN 60309



| Model No.  | Specification             |
|------------|---------------------------|
| LK08-02    | 2 ways, with base         |
| LK08-02NBS | 2 ways, without base      |
| LK080200   | Foothold frame for 2 ways |

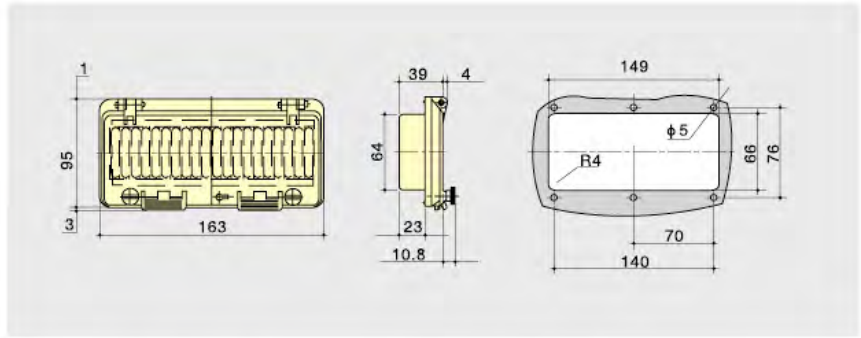


| Model No.  | Specification            |
|------------|--------------------------|
| LK08-04    | 4 ways, with base        |
| LK08-04NBS | 4ways, without base      |
| LK080400   | Foothold frame for 4ways |

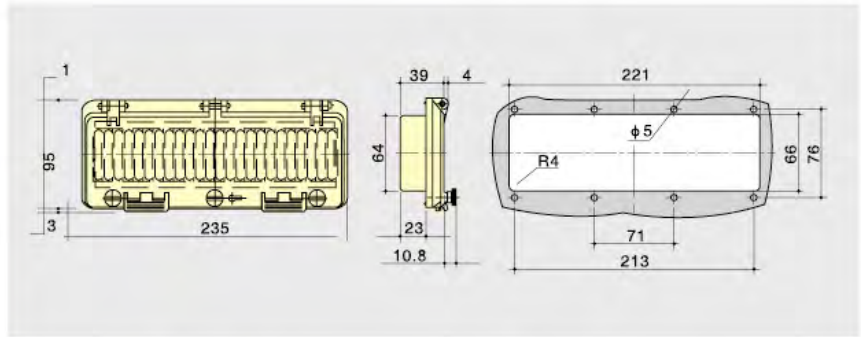


| Model No.  | Specification             |
|------------|---------------------------|
| LK08-06    | 6 ways, with base         |
| LK08-06NBS | 6ways, without base       |
| LK080600   | Foothold frame for 6 ways |

Terminal Connection



| Model No.  | Specification             |
|------------|---------------------------|
| LK08-08    | 8 ways, with base         |
| LK08-08NBS | 8ways, without base       |
| LK080800   | Foothold frame for 8 ways |



| Model No.  | Specification              |
|------------|----------------------------|
| LK08-12    | 12ways, with base          |
| LK08-12NBS | 12ways, without base       |
| LK081200   | Foothold frame for 12 ways |



Foothold Frame



# Transformer



**Overview**

LDZ DC power supply compact construction, good looking, small ripple, low power consumption, big capacity and so on. Suitable for circuit with AC 50/60Hz, input voltage less than 500V and output voltage 20V.

**Features**

1. Comply with IEC standard and integrate transformer and rectify power.
2. Rated input voltage has  $\pm 5\%$  tapping, Iron core adopt air protection argon welding .
3. Swift fuse protection, protection grade up to IP20.

Rated input voltage: AC220V $\pm 5\%$ , AC380V $\pm 5\%$

Rated output voltage: DC24V

Rated input current: 2A, 5A, 10A

Rated load input voltage:  $95\% U_n \leq U_m \leq 105\% U_n$

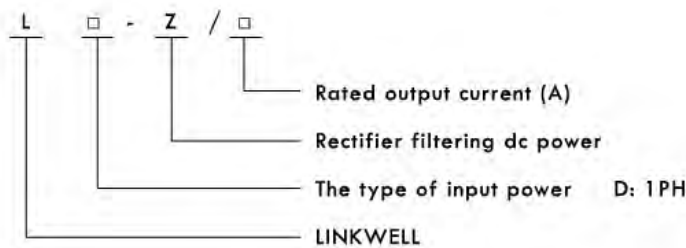
Efficiency:  $>75\%$

Ripple coefficient:  $\leq 5\%$  ( JSZ  $\leq 2\%$  )

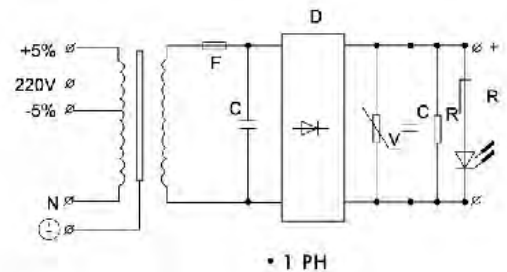
frequency withstand voltage: AC2500V 1min / AC1000V 1min

Environment temperature:  $-5^\circ\text{C} \sim +40^\circ\text{C}$

**Type and meaning**

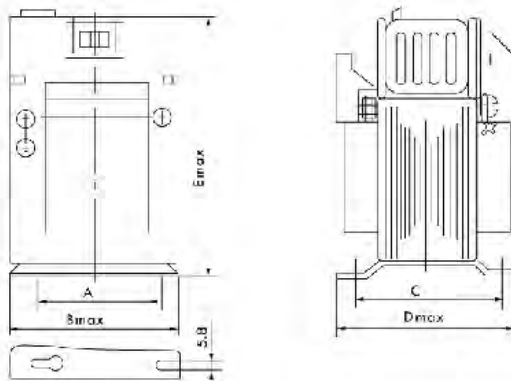


**Circuit diawing**



**Appearance and installing size**

LDZ-2、5、10



| Model | LDZ-2 | LDZ-5 | LDZ-10 |
|-------|-------|-------|--------|
| B max | 78    | 96    | 120    |
| D max | 72    | 93    | 100    |
| E max | 100   | 133   | 168    |
| A     | 56    | 84    | 90     |
| C     | 46    | 73.5  | 85     |

## Three-phase dry type transformer (servo transformer)

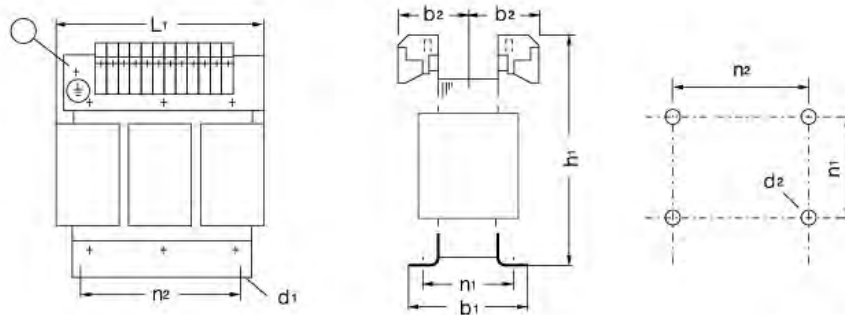


Adopting technology of Siemens company, we design and manufacture JSG series three phase transformer with voltage between 160VA and 16KVA. The figure and installation size have been standardized and can be used together with 4AP series of Siemens.

JSG series transformer used for equipment with input and output voltage less than 500V and frequency 50-60Hz.

Product complies with VDE0550, IEC439, JB5555, GB5226 standard.

### Appearance and installing size



JSG-0.16~JSG-5

| Model    | Capacity KVA | b1 max | b2 max | d1     | d2  | h1 max | L1 max | n1  | n2  |
|----------|--------------|--------|--------|--------|-----|--------|--------|-----|-----|
| JSG-0.16 | 0.16         | 64     | 50     | 5×8    | M4  | 140    | 122    | 49  | 90  |
| JSG-0.25 | 0.25         | 67     | 48     | 6×12   | M5  | 162    | 156    | 49  | 113 |
| JSG-0.4  | 0.4          | 82     | 56     | 6×12   | M5  | 162    | 156    | 64  | 113 |
| JSG-0.63 | 0.63         | 76     | 51     | 7.4×13 | M6  | 187    | 181    | 56  | 136 |
| JSG-1    | 1            | 97     | 61     | 7.4×13 | M6  | 187    | 181    | 76  | 136 |
| JSG-1.6  | 1.6          | 115    | 98     | 7.4×13 | M6  | 214    | 229    | 94  | 170 |
| JSG-2.5  | 2.5          | 133    | 102    | 10×18  | M8  | 241    | 264    | 101 | 200 |
| JSG-4    | 4.0          | 148    | 104    | 10×18  | M8  | 250    | 270    | 118 | 224 |
| JSG-6.3  | 6.3          | 155    | 129    | 10×18  | M8  | 320    | 360    | 118 | 264 |
| JSG-8    | 8            | 170    | 134    | 12×20  | M10 | 380    | 420    | 140 | 315 |
| JSG-10   | 10           | 170    | 134    | 12×20  | M10 | 380    | 420    | 140 | 315 |



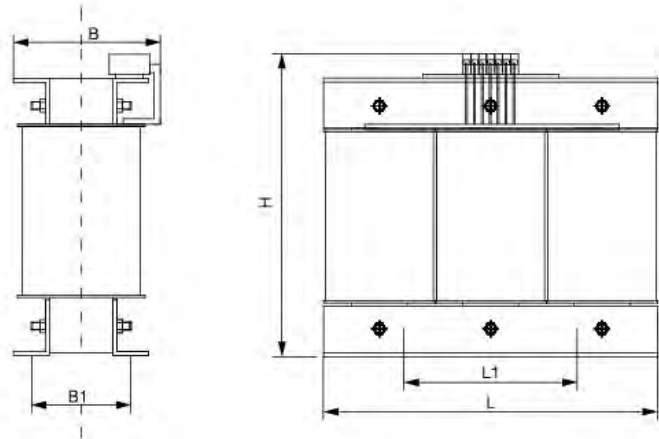
Mainly used for power exchange, illumination electric, power and current rectify.

Capacity: 0.5-100KVA.

Input voltage: 660 and 380 V.

Way of connection: Y or Delta.

Appearance and installing size



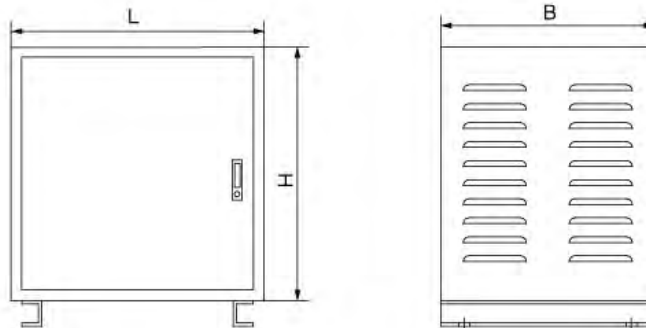
| Model  | Capacity KVA | Input voltage |             | Outline size |     |     | Installation size |     | Hole radius |
|--------|--------------|---------------|-------------|--------------|-----|-----|-------------------|-----|-------------|
|        |              |               |             | L            | B   | H   | L1                | B1  |             |
| SG-2.5 | 2.5          | 660           | △<br>或<br>Y | 270          | 180 | 260 | 200               | 102 | 8.5         |
| SG-3   | 3            |               |             | 270          | 190 | 260 | 200               | 102 | 8.5         |
| SG-4   | 4            |               |             | 300          | 190 | 290 | 224               | 120 | 8.5         |
| SG-5   | 5            |               |             | 300          | 210 | 290 | 224               | 135 | 8.5         |
| SG-6   | 6            |               |             | 360          | 200 | 350 | 264               | 127 | 8.5         |
| SG-7   | 7            |               |             | 360          | 200 | 370 | 264               | 127 | 8.5         |
| SG-8   | 8            |               |             | 360          | 240 | 370 | 264               | 142 | 8.5         |
| SG-10  | 10           |               |             | 420          | 240 | 420 | 315               | 150 | 12.5        |
| SG-12  | 12           |               |             | 420          | 240 | 420 | 315               | 150 | 12.5        |
| SG-15  | 15           |               |             | 420          | 280 | 420 | 315               | 170 | 12.5        |
| SG-20  | 20           | 380           | △<br>或<br>Y | 480          | 240 | 450 | 360               | 150 | 12.5        |
| SG-25  | 25           |               |             | 480          | 240 | 450 | 360               | 180 | 12.5        |
| SG-30  | 30           |               |             | 480          | 270 | 450 | 360               | 220 | 12.5        |
| SG-40  | 40           |               |             | 540          | 300 | 450 | 360               | 250 | 12.5        |
| SG-45  | 45           |               |             | 600          | 300 | 560 | 450               | 250 | 12.5        |
| SG-50  | 50           |               |             | 600          | 350 | 560 | 450               | 220 | 12.5        |
| SG-60  | 60           |               |             | 600          | 350 | 560 | 450               | 220 | 15          |
| SG-80  | 80           |               |             | 660          | 380 | 660 | 550               | 250 | 15          |
| SG-100 | 100          |               |             | 660          | 380 | 660 | 550               | 250 | 15          |



## SGC series three phase dry-type transformer shell



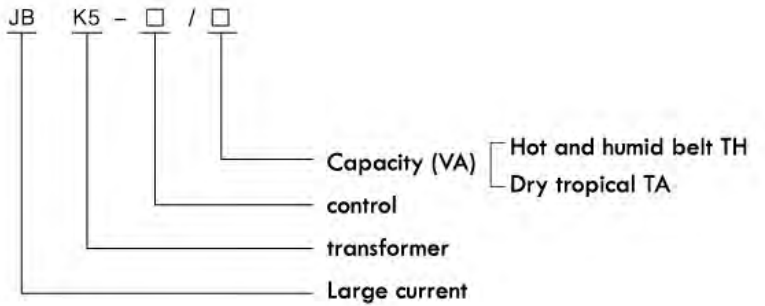
Appearance and installing size



| Type       | Rated volume (KVA) | Outline size |     |     |
|------------|--------------------|--------------|-----|-----|
|            |                    | L            | B   | H   |
| SGC-2.5KVA | 2.5                | 300          | 240 | 280 |
| SGC-3KVA   | 3                  | 300          | 240 | 280 |
| SGC-4KVA   | 4                  | 390          | 280 | 320 |
| SGC-5KVA   | 5                  | 390          | 280 | 320 |
| SGC-6KVA   | 6                  | 390          | 280 | 320 |
| SGC-8KVA   | 8                  | 500          | 350 | 450 |
| SGC-10KVA  | 10                 | 500          | 350 | 450 |
| SGC-12KVA  | 12                 | 500          | 350 | 450 |
| SGC-15KVA  | 15                 | 500          | 350 | 450 |
| SGC-20KVA  | 20                 | 600          | 420 | 520 |
| SGC-25KVA  | 25                 | 600          | 420 | 520 |
| SGC-30KVA  | 30                 | 600          | 420 | 520 |
| SGC-40KVA  | 40                 | 600          | 420 | 520 |
| SGC-45KVA  | 45                 | 740          | 500 | 650 |
| SGC-50KVA  | 50                 | 740          | 500 | 650 |
| SGC-60KVA  | 60                 | 740          | 500 | 650 |
| SGC-80KVA  | 80                 | 840          | 530 | 650 |
| SGC-100KVA | 100                | 840          | 530 | 650 |



### Type and meaning



| Type       | Rated volume (VA) | Efficiency (%) | voltage of output under load  |                     | Voltage of output unloaded |                     | rated input voltage (v)          | rated output voltage (v) | Remarks          |
|------------|-------------------|----------------|-------------------------------|---------------------|----------------------------|---------------------|----------------------------------|--------------------------|------------------|
|            |                   |                | Signal winding (%)            | Control winding (%) | Signal winding (%)         | Control winding (%) |                                  |                          |                  |
| JBK5-40    | 40                | 80             | 6≥Um > 5<br>12≥Um > 10        | 95%-105%<br>UH      | 6或12                       | 1.1 Um              | AC380<br>±5%                     | AC220<br>(127)<br>110    | Control          |
| JBK5-63    | 63                |                |                               |                     |                            |                     |                                  |                          |                  |
| JBK5-100   | 100               |                |                               |                     |                            |                     |                                  |                          |                  |
| JBK5-160   | 160               | 85             | 6≥Um > 4.5<br>12≥Um > 9       | 95%-105%<br>UH      | 6或12                       | 1.1 Um              | AC220<br>±5%                     | 48<br>35<br>24           | Light or Control |
| JBK5-250   | 250               |                |                               |                     |                            |                     |                                  |                          |                  |
| JBK5-400   | 400               |                |                               |                     |                            |                     |                                  |                          |                  |
| JBK5-630   | 630               | 90             | 12.8≥Um > 9.6<br>13.5≥Um > 10 | 95%-105%<br>UH      | 6或12                       | 1.1 Um              | AC220<br>±5%                     | 12<br>6                  | Signal           |
| JBK5-800   | 800               |                |                               |                     |                            |                     |                                  |                          |                  |
| JBK5-1000  | 1000              |                |                               |                     |                            |                     |                                  |                          |                  |
| JBK5-1600  | 1600              | 90             | 15.2≥Um11                     | 95%-105%<br>UH      | 6或12                       | 1.1 Um              | 0-380 or<br>0-220 without<br>±5% |                          |                  |
| JBK5-2500  | 2500              |                |                               |                     |                            |                     |                                  |                          |                  |
| JBK5-3000  | 3000              |                |                               |                     |                            |                     |                                  |                          |                  |
| JBK5-4000  | 4000              | 90             | 15.2≥Um11                     | 95%-105%<br>UH      | 6或12                       | 1.1 Um              | 0-380 or<br>0-220 without<br>±5% |                          |                  |
| JBK5-5000  | 5000              |                |                               |                     |                            |                     |                                  |                          |                  |
| JBK5-6000  | 6000              |                |                               |                     |                            |                     |                                  |                          |                  |
| JBK5-7000  | 7000              | 90             | 15.2≥Um11                     | 95%-105%<br>UH      | 6或12                       | 1.1 Um              | 0-380 or<br>0-220 without<br>±5% |                          |                  |
| JBK5-8000  | 8000              |                |                               |                     |                            |                     |                                  |                          |                  |
| JBK5-10000 | 10000             |                |                               |                     |                            |                     |                                  |                          |                  |
| JBK5-15KVA | 15000             | 90             | 15.2≥Um11                     | 95%-105%<br>UH      | 6或12                       | 1.1 Um              | 0-380 or<br>0-220 without<br>±5% |                          |                  |
| JBK5-20KVA | 20000             |                |                               |                     |                            |                     |                                  |                          |                  |
| JBK5-30KVA | 30000             |                |                               |                     |                            |                     |                                  |                          |                  |
| JBK5-40KVA | 40000             | 90             | 15.2≥Um11                     | 95%-105%<br>UH      | 6或12                       | 1.1 Um              | 0-380 or<br>0-220 without<br>±5% |                          |                  |
| JBK5-50KVA | 50000             |                |                               |                     |                            |                     |                                  |                          |                  |
| JBK5-60KVA | 60000             |                |                               |                     |                            |                     |                                  |                          |                  |

The distribution of every winding capacity can be made according to user's demand



# Series JBK5 machine controlling transformer

## Series JBK5 machine controlling transformer

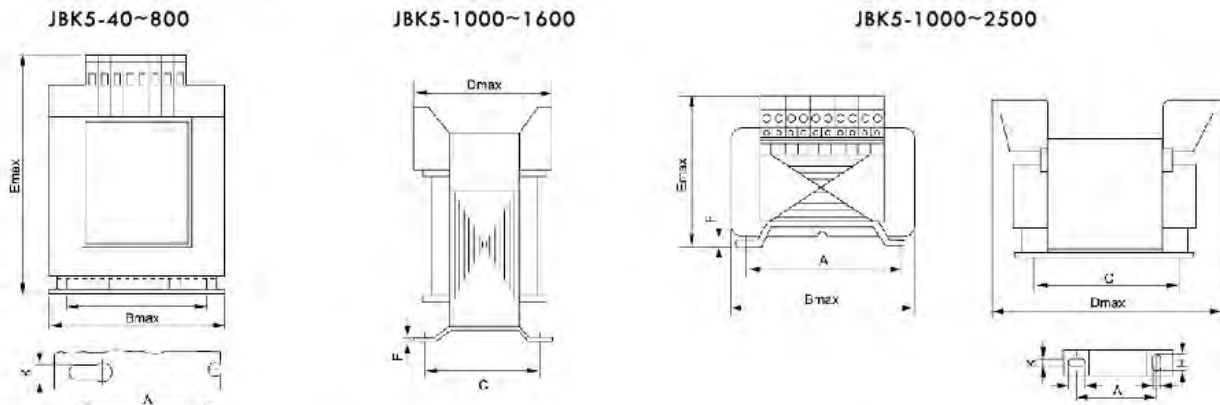


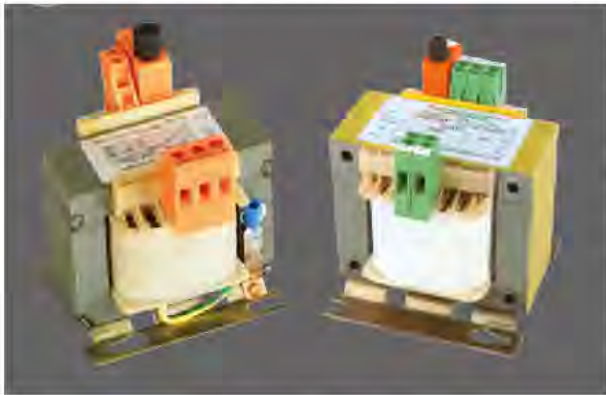
| Type       | B max | D max | E max | Hole distance A | Hole distance C | Installing hole K | F max | Remarks    |
|------------|-------|-------|-------|-----------------|-----------------|-------------------|-------|------------|
| JBK5-40、63 | 78    | 72    | 90    | 56±0.15         | 46±0.125        | 4.6               | 1.5   |            |
| JBK5-100   | 85    | 75    | 96    | 64±0.15         | 62±0.15         | 4.6               | 1.5   |            |
| JBK5-160   | 96    | 92    | 105   | 84±0.175        | 73.5±0.15       | 5.5               | 1.5   |            |
| JBK5-250   | 96    | 100   | 104   | 84±0.175        | 85±0.175        | 5.8               | 1.5   |            |
| JBK5-400   | 120   | 100   | 122   | 90±0.175        | 85±0.175        | 5.8               | 2     |            |
| JBK5-500   | 120   | 110   | 122   | 90±0.175        | 96±0.175        | 5.8               | 2     |            |
| JBK5-630   | 150   | 110   | 140   | 122±0.2         | 90±0.175        | 7                 | 2     |            |
| JBK5-800   | 150   | 128   | 142   | 122±0.2         | 105±0.2         | 7                 | 2     |            |
| JBK5-1000  | 150   | 190   | 142   | 155±0.2         | 126±0.2         | 7                 | 3     | Horizontal |
| JBK5-1000  | 168   | 125   | 155   | 138±0.2         | 105±0.2         | 9                 | 2     | Vertical   |
| JBK5-1600  | 170   | 225   | 153   | 176±0.2         | 140±0.2         | 7                 | 3     | Horizontal |
| JBK5-1600  | 168   | 138   | 155   | 138±0.2         | 116±0.2         | 9                 | 2     | Vertical   |
| JBK5-2500  | 194   | 250   | 170   | 200±0.2         | 170±0.23        | 7                 | 4     | Horizontal |
| JBK5-3000  | 194   | 250   | 190   | 200±0.2         | 170±0.23        | 7                 | 4     | Horizontal |
| JBK5-4000  | 194   | 250   | 200   | 200±0.2         | 170±0.23        | 7                 | 4     | Horizontal |
| JBK5-5000  | 220   | 286   | 215   | 240±0.5         | 208±0.5         | 9                 | 6     | Horizontal |
| JBK5-6000  | 220   | 286   | 215   | 240±0.5         | 208±0.5         | 9                 | 6     | Horizontal |
| JBK5-7000  | 280   | 205   | 260   | 200±0.5         | 180±0.5         | 12                | 7     | Vertical   |
| JBK5-8000  | 280   | 205   | 260   | 200±0.5         | 180±0.5         | 12                | 7     | Vertical   |
| JBK5-10000 | 280   | 250   | 260   | 200±0.5         | 215±0.5         | 12                | 7     | Vertical   |

### Main Technical Parameter

| Type       | Rated volume (VA) | Efficiency (%) | voltage of output under load                  |                     | Voltage of output unloaded |                     | rated input voltage (v)    | rated output voltage (v)        | Remarks   |
|------------|-------------------|----------------|---|---------------------|----------------------------|---------------------|----------------------------|---------------------------------|---|
|            |                   |                | Signal winding (%)                            | Control winding (%) | Signal winding (%)         | Control winding (%) |                            |                                 |   |
| JBK5-40    | 40                | 80             | $6 \geq U_m > 5$<br>$12 \geq U_m > 10$        | 95%-105% UH         | 6 or 12                    | 1.1U <sub>m</sub>   | AC380 ±5%                  | AC220 (127) Control<br>110      | The distribution of every winding capacity can be made according to user's demand |
| JBK5-63    | 63                |                |   |                     |                            |                     |                            |                                 |   |
| JBK5-100   | 100               |                |   |                     |                            |                     |                            |                                 |   |
| JBK5-160   | 160               |                |   |                     |                            |                     |                            |                                 |   |
| JBK5-250   | 250               |                |   |                     |                            |                     |                            |                                 |   |
| JBK5-400   | 400               | 85             | $6 \geq U_m > 4.5$<br>$12 \geq U_m > 9$       | 95%-105% UH         | 6 or 12                    | 1.1U <sub>m</sub>   | AC220 ±5%                  | 48 Light or Control<br>35<br>24 |   |
| JBK5-630   | 630               |                |   |                     |                            |                     |                            |                                 |   |
| JBK5-800   | 800               |                |   |                     |                            |                     |                            |                                 |   |
| JBK5-1000  | 1000              |                |   |                     |                            |                     |                            |                                 |   |
| JBK5-1600  | 1600              |                |   |                     |                            |                     |                            |                                 |   |
| JBK5-2500  | 2500              | 90             | $12.8 \geq U_m > 9.6$<br>$13.5 \geq U_m > 10$ | 95%-105% UH         | 6 or 12                    | 1.1U <sub>m</sub>   | AC220 ±5%                  | 12 Signal<br>6                  |   |
| JBK5-3000  | 3000              |                |   |                     |                            |                     |                            |                                 |   |
| JBK5-4000  | 4000              |                |   |                     |                            |                     |                            |                                 |   |
| JBK5-5000  | 5000              |                |   |                     |                            |                     |                            |                                 |   |
| JBK5-6000  | 6000              |                |   |                     |                            |                     |                            |                                 |   |
| JBK5-7000  | 7000              | 96             | $15.2 \geq U_m > 11$                          | 95%-105% UH         | 6 or 12                    | 1.1U <sub>m</sub>   | 0-380 or 0-220 without ±5% | 12 Signal<br>6                  |   |
| JBK5-8000  | 8000              |                |   |                     |                            |                     |                            |                                 |   |
| JBK5-8000  | 8000              |                |   |                     |                            |                     |                            |                                 |   |
| JBK5-10000 | 10000             |                |   |                     |                            |                     |                            |                                 |   |

### Appearance and installing size





## Series JBK5 machine controlling transformer

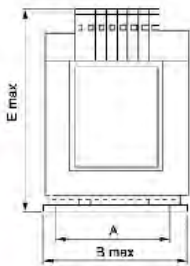
### Summary

Series JBK6 machine controlling transformer is our company introduces the series of the foreign latest transformer, on the basis of the JBK5 controlling transformer, develop the new generation transformer, JBK6 transformer's appearance size, installation size, and the occasion of using are same as JBK5 transformer, besides JBK5 transformer's advantage, JBK6 transformer has the following characteristic:

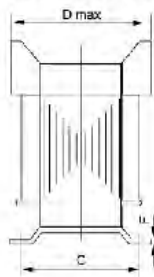
1. The terminal screw is bigger than JBK 5, it is more convenient and firmer to wire.
2. With shortcut and hot protector, it is more reliable to use.
3. The transformer adopts the craft of vacuum soak painting, the insulating material import from foreign country, insulating ability is more steady.

### Appearance and installing size

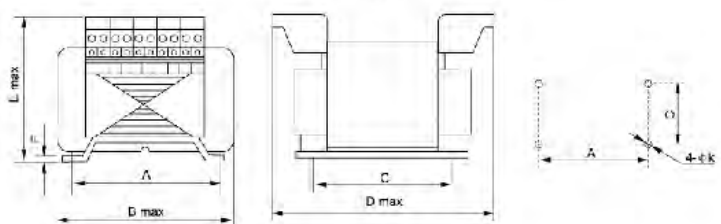
JBK6-40~800



JBK6-1000~1600 Vertical



JBK6-1000~2500



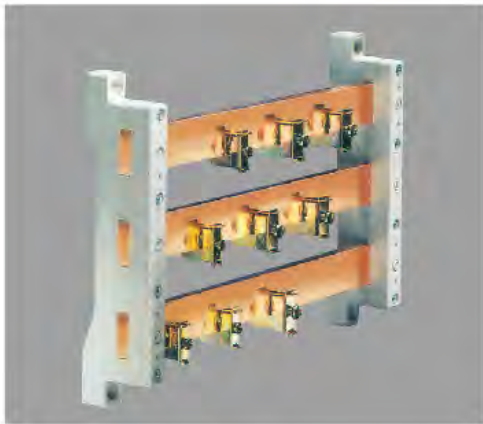
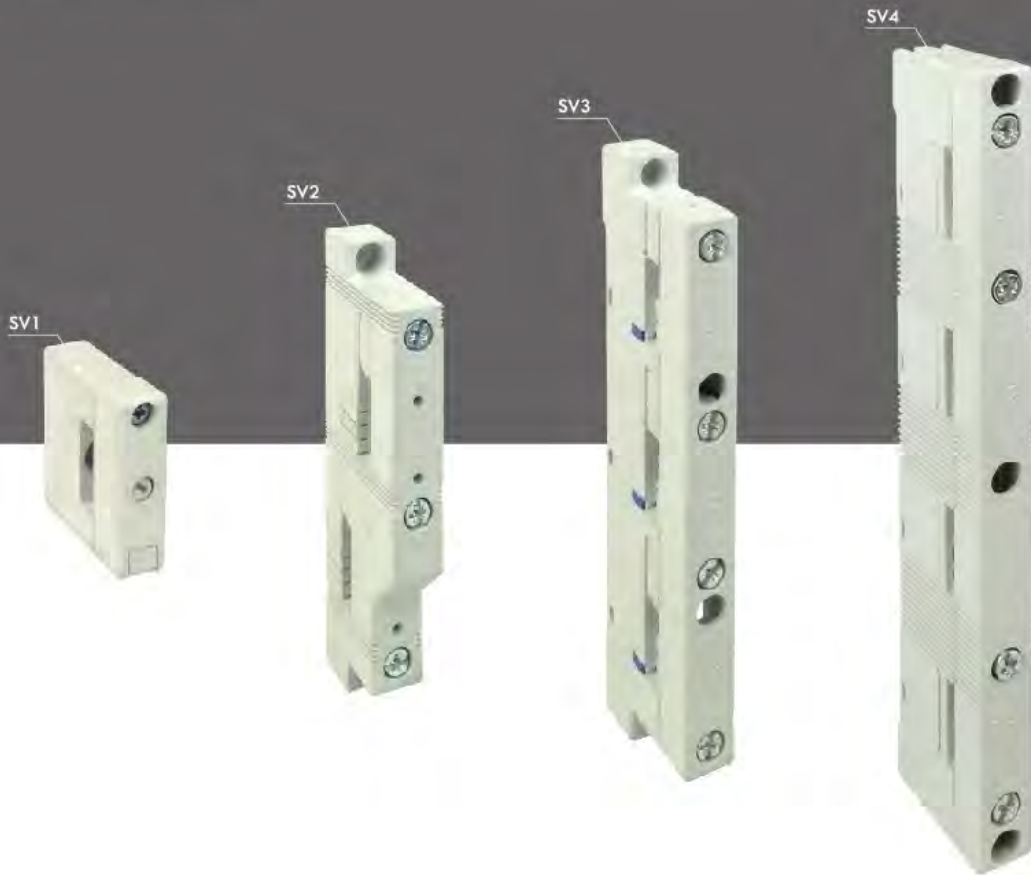
| Type       | B max | D max | E max | Hole distance A | Hole distance C | Installing hole K | F max | Remarks    |
|------------|-------|-------|-------|-----------------|-----------------|-------------------|-------|------------|
| JBK6-40、63 | 78    | 72    | 90    | 56±0.15         | 46±0.125        | 4.6               | 1.5   |            |
| JBK6-100   | 85    | 75    | 96    | 64±0.15         | 62±0.15         | 4.6               | 1.5   |            |
| JBK6-160   | 96    | 92    | 105   | 84±0.175        | 73.5±0.15       | 5.5               | 1.5   |            |
| JBK6-250   | 96    | 100   | 104   | 84±0.175        | 85±0.175        | 5.8               | 1.5   |            |
| JBK6-400   | 120   | 100   | 122   | 90±0.175        | 85±0.175        | 5.8               | 2     |            |
| JBK6-630   | 150   | 110   | 140   | 122±0.2         | 90±0.175        | 7                 | 2     |            |
| JBK6-800   | 150   | 128   | 142   | 122±0.2         | 105±0.2         | 7                 | 2     |            |
| JBK6-1000  | 150   | 190   | 142   | 126±0.2         | 155±0.2         | 7                 | 3     | Horizontal |
| JBK6-1000  | 168   | 125   | 155   | 105±0.2         | 138±0.2         | 9                 | 2     | Vertical   |
| JBK6-1600  | 170   | 225   | 153   | 140±0.2         | 176±0.2         | 7                 | 3     | Horizontal |
| JBK6-1600  | 168   | 138   | 155   | 116±0.2         | 138±0.2         | 9                 | 2     | Vertical   |
| JBK6-2500  | 194   | 160   | 165   | 172±0.2         | 195±0.23        | 7                 | 4     | Horizontal |

### Main Technical Parameter

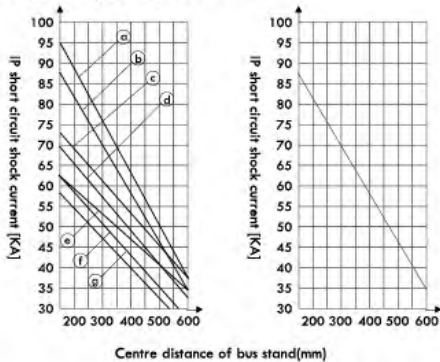
| Type      | Rated volume (VA) | Efficiency (%) | voltage of output under load |                     | Voltage of output unloaded |                     | rated input voltage (v) | rated output voltage (v) | Remarks   |
|-----------|-------------------|----------------|------------------------------|---------------------|----------------------------|---------------------|-------------------------|--------------------------|---|
|           |                   |                | Signal winding (%)           | Control winding (%) | Signal winding (%)         | Control winding (%) |                         |                          |   |
| JBK6-40   | 40                | 80             | 6≥Um>5<br>12≥Um>10           | 95%-105%<br>UH      | 6 or 12                    | 1.1Um               | AC380<br>±5%            | AC220<br>(127) } Control | The distribution of every winding capacity can be made according to user's demand |
| JBK6-63   | 63                |                |                              |                     |                            |                     |                         | 110                      |   |
| JBK6-100  | 100               |                |                              |                     |                            |                     |                         | 48 } Light or Control    |   |
| JBK6-160  | 160               |                |                              |                     |                            |                     |                         |                          |   |
| JBK6-250  | 250               | 85             | 6≥Um>4.5<br>12≥Um>9          |                     |                            |                     | AC220<br>±5%            | 12 } Signal              |   |
| JBK6-400  | 400               |                |                              |                     |                            |                     |                         | 6 }<br>6 }               |   |
| JBK6-630  | 630               |                |                              |                     |                            |                     |                         |                          |   |
| JBK6-800  | 800               | 90             |                              |                     |                            |                     |                         |                          |   |
| JBK6-1000 | 1000              |                |                              |                     |                            |                     |                         |                          |   |
| JBK6-1600 | 1600              |                |                              |                     |                            |                     |                         |                          |   |
| JBK6-2500 | 2500              |                |                              |                     |                            |                     |                         |                          |   |



# Cabinet Accessories



SV1/SV2/SV3/SV4



**New type adjustable busbar holder**

**Design:**

With the wiring techniques of wire section material and bus-bar without pinholes adopted, the bending-proof intensity and short-circuit-proof capacity of the bus-bar are improved, and it also helps to cool the bus-bar, lower the temperature and increase current capacity.

The Linkwell bus-bar system has been used to develop various switches. The system is also widely used in low-voltage electricity supply and distribution devices and industrial and building electric appliances.

**Material:**

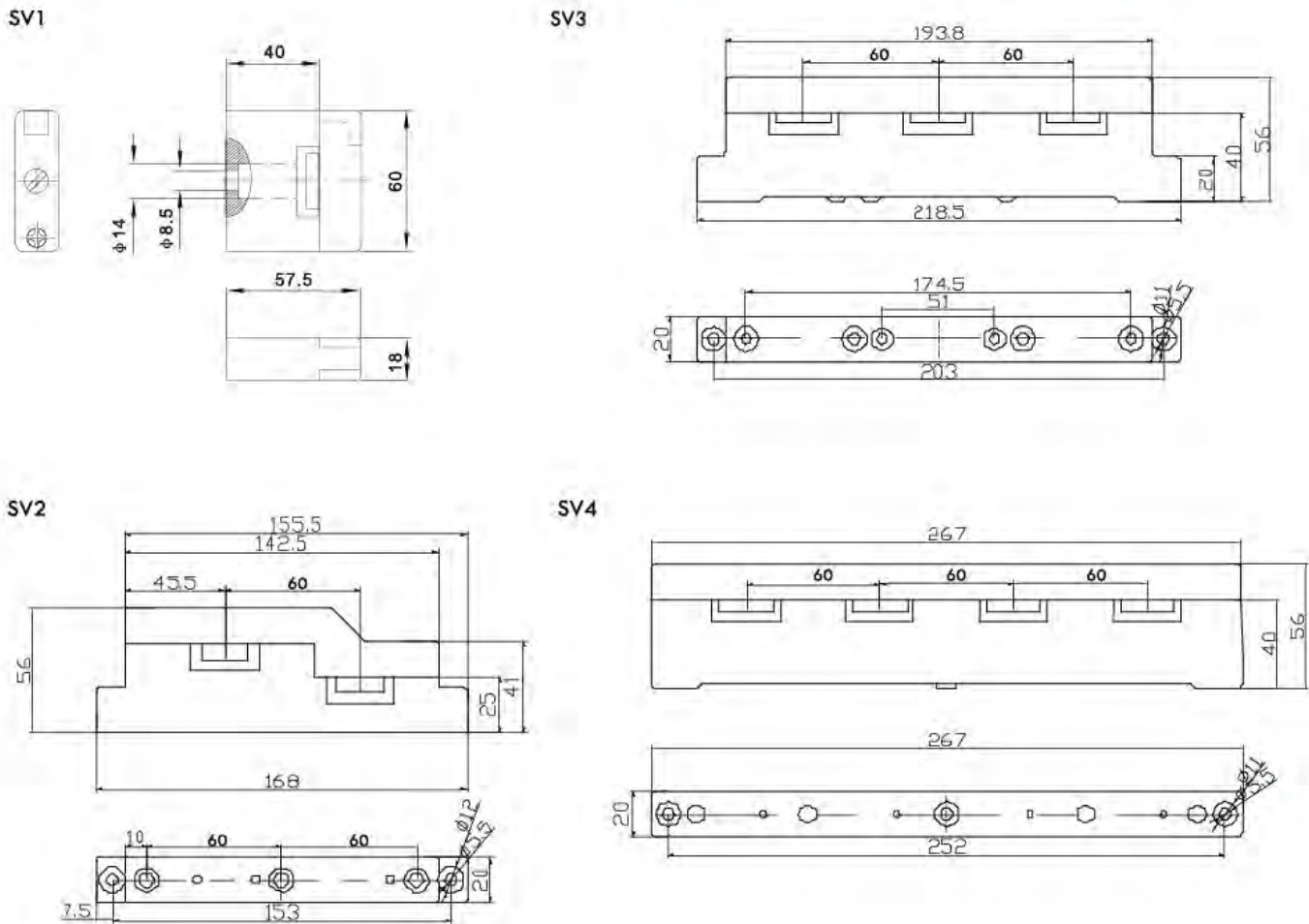
Glass fibre strengthened, thermoplastic polyester (PBT), continuous working temperature maximum 140°C. Fireproofing function based on UL94-V0

**Short-circuit-proof intensity graph**

Testing base: VDE 0660/IEC 439

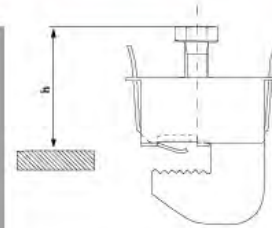
Testing process: according to dynamic short-circuit intensity of IEC 439.

# New Generation SV Bus-bar Holder



Rated working voltage up to 1000 volt,50/60 Hz.according to VDE 0660

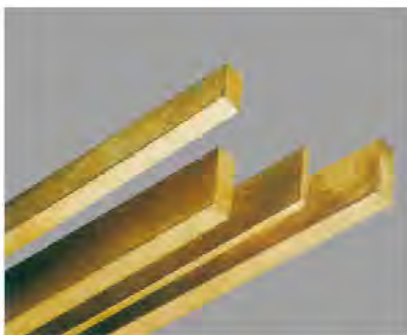
| Rated current up to | Number of poles | Centre distance of bus stand | Suitable for Busbar size   | Tightening turning moment |                 | Per package | Model |
|---------------------|-----------------|------------------------------|--|---------------------------|-----------------|-------------|-------|
|                     |                 |                              |  | Fixed screw               | Fixed the cover |             |       |
| 800                 | 1               | —                            | 30X10mm  | 5-8Nm                     | 1-3Nm           | 2           | SV1   |
| 800                 | 2               | 60mm                         | 30X10mm,30X5mm,25x10mm,25x5mm,20x10mm,20x5mm,15x10mm,15x5mm,12x10mm,12x5mm | 3-5Nm                     | 1-3Nm           | 2           | SV2   |
| 800                 | 2               | 60mm                         | 30X10mm,30X5mm,25x10mm,25x5mm,20x10mm,20x5mm,15x10mm,15x5mm                | 3-5Nm                     | 1-3Nm           | 2           | SV3   |
| 800                 | 4               | 60mm                         | 30X10mm,30X5mm,25x10mm,25x5mm,20x10mm,20x5mm,15x10mm,15x5mm                | 3-5Nm                     | 1-3Nm           | 2           | SV4   |



SV Busbar terminal

| Minimum H (mm) | Maximum H (mm) | Model NO. |
|----------------|----------------|-----------|
| 17             | 23             | SV201/206 |
| 22             | 29             | SV202/207 |
| 26             | 39             | SV203/208 |
| 39             | 57             | SV204/209 |
| 44             | 66             | SV205/210 |

| Thickness of bus | Round lead wiring*    | Piled copper bus terminal space | Torque  | Per package | Model NO. |
|------------------|-----------------------|---------------------------------|---------|-------------|-----------|
| 4-5mm            | 1-4mm <sup>2</sup>    | -                               | 2Nm     | 50pcs       | SV201     |
| 4-5mm            | 2.5-16mm <sup>2</sup> | 8 x 8mm                         | 3Nm     | 50pcs       | SV202     |
| 4-5mm            | 16-50mm <sup>2</sup>  | 10.5 x 11mm                     | 6-8Nm   | 50pcs       | SV203     |
| 4-5mm            | 35-70mm <sup>2</sup>  | 16.5 x 15mm                     | 10-12Nm | 50pcs       | SV204     |
| 4-5mm            | 70-185mm <sup>2</sup> | 22.5 x 20mm                     | 12-15Nm | 50pcs       | SV205     |
| 9-10mm           | 1-4mm <sup>2</sup>    | -                               | 2Nm     | 50pcs       | SV206     |
| 9-10mm           | 2.5-16mm <sup>2</sup> | 8 x 8mm                         | 3Nm     | 50pcs       | SV207     |
| 9-10mm           | 16-50mm <sup>2</sup>  | 10.5 x 11mm                     | 6-8Nm   | 50pcs       | SV208     |
| 9-10mm           | 35-70mm <sup>2</sup>  | 16.5 x 15mm                     | 10-12Nm | 50pcs       | SV209     |
| 9-10mm           | 70-185mm <sup>2</sup> | 22.5 x 20mm                     | 12-15Nm | 50pcs       | SV210     |

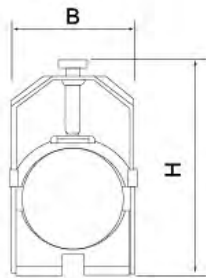


### Copper Busbar

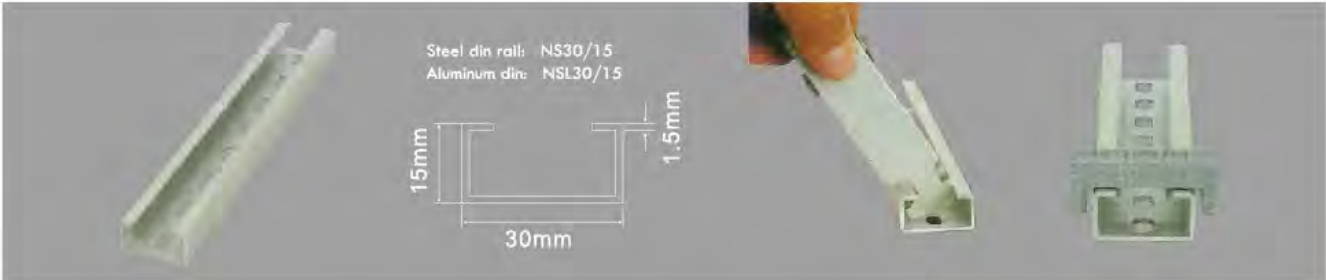
| Model              | Cu221 | Cu222 | Cu223 | Cu224 | Cu225 |
|--------------------|-------|-------|-------|-------|-------|
| Specifications(mm) | 30×5  | 25×5  | 20×10 | 20×5  | 30×10 |
| Rated current      | 447A  | 384A  | 497A  | 319A  | 800A  |

1.Up to 2 meters copper plating    2.Length optional electroless copper

## New BK Cable clamp series



| Material & Specification |                 | Cable diameter<br>Ø (mm) | Size(mm) |     |
|--------------------------|-----------------|--------------------------|----------|-----|
| Galvanized steel         | Stainless steel |                          | B        | H   |
| BK14                     | BK14E           | 6-12                     | 21       | 70  |
| BK18                     | BK18 E          | 12-18                    | 23       | 70  |
| BK22                     | BK22 E          | 18-22                    | 27       | 75  |
| BK30                     | BK30 E          | 22-30                    | 39       | 85  |
| BK38                     | BK38 E          | 30-38                    | 45       | 90  |
| BK42                     | BK42E           | 38-42                    | 47       | 95  |
| BK50                     | BK50E           | 42-50                    | 57       | 120 |
| BK64                     | BK64 E          | 50-64                    | 70       | 130 |
| BK70                     | BK70 E          | 64-72                    | 77       | 165 |
| BK80                     | BK80 E          | 72-82                    | 87       | 183 |
| BK100                    | BK100 E         | 95-102                   | 108      | 217 |

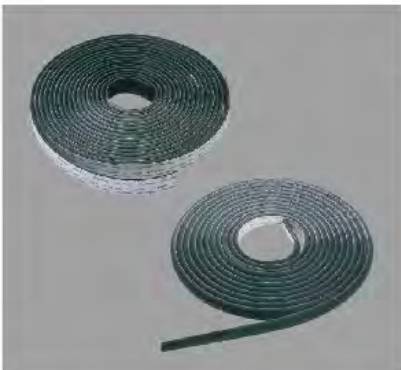


## Cable entry sleeve

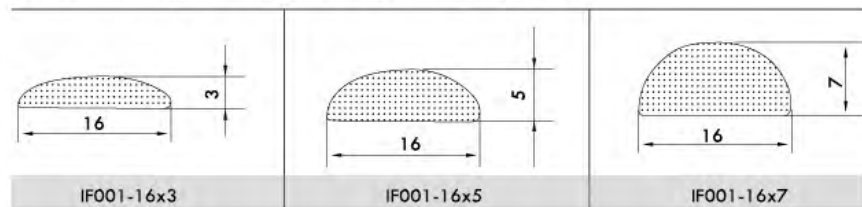
It could tightly clutch different cable on the bottom of the case. It is used together with a cable leading bar.



| Model | Diameter mm | Cable Number |
|-------|-------------|--------------|
| US1   | 47          | 1            |
| US3   | 21          | 3            |
| US8   | 13          | 8            |



## Adhesive tape for panel IF001-16x3 / 5 / 7





### Technical data of electrical conductor

- Copper strips ( $\geq 99.9\%Cu$ ).
- Surface: uncoated or tinned.
- Resistivity:  $\leq 1.785\mu\Omega/cm^2$ .
- Electrical conductivity:  $\geq 55 Sm/mm^2$ .
- Tensile strength:  $\geq 200N/mm^2$ .
- Extensibility:  $\geq 30\%$ .

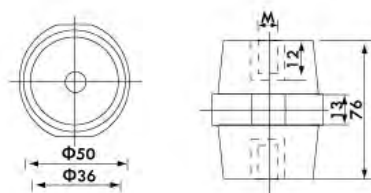
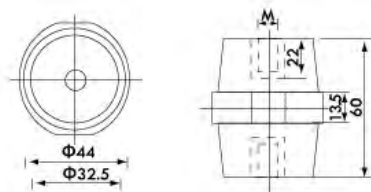
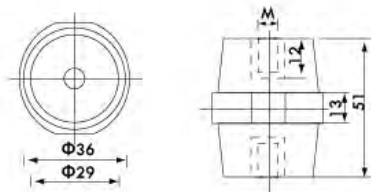
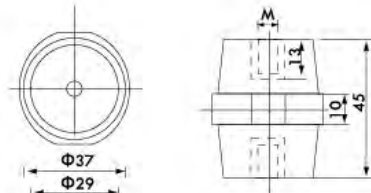
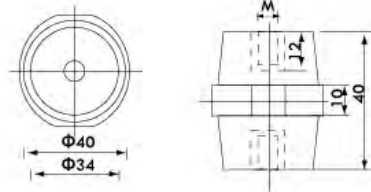
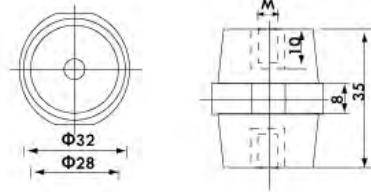
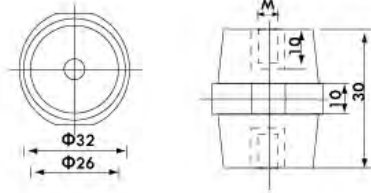
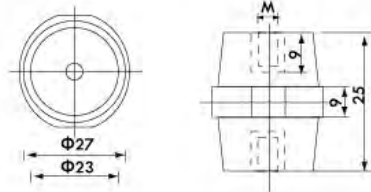
### Technical data of insulation

- Material: PVC. Color: black.
- Thickness: 1.8-2.1mm.
- Shore hardness: A70-80.
- Electrical strength:  $\geq 23kV/mm$ .
- Oxygen index: 30%.
- Flame retardant; self-extinguishing.
- Elasticity:  $\geq 180\%$  after 7-day aging-test with  $135^\circ C$ .
- Tensile strength:  $\geq 20MPa$ .

### Technical data of flexible insulated busbars

- Operating temperature:  $-30^\circ C$  to  $+105^\circ C$ .
- Operating voltage: 750V.
- Voltage withstand performance with 15min / 50Hz AC:
  - between flexible insulated busbar and earth:  $\geq 15kV$ .
  - between two flexible insulated busbars:  $\geq 30kV$ .

| Dimensions and Qty. of strips | Cross section (mm <sup>2</sup> ) | Ampacity (A)             |                          |                          | Dimensions and Qty. of strips | Cross section (mm <sup>2</sup> ) | Ampacity (A)             |                          |                          |
|-------------------------------|----------------------------------|--------------------------|--------------------------|--------------------------|-------------------------------|----------------------------------|--------------------------|--------------------------|--------------------------|
|                               |                                  | $\triangle$<br>T=20K (3) | $\triangle$<br>T=40K (4) | $\triangle$<br>T=50K (5) |                               |                                  | $\triangle$<br>T=20K (3) | $\triangle$<br>T=40K (4) | $\triangle$<br>T=50K (5) |
| 15.5 x 0.8 x 2                | 24.8                             | 125                      | 175                      | 200                      | 40 x 1 x 2                    | 80                               | 240                      | 330                      | 380                      |
| 15.5 x 0.8 x 3                | 37.2                             | 160                      | 210                      | 240                      | 40 x 1 x 3                    | 120                              | 330                      | 480                      | 540                      |
| 15.5 x 0.8 x 4                | 49.6                             | 195                      | 265                      | 295                      | 40 x 1 x 4                    | 160                              | 400                      | 560                      | 630                      |
| 15.5 x 0.8 x 6                | 74.4                             | 225                      | 320                      | 360                      | 40 x 1 x 5                    | 200                              | 450                      | 630                      | 710                      |
| 15.5 x 0.8 x 8                | 99.2                             | 265                      | 380                      | 430                      | 40 x 1 x 6                    | 240                              | 480                      | 680                      | 750                      |
| 15.5 x 0.8 x 10               | 124                              | 300                      | 420                      | 480                      | 40 x 1 x 8                    | 320                              | 600                      | 830                      | 920                      |
| 20 x 1 x 2                    | 40                               | 170                      | 240                      | 270                      | 40 x 1 x 10                   | 400                              | 670                      | 920                      | 1030                     |
| 20 x 1 x 3                    | 60                               | 230                      | 320                      | 360                      | 50 x 1 x 3                    | 150                              | 400                      | 570                      | 650                      |
| 20 x 1 x 4                    | 80                               | 270                      | 380                      | 440                      | 50 x 1 x 4                    | 200                              | 490                      | 700                      | 790                      |
| 20 x 1 x 5                    | 100                              | 300                      | 430                      | 490                      | 50 x 1 x 5                    | 250                              | 540                      | 780                      | 880                      |
| 20 x 1 x 6                    | 120                              | 330                      | 470                      | 530                      | 50 x 1 x 6                    | 300                              | 590                      | 840                      | 950                      |
| 20 x 1 x 8                    | 160                              | 400                      | 560                      | 620                      | 50 x 1 x 8                    | 400                              | 680                      | 1000                     | 1130                     |
| 20 x 1 x 10                   | 200                              | 420                      | 580                      | 650                      | 50 x 1 x 10                   | 500                              | 750                      | 1100                     | 1300                     |
| 24 x 1 x 2                    | 48                               | 200                      | 280                      | 320                      | 63 x 1 x 5                    | 315                              | 650                      | 900                      | 1000                     |
| 24 x 1 x 3                    | 72                               | 250                      | 360                      | 410                      | 63 x 1 x 6                    | 378                              | 690                      | 980                      | 1100                     |
| 24 x 1 x 4                    | 96                               | 280                      | 410                      | 460                      | 63 x 1 x 8                    | 504                              | 840                      | 1200                     | 1350                     |
| 24 x 1 x 5                    | 120                              | 330                      | 470                      | 530                      | 63 x 1 x 10                   | 630                              | 920                      | 1300                     | 1450                     |
| 24 x 1 x 6                    | 144                              | 360                      | 510                      | 570                      | 80 x 1 x 5                    | 400                              | 700                      | 1100                     | 1230                     |
| 24 x 1 x 8                    | 192                              | 420                      | 590                      | 670                      | 80 x 1 x 6                    | 480                              | 780                      | 1210                     | 1360                     |
| 24 x 1 x 10                   | 240                              | 500                      | 700                      | 790                      | 80 x 1 x 8                    | 640                              | 950                      | 1400                     | 1570                     |
| 32 x 1 x 2                    | 64                               | 230                      | 320                      | 360                      | 80 x 1 x 10                   | 800                              | 1090                     | 1550                     | 1730                     |
| 32 x 1 x 3                    | 96                               | 280                      | 410                      | 460                      | 100 x 1 x 5                   | 500                              | 860                      | 1250                     | 1400                     |
| 32 x 1 x 4                    | 128                              | 320                      | 460                      | 520                      | 100 x 1 x 6                   | 600                              | 950                      | 1380                     | 1530                     |
| 32 x 1 x 5                    | 160                              | 390                      | 550                      | 610                      | 100 x 1 x 8                   | 800                              | 1100                     | 1580                     | 1760                     |
| 32 x 1 x 6                    | 192                              | 440                      | 620                      | 700                      | 100 x 1 x 10                  | 1000                             | 1220                     | 1710                     | 1920                     |
| 32 x 1 x 8                    | 256                              | 510                      | 720                      | 822                      | 100 x 1 x 12                  | 1200                             | 1300                     | 1800                     | 2010                     |
| 32 x 1 x 10                   | 320                              | 600                      | 840                      | 930                      |                               |                                  |                          |                          |                          |



|                       |     |
|-----------------------|-----|
| Tensile strength(LBS) | 500 |
| Torgue strength(LBS)  | 6   |
| Voltage withstand(KV) | 6   |
| screw(mm)             | 6   |
| weight(G)             | 28  |

|                       |     |
|-----------------------|-----|
| Tensile strength(LBS) | 550 |
| Torgue strength(LBS)  | 8   |
| Voltage withstand(KV) | 8   |
| screw(mm)             | 8   |
| weight(G)             | 44  |

|                       |     |
|-----------------------|-----|
| Tensile strength(LBS) | 800 |
| Torgue strength(LBS)  | 10  |
| Voltage withstand(KV) | 10  |
| screw(mm)             | 8   |
| weight(G)             | 50  |

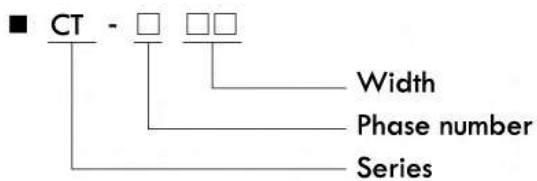
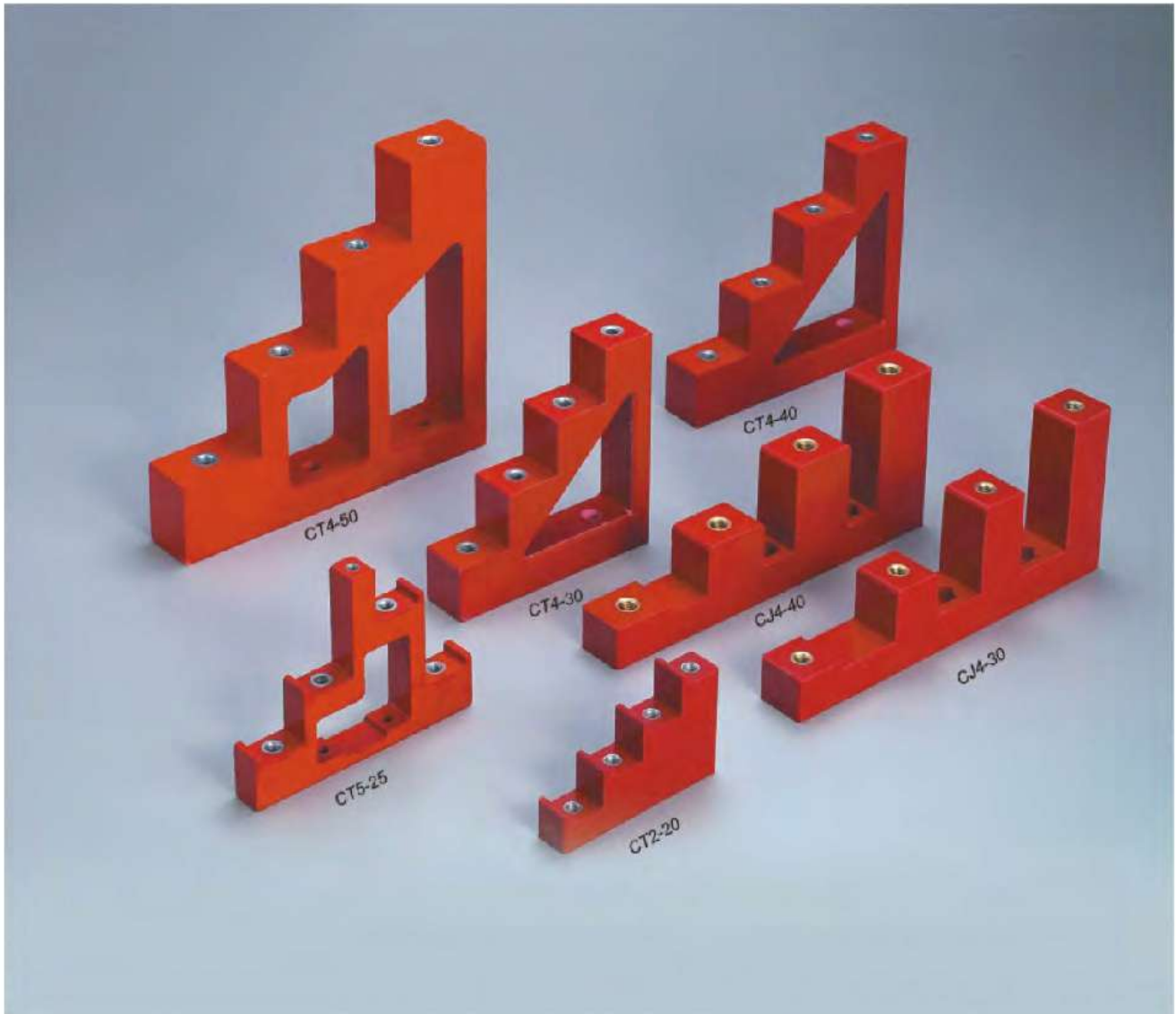
|                       |     |
|-----------------------|-----|
| Tensile strength(LBS) | 650 |
| Torgue strength(LBS)  | 10  |
| Voltage withstand(KV) | 12  |
| screw(mm)             | 8   |
| weight(G)             | 86  |

|                       |      |
|-----------------------|------|
| Tensile strength(LBS) | 1000 |
| Torgue strength(LBS)  | 20   |
| Voltage withstand(KV) | 15   |
| screw(mm)             | 10   |
| weight(G)             | 70   |

|                       |      |
|-----------------------|------|
| Tensile strength(LBS) | 1000 |
| Torgue strength(LBS)  | 20   |
| Voltage withstand(KV) | 15   |
| screw(mm)             | 8    |
| weight(G)             | 83   |

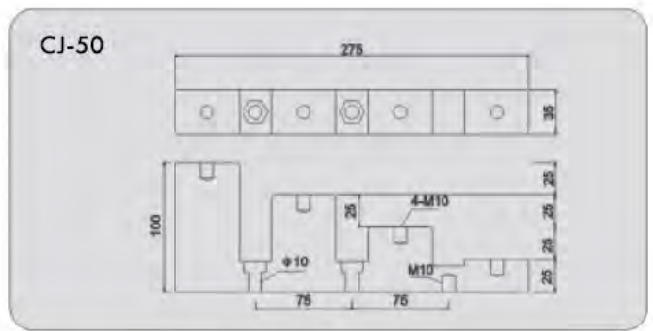
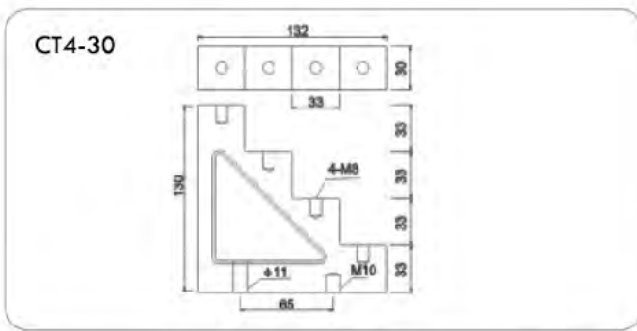
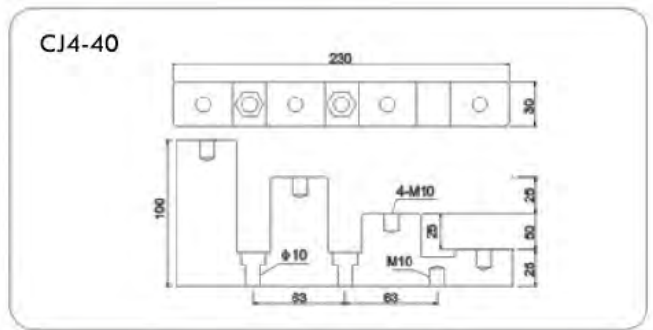
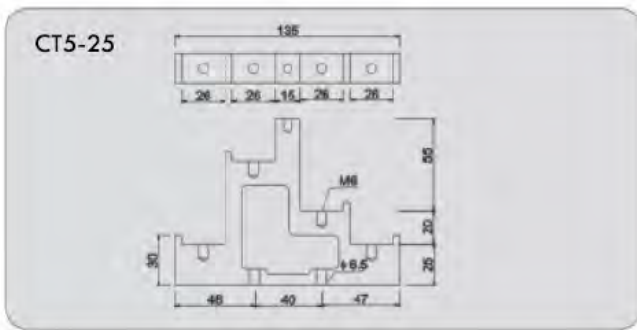
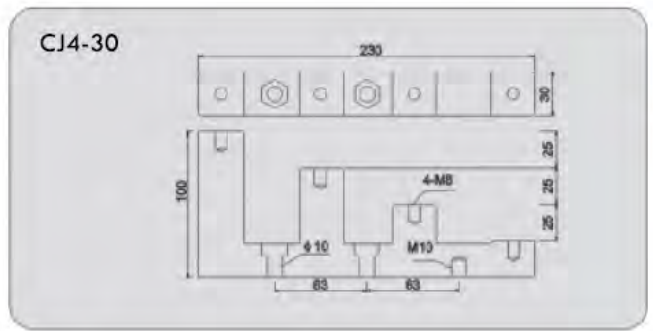
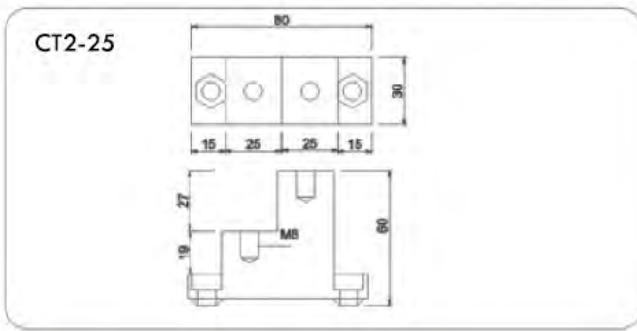
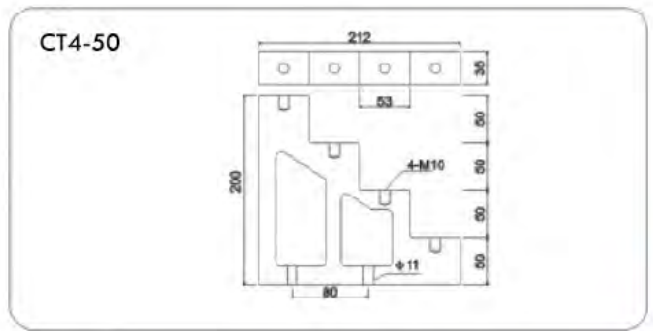
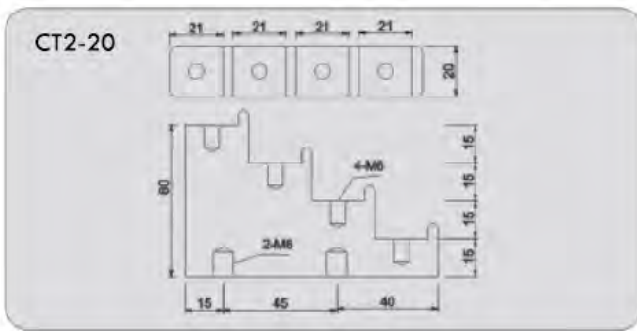
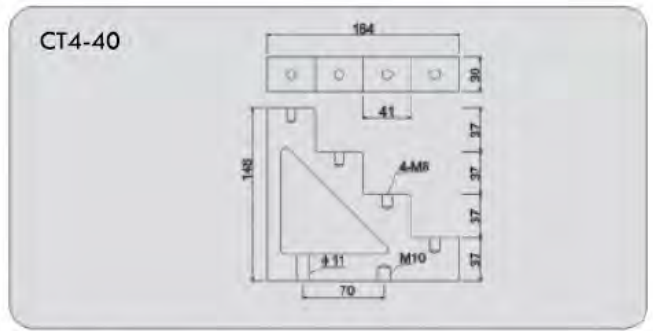
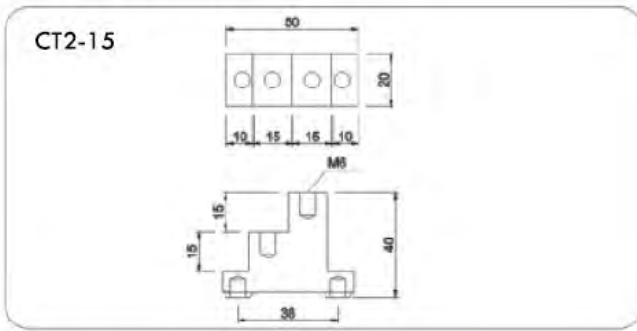
|                       |      |
|-----------------------|------|
| Tensile strength(LBS) | 1500 |
| Torgue strength(LBS)  | 40   |
| Voltage withstand(KV) | 25   |
| screw(mm)             | 10   |
| weight(G)             | 170  |

|                       |      |
|-----------------------|------|
| Tensile strength(LBS) | 1500 |
| Torgue strength(LBS)  | 40   |
| Voltage withstand(KV) | 25   |
| screw(mm)             | 10   |
| weight(G)             | 233  |



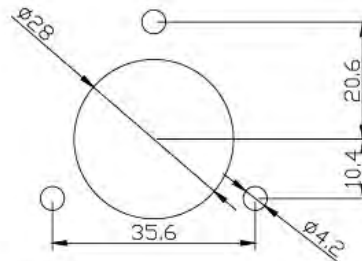
- Operating Temperature:-40~+140
- Insert:Brass.Steel with Zn coating
- Material:BMC(Bough Moulding Compound)  
 SMC(Sheet Moulding Compound)
- Colour,Insert,material In capability accordance with customer needs

## STEP INSULATORS



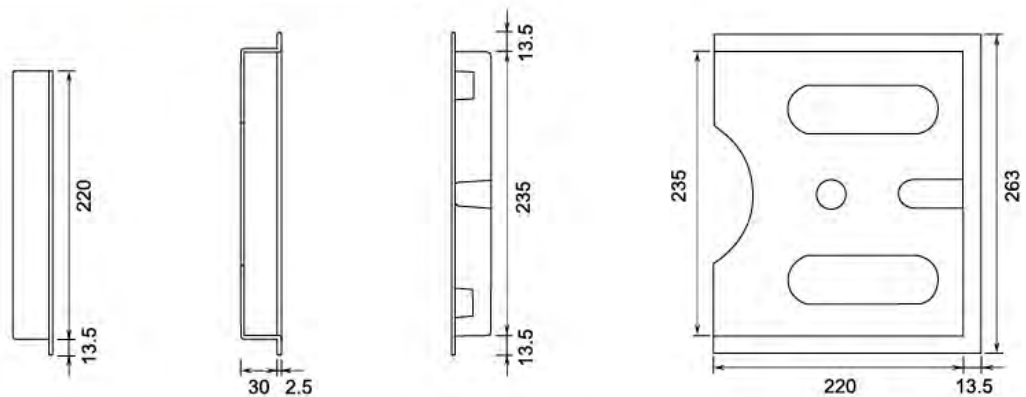
**LK-705**

Sealed enclosures when subject to external temperature fluctuations develop pressure differential toward the ambient. As a consequence entrance of dust and/or humidity is likely to happen through leakage points. Installing a LK-705 prevents this risk while preserving a high protection degree for the enclosure.



| Features          | unit | Characters                    |
|-------------------|------|-------------------------------|
| Material          | -    | ABS self-extinguishing        |
| Color             | -    | Grey(RAL7035), Black(RAL9005) |
| Protection degree | -    | IP54                          |
| Fixing            | -    | Screws with rubber gasket     |
| Dimensions HxWxD  | mm   | 70x50x21                      |
| Weight            | kg   | 0.03                          |

**Documents Pocket WJ-1**



The installing guide is designed according to the new Europe standard EN 50 022,EN 50 035,EN50 045.

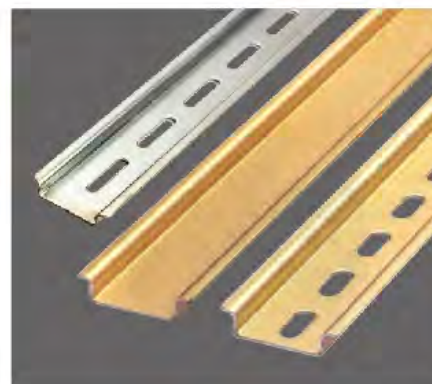
It has a precise height,strict tolerance,fine surface and good finish.The steel guide has been zinc-plated and yellow processed.

For the convenience of installing and making holes,there is a line printed on the center of guide which also exists on the aluminum and copper guide.length and can be with round hole,long hole,or trough.



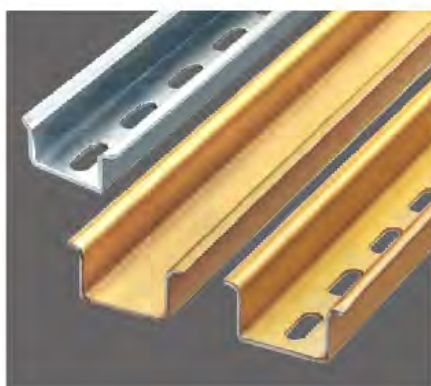
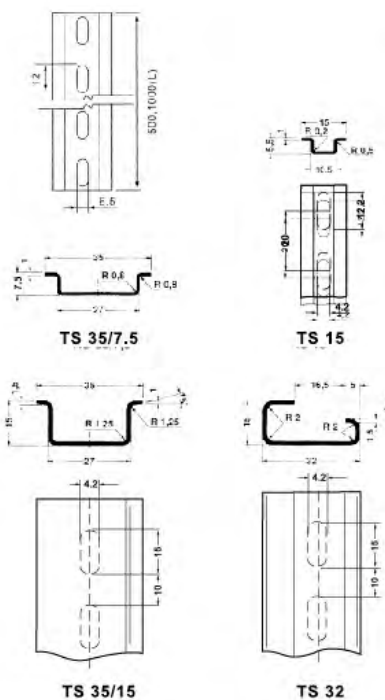
**TS 15/5.5**

| Model  | Packing |
|--|---------|
| According to EN 50 045-15×5mm<br>Made of steel,yellow,<br>Without hole length:2m |         |
| NS 15/5.5 Without hole   | 1       |



**TS 35/7.5**

| Model  | Packing |
|--|---------|
| According to EN 50 022-35×7.5mm<br>Made of steel,yellow,<br>Without hole length:2m |         |
| NS 35/7.5 Without hole   | 1       |



**TS 35/15**

| Model   | Packing |
|---|---------|
| According to EN 50 022 35×15mm<br>Made of thick steel plate of 1.5mm<br>High section,Without hole length:2m |         |
| TS 35/15 Without hole   | 1       |



**TS 32**

| Model   | Packing |
|---|---------|
| According to EN 50 035-G 32<br>Made of steel,Without hole length:2m |         |
| TS 32 Without hole  | 1       |

### DIN rail retainer TSTW



### Aluminum DIN rail



Din Rail Cutter



LKDC-002 Standard Din Rail Cutter.

Used for: Din Rail W35\*H7.5\*T1.0mm or W35\*H15\*T1.5mm, customizable for other size Din Rail.

Use Method and Notes:

- 1, Lift the handle, insert the Din Rail into the matching cavity, make it vertical to the cavity surface at the same time and Din Rail will go through, press the handle, Din Rail will be cut off.
- 2, Choose the flat ground during the operation, it ensures the cutter base bear stress evenly and reduces the stress on cavity.



LKDC-003 Bench Type Din Rail Cutter

This cutter needs to be installed on a workbench, it can cut any size Din Rail with the assistance of a measure gauge. Humanization design, no need to bend over when operate it.

Use Method and Notes:

- 1, Lift the handle, insert the Din Rail into the matching cavity, make it vertical to the cavity surface at the same time and Din Rail will go through, press the handle, Din Rail will be cut off.
- 2, Choose the flat ground during the operation, it ensures the cutter base bear stress evenly and reduces the stress on cavity.



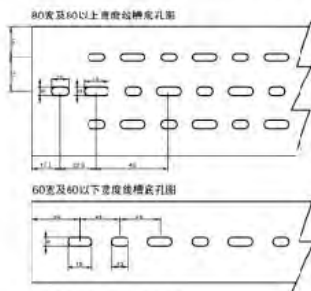
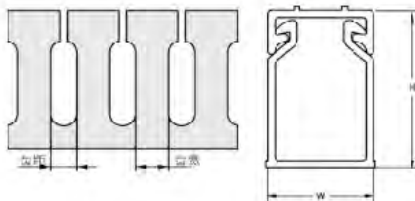
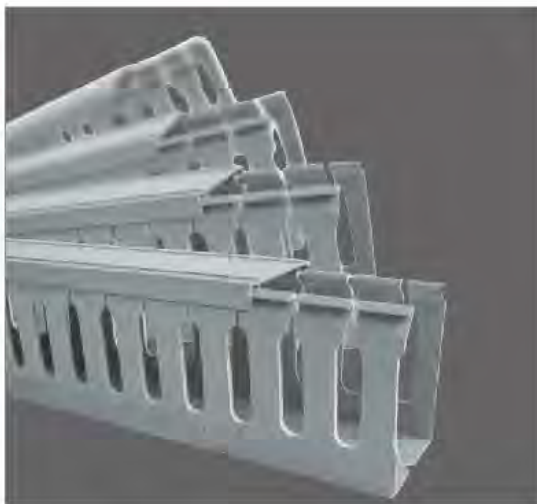
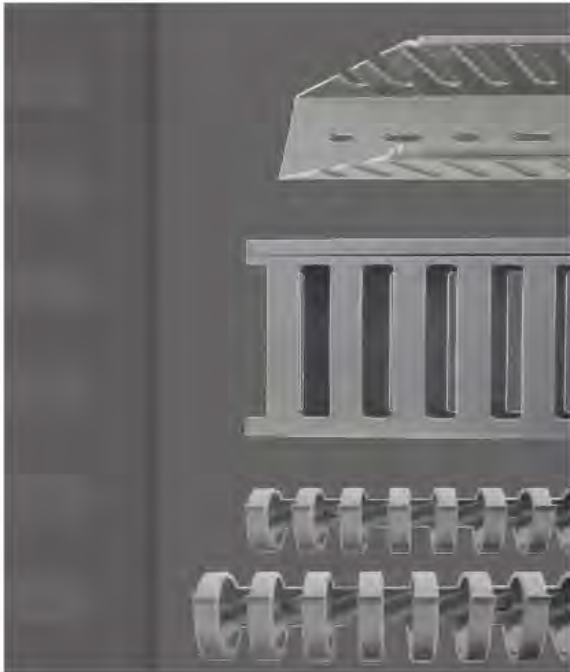
LKWC-001 Wiring Duct Cutter

Used to cut wiring duct and cover, Max available width: 125mm

High strength cutting blade, anti-abrasion.

High efficient, free of burrs after cutting.





图例系列选型: SWD 高H宽W

## Description

### Material

Manufactured with high quality rigid PVC, ROHS compliant, low smoke

### Flammability rating

UL94 Flammability Rating of V-0, inflaming retarding material with good self extinguishing ability

### Construction

1. Consist of base and cover, Easy and firm snap-on assembly, smooth joining for a better finish
2. With aligned slot, Smooth corners and edges will not damage or disfigure wires.
3. Variable sizes and multi type side holes, easily for installation and wiring digrame.
4. Special mark line design on the cover can allow a quick tag of relevant components.

### Color

Grey (White. Blue. and Black colors are available)

### Temperature

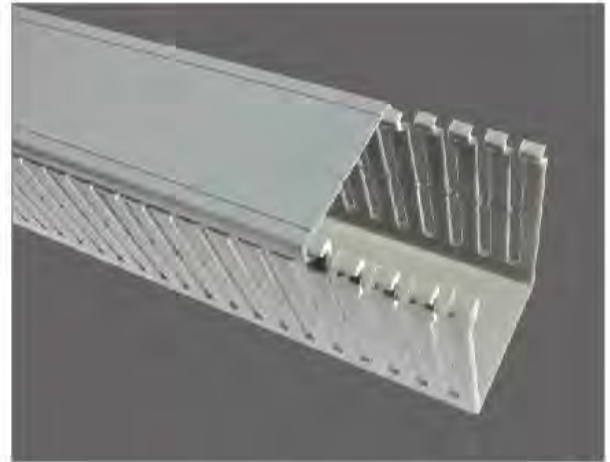
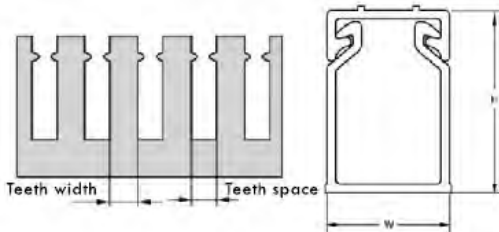
-20°C ~ 85°C

### LD series

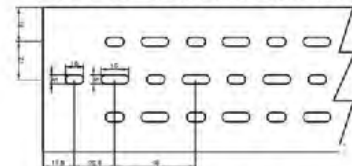
| Wide slot/finger<br>TYPE | Dimension |       | Teeth space/Teeth width (mm) |      |       | package<br>meter |
|--------------------------|-----------|-------|------------------------------|------|-------|------------------|
|                          | H(mm)     | W(mm) | 6-8                          | 8-10 | 10-10 |                  |
| LD 50 25                 | 50        | 25    | •                            |      |       | 100              |
| LD 50 35                 |           | 35    | •                            |      |       | 100              |
| LD 50 45                 |           | 45    | •                            |      |       | 80               |
| LD 50 50                 |           | 50    | •                            |      |       | 80               |
| LD 50 60                 |           | 60    | •                            |      |       | 64               |
| LD 50 80                 |           | 80    | •                            |      |       | 48               |
| LD 60 40                 | 60        | 40    |                              | •    |       | 64               |
| LD 60 60                 |           | 60    |                              | •    |       | 48               |
| LD 60 80                 |           | 80    |                              |      | •     | 36               |
| LD 65 33                 | 65        | 33    |                              | •    |       | 80               |
| LD 65 45                 |           | 45    |                              | •    |       | 80               |
| LD 65 65                 |           | 65    |                              |      | •     | 48               |
| LD 80 25                 | 80        | 25    |                              | •    |       | 60               |
| LD 80 35                 |           | 35    |                              | •    |       | 60               |
| LD 80 40                 |           | 40    |                              | •    |       | 48               |
| LD 80 45                 |           | 45    |                              | •    |       | 48               |
| LD 80 50                 |           | 50    |                              | •    |       | 48               |
| LD 80 60                 |           | 60    |                              |      | •     | 36               |
| LD 80 80                 |           | 80    |                              |      | •     | 36               |
| LD 80 100                |           | 100   |                              |      | •     | 24               |
| LD 80 120                |           | 120   |                              |      | •     | 24               |
| LD 100 35                |           | 100   | 35                           |      |       | •                |
| LD 100 40                | 40        |       |                              |      | •     | 48               |
| LD 100 50                | 50        |       |                              |      | •     | 48               |
| LD 100 60                | 60        |       |                              |      | •     | 36               |
| LD 100 80                | 80        |       |                              |      | •     | 24               |
| LD 100 100               | 100       |       |                              |      | •     | 24               |
| LD 100 120               | 120       |       |                              |      | •     | 24               |
| LD 100 140               | 140       |       |                              |      | •     | 24               |
| LD 130 100               | 130       | 100   |                              |      | •     | 24               |

## LFD series

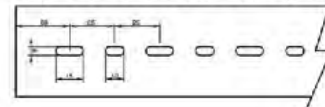
| Round      | DimensiOfns |       | Teeth space/Teeth width (mm) |     |       | package |
|------------|-------------|-------|------------------------------|-----|-------|---------|
|            | H(mm)       | W(mm) | 6-6                          | 6-8 | 10-10 |         |
| TYPE       |             |       |                              |     |       | meter   |
| LFD 50 25  | 50          | 25    | •                            |     | •     | 100     |
| LFD 50 35  |             | 35    | •                            |     | •     | 100     |
| LFD 50 45  |             | 45    | •                            |     | •     | 80      |
| LFD 50 50  |             | 50    | •                            |     | •     | 80      |
| LFD 50 60  |             | 60    | •                            |     | •     | 64      |
| LFD 50 80  |             | 80    | •                            |     | •     | 48      |
| LFD 80 25  | 80          | 25    |                              | •   |       | 60      |
| LFD 80 35  |             | 35    |                              | •   |       | 60      |
| LFD 80 40  |             | 40    |                              | •   |       | 48      |
| LFD 80 45  |             | 45    |                              | •   |       | 48      |
| LFD 80 50  |             | 50    |                              | •   |       | 48      |
| LFD 80 60  |             | 60    |                              | •   |       | 36      |
| LFD 80 80  |             | 80    |                              | •   |       | 36      |
| LFD 80 100 |             | 100   |                              | •   |       | 24      |
| LFD 80 120 |             | 120   |                              | •   |       | 24      |



Bottom view for duct above 80mm(width)

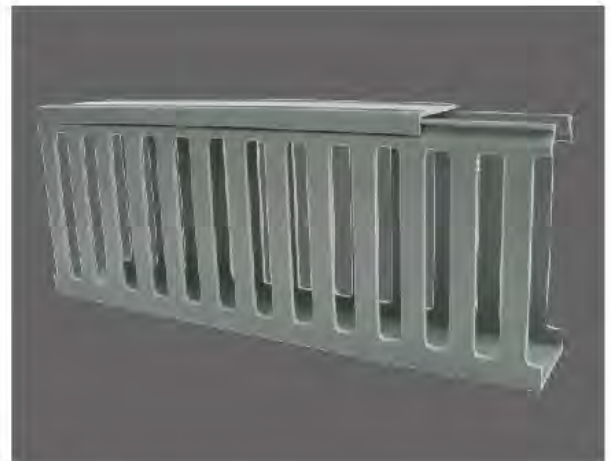
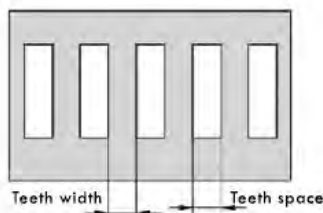


Bottom view for duct below 60mm(width)

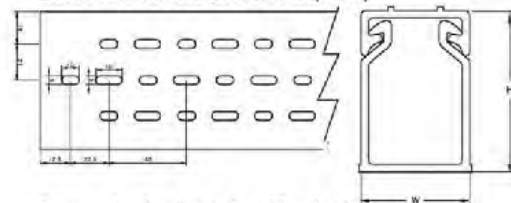


## KFD series

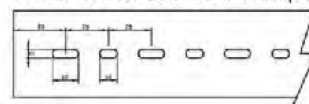
| Close/Square | DimensiOfns |       | Teeth space/Teeth width (mm) |     |       | package |    |
|--------------|-------------|-------|------------------------------|-----|-------|---------|----|
|              | H(mm)       | W(mm) | 6-6                          | 6-8 | 10-10 |         |    |
| TYPE         |             |       |                              |     |       | meter   |    |
| KFD 60 40    | 60          | 40    | •                            |     |       | 64      |    |
| KFD 60 60    |             | 60    | •                            |     |       | 48      |    |
| KFD 60 80    |             | 80    | •                            |     |       | 36      |    |
| KFD 100 30   | 100         | 35    |                              |     | •     | 48      |    |
| KFD 100 40   |             | 40    |                              |     | •     | 48      |    |
| KFD 100 50   |             | 50    |                              |     | •     | 48      |    |
| KFD 100 60   |             | 60    |                              |     | •     | 36      |    |
| KFD 100 80   |             | 80    |                              |     | •     | 24      |    |
| KFD 100 100  |             | 100   |                              |     | •     | 24      |    |
| KFD 100 120  |             | 120   |                              |     | •     | 24      |    |
| KFD 100 140  |             | 140   |                              |     | •     | 24      |    |
| KFD 150 100  |             | 150   | 100                          |     |       | •       | 16 |

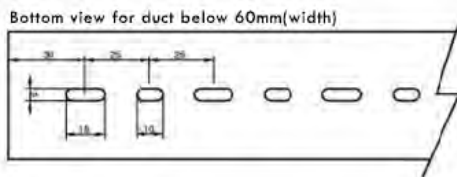
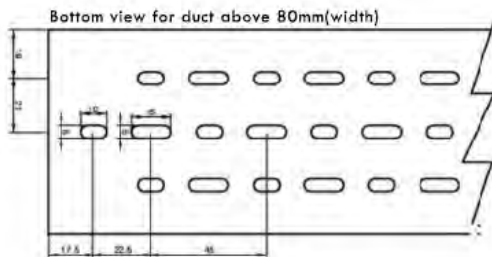
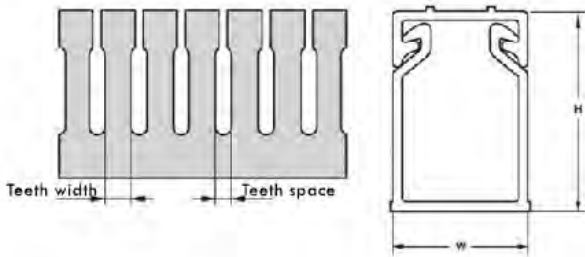


Bottom view for duct above 80mm(width)



Bottom view for duct below 60mm(width)





## KD series

| Narrow Slot/Finger<br>TYPE | Dimension |       | Teeth space/Teeth width (mm) |     |     | Package meter |
|----------------------------|-----------|-------|------------------------------|-----|-----|---------------|
|                            | H(mm)     | W(mm) | 4-6                          | 6-6 | 6-8 |               |
| KD 25 25                   | 25        | 25    | •                            |     |     | 100           |
| KD 30 20                   |           | 20    | •                            |     |     | 100           |
| KD 30 35                   |           | 35    | •                            |     |     | 100           |
| KD 30 30                   |           | 30    | •                            |     |     | 100           |
| KD 30 35                   |           | 35    | •                            |     |     | 100           |
| KD 35 35                   | 35        | 35    | •                            |     |     | 100           |
| KD 40 25                   |           | 25    | •                            |     |     | 100           |
| KD 40 40                   | 40        | 40    | •                            |     |     | 80            |
| KD 40 60                   |           | 60    | •                            |     |     | 60            |
| KD 50 25                   |           | 25    | •                            |     |     | 100           |
| KD 50 35                   |           | 35    | •                            |     |     | 100           |
| KD 50 45                   |           | 45    | •                            |     |     | 80            |
| KD 50 50                   | 50        | 50    | •                            |     |     | 80            |
| KD 50 60                   |           | 60    | •                            |     |     | 64            |
| KD 50 80                   |           | 80    | •                            |     |     | 48            |
| KD 60 40                   |           | 40    | •                            |     |     | 64            |
| KD 60 60                   | 60        | 60    | •                            |     |     | 48            |
| KD 60 80                   |           | 80    | •                            |     |     | 36            |
| KD 65 33                   |           | 33    | •                            |     |     | 80            |
| KD 65 45                   |           | 45    | •                            |     |     | 80            |
| KD 65 65                   |           | 65    | •                            |     |     | 48            |
| KD 80 25                   |           | 25    | •                            |     | •   | 60            |
| KD 80 35                   |           | 35    | •                            |     | •   | 60            |
| KD 80 40                   |           | 40    | •                            |     | •   | 48            |
| KD 80 45                   |           | 45    | •                            |     | •   | 48            |
| KD 80 50                   |           | 50    | •                            |     | •   | 48            |
| KD 80 60                   |           | 60    | •                            |     | •   | 36            |
| KD 80 80                   |           | 80    | •                            |     | •   | 36            |
| KD 80 100                  |           | 100   | •                            |     | •   | 24            |
| KD 80 120                  |           | 120   | •                            |     | •   | 24            |
| KD 100 35                  |           | 35    |                              | •   |     | 48            |
| KD 100 40                  |           | 40    |                              | •   |     | 48            |
| KD 100 50                  |           | 50    |                              | •   |     | 48            |
| KD 100 60                  |           | 60    |                              | •   |     | 36            |
| KD 100 80                  |           | 80    |                              | •   |     | 24            |
| KD 100 100                 |           | 100   |                              | •   |     | 24            |
| KD 100 120                 |           | 120   |                              | •   |     | 24            |

**MKD series**

| Close Type  | Dimension |       | Package     |
|-------------|-----------|-------|-------------|
|             | TYPE      | H(mm) | W(mm) meter |
| MKD 25 25   | 25        | 25    | 100         |
| MKD 30 20   | 30        | 20    | 100         |
| MKD 30 35   |           | 35    | 100         |
| MKD 30 30   |           | 30    | 100         |
| MKD 30 35   |           | 35    | 100         |
| MKD 35 35   | 35        | 35    | 100         |
| MKD 40 25   | 40        | 25    | 100         |
| MKD 40 40   |           | 40    | 80          |
| MKD 40 60   |           | 60    | 60          |
| MKD 50 25   | 50        | 25    | 100         |
| MKD 50 35   |           | 35    | 100         |
| MKD 50 45   |           | 45    | 80          |
| MKD 50 50   |           | 50    | 80          |
| MKD 50 60   |           | 60    | 64          |
| MKD 50 80   |           | 80    | 48          |
| MKD 60 40   | 60        | 40    | 64          |
| MKD 60 60   |           | 60    | 48          |
| MKD 60 80   |           | 80    | 36          |
| MKD 65 33   | 65        | 33    | 80          |
| MKD 65 45   |           | 45    | 80          |
| MKD 65 65   |           | 65    | 48          |
| MKD 80 25   | 80        | 25    | 60          |
| MKD 80 35   |           | 35    | 60          |
| MKD 80 40   |           | 40    | 48          |
| MKD 80 45   |           | 45    | 48          |
| MKD 80 50   |           | 50    | 48          |
| MKD 80 60   |           | 60    | 36          |
| MKD 80 80   |           | 80    | 36          |
| MKD 80 100  |           | 100   | 24          |
| MKD 80 120  |           | 120   | 24          |
| MKD 100 35  | 100       | 35    | 48          |
| MKD 100 40  |           | 40    | 48          |
| MKD 100 50  |           | 50    | 48          |
| MKD 100 60  |           | 60    | 36          |
| MKD 100 80  |           | 80    | 24          |
| MKD 100 100 |           | 100   | 24          |
| MKD 100 120 |           | 120   | 24          |
| MKD 100 140 |           | 140   | 24          |
| MKD 130 100 | 130       | 100   | 24          |
| MKD 150 100 | 150       | 100   | 16          |


**Cover**
**Model: KB-width**

| Art. No | Art. No | Art. No | Art. No |
|---------|---------|---------|---------|
| KB-15   | KB-35   | KB-60   | KB-120  |
| KB-20   | KB-40   | KB-65   | KB-140  |
| KB-25   | KB-45   | KB-80   | KB-535  |
| KB-30   | KB-50   | KB-100  |         |
| KB-33   | KB-55   |         |         |

## LED Light Used For Switchgear Instrument Cabinet LKL10-W / LKL10-W-3



### Application

LKL10-W Series LED light is designed for instrument cabinet illumination of various switchgear.

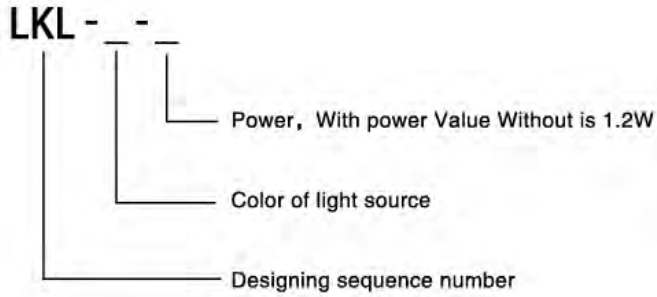
### Features and advantage

- ◆ Economize on energy, In the case of illuminate effect same alike the traditional light, economizing on energy is 75% above.
- ◆ Life span is long, the LED light source, someone call it the longevity light, meaning to extinguish never. It's the solid cold light source, adopt a special electric circuit design, the life span can reach to for 100,000 hours, comparing traditional light source life span to grow 1000% above.
- ◆ The environmental protection performance is better, without ultraviolet ray and infrared rays in the spectrum, without calories and radiate, the dizzy light is small, and the castoff can recover, without pollution and do not contain the mercury chemical Element. The cold light source, can be touched, belong to typical model of the green illuminate light source.
- ◆ Special circuit design, if anyone LED is bad, it isn't without influence to normal lumination of others LED.
- ◆ Special structure design, light body position can be adjusted, that solves the problem of less lumination angle of LED.
- ◆ The power supply adapt to AC/DC110~230V, suitable in application case of switchgear especially .
- ◆ With two mounting methods of clamp and fixation.

### Technique parameters

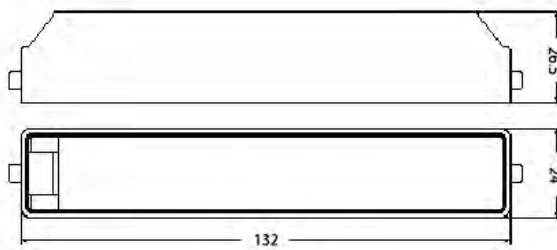
|                        |  |
|------------------------|--|
| Enclosure material     | PC-ABS(halogen-free)                           |
| Protection category    | IP 20  |
| Power supply           | AC(50/60Hz)/DC 110V~230V                       |
| Wire connection        | 1 × 4mm <sup>2</sup> or 2 × 1.5mm <sup>2</sup> |
| Insulating strength    | AC2500V, 1Min                                  |
| luminescence component | LED  |
| Ambient temperature    | -25℃~50℃                                       |
| Relative humidity      | 25% ~ 95%                                      |
| Life span              | More than 100,000hours                         |

Models explanation

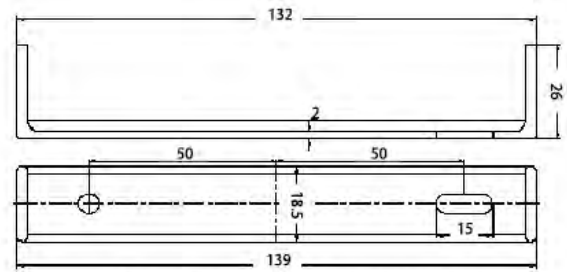


| TYPE                  | LKL10-W | LKL10-W-3 |
|-----------------------|---------|-----------|
| Color of light source | White   | Black     |
| Power                 | 1.2W    | 3W        |

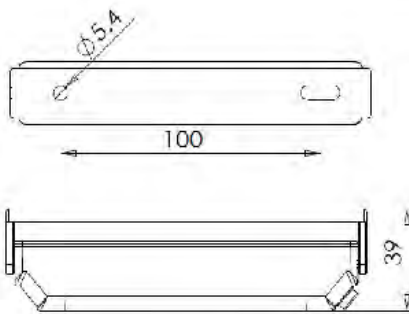
Dimension diagram



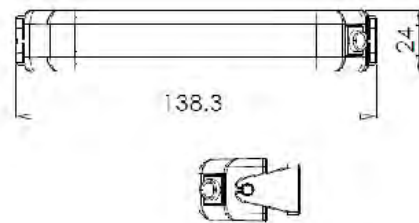
Dimension of LKL10-W light body



Dimension of LKL10-W light bracket



Dimension of LKL10-W-3 light body



Dimension of LKL10-W-3 light bracket

Installation

Assemble by clamp or bolt fixation. Assemble bracket first , then connect the power cable into light body terminal , insert the terminal side of light body into assemble hole of bracket, another side insert into the another side of bracket with screwdriver.

The angle between the support and the light body can be adjust according to the lumination need.

LKL10-W Light body

LKL10-W Bracket

LKL10-W assembled



# Cable Cabinet Lamp LKCL 20



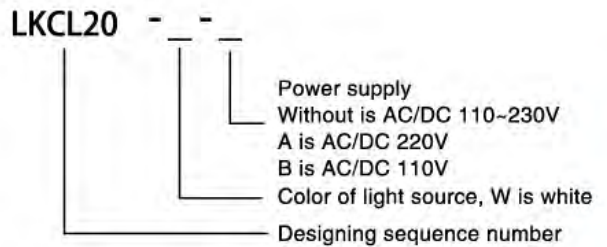
### Application

The LKCL 20-W is the substitute of the traditional cable cabinet lamp, adopt LED as light source, and adopt metal shell, carry out low cost and high reliability and use easily .

### Features and advantages

- ◆ Choose the LED that suitable with the cable cabinet illuminance, ensure illuminance effect with lower power consumption
- ◆ Since LED life is long, replacing is not be acted as normal situation.
- ◆ The material of shell adopt metal.

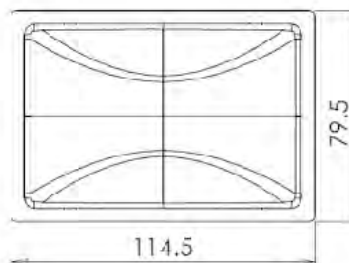
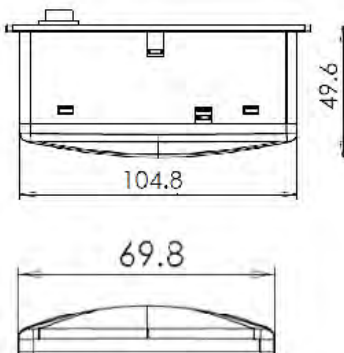
### Models explanation



|                             |   |
|-----------------------------|---|
| Rated power voltage         | AC(50/60Hz)/DC110V~230V / AC(50/60Hz)/DC220V / AC(50/60Hz)/DC110V |
| Power Consumption           | < 4W  |
| Illuminance                 | Center point 30cm from lamp, >350Lx                               |
| Life span                   | Use highlight LED, the life span is no less Than for 50000 hours  |
| Arc accident shock strength | >10000N   |
| Insulating strength         | AC2500V,1Min  |
| Ambient temperature         | -25℃~50℃  |
| Relative humidity           | 25%~95%   |
| Mount method                | Fix   |

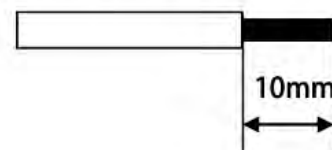
| TYPE                  | LKCL 20-W      | LKCL 20-W-A | LKCL 20-W-B |
|-----------------------|----------------|-------------|-------------|
| Color of light source | White          | White       | White       |
| Power supply          | AC/DC 110-230V | AC/DC 240V  | AC/DC 110V  |

### Dimension diagram



Cut-out dimension  
107 × 71

Terminal Cross Section



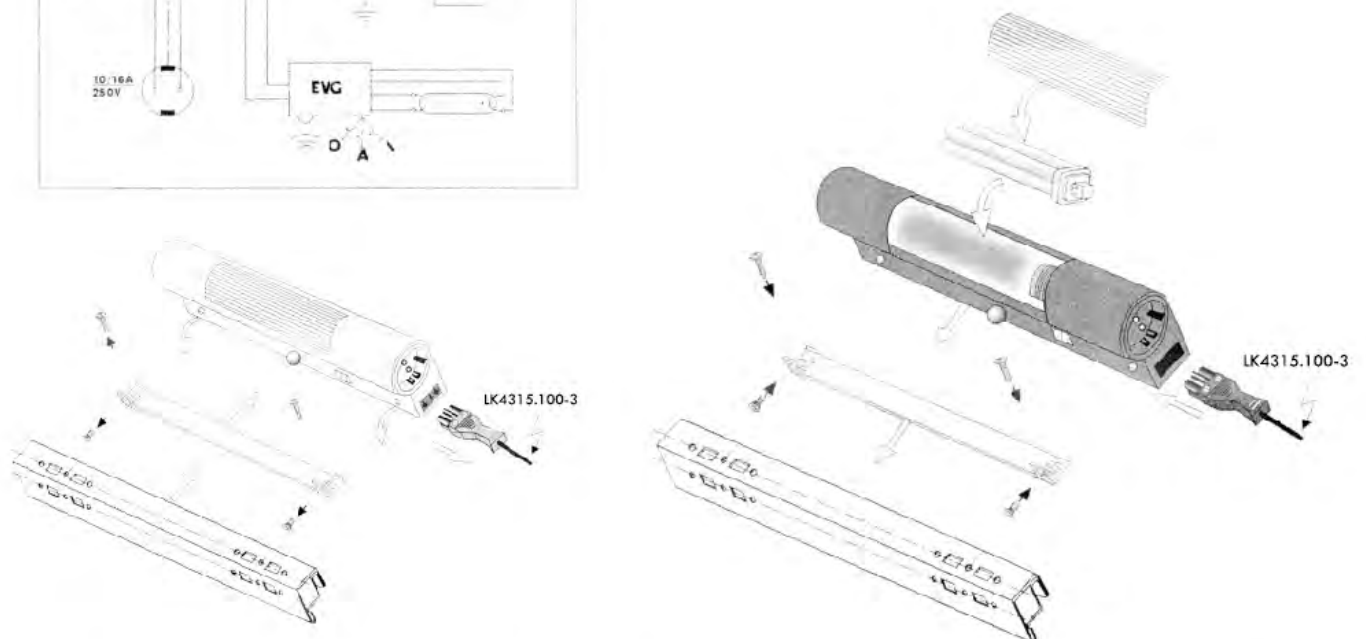
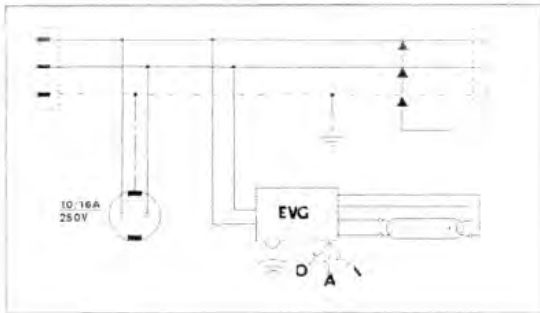
Nominal Cross Section: 2.5mm<sup>2</sup>



**Universal light**

With integral motion detector

- With motion sensor, so it can be automatically on/off when open/close the panel door
- Special structure design ,light body can be adjusted so it can change the angel of lighting
- Compact size with compact fluorescent lamp 174mm and wide voltage 110-240V AC



| Technical specifications | Socket | W mm | H mm | D mm | Model No. LK | Code     |
|--------------------------|--------|------|------|------|--------------|----------|
| 26W, 110-240V            | No     | 345  | 95   | 55   | LK-212       | 4155.000 |
| 50-60 Hz                 | Yes    | 345  | 95   | 55   | LK-213       | 4155.100 |

## T5 Fluorescent Cabinet Lamp



- High brightness, small size, with on/off switch
- High lighting effect, save 55% power
- Long life non flicker and can start by low voltage
- T5 Fluorescent with Opal Cover, Or with Striate Cover

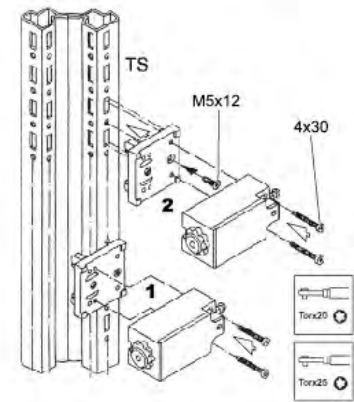
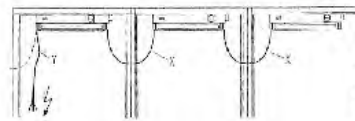
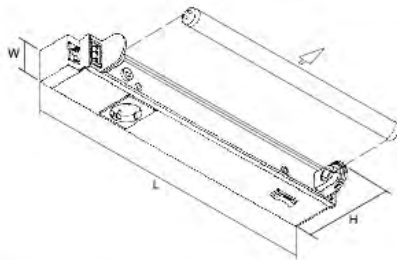
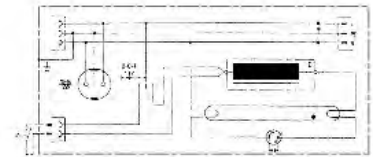
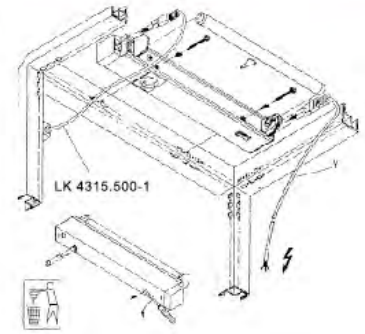
| Model         | Name                                     | voltage   | Power | PF   | Dimension | Color temperature | QTY/CTN |
|---------------|--|-----------|-------|------|-----------|-------------------|---------|
| LK-Y5Z04/YW01 | T5<br>Aluminum<br>Profile<br>Fluorescent | 220V/50HZ | 4W    | 0.55 | 156x24x36 | 2700K/6500K       | 30      |
| LK-Y5Z06/YW01 |  |           | 6W    |      | 255x24x36 | 2700K/6500K       | 30      |
| LK-Y5Z08/YW01 |  |           | 8W    |      | 309x24x36 | 2700K/6500K       | 30      |
| LK-Y5Z12/YW01 |  |           | 12W   |      | 486x24x36 | 2700K/6500K       | 30      |
| LK-Y5Z14/YW01 |  |           | 14W   |      | 571x24x36 | 2700K/6500K       | 30      |
| LK-Y5Z18/YW01 |  |           | 18W   |      | 731x24x36 | 2700K/6500K       | 30      |
| LK-Y5Z21/YW01 |  |           | 21W   |      | 871x24x36 | 2700K/6500K       | 30      |

## T5 LED Cabinet Lamp



- The LED Lighting has no strobe, no infrared and ultraviolet, radiation free, Mercury free protect the natural environment
- High-quality LED chips as the illuminant, save more power, LED chip is antistatic.
- LED chips are solid encapsulation, they belong to cold light type, impact resistance, shockproof, easy for installation.
- Start fast, Long life: operation life about 50 thousand hours.

| Model     | LED Qty | Input voltage | Power | Luminous flux | Life (H) | Ra  | External dimension | Color temperature | Qty |
|-----------|---------|---------------|-------|---------------|----------|-----|--------------------|-------------------|-----|
| LK-L5X10A | 96      | AC110-240V    | 10W   | 870           | >50000   | ≥80 | 850mm              | 3000/6400         | 30  |
| LK-L5X10A | 102     | AC110-240V    | 10W   | 890           | >50000   | ≥80 | 871mm              | 3000/6400         | 30  |
| LK-L5X9A  | 80      | AC110-240V    | 9W    | 700           | >50000   | ≥80 | 731mm              | 3000/6400         | 30  |
| LK-L5X6A  | 60      | AC110-240V    | 6W    | 530           | >50000   | ≥80 | 550mm              | 3000/6400         | 30  |
| LK-L5X6A  | 64      | AC110-240V    | 6W    | 560           | >50000   | ≥80 | 571mm              | 3000/6400         | 30  |
| LK-L5X5A  | 52      | AC110-240V    | 5W    | 450           | >50000   | ≥80 | 486mm              | 3000/6400         | 30  |
| LK-L5X4A  | 38      | AC110-240V    | 4W    | 330           | >50000   | ≥80 | 309mm              | 3000/6400         | 30  |



|      | Type         | Type         |
|------|--------------|--------------|
|      | LK-4138.10-1 | LK-4138.18-1 |
| L mm | 425          | 685          |
| W mm | 50           | 50           |
| H mm | 117          | 117          |
| Pw   | 10w          | 18w          |

|  | X            | Y            |
|--|--------------|--------------|
|  | LK4315.200-1 | LK4315.100-1 |
|  | LK4315.400-1 |              |
|  | LK4315.600-1 |              |

## Lamp Cable



| Type             | LK4315.500-1 |
|------------------|--------------|
| Cable length(mm) | 500          |
| Colour           | White        |

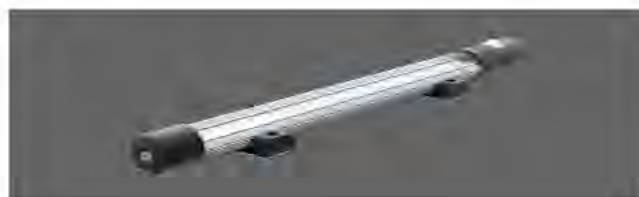
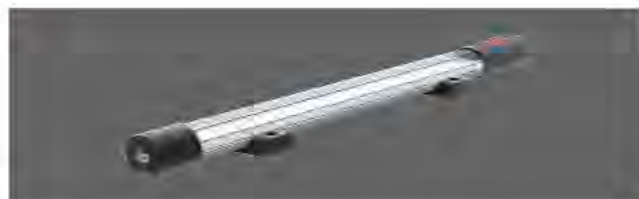


| Type             | LK4315.200-1 | LK4315.600-1 | LK4315.4000-1 |
|------------------|--------------|--------------|---------------|
| Cable length(mm) | 1000         | 600          | 4000          |
| Colour           | Orange       | Orange       | Orange        |



| Type             | LK4315.100-3 | LK4315.100-2 | LK4315.100-1 |
|------------------|--------------|--------------|--------------|
| Cable length(mm) | 3000         | 2000         | 1000         |
| Colour           | Orange       | Orange       | Orange       |

## Lamp LK 025-LED



Wide voltage range  
Integrated power unit

Long-lived and maintenance-free by LED technology  
On/off switch or movement sensor

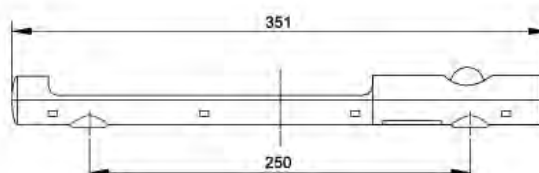
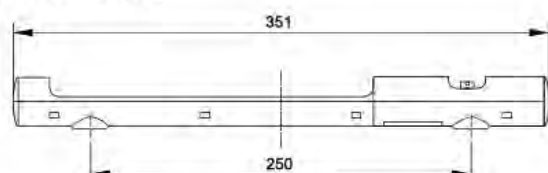
The lamp series LED 025 is suitable for all types of panels and enclosures, especially where space is at a premium. The lamps have a very long service life thanks to the use of LED technology. They are available with powerful non-slip rubberized magnets allowing them to be quickly positioned in any steel enclosure. Alternatively they can be fixed mechanically. The power output allows up to 10 lamps to be connected to each other (daisy chain). Both the power input and output connectors snap lock into their sockets. With the integrated power unit and the plugs the lamp can quickly be connected.

## Technical Details

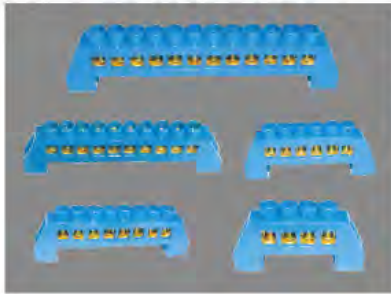
|                                  |   |
|----------------------------------|---|
| Power consumption                | max. 5W   |
| Luminosity                       | 290Lm at 120° (870Lm at 360° or equivalent 75W light bulb)  |
| Lamp type                        | LED, angle of radiation 120°<br>light color: daylight, color temperature: 6,500K                              |
| Service life                     | 60,000h at +20°C (+68°F)  |
| Connection                       | 2-pole connector with snap lock<br>AC: max. 2.5A / 240VAC, color: white<br>DC: max. 2.5A / 60VDC, color: blue |
| Mounting                         | magnet fixing or screw fixing (M5), torque 2Nm max.,<br>250mm centers   |
| Casing                           | plastic, transparent  |
| Dimensions                       | see drawings  |
| Operating/Storage temperature    | -30 to +60°C (-22 to +140°F) / -40 to +85°C (-40 to +185°F)   |
| Operating/Storage humidity       | max. 90% RH (non-condensing)  |
| Protection type/Protection class | IP20 / II (double insulated)  |

| Art. No. Magnet fixing | Art. No. Screw fixing | Operating voltage                             | Switch                           | Weight (approx.) |
|------------------------|-----------------------|---|----------------------------------|------------------|
| 02540.0-00             | 02540.0-01            | 100-240VAC, 50/60Hz (min. 90VAC, max. 265VAC) | on/off light switch              | 0.2kg            |
| 02540.1-00             | 02540.1-01            | 24-48VDC (min. 20VDC, max. 60VDC)             | on/off light switch              | 0.2kg            |
| 02541.0-00             | 02541.0-01            | 100-240VAC, 50/60Hz (min. 90VAC, max. 265VAC) | PIR movement sensor <sup>1</sup> | 0.2kg            |
| 02541.1-00             | 02541.1-01            | 24-48VDC (min. 20VDC, max. 60VDC)             | PIR movement sensor <sup>1</sup> | 0.2kg            |

## Technical Drawing

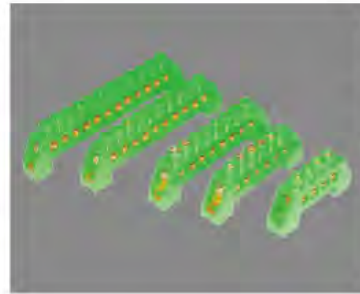


Lamp Series LK 025-LED



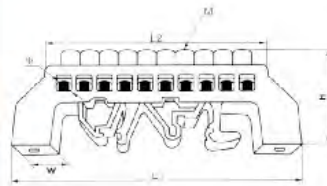
There are 8x12 copper rows in insulating crust

- D-8x12/12 Potential**
- D-8x12/10 Potential**
- D-8x12/8 Potential**
- D-8x12/6 Potential**
- D-8x12/4 Potential**



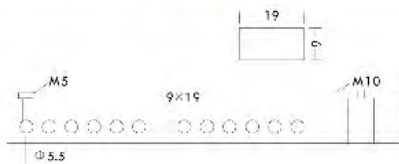
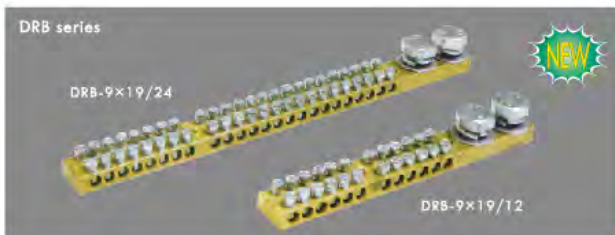
G-8x12 copper rows in insulating crust with earthing in one end.

- G-8x12/12 Potential**
- G-8x12/10 Potential**
- G-8x12/8 Potential**
- G-8x12/6 Potential**
- G-8x12/4 Potential**



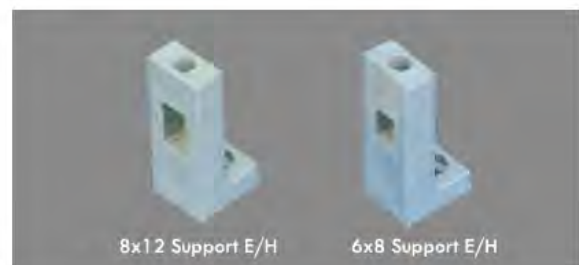
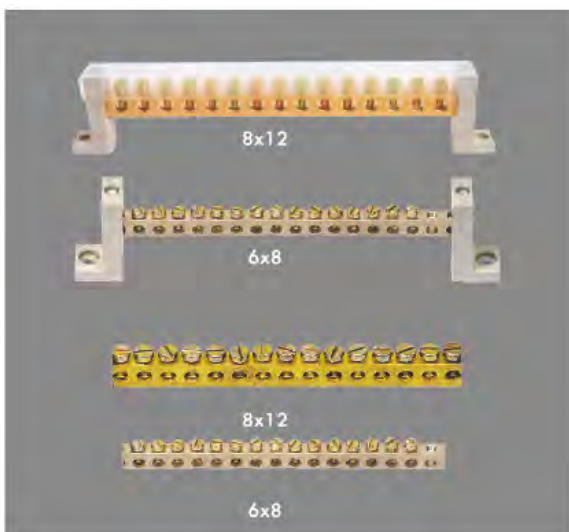
| Item no.  | Spec. w x h -hole | L1    | L2    | H    | W    | Φ   | screw size | Plastic setting |
|-----------|-------------------|-------|-------|------|------|-----|------------|-----------------|
|           |                   |       |       |      |      |     |            |                 |
| LK 033-01 | 6x9-4             | 57.5  | 34    | 34.5 | 10.5 | 5.0 | M4         | PA              |
| LK 033-02 | 6x9-6             | 57.7  | 46.7  | 34.5 | 10.5 | 5.0 | M4         | PA              |
| LK 033-03 | 6x9-8             | 78.5  | 60    | 34.5 | 10.5 | 5.0 | M4         | PA              |
| LK 033-04 | 6x9-10            | 89    | 72.8  | 34.5 | 10.5 | 5.0 | M4         | PA              |
| LK 033-05 | 6x9-12            | 102   | 85.7  | 34.5 | 10.5 | 5.0 | M4         | PA              |
| LK 033-06 | 8x12-4            | 77.5  | 40.6  | 38.6 | 12.6 | 7.0 | M5         | PA              |
| LK 033-07 | 8x12-6            | 77.5  | 57.3  | 38.6 | 12.6 | 7.0 | M5         | PA              |
| LK 033-08 | 8x12-8            | 94.3  | 74.4  | 38.6 | 12.6 | 7.0 | M5         | PA              |
| LK 033-09 | 8x12-10           | 111.0 | 91    | 38.6 | 12.6 | 7.0 | M5         | PA              |
| LK 033-10 | 8x12-12           | 128.4 | 108.6 | 38.6 | 12.6 | 7.0 | M5         | PA              |
| LK 033-11 | 8x12-14           | 145.8 | 135.6 | 38.6 | 12.6 | 7.0 | M5         | PA              |

### DRB series

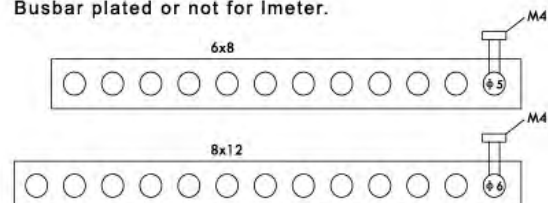


### Double row brass terminal series

| Model No.   | Way | Brass specification (mm) | Rated current (A) | Dimension (mm) | Screw no.s         | Installation hole Distance(mm) |
|-------------|-----|--------------------------|-------------------|----------------|--------------------|--------------------------------|
| DRB-9x19/6  | 6   | 9x19                     | 180A              | 102x45x45      | 2 x M10<br>12 x M5 | 50 (M5)                        |
| DRB-9x19/12 | 12  | 9x19                     | 180A              | 144x45x45      | 2 x M10<br>24 x M5 | 50 (M5)                        |
| DRB-9x19/18 | 18  | 9x19                     | 180A              | 187x45x45      | 2 x M10<br>36 x M5 | 120 (M5)                       |
| DRB-9x19/24 | 24  | 9x19                     | 180A              | 230x45x45      | 2 x M10<br>48 x M5 | 120 (M5)                       |
| DRB-9x19/36 | 36  | 9x19                     | 180A              | 315x45x45      | 2 x M10<br>72 x M5 | 120 (M5)                       |

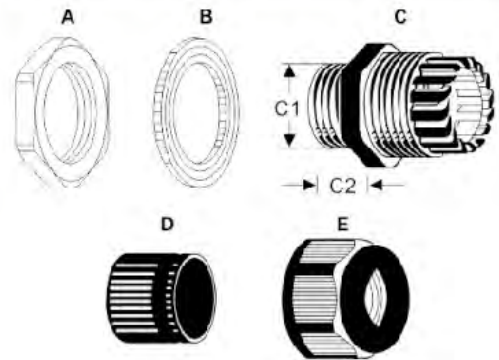


Busbar plated or not for Imeter.





# Cable Glands Series

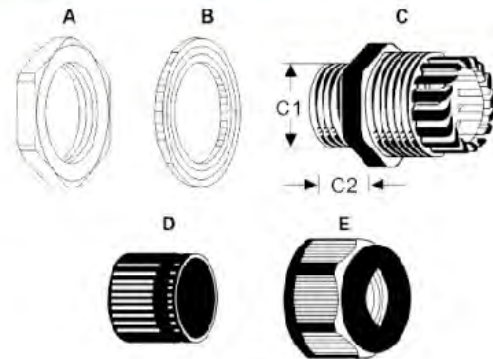


### Product Overview

- ◆ Thread: PG, Metric, G, and NPT thread
- ◆ Materials: UL approved Nylon PA66 (Flammability) UL 94V-2) for A. C. E parts, (Accept to make flammability UL 94V-0); EPDM rubber for B. D parts, (Also accept to make super rubber: resist high temperature rubber, resist strong acid/alkali, etc).
- ◆ Protection degree: IP68
- ◆ Working temperature: -40 °C to 100 °C
- ◆ Features: The claws and seals of excellent design, sealing nut have a "click" sound and re-open, can hold cable firmly and have a wider cable range. Resistant to salt water, weak acid, alcohol, oil, grease and common solvency.
- ◆ Colours: Black(RAL9005), gray(RAL7035), other color available upon request.

| PG Type | PG Thicken Type | Applicable to cable | Thread diameter C1 | Thread length C2 | Wrench diameter |
|---------|-----------------|---------------------|--------------------|------------------|-----------------|
| PG7     | PG7-T           | 3~6.5               | 12.5               | 8                | 16              |
| PG9     | PG9-T           | 4~8                 | 15.2               | 8                | 19              |
| PG11    | PG11-T          | 5~10                | 18.6               | 8                | 22              |
| PG13.5  | PG13.5-T        | 6~12                | 20.4               | 10               | 24              |
| PG16    | PG16-T          | 10~14               | 22.5               | 10               | 27              |
| PG19    | PG19-T          | 12~16               | 24                 | 10               | 27              |
| PG21    | PG21-T          | 13~18               | 28.3               | 10               | 33              |
| PG25    | PG25-T          | 16~21               | 30                 | 11               | 35              |
| PG29    | PG29-T          | 18~25               | 37                 | 12               | 42              |
| PG36    | PG36-T          | 22~32               | 47                 | 14               | 52              |
| PG42    | PG42-T          | 32~38               | 54                 | 14               | 60              |
| PG48    | PG48-T          | 37~44               | 59.3               | 15               | 64              |
| PG63    | PG63-T          | 42~50               | 71                 | 28               | 77              |

## Nylon Cable Glands (Metric) M type



### Product Overview

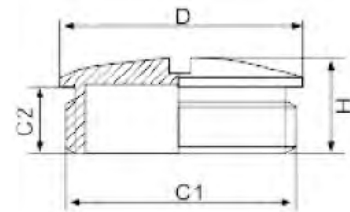
- ◆ Thread: Metric, PG, G(PF), and NPT thread
- ◆ Materials: UL approved Nylon PA66 (Flammability) UL 94V-2) for A. C. E parts, (Accept to make flammability UL 94V-0); EPDM rubber for B. D parts, (Also accept to make super rubber: resist high temperature rubber, resist strong acid/alkali, etc).
- ◆ Protection degree: IP68
- ◆ Working temperature: -40 °C to 100 °C
- ◆ Features: The claws and seals of excellent design, sealing nut have a "click" sound and re-open, can hold cable firmly and have a wider cable range. Resistant to salt water, weak acid, alcohol, oil, grease and common solvency.
- ◆ Colours: Black(RAL9005), gray(RAL7035), other color available upon request.

| PG Type | PG Thicken Type | Applicable to cable | Thread diameter C1 | Thread length C2 | Wrench diameter |
|---------|-----------------|---------------------|--------------------|------------------|-----------------|
| M12x1.5 | M12x1.5-T       | 3~6.5               | 12                 | 8                | 16              |
| M16x1.5 | M16x1.5-T       | 4~8                 | 16                 | 8                | 19              |
| M18x1.5 | M18x1.5-T       | 5~10                | 18                 | 8                | 22              |
| M20x1.5 | M20x1.5-T       | 6~12                | 20                 | 10               | 24              |
| M22x1.5 | M22x1.5-T       | 10~14               | 22                 | 10               | 27              |
| M24x1.5 | M24x1.5-T       | 12~16               | 24                 | 10               | 27              |
| M25x1.5 | M25x1.5-T       | 13~18               | 25                 | 10               | 33              |
| M27x1.5 | M27x1.5-T       | 13~18               | 27                 | 10               | 33              |
| M30x1.5 | M30x1.5-T       | 16~21               | 30                 | 11               | 35              |
| M32x1.5 | M32x1.5-T       | 16~21               | 32                 | 11               | 35              |
| M36x1.5 | M36x1.5-T       | 18~25               | 36                 | 12               | 42              |
| M40x1.5 | M40x1.5-T       | 22~32               | 40                 | 14               | 52              |
| M50x1.5 | M50x1.5-T       | 32~38               | 50                 | 14               | 60              |
| M63x1.5 | M63x1.5-T       | 37~44               | 63                 | 15               | 64              |
| M71x1.5 | M71x1.5-T       | 42~50               | 71                 | 28               | 77              |



**Product Overview**

- ◆ Material: Nylon PA66
- ◆ Protection degree: IP68
- ◆ Working temperature: -40°C to 100°C
- ◆ Application: Dust-proof for spare holes
- ◆ Colours: Black and gray



**Nylon Screw Plugs PG Type**

| PG Type | Thread diameter C1 | Thread length C2 | Main Dimensions H | Cover Dimensions D |
|---------|--------------------|------------------|-------------------|--------------------|
| PG7     | 12.5               | 8.5              | 12.5              | 15                 |
| PG9     | 15.2               | 8.5              | 13                | 19                 |
| PG11    | 18.6               | 9                | 13                | 22                 |
| PG13.5  | 20.4               | 9                | 13                | 25                 |
| PG16    | 22.5               | 10.5             | 15                | 27                 |
| PG21    | 28.3               | 10.5             | 15.5              | 33                 |
| PG29    | 37                 | 11.5             | 16                | 44                 |
| PG36    | 47                 | 13.5             | 18                | 55                 |
| PG42    | 54                 | 13.5             | 18.5              | 62                 |
| PG48    | 59.3               | 14.5             | 19.5              | 68                 |

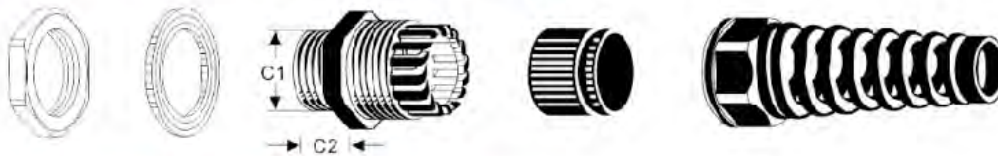
**Nylon Screw Plugs M Type**

| M Type  | Thread diameter C1 | Thread length C2 | Main Dimensions H | Cover Dimensions D |
|---------|--------------------|------------------|-------------------|--------------------|
| M12x1.5 | 12                 | 8.5              | 12.5              | 15                 |
| M16x1.5 | 16                 | 8.5              | 13                | 19                 |
| M18x1.5 | 18                 | 9                | 13                | 22                 |
| M20x1.5 | 20                 | 9                | 13                | 25                 |
| M22x1.5 | 22                 | 10.5             | 15                | 27                 |
| M25x1.5 | 25                 | 10.5             | 15.5              | 30                 |
| M27x1.5 | 27                 | 10.5             | 15.5              | 33                 |
| M32x1.5 | 32                 | 10.5             | 16                | 38                 |
| M40x1.5 | 40                 | 11.5             | 16                | 46                 |
| M50x1.5 | 50                 | 13.5             | 18                | 56                 |
| M63x1.5 | 63                 | 14.5             | 19                | 68                 |



## Product Overview

- ◆ Thread: PG, Metric, G, and NPT thread
- ◆ Materials: UL approved Nylon PA66 (Flammability) UL 94V-2) for A. C. E parts, (Accept to make flammability UL 94V-0); EPDM rubber for B. D parts, (Also accept to make super rubber: resist high temperature rubber, resist strong acid/alkali, etc).
- ◆ Protection degree: IP68
- ◆ Working temperature: -40 °C to 100 °C
- ◆ Features: The claws and seals of excellent design, sealing nut have a "click" sound and re-open, can hold cable firmly and have a wider cable range. Resistant to salt water, weak acid, alcohol, oil, grease and common solvency.
- ◆ Colours: Black(RAL9005), gray(RAL7035), other color available upon request.



## Spiral Cable Glands PG type

| PG Type | Cable Range | Thread diameter C1 | Thread length C2 | Wrench diameter |
|---------|-------------|--------------------|------------------|-----------------|
| PG7     | 3~6.5       | 12.5               | 8                | 16              |
| PG7     | 2~5         | 12.5               | 8                | 16              |
| PG9     | 4~8         | 15.2               | 8                | 19              |
| PG9     | 2~6         | 15.2               | 8                | 19              |
| PG11    | 5~10        | 18.6               | 8                | 22              |
| PG11    | 3~7         | 18.6               | 8                | 22              |
| PG13.5  | 6~12        | 20.4               | 9                | 24              |
| PG13.5  | 5~9         | 20.4               | 9                | 24              |
| PG16    | 10~14       | 22.5               | 10               | 27              |
| PG16    | 7~12        | 22.5               | 10               | 27              |
| PG21    | 13~18       | 28.3               | 10               | 33              |
| PG21    | 9~16        | 28.3               | 10               | 33              |

## Spiral Cable Glands M type

| M Type  | Cable Range | Thread diameter C1 | Thread length C2 | Wrench diameter |
|---------|-------------|--------------------|------------------|-----------------|
| M12x1.5 | 3~6.5       | 12                 | 8                | 16              |
| M12x1.5 | 2~5         | 12                 | 8                | 16              |
| M16x1.5 | 4~8         | 16                 | 8                | 19              |
| M16x1.5 | 2~6         | 16                 | 8                | 19              |
| M18x1.5 | 5~10        | 18                 | 8                | 22              |
| M18x1.5 | 3~7         | 18                 | 8                | 22              |
| M20x1.5 | 6~12        | 20                 | 9                | 24              |
| M20x1.5 | 5~9         | 20                 | 9                | 24              |
| M22x1.5 | 10~14       | 22                 | 10               | 27              |
| M22x1.5 | 7~12        | 22                 | 10               | 27              |
| M25x1.5 | 13~18       | 25                 | 10               | 33              |
| M25x1.5 | 9~16        | 25                 | 10               | 33              |
| M27x1.5 | 13~18       | 27                 | 10               | 33              |
| M27x1.5 | 9~16        | 27                 | 10               | 33              |



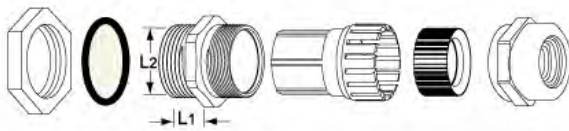
**Material:** Parts A, C, F are made of brass plated with nickel, part D is made of UL approved nylon PA66, parts B and E are made of nitrile butadiene rubber (NBR).

**Thread spec.:** Metric, PG, G, NPT.

**Working temperature:** -40 °C to 100 °C, instantaneous heat resistance up to 120 °C.

**Characteristics:** Special design of clamping die and rubber part, large range in clamping the cable, ultrastrong stretching resistance, waterproof, dustproof, and high ability to resist salt, acid, alkali, alcohol, grease and general solvent.

**A** Lock Nut    **B** O Ring    **C** Body    **D** Claw    **E** Seal    **F** Sealing Nut



| Model    | Thread Size | Cable Range (mm) | Thread O. D. L2 (mm) | Thread Length L1 (mm) | Spanner Size (mm) |
|----------|-------------|------------------|----------------------|-----------------------|-------------------|
| PG7-M    | PG7         | 3~6.5            | 12.5                 | 5                     | 14                |
| PG7-M    | PG7         | 2~5              | 12.5                 | 5                     | 14                |
| PG9-M    | PG9         | 5~9              | 15.2                 | 6                     | 17                |
| PG9-M    | PG9         | 2~6              | 15.2                 | 6                     | 17                |
| PG11-M   | PG11        | 6.5~11           | 18.6                 | 6                     | 20                |
| PG11-M   | PG11        | 3~7              | 18.6                 | 6                     | 20                |
| PG13.5-M | PG13.5      | 7~13             | 20.4                 | 6.5                   | 22                |
| PG13.5-M | PG13.5      | 5~9              | 20.4                 | 6.5                   | 22                |
| PG16-M   | PG16        | 9~14             | 22.5                 | 6.5                   | 24                |
| PG16-M   | PG16        | 6~12             | 22.5                 | 6.5                   | 24                |
| PG21-M   | PG21        | 11~18            | 28.3                 | 7                     | 30                |
| PG21-M   | PG21        | 9~16             | 28.3                 | 7                     | 30                |
| PG29-M   | PG29        | 18~26            | 37                   | 8                     | 40                |
| PG29-M   | PG29        | 13~20            | 37                   | 8                     | 40                |
| PG36-M   | PG36        | 24~33            | 47                   | 9                     | 50                |
| PG36-M   | PG36        | 20~26            | 47                   | 9                     | 50                |
| PG42-M   | PG42        | 30~39            | 54                   | 10                    | 58                |
| PG42-M   | PG42        | 25~31            | 54                   | 10                    | 58                |
| PG48-M   | PG48        | 34~45            | 59.3                 | 10                    | 63                |
| PG48-M   | PG48        | 29~35            | 59.3                 | 10                    | 63                |

## Metallic cable gland PG-LM/M-M type

### Metallic cable gland PG-LM type

| Model     | Thread Size | Cable Range (mm) | Thread O. D. L2 (mm) | Thread Length L1 (mm) | Spanner Size (mm) |
|-----------|-------------|------------------|----------------------|-----------------------|-------------------|
| PG7-LM    | PG7         | 3~6.5            | 12.5                 | 10                    | 14                |
| PG7-LM    | PG7         | 2~5              | 12.5                 | 10                    | 14                |
| PG9-LM    | PG9         | 5~9              | 15.2                 | 10                    | 17                |
| PG9-LM    | PG9         | 2~6              | 15.2                 | 10                    | 17                |
| PG11-LM   | PG11        | 6.5~11           | 18.6                 | 10                    | 20                |
| PG11-LM   | PG11        | 3~7              | 18.6                 | 10                    | 20                |
| PG13.5-LM | PG13.5      | 6~13             | 20.4                 | 10                    | 22                |
| PG13.5-LM | PG13.5      | 5~9              | 20.4                 | 10                    | 22                |
| PG16-LM   | PG16        | 10~14            | 22.5                 | 10                    | 24                |
| PG16-LM   | PG16        | 6~12             | 22.5                 | 10                    | 24                |
| PG21-LM   | PG21        | 11~18            | 28.3                 | 12                    | 30                |
| PG21-LM   | PG21        | 9~16             | 28.3                 | 12                    | 30                |
| PG29-LM   | PG29        | 18~26            | 37                   | 12                    | 40                |
| PG29-LM   | PG29        | 13~20            | 37                   | 12                    | 40                |
| PG36-LM   | PG36        | 22~33            | 47                   | 15                    | 50                |
| PG36-LM   | PG36        | 20~26            | 47                   | 15                    | 50                |
| PG42-LM   | PG42        | 30~39            | 54                   | 15                    | 58                |
| PG42-LM   | PG42        | 25~31            | 54                   | 15                    | 58                |
| PG48-LM   | PG48        | 34~45            | 59.3                 | 15                    | 63                |
| PG48-LM   | PG48        | 29~35            | 59.3                 | 15                    | 63                |

### Metallic cable gland M-M type

| Model | Thread Size | Cable Range (mm) | Thread O. D. L2 (mm) | Thread Length L1 (mm) | Spanner Size (mm) |
|-------|-------------|------------------|----------------------|-----------------------|-------------------|
| M12-M | M12x1.5     | 3~6.5            | 12                   | 5                     | 14                |
| M14-M | M14x1.5     | 3~6.5            | 14                   | 6                     | 17                |
| M16-M | M16x1.5     | 5~9              | 16                   | 6                     | 17                |
| M18-M | M18x1.5     | 6.5~11           | 18                   | 6                     | 20                |
| M20-M | M20x1.5     | 7~13             | 20                   | 6                     | 22                |
| M22-M | M22x1.5     | 9~14             | 22                   | 6                     | 24                |
| M24-M | M24x1.5     | 9~14             | 24                   | 7                     | 30                |
| M25-M | M25x1.5     | 9~14             | 25                   | 7                     | 30                |
| M27-M | M27x1.5(2)  | 11~18            | 27                   | 7                     | 30                |
| M30-M | M30x1.5(2)  | 11~18            | 30                   | 7                     | 37                |
| M32-M | M32x1.5(2)  | 15~22            | 32                   | 8                     | 37                |
| M33-M | M33x1.5(2)  | 15~22            | 33                   | 8                     | 37                |
| M36-M | M36x1.5(2)  | 18~26            | 36                   | 8                     | 42                |
| M40-M | M40x1.5(2)  | 18~26            | 40                   | 8                     | 46                |
| M42-M | M42x1.5(2)  | 18~26            | 42                   | 9                     | 46                |
| M48-M | M48x1.5(2)  | 24~33            | 48                   | 9                     | 52                |
| M50-M | M50x1.5(2)  | 30~38            | 50                   | 9                     | 60                |
| M54-M | M54x1.5(2)  | 30~38            | 54                   | 9                     | 60                |
| M60-M | M60x1.5(2)  | 34~45            | 60                   | 9                     | 70                |
| M63-M | M63x1.5(2)  | 34~45            | 63                   | 10                    | 70                |
| M64-M | M64x1.5(2)  | 34~45            | 64                   | 10                    | 70                |

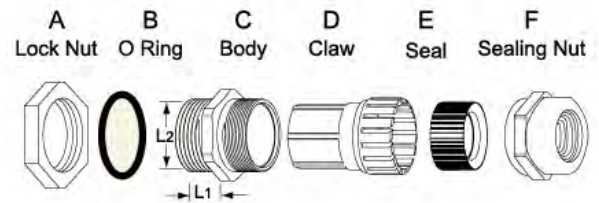


**Material:** Parts A, C, F are made of brass plated with nickel, part D is made of UL approved nylon PA66, parts B and E are made of nitrile butadiene rubber (NBR).

**Thread spec.:** Metric, PG, G, NPT.

**Working temperature:** -40 °C to 100 °C, instantaneous heat resistance up to 120 °C.

**Characteristics:** Special design of clamping die and rubber part, large range in clamping the cable, ultrastrong stretching resistance, waterproof, dustproof, and high ability to resist salt, acid, alkali, alcohol, grease and general solvent.



| Model  | Thread Size | Cable Range (mm) | Thread O. D. L2 (mm) | Thread Length L1 (mm) | Spanner Size (mm) |
|--------|-------------|------------------|----------------------|-----------------------|-------------------|
| M12-LM | M12x1.5     | 3~6.5            | 12                   | 10                    | 14                |
| M14-LM | M14x1.5     | 3~6.5            | 14                   | 10                    | 17                |
| M16-LM | M16x1.5     | 5~9              | 16                   | 10                    | 17                |
| M18-LM | M18x1.5     | 6.5~11           | 18                   | 10                    | 20                |
| M20-LM | M20x1.5     | 7~13             | 20                   | 10                    | 22                |
| M22-LM | M22x1.5     | 9~14             | 22                   | 10                    | 24                |
| M24-LM | M24x1.5     | 9~14             | 24                   | 11                    | 30                |
| M25-LM | M25x1.5     | 9~14             | 25                   | 12                    | 30                |
| M27-LM | M27x1.5(2)  | 11~18            | 27                   | 12                    | 30                |
| M30-LM | M30x1.5(2)  | 11~18            | 30                   | 14                    | 37                |
| M32-LM | M32x1.5(2)  | 15~22            | 32                   | 14                    | 37                |
| M33-LM | M33x1.5(2)  | 15~22            | 33                   | 14                    | 37                |
| M36-LM | M36x1.5(2)  | 18~26            | 36                   | 14                    | 42                |
| M40-LM | M40x1.5(2)  | 18~26            | 40                   | 15                    | 46                |
| M42-LM | M42x1.5(2)  | 18~26            | 42                   | 15                    | 46                |
| M48-LM | M48x1.5(2)  | 24~33            | 48                   | 15                    | 52                |
| M50-LM | M50x1.5(2)  | 30~38            | 50                   | 15                    | 60                |
| M54-LM | M54x1.5(2)  | 30~38            | 54                   | 15                    | 60                |
| M60-LM | M60x1.5(2)  | 34~45            | 60                   | 15                    | 70                |
| M63-LM | M63x1.5(2)  | 34~45            | 63                   | 15                    | 70                |
| M64-LM | M64x1.5(2)  | 34~45            | 64                   | 15                    | 70                |

## Metallic cable gland NPT-M/PG-MA type

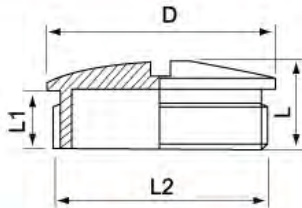


### Metallic cable gland NPT-M type

| Model      | Thread Size | Cable Range (mm) | Thread O. D. L2 (mm) | Thread Length L1 (mm) | Spanner Size (mm) |
|------------|-------------|------------------|----------------------|-----------------------|-------------------|
| NPT3/8" -M | NPT3/8"     | 4~8              | 17.1                 | 13                    | 18                |
| NPT3/8" -M | NPT3/8"     | 2~6              | 17.1                 | 13                    | 18                |
| NPT1/2" -M | NPT1/2"     | 6~12             | 21.3                 | 13                    | 22                |
| NPT1/2" -M | NPT1/2"     | 5~9              | 21.3                 | 13                    | 22                |
| NPT3/4" -M | NPT3/4"     | 13~18            | 26.6                 | 15                    | 30                |
| NPT3/4" -M | NPT3/4"     | 9~16             | 26.6                 | 15                    | 30                |
| NPT1" -M   | NPT1"       | 18~25            | 33.5                 | 16                    | 40                |
| NPT1" -M   | NPT1"       | 13~20            | 33.5                 | 16                    | 40                |
| NPT1" -M   | NPT1 1/4"   | 22~33            | 42                   | 18                    | 50                |
| NPT1" -M   | NPT1 1/4"   | 18~25            | 42                   | 18                    | 50                |
| NPT1" -M   | NPT1 1/2"   | 32~38            | 48                   | 18                    | 57                |
| NPT1" -M   | NPT1 1/2"   | 20~26            | 48                   | 18                    | 57                |

### Metallic cable gland PG-MA type

| Model     | Thread Size | Cable Range (mm) | Thread O. D. L2 (mm) | Thread Length L1 (mm) | Spanner Size (mm) |
|-----------|-------------|------------------|----------------------|-----------------------|-------------------|
| PG7-MA    | PG7         | 3~6.5            | 12.5                 | 6                     | 14                |
| PG7-MA    | PG7         | 2~5              | 12.5                 | 6                     | 14                |
| PG9-MA    | PG9         | 4~8              | 15.2                 | 7                     | 18                |
| PG9-MA    | PG9         | 2~6              | 15.2                 | 7                     | 18                |
| PG11-MA   | PG11        | 5~10             | 18.6                 | 7                     | 20                |
| PG11-MA   | PG11        | 3~7              | 18.6                 | 7                     | 20                |
| PG13.5-MA | PG13.5      | 6~12             | 20.4                 | 7.5                   | 22                |
| PG13.5-MA | PG13.5      | 5~9              | 20.4                 | 7.5                   | 22                |
| PG16-MA   | PG16        | 10~14            | 22.5                 | 7.5                   | 24                |
| PG16-MA   | PG16        | 6~12             | 22.5                 | 7.5                   | 24                |
| PG21-MA   | PG21        | 13~18            | 28.3                 | 8                     | 30                |
| PG21-MA   | PG21        | 9~16             | 28.3                 | 8                     | 30                |
| PG29-MA   | PG29        | 18~25            | 37                   | 9                     | 40                |
| PG29-MA   | PG29        | 13~20            | 37                   | 9                     | 40                |
| PG36-MA   | PG36        | 22~33            | 47                   | 9                     | 50                |
| PG36-MA   | PG36        | 20~26            | 47                   | 9                     | 50                |
| PG42-MA   | PG42        | 32~38            | 54                   | 10                    | 57                |
| PG42-MA   | PG42        | 25~31            | 54                   | 10                    | 57                |
| PG48-MA   | PG48        | 37~44            | 59.3                 | 11                    | 64                |
| PG48-MA   | PG48        | 29~35            | 59.3                 | 11                    | 64                |



**Material:** Made of brass plated with nickel.

**O-sealing element:** Made of nitrile butadiene rubber (NBR).

**Working temperature:** -40 °C to 100 °C.

### Metallic threaded plug PG-TM type

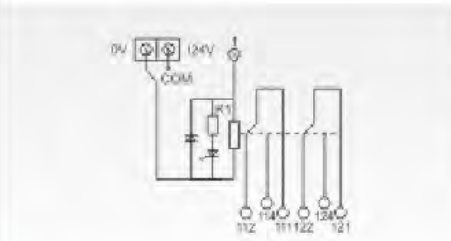
| Model     | Thread Size | Thread O. D. L2 (mm) | Thread Length L1 (mm) | Main body Dimensions L (mm) | Cover Dimensions D (mm) |
|-----------|-------------|----------------------|-----------------------|-----------------------------|-------------------------|
| PG7-TM    | PG7         | 12.5                 | 5                     | 8                           | 14                      |
| PG9-TM    | PG9         | 15.2                 | 6                     | 9                           | 17                      |
| PG11-TM   | PG11        | 18.6                 | 6                     | 9                           | 20                      |
| PG13.5-TM | PG13.5      | 20.4                 | 6.5                   | 9.5                         | 22                      |
| PG16-TM   | PG16        | 22.5                 | 6.5                   | 9.5                         | 24                      |
| PG21-TM   | PG21        | 28.3                 | 7                     | 11                          | 30                      |
| PG29-TM   | PG29        | 37                   | 8                     | 12                          | 39                      |
| PG36-TM   | PG36        | 47                   | 9                     | 15                          | 50                      |
| PG42-TM   | PG42        | 54                   | 10                    | 16                          | 57                      |
| PG48-TM   | PG48        | 59.3                 | 10                    | 16                          | 64                      |

### Metallic threaded plug M-TM type

| Model  | Thread Size | Thread O. D. L2 (mm) | Thread Length L1 (mm) | Main body Dimensions L (mm) | Cover Dimensions D (mm) |
|--------|-------------|----------------------|-----------------------|-----------------------------|-------------------------|
| M12-TM | M12x1.5     | 12                   | 5                     | 8                           | 114                     |
| M16-TM | M16x1.5     | 16                   | 6                     | 9                           | 18                      |
| M18-TM | M18x1.5     | 18                   | 6                     | 9                           | 20                      |
| M20-TM | M20x1.5     | 20                   | 6.5                   | 9.5                         | 22                      |
| M22-TM | M22x1.5     | 22                   | 6.5                   | 9.5                         | 24                      |
| M25-TM | M25x1.5     | 25                   | 7                     | 11                          | 28                      |
| M32-TM | M32x1.5     | 32                   | 8                     | 12                          | 35                      |
| M40-TM | M40x1.5     | 40                   | 9                     | 15                          | 44                      |
| M50-TM | M50x1.5     | 50                   | 10                    | 16                          | 54                      |
| M63-TM | M63x1.5     | 63                   | 10                    | 16                          | 70                      |



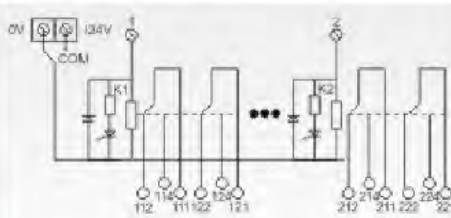
# Relay Module



LK-1-2Z-NP

■ Character

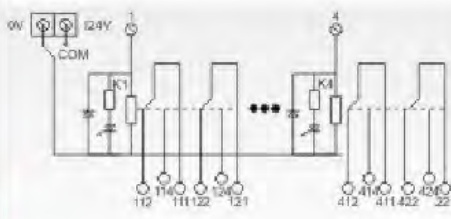
|                 |   |
|-----------------|---|
| Input type      | Terminal block input, NPN and PNP is common |
| Relay           | OMRON                                       |
| Coil voltage    | 12,24,48,110,220VAC/DC                      |
| Relay quantity  | 1   |
| Contact rating  | 250VAC/30VDC/8A 2Z                          |
| Outer dimension | 15x85x66mm                                  |



LK-2-2Z-NP

■ Character

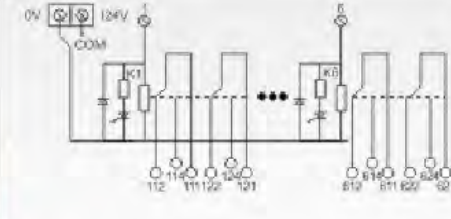
|                 |  |
|-----------------|--|
| Input type      | Terminal block input, NPN and PNP is common; AC/DC is common |
| Relay           | OMRON  |
| Coil voltage    | 12,24,48,110,220VAC/DC                                       |
| Relay quantity  | 2  |
| Contact rating  | 250VAC/30VDC/8A 2Z   |
| Outer dimension | 15x85x66mm   |



LK-4-2Z-NP

■ Character

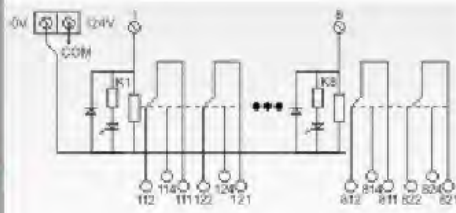
|                 |  |
|-----------------|--|
| Input type      | Terminal block input, NPN and PNP is common; AC/DC is common |
| Relay           | OMRON  |
| Coil voltage    | 12,24,48,110,220VAC/DC                                       |
| Relay quantity  | 4  |
| Contact rating  | 250VAC/30VDC/8A 2Z   |
| Outer dimension | 70x85x70mm   |



LK-6-2Z-NP

■ Character

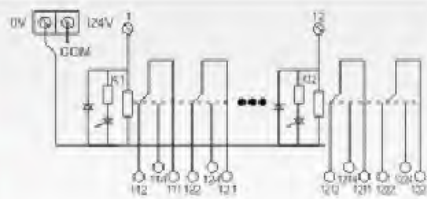
|                 |  |
|-----------------|--|
| Input type      | Terminal block input, NPN and PNP is common; AC/DC is common |
| Relay           | OMRON  |
| Coil voltage    | 12,24,48,110,220VAC/DC                                       |
| Relay quantity  | 6  |
| Contact rating  | 250VAC/30VDC/8A 2Z   |
| Outer dimension | 70x85x70mm   |



LK-8-2Z-NP

■ Character

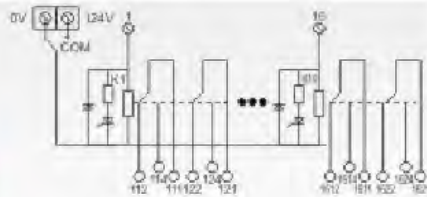
|                 |  |
|-----------------|--|
| Input type      | Terminal block input, NPN and PNP is common; AC/DC is common |
| Relay           | OMRON  |
| Coil voltage    | 12,24,48,110,220VAC/DC                                       |
| Relay quantity  | 8  |
| Contact rating  | 250VAC/30VDC/8A 2Z   |
| Outer dimension | 130x85x70mm  |



LK-12-2Z-NP

■ Character

|                 |  |
|-----------------|--|
| Input type      | Terminal block input, NPN and PNP is common; AC/DC is common |
| Relay           | OMRON  |
| Coil voltage    | 12,24,48,110,220VAC/DC                                       |
| Relay quantity  | 12   |
| Contact rating  | 250VAC/30VDC/8A 2Z   |
| Outer dimension | 190x85x70mm  |



LK-16-2Z-NP

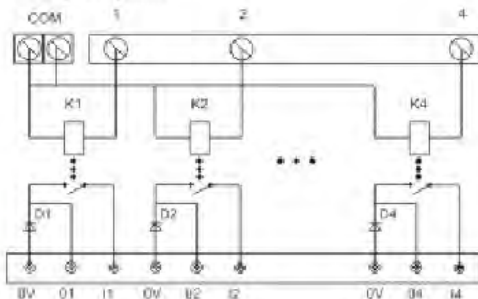
■ Character

|                 |  |
|-----------------|--|
| Input type      | Terminal block input, NPN and PNP is common; AC/DC is common |
| Relay           | OMRON  |
| Coil voltage    | 12,24,48,110,220VAC/DC                                       |
| Relay quantity  | 16   |
| Contact rating  | 250VAC/30VDC/8A 2Z   |
| Outer dimension | 250x85x70mm  |



LK-04-CR

Wiring Diagram



Character

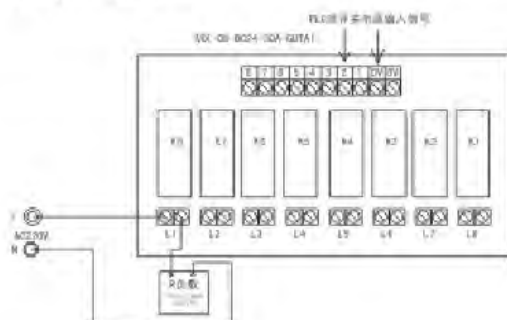
|                        |                                       |
|------------------------|---------------------------------------|
| Input type             | Terminal input, NPN and PNP is common |
| Relay                  | OMRON                                 |
| Input voltage          | 2-32VDC                               |
| SSR quantity           | 2,4,6,8,12,16                         |
| Load voltage           | 280VAC/DC80V/5A                       |
| Load current           | 0.1-5A                                |
| Arc extinction circuit | Diode                                 |
| Outer dimension        | 70x85x73mm                            |

- This product output using CRYDOM relay, is designed for control AC and DC load, for example, DC motor for avoid motor of electromagnetic relay is raise spare and burn out contact, improving the reliability of module.
- SSR relay module's respond speed is fast.
- SSR relay module have small interference, no noise, long life, ability of electromagnetic compatibility is good, affordability of impact current is high.
- Input and output have protect circuit, to avoid damage to the upper and lower pole.
- The module is design is small size, save space, easy wiring and improve efficiently.



LK-08-DC24V-30A-GUTAI

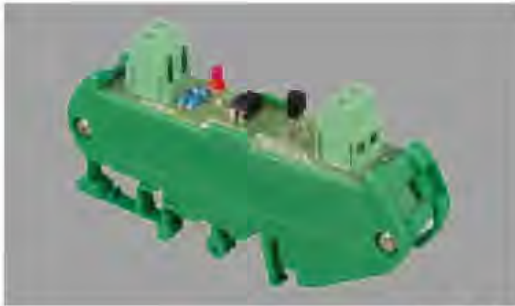
Wiring Diagram



Character

|                 |                          |
|-----------------|--------------------------|
| Input type      | Pluggable terminal input |
| SCR             | PHILLIPS tube            |
| Input voltage   | 3-32VDC                  |
| SCR quantity    | 2,4,6,8,12,16            |
| Load voltage    | AC220V/30A               |
| Load current    | 40A                      |
| Outer dimension | 210x110x70mm             |

- This product is designed for control AC and DC load, for example, heating rod contactor AC motor, etc.
- The price is lower than solid state relay.
- Speed is fast, no contact.
- Input and output terminals have fault indication circuit.

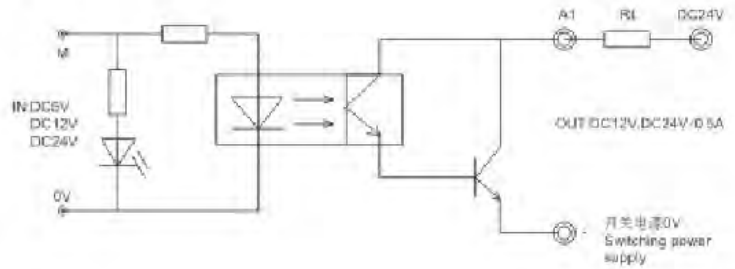


LKO-1CP

Specifications

|                      |                |
|----------------------|----------------|
| Power Output         | NN, NP, PN, PP |
| Driving Voltage      | DC5V, 12V, 24V |
| Optocoupler Quantity | 1              |
| Output Current       | DC24V/500mA    |
| Outer Dimension      | 15x73x66mm     |

Wiring Diagram



- This product output using CRYDOM relay, is designed for control AC and DC load, for example, DC motor for avoid motor of electromagnetic relay is raise spare and burn out contact, improving the reliability of module.
- SSR relay module's respond speed is fast.
- SSR relay module have small interference, no noise, long life, ability of electromagnentic compatibility is good, attordability of impact current is high.
- Input and output have protect circuit, to avoid damage to the upper and lower pole.
- The module is design is small size, save space, easy wiring and improve efficiently.

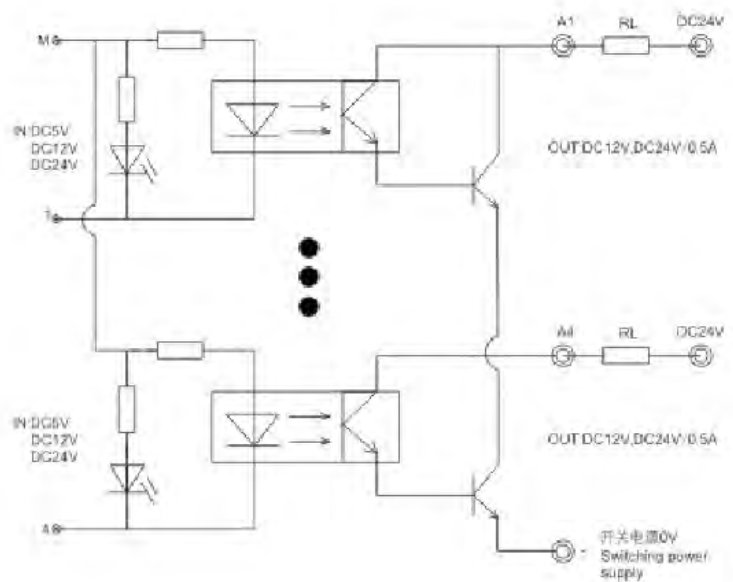


LKO-4CP

Specifications

|                      |                |
|----------------------|----------------|
| Power Output         | NN, NP, PN, PP |
| Driving Voltage      | DC5V, 12V, 24V |
| Optocoupler Quantity | 4              |
| Output Current       | DC24V/500mA    |
| Outer Dimension      | 30x73x66mm     |

Wiring Diagram



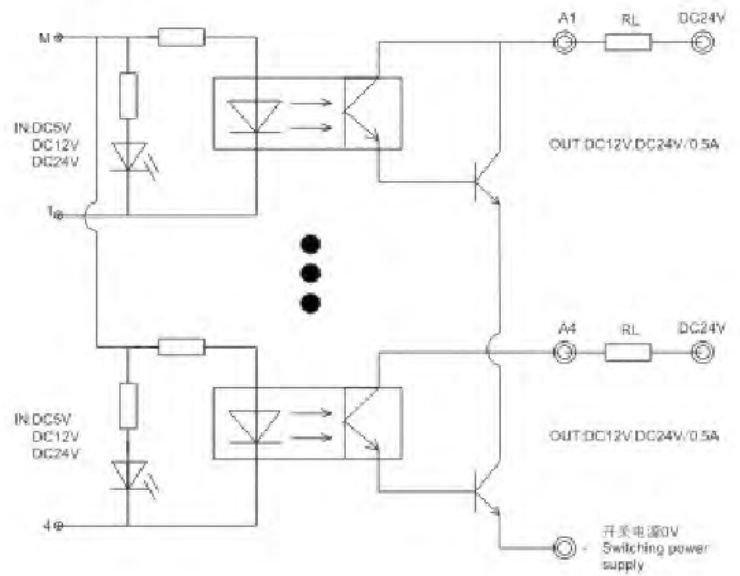


**LKO-8CP**

**Specifications**

|                      |                |
|----------------------|----------------|
| Power Output         | NN, NP, PN, PP |
| Driving Voltage      | DC5V, 12V, 24V |
| Optocoupler Quantity | 8              |
| Output Current       | DC24V/500mA    |
| Outer Dimension      | 55x73x66mm     |

**Wiring Diagram**

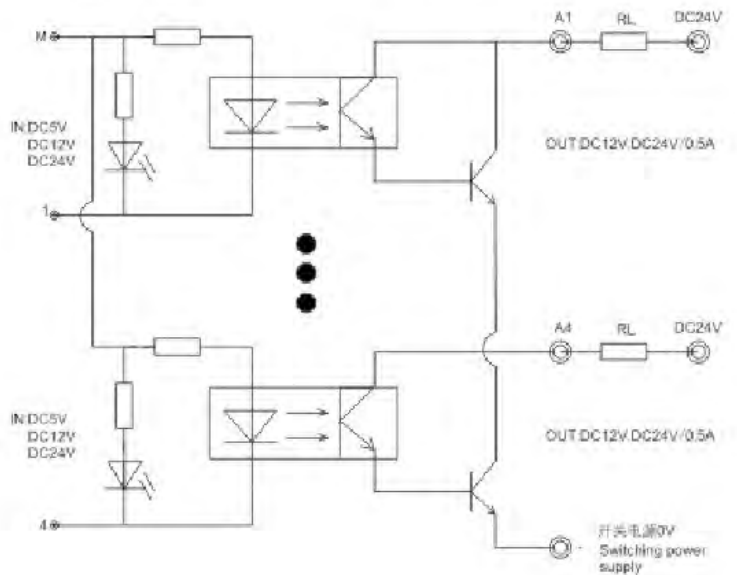


**LKO-16CP**

**Specifications**

|                      |                |
|----------------------|----------------|
| Power Output         | NN, NP, PN, PP |
| Driving Voltage      | DC5V, 12V, 24V |
| Optocoupler Quantity | 16             |
| Output Current       | DC24V/500mA    |
| Outer Dimension      | 110x73x66mm    |

**Wiring Diagram**





LK-8-PN-PA1A-50MM

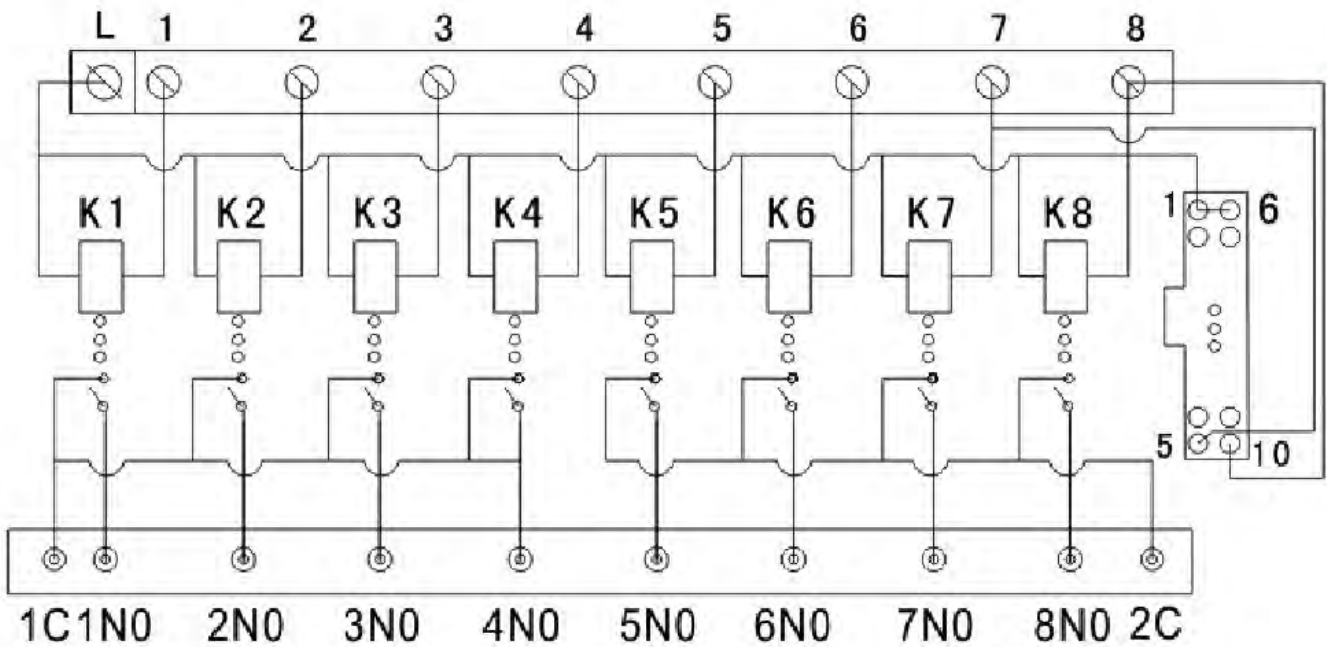
■ Character

|                 |   |
|-----------------|---|
| Input type      | Terminal input, NPN and PNP is common;<br>AC and DC is common |
| Relay           | PA1A  |
| Coil voltage    | DC24V   |
| Relay quantity  | 4,6,8,12,16   |
| Contact rating  | 250VAC/30VDC/5A/1Z  |
| Outer dimension | 70x50x66mm  |

Product advantages

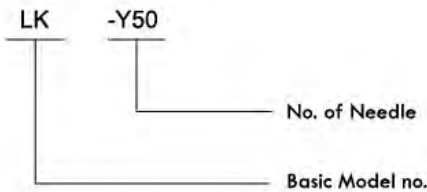
- Input Method: IDC terminal block horns and two input methods;
- Space saving, specifically for small control cabinet space, old-fashioned MY2 series quarter;
- Product output common terminal using two different load Convenient customer access time savings wire input uses a common ground line, so that saves wires, space-saving role.

Wiring Diagram

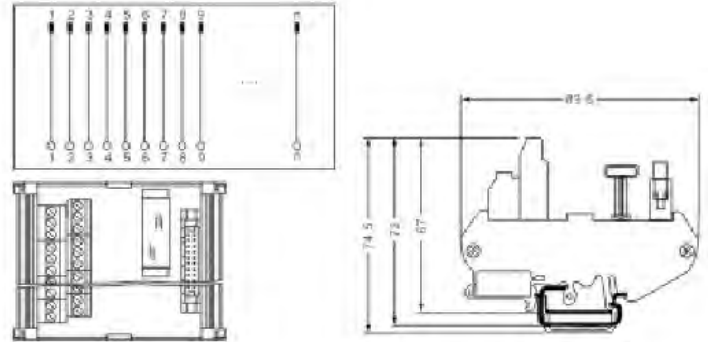




Mitsubishi QX series PLC input dedicated board



**Wiring Diagram**



**Product performance Comparison**

LK-F Series plug-in terminal module connects the basic pin 10 to pin 64 of pin socket with double screw terminals via a circuit board. To select pin position, use multi-pin flat cable plug (Follow IEC603-1/DIN41651 standard) and leading to the industrial field's double terminal wire. Thus, to connect by numbers corresponding to the standard rail of NS 35/7.5 or NS32 which is versatile, reliable, easy and safe usage. Module can be labeled by mark base or use ZB. mark on cover, but it needs to order separately.

**Technical Parameter**

|                     |                        |
|---------------------|------------------------|
| Wire cross-section  | 0.2-2.5mm <sup>2</sup> |
| I Allowable current | 1A                     |
| U Allowable voltage | AC/DC 60V              |

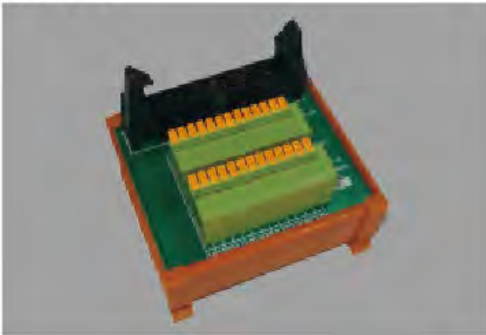
**Performance Parameters**

| Model  | Pin No. | Thickness of module board | Layout for connector and terminal No. |
|--------|---------|---------------------------|---------------------------------------|
| LK-F10 | 10      | 45                        |                                       |
| LK-F14 | 14      | 45                        |                                       |
| LK-F16 | 16      | 67.5                      |                                       |
| LK-F20 | 20      | 67.5                      |                                       |
| LK-F26 | 26      | 96                        |                                       |
| LK-F34 | 34      | 112.5                     |                                       |
| LK-F40 | 40      | 112.5                     |                                       |
| LK-F50 | 50      | 135                       |                                       |
| LK-F60 | 60      | 180                       |                                       |
| LK-F64 | 64      | 180                       |                                       |

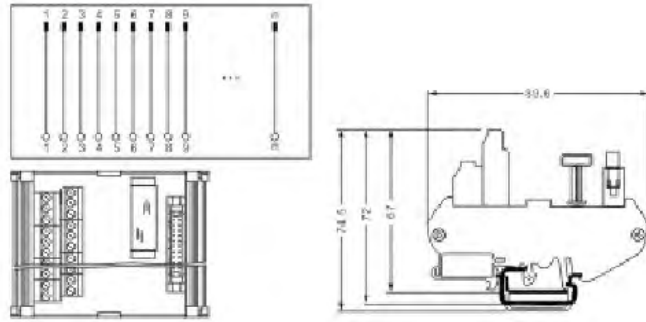


# Module Splitter Series (LK-F-2.54 Terminal Plug-in Module)

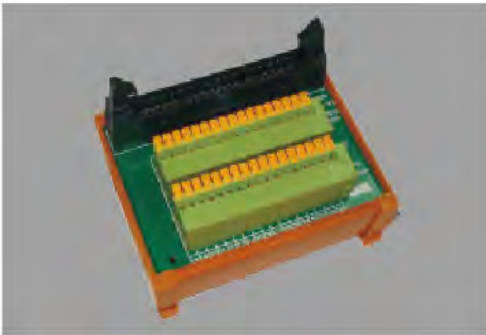
LK-F26-2.54



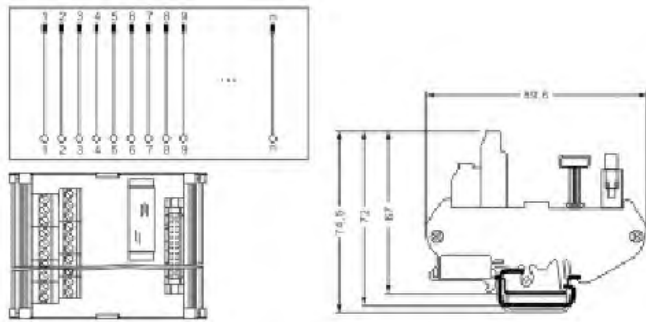
Wiring Diagram



LK-F34-2.54



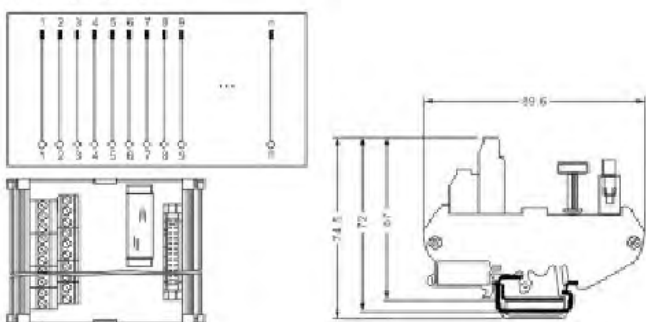
Wiring Diagram



LK-F40-2.54



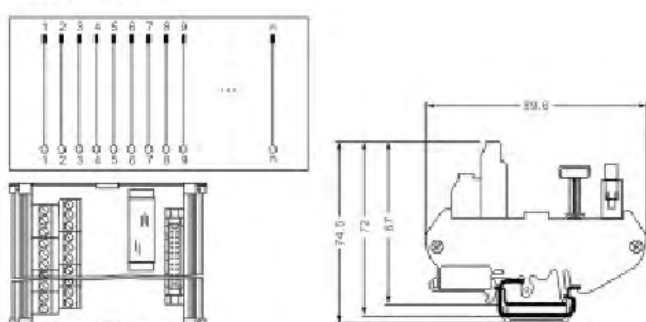
Wiring Diagram



LK-F50-2.54



Wiring Diagram



## Product Performance Comparison

This product is used to connect with I/O of CNC interface and corresponding control panel and switch module, circular cable can effectively

save cabinet space, optimization electrical performance, and it has good shielding.

## Character

|                                   |                               |
|-----------------------------------|-------------------------------|
| Max. operating voltage            | 60VAC/DC                      |
| Conductor impedance               | ≤0.16W/M                      |
| Conductor section                 | AWG26/0.14mm <sup>2</sup>     |
| Withstand voltage test            | 0.5KV/HZ/60 seconds           |
| Max.current single stranded cable | 1A                            |
| Temperature range                 | -20℃-50℃                      |
| Conductor structure               | 7 Stranded, tin-plated copper |
| Shield Grade                      | Double-shield                 |



MX-KB40S-4F1H-nM



Mitsubishi Q series input and output dedicated line

MX-KB50S-3M-nM



OMRON dedicated line driver output

MX-KB40S-AMP-nM

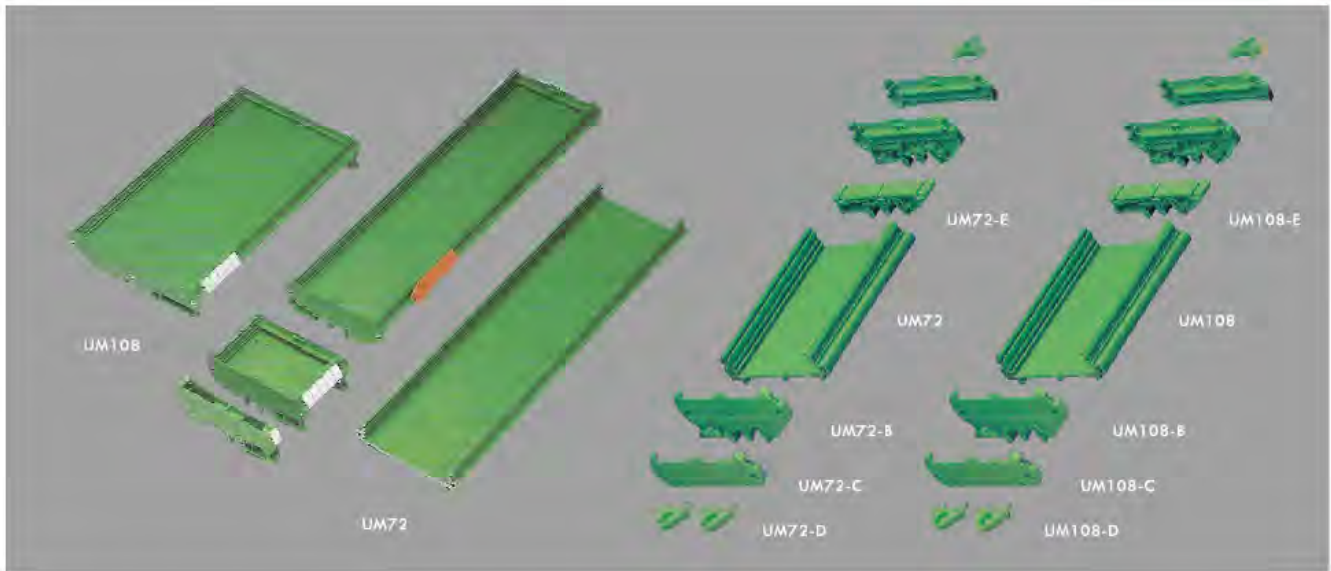


Mitsubishi Q series input and output dedicated line

MX-KB50S-HONDA-nM



HONDA dedicated line interface

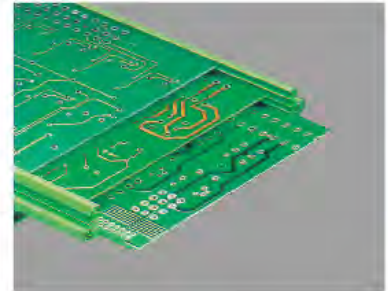


### Cut length of section bar according to actual need

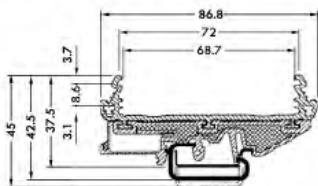
It's possible to cut length of section bar according to your need, precision is mm and there is no fixed size, which can have shell and installed electron circuit match.

### It is possible to put three-layer printing circuit board

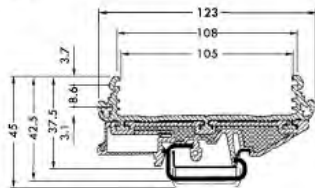
Section bar has leading slot and it can place three-layer printing circuit board. If applying SMD technology, it is possible to come true compact electron circuit.



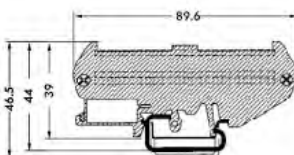
### Size picture of shell of UM72/108 strip



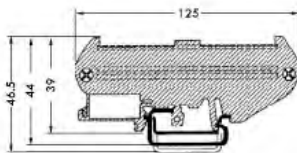
Extrusion section bar of UM72-E universal installation feet cell



Extrusion section bar with UM108 universal installation feet cell



UM72-B board of side with universal installation feet



UM 108B board of side with universal installation feet

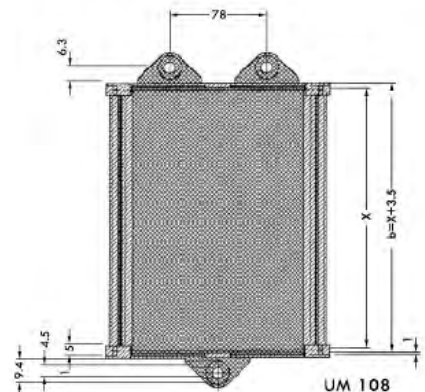
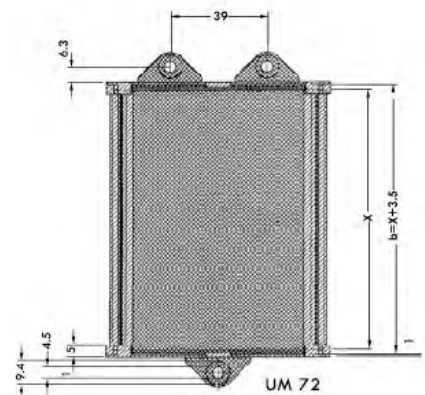


UM72-C board of side without universal installation feet



UM108-C board of side without universal installation feet

UM72/108 extrusion section bar with UM72/108-B universal installation feet and UM-D fixed flange (directly install to use on the wall of board)



X=length of section bar  
b=length of printing circuit board



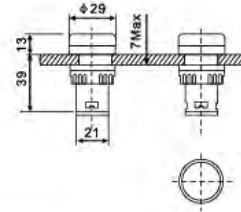
## Push Button & Indicator

# Indicator Lights AD22 Series



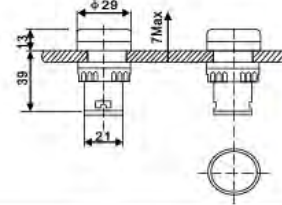
AD16-16DS

- 21-DC.AC6V
- 22-DC.AC12V
- 23-DC.AC24V
- 24-DC.AC36V
- 25-DC.AC48V
- 26-DC.AC110V
- 27-DC.AC127V
- 28-DC220V
- 31-AC220V
- 32-AC380V



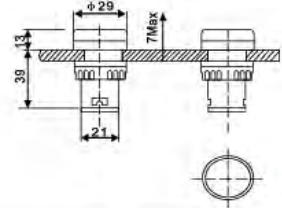
AD22-22DS

- 21-DC.AC6V
- 22-DC.AC12V
- 23-DC.AC24V
- 24-DC.AC36V
- 25-DC.AC48V
- 26-DC.AC110V
- 27-DC.AC127V
- 28-DC220V
- 31-AC220V
- 32-AC380V



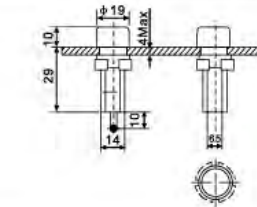
AD22-30DS  
φ 30

- 21-DC.AC6V
- 22-DC.AC12V
- 23-DC.AC24V
- 24-DC.AC36V
- 25-DC.AC48V
- 26-DC.AC110V
- 27-DC.AC127V
- 28-DC220V
- 31-AC220V
- 32-AC380V



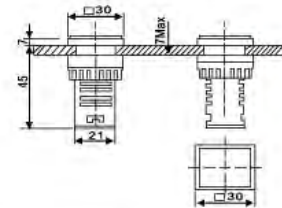
AD22-16B

- 21-DC.AC6V
- 22-DC.AC12V
- 23-DC.AC24V
- 24-DC.AC36V
- 25-DC.AC48V
- 26-DC.AC110V
- 27-DC.AC127V
- 28-DC220V
- 31-AC220V
- 32-AC380V



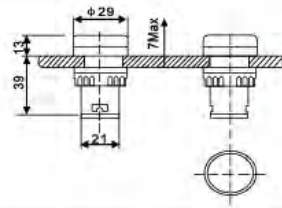
AD22-22FS/

- 21-DC.AC6V
- 22-DC.AC12V
- 23-DC.AC24V
- 24-DC.AC36V
- 25-DC.AC48V
- 26-DC.AC110V
- 27-DC.AC127V
- 31-AC220V
- 32-AC380V



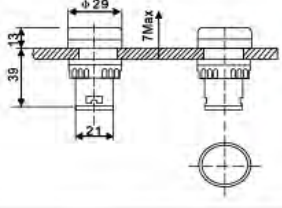
AD22-22BS

- 21-DC.AC6V
- 22-DC.AC12V
- 23-DC.AC24V
- 24-DC.AC36V
- 25-DC.AC48V
- 26-DC.AC110V
- 27-DC.AC127V
- 28-DC220V
- 31-AC220V
- 32-AC380V

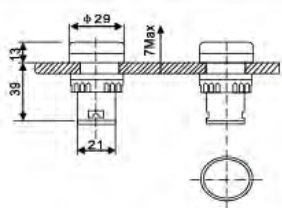


AD22-22CS


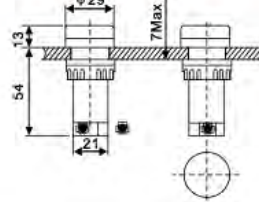


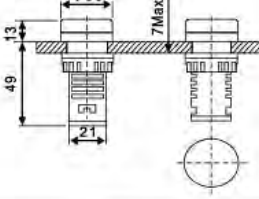


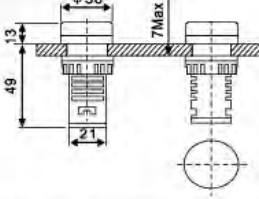


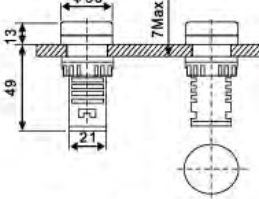


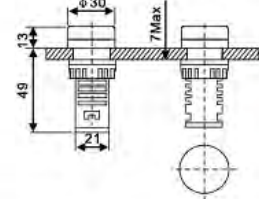


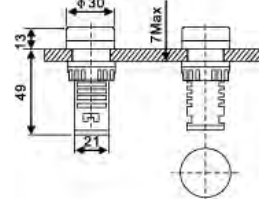


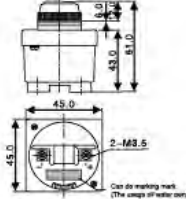

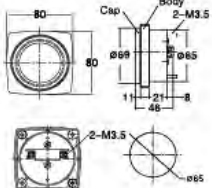
- 21-DC.AC6V
- 22-DC.AC12V
- 23-DC.AC24V
- 24-DC.AC36V
- 25-DC.AC48V
- 26-DC.AC110V
- 27-DC.AC127V
- 28-DC220V
- 31-AC220V
- 32-AC380V


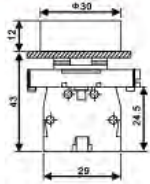


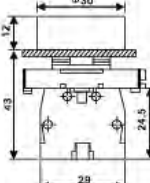


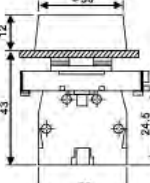


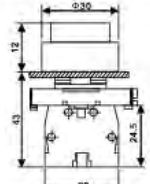


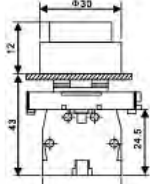


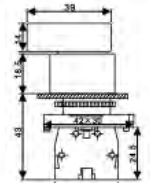


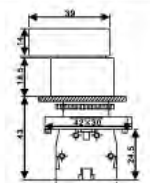


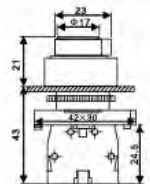




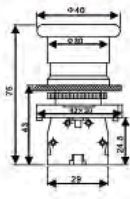


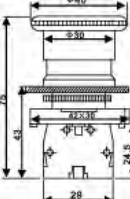


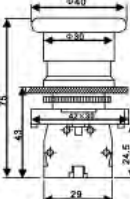


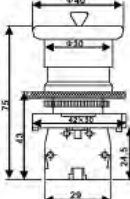


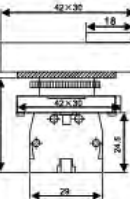


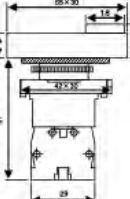


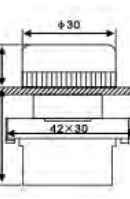


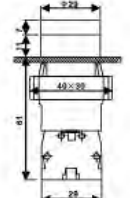

- |            |            |
|------------|------------|
| 220V       | 380V       |
| XB2-BVM1LC | XB2-BVQ1LC |
| XB2-BVM3LC | XB2-BVQ3LC |
| XB2-BVM4LC | XB2-BVQ4LC |
| XB2-BVM5LC | XB2-BVQ5LC |
| XB2-BVM6LC | XB2-BVQ6LC |
| 24V        | 110V       |
| XB2-BVB1LC | XB2-BVF1LC |
| XB2-BVB3LC | XB2-BVF3LC |
| XB2-BVB4LC | XB2-BVF4LC |
| XB2-BVB5LC | XB2-BVF5LC |
| XB2-BVB6LC | XB2-BVF6LC |


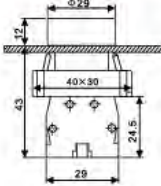


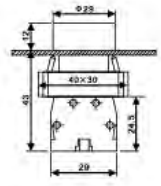


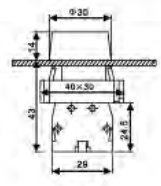


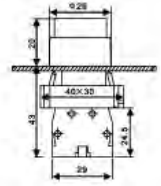


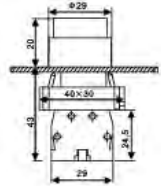


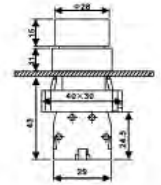


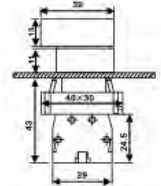


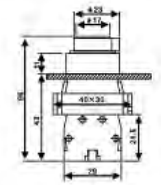



Push Button & Indicator

|   |  |   |   |   |
|---|--|---|---|---|
|    | <p>Double color indicator light</p> <p><b>AD22-22DRG/</b></p>  | <p>26-DC.AC110V<br/>27-DC.AC127V<br/>28-DC220V<br/>31-AC220V<br/>32-AC380V</p>  |    |    |
|    | <p>Isolation brake position indicator</p> <p><b>AD22-22W/G</b></p>   | <p>23-DC.AC 24V<br/>24-DC.AC 36V<br/>25-DC.AC 48V<br/>26-DC.AC 110V<br/>27-DC.AC 127V<br/>28-DC.AC 220V<br/>31-AC 220V<br/>32-AC 380V<br/>XOX1<br/>power on - Red light<br/>XOX2<br/>power on - Green light</p>                                 |    |    |
|    | <p>Circuit breaker position indicator</p> <p><b>AD22-22W/D</b></p>   | <p>23-DC.AC 24V<br/>24-DC.AC 36V<br/>25-DC.AC 48V<br/>26-DC.AC 110V<br/>27-DC.AC 127V<br/>28-DC.AC 220V<br/>31-AC 220V<br/>32-AC 380V<br/>XOX1<br/>power on <math>\psi</math> Red light<br/>XOX2<br/>power on <math>\psi</math> Green light</p> |    |    |
|   | <p>Grounding position indicator</p> <p><b>AD22-22W/N</b></p>   | <p>23-DC.AC 24V<br/>24-DC.AC 36V<br/>25-DC.AC 48V<br/>26-DC.AC 110V<br/>27-DC.AC 127V<br/>28-DC.AC 220V<br/>31-AC 220V<br/>32-AC 380V<br/>X1X2<br/>power on <math>\psi</math> Red light</p>   |   |   |
|  | <p>Flash Buzzer</p> <p><b>AD22-22SM/R</b></p>  | <p>22-DC.AC12V<br/>23-DC.AC24V<br/>24-DC.AC36V<br/>25-DC.AC48V<br/>26-DC.AC110V<br/>27-DC.AC127V<br/>28-DC220V<br/>31-AC220V<br/>32-AC380V</p>  |  |  |
|  | <p>Buzzer</p> <p><b>AD22-22FMD/</b></p>  | <p>21-DC.AC6V<br/>22-DC.AC12V<br/>23-DC.AC24V<br/>24-DC.AC36V<br/>25-DC.AC48V<br/>26-DC.AC110V<br/>27-DC.AC127V<br/>28-DC220V<br/>31-AC220V<br/>32-AC380V</p>   |  |  |
|  | <p><math>\phi</math> 25 Buzzer</p> <p><b>KH-4025-D <math>\phi</math> 25</b><br/><b>HRB-PS60A2 <math>\phi</math> 30</b></p> | <p>AC/DC12V<br/>AC/DC24V<br/>AC/DC110V<br/>AC220V<br/>AC380V<br/>Power consumption DC: 25ma<br/>Maximum power 1W(PEAK)<br/>Volume More than 60 dB<br/>IP40<br/>Withstand voltage:<br/>1,000VAC 1 Minute</p>                                     |  |   |
|  | <p><math>\phi</math> 65 Cover up into the type buzzer</p> <p><b>HRB-P80A2</b></p>  | <p>A2(220VAC)<br/>A1(110VAC)<br/>D2(12VAC/DC)<br/>D4(24VAC/DC)<br/>D1(110VAC/DC)</p>  |  |   |

|   |  |   |
|---|--|---|
|    | <p><b>Even button spring return</b></p> <p>LAY5-EA11(XB2-EA11)<br/>           LAY5-EA21(XB2-EA21)<br/>           LAY5-EA31(XB2-EA31)<br/>           LAY5-EA42(XB2-EA42)<br/>           LAY5-EA51(XB2-EA51)<br/>           LAY5-EA61(XB2-EA61)<br/>           LAY5-EA25(XB2-EA25)<br/>           LAY5-EA35(XB2-EA35)<br/>           LAY5-EA45(XB2-EA45)</p> <p>NO<br/>           NO<br/>           NO<br/>           NC<br/>           NO<br/>           NO<br/>           NO+NC<br/>           NO+NC<br/>           NO+NC</p>                  |       |
|    | <p><b>Even button spring return With symbol logo</b></p> <p>LAY5-EA3311(XB2-EA3311)<br/>           LAY5-EA3361(XB2-EA3361)<br/>           LAY5-EA3341(XB2-EA3341)<br/>           LAY5-EA3351(XB2-EA3351)<br/>           LAY5-EA4322(XB2-EA4322)<br/>           LAY5-EA4342(XB2-EA4342)<br/>           LAY5-EA5331(XB2-EA5331)<br/>           LAY5-EA5321(XB2-EA5321)</p> <p>NO I<br/>           NO II<br/>           NO ↑↓<br/>           NO ↑↓<br/>           NC ○<br/>           NC STOP<br/>           NO START<br/>           NO START</p> |       |
|    | <p><b>Button with protective cover</b></p> <p>LAY5-EP11(XB2-EP11)<br/>           LAY5-EP21(XB2-EP21)<br/>           LAY5-EP31(XB2-EP31)<br/>           LAY5-EP42(XB2-EP42)<br/>           LAY5-EP51(XB2-EP51)<br/>           LAY5-EP61(XB2-EP61)</p> <p>NO<br/>           NO<br/>           NO<br/>           NC<br/>           NO<br/>           NO</p> <p>IP 65</p>  |       |
|   | <p><b>Protruding button</b></p> <p>LAY5-EL21(XB2-EL21)<br/>           LAY5-EL31(XB2-EL31)<br/>           LAY5-EL42(XB2-EL42)<br/>           LAY5-EL51(XB2-EL51)<br/>           LAY5-EL61(XB2-EL61)</p> <p>NO<br/>           NC<br/>           NO<br/>           NO<br/>           NO</p>   |     |
|  | <p><b>Protruding button spring return With symbol logo</b></p> <p>LAY5-EL3311(XB2-EL3311)<br/>           LAY5-EL3361(XB2-EL3361)<br/>           LAY5-EL3341(XB2-EL3341)<br/>           LAY5-EL3341(XB2-EL3341)<br/>           LAY5-EL4322(XB2-EL4322)<br/>           LAY5-EL4342(XB2-EL4342)</p> <p>NO I<br/>           NO II<br/>           NO ↑↓<br/>           NO ↑↓<br/>           NC ○<br/>           NC STOP</p>   |   |
|  | <p><b>Standard handle knob</b></p> <p>LAY5-ED21(XB2-ED21)<br/>           LAY5-ED25(XB2-ED25)<br/>           LAY5-ED33(XB2-ED33)<br/>           LAY5-ED41(XB2-ED41)<br/>           LAY5-ED45(XB2-ED45)<br/>           LAY5-ED53(XB2-ED53)</p> <p>NO 2-position locked<br/>           NO+NC 3-position locked<br/>           NO+NO 2-position locked<br/>           NO 2-position reset<br/>           NO 2-position reset<br/>           NO+NO 3-position reset</p>   |   |
|  | <p><b>Long handle knob</b></p> <p>LAY5-EJ21(XB2-EJ21)<br/>           LAY5-EJ25(XB2-EJ25)<br/>           LAY5-EJ33(XB2-EJ33)<br/>           LAY5-EJ41(XB2-EJ41)<br/>           LAY5-EJ45(XB2-EJ45)<br/>           LAY5-EJ53(XB2-EJ53)</p> <p>NO 2-position locked<br/>           NO+NC 3-position locked<br/>           NO+NO 2-position locked<br/>           NO 2-position reset<br/>           NO 2-position reset<br/>           NO+NO 3-position reset</p>   |   |
|  | <p><b>Key button</b></p> <p>LAY5-EG21(XB2-EG21)<br/>           LAY5-EG25(XB2-EG25)<br/>           LAY5-EG03(XB2-EG03)<br/>           LAY5-EG33(XB2-EG33)<br/>           LAY5-EG41(XB2-EG41)<br/>           LAY5-EG45(XB2-EG45)<br/>           LAY5-EG53(XB2-EG53)</p> <p>NO 2-position locked<br/>           NO+NC 2-position locked<br/>           NO+NO 3-position locked<br/>           NO+NO 3-position locked<br/>           NO+NC 2-position reset<br/>           NO+NC 2-position reset<br/>           NO+NO 3-position reset</p>       |   |

|   |  |                         |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
|---|--|-------------------------|------------|------------|-------------------------|------------|------------|---|------------|------------|---|------------|------------|---|------------|----|---|------------|------|---------------------|------------|--------|---------------------|------------|----|---|------------|--|---------------------|------------|--|---|
|    | <p><b>Even button spring return</b></p> <table border="0"> <tr><td>LAY5-EC21(XB2-EC21)</td><td>φ40</td><td>NO</td></tr> <tr><td>LAY5-EC31(XB2-EC31)</td><td>φ40</td><td>NO</td></tr> <tr><td>LAY5-EC42(XB2-EC42)</td><td>φ40</td><td>NC</td></tr> <tr><td>LAY5-EC51(XB2-EC51)</td><td>φ40</td><td>NO</td></tr> <tr><td>LAY5-ER21(XB2-ER21)</td><td>φ60</td><td>NO</td></tr> <tr><td>LAY5-ER31(XB2-ER31)</td><td>φ60</td><td>NO</td></tr> <tr><td>LAY5-ER42(XB2-ER42)</td><td>φ60</td><td>NC</td></tr> <tr><td>LAY5-ER51(XB2-ER51)</td><td>φ60</td><td>NO</td></tr> </table>  | LAY5-EC21(XB2-EC21)     | φ40        | NO         | LAY5-EC31(XB2-EC31)     | φ40        | NO         | LAY5-EC42(XB2-EC42)   | φ40        | NC         | LAY5-EC51(XB2-EC51)   | φ40        | NO         | LAY5-ER21(XB2-ER21)   | φ60        | NO | LAY5-ER31(XB2-ER31)   | φ60        | NO   | LAY5-ER42(XB2-ER42) | φ60        | NC     | LAY5-ER51(XB2-ER51) | φ60        | NO |   |            |  |                     |            |  |   |
| LAY5-EC21(XB2-EC21)   | φ40  | NO                      |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EC31(XB2-EC31)   | φ40  | NO                      |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EC42(XB2-EC42)   | φ40  | NC                      |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EC51(XB2-EC51)   | φ40  | NO                      |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-ER21(XB2-ER21)   | φ60  | NO                      |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-ER31(XB2-ER31)   | φ60  | NO                      |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-ER42(XB2-ER42)   | φ60  | NC                      |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-ER51(XB2-ER51)   | φ60  | NO                      |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
|    | <p><b>Even button spring return With symbol logo</b></p> <table border="0"> <tr><td>LAY5-ES442(XB2-ES442)</td><td>φ30</td><td>NC</td></tr> <tr><td>LAY5-ES542(XB2-ES542)</td><td>φ40</td><td>NC</td></tr> <tr><td>LAY5-ES642(XB2-ES642)</td><td>φ60</td><td>NC</td></tr> </table>  | LAY5-ES442(XB2-ES442)   | φ30        | NC         | LAY5-ES542(XB2-ES542)   | φ40        | NC         | LAY5-ES642(XB2-ES642)   | φ60        | NC         |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-ES442(XB2-ES442)   | φ30  | NC                      |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-ES542(XB2-ES542)   | φ40  | NC                      |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-ES642(XB2-ES642)   | φ60  | NC                      |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
|    | <p><b>Button with protective cover</b></p> <table border="0"> <tr><td>LAY5-ET42(XB2-ET42)</td><td>φ40</td><td>NC</td></tr> <tr><td>LAY5-ET845(XB2-ET845)</td><td>φ40</td><td>NO+NC</td></tr> </table>  | LAY5-ET42(XB2-ET42)     | φ40        | NC         | LAY5-ET845(XB2-ET845)   | φ40        | NO+NC      |       |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-ET42(XB2-ET42)   | φ40  | NC                      |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-ET845(XB2-ET845)   | φ40  | NO+NC                   |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
|   | <p><b>Protruding button</b></p> <table border="0"> <tr><td>LAY5-ES142(XB2-ES142)</td><td>φ40</td><td>NC</td></tr> <tr><td>LAY5-ES8445(XB2-ES8445)</td><td>φ40</td><td>NO+NC</td></tr> </table>   | LAY5-ES142(XB2-ES142)   | φ40        | NC         | LAY5-ES8445(XB2-ES8445) | φ40        | NO+NC      |     |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-ES142(XB2-ES142)   | φ40  | NC                      |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-ES8445(XB2-ES8445)   | φ40  | NO+NC                   |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
|  | <p><b>Protruding button spring return With symbol logo</b></p> <table border="0"> <tr><td>LAY5-EL8325(XB2-EL8325)</td><td></td><td>NO+NC</td></tr> <tr><td>LAY5-EL8425(XB2-EL8425)</td><td></td><td>NO+NC</td></tr> </table>   | LAY5-EL8325(XB2-EL8325) |            | NO+NC      | LAY5-EL8425(XB2-EL8425) |            | NO+NC      |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EL8325(XB2-EL8325)   |  | NO+NC                   |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EL8425(XB2-EL8425)   |  | NO+NC                   |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
|  | <p><b>Standard handle knob</b></p> <table border="0"> <tr><td>LAY5-EW8365(XB2-EW8365)</td><td>NO+NC</td><td>Directness</td></tr> <tr><td>LAY5-EW8465(XB2-EW8465)</td><td>NO+NC</td><td>Directness</td></tr> <tr><td>LAY5-EW8375(XB2-EW8375)</td><td>NO+NC</td><td>Resistance</td></tr> <tr><td>LAY5-EW8475(XB2-EW8475)</td><td>NO+NC</td><td>Resistance</td></tr> </table>   | LAY5-EW8365(XB2-EW8365) | NO+NC      | Directness | LAY5-EW8465(XB2-EW8465) | NO+NC      | Directness | LAY5-EW8375(XB2-EW8375)   | NO+NC      | Resistance | LAY5-EW8475(XB2-EW8475)   | NO+NC      | Resistance |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EW8365(XB2-EW8365)   | NO+NC  | Directness              |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EW8465(XB2-EW8465)   | NO+NC  | Directness              |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EW8375(XB2-EW8375)   | NO+NC  | Resistance              |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EW8475(XB2-EW8475)   | NO+NC  | Resistance              |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
|  | <p><b>Long handle knob</b></p> <table border="0"> <tr><td>LAY5-EV61(XB2-EV61)</td><td>Directness</td><td></td></tr> <tr><td>LAY5-EV63(XB2-EV63)</td><td>Directness</td><td></td></tr> <tr><td>LAY5-EV64(XB2-EV64)</td><td>Directness</td><td></td></tr> <tr><td>LAY5-EV65(XB2-EV65)</td><td>Directness</td><td></td></tr> <tr><td>LAY5-EV66(XB2-EV66)</td><td>Directness</td><td></td></tr> <tr><td>LAY5-EV71(XB2-EV71)</td><td>Directness</td><td>220V</td></tr> <tr><td>LAY5-EV73(XB2-EV73)</td><td>Resistance</td><td>6-380V</td></tr> <tr><td>LAY5-EV74(XB2-EV74)</td><td>Resistance</td><td></td></tr> <tr><td>LAY5-EV75(XB2-EV75)</td><td>Resistance</td><td></td></tr> <tr><td>LAY5-EV76(XB2-EV76)</td><td>Resistance</td><td></td></tr> </table> | LAY5-EV61(XB2-EV61)     | Directness |            | LAY5-EV63(XB2-EV63)     | Directness |            | LAY5-EV64(XB2-EV64)   | Directness |            | LAY5-EV65(XB2-EV65)   | Directness |            | LAY5-EV66(XB2-EV66)   | Directness |    | LAY5-EV71(XB2-EV71)   | Directness | 220V | LAY5-EV73(XB2-EV73) | Resistance | 6-380V | LAY5-EV74(XB2-EV74) | Resistance |    | LAY5-EV75(XB2-EV75)   | Resistance |  | LAY5-EV76(XB2-EV76) | Resistance |  |   |
| LAY5-EV61(XB2-EV61)   | Directness   |                         |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EV63(XB2-EV63)   | Directness   |                         |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EV64(XB2-EV64)   | Directness   |                         |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EV65(XB2-EV65)   | Directness   |                         |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EV66(XB2-EV66)   | Directness   |                         |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EV71(XB2-EV71)   | Directness   | 220V                    |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EV73(XB2-EV73)   | Resistance   | 6-380V                  |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EV74(XB2-EV74)   | Resistance   |                         |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EV75(XB2-EV75)   | Resistance   |                         |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EV76(XB2-EV76)   | Resistance   |                         |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
|  | <p><b>Key button</b></p> <table border="0"> <tr><td>LAY5-EW3161(XB2-EW3161)</td><td>NO</td><td></td></tr> <tr><td>LAY5-EW3361(XB2-EW3361)</td><td>NO</td><td></td></tr> <tr><td>LAY5-EW3462(XB2-EW3462)</td><td>NC</td><td>Directness</td></tr> <tr><td>LAY5-EW3561(XB2-EW3561)</td><td>NO</td><td>220V-240V</td></tr> <tr><td>LAY5-EW3661(XB2-EW3661)</td><td>NO</td><td></td></tr> </table>  | LAY5-EW3161(XB2-EW3161) | NO         |            | LAY5-EW3361(XB2-EW3361) | NO         |            | LAY5-EW3462(XB2-EW3462)   | NC         | Directness | LAY5-EW3561(XB2-EW3561)   | NO         | 220V-240V  | LAY5-EW3661(XB2-EW3661)   | NO         |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EW3161(XB2-EW3161)   | NO   |                         |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EW3361(XB2-EW3361)   | NO   |                         |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EW3462(XB2-EW3462)   | NC   | Directness              |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EW3561(XB2-EW3561)   | NO   | 220V-240V               |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |
| LAY5-EW3661(XB2-EW3661)   | NO   |                         |            |            |                         |            |            |   |            |            |   |            |            |   |            |    |   |            |      |                     |            |        |                     |            |    |   |            |  |                     |            |  |   |

|   |  |  |   |
|---|--|--|---|
|    | <p><b>Even button spring return</b></p> <p>LAY5-BA11(XB2-BA11)<br/>           LAY5-BA21(XB2-BA21)<br/>           LAY5-BA31(XB2-BA31)<br/>           LAY5-BA42(XB2-BA42)<br/>           LAY5-BA51(XB2-BA51)<br/>           LAY5-BA61(XB2-BA61)<br/>           LAY5-BA25(XB2-BA25)<br/>           LAY5-BA35(XB2-BA35)<br/>           LAY5-BA45(XB2-BA45)</p>               | <p>NO<br/>           NO<br/>           NO<br/>           NC<br/>           NO<br/>           NO<br/>           NO+NC<br/>           NO+NC<br/>           NO+NC</p>   |       |
|    | <p><b>Even button spring return With symbol logo</b></p> <p>LAY5-BA3311(XB2-BA3311)<br/>           LAY5-BA3361(XB2-BA3361)<br/>           LAY5-BA3341(XB2-BA3341)<br/>           LAY5-BA3351(XB2-BA3351)<br/>           LAY5-BA4322(XB2-BA4322)<br/>           LAY5-BA4342(XB2-BA4342)<br/>           LAY5-BA5331(XB2-BA5331)<br/>           LAY5-BA5321(XB2-BA5321)</p> | <p>NO I<br/>           NO II<br/>           NO ⬆️<br/>           NO ⬆️⬆️<br/>           NC ○<br/>           NC STOP<br/>           NO START<br/>           NO START</p>  |       |
|    | <p><b>Button with protective cover</b></p> <p>LAY5-BP11(XB2-BP11)<br/>           LAY5-BP21(XB2-BP21)<br/>           LAY5-BP31(XB2-BP31)<br/>           LAY5-BP42(XB2-BP42)<br/>           LAY5-BP51(XB2-BP51)<br/>           LAY5-BP61(XB2-BP61)</p>   | <p>NO<br/>           NO<br/>           NO<br/>           NC<br/>           NO<br/>           NO</p> <p>IP65</p>  |       |
|   | <p><b>Protruding button</b></p> <p>LAY5-BL21(XB2-BL21)<br/>           LAY5-BL31(XB2-BL31)<br/>           LAY5-BL42(XB2-BL42)<br/>           LAY5-BL51(XB2-BL51)<br/>           LAY5-BL61(XB2-BL61)</p>   | <p>NO<br/>           NC<br/>           NO<br/>           NO<br/>           NO</p>  |     |
|  | <p><b>Protruding button spring return With symbol logo</b></p> <p>LAY5-BL3311(XB2-BL3311)<br/>           LAY5-BL3361(XB2-BL3361)<br/>           LAY5-BL3341(XB2-BL3341)<br/>           LAY5-BL3341(XB2-BL3341)<br/>           LAY5-BL4322(XB2-BL4322)<br/>           LAY5-BL4342(XB2-BL4342)</p>   | <p>NO I<br/>           NO II<br/>           NO ⬆️<br/>           NO ⬆️⬆️<br/>           NC ○<br/>           NC STOP</p>  |   |
|  | <p><b>Standard handle knob</b></p> <p>LAY5-BD21(XB2-BD21)<br/>           LAY5-BD25(XB2-BD25)<br/>           LAY5-BD33(XB2-BD33)<br/>           LAY5-BD41(XB2-BD41)<br/>           LAY5-BD45(XB2-BD45)<br/>           LAY5-BD53(XB2-BD53)</p>   | <p>NO 2-position locked<br/>           NO+NC 3-position locked<br/>           NO+NO 2-position locked<br/>           NO 2-position reset<br/>           NO 2-position reset<br/>           NO+NO 3-position reset</p>  |   |
|  | <p><b>Long handle knob</b></p> <p>LAY5-BJ21(XB2-BJ21)<br/>           LAY5-BJ25(XB2-BJ25)<br/>           LAY5-BJ33(XB2-BJ33)<br/>           LAY5-BJ41(XB2-BJ41)<br/>           LAY5-BJ45(XB2-BJ45)<br/>           LAY5-BJ53(XB2-BJ53)</p>   | <p>NO 2-position locked<br/>           NO+NC 3-position locked<br/>           NO+NO 2-position locked<br/>           NO 2-position reset<br/>           NO 2-position reset<br/>           NO+NO 3-position reset</p>  |   |
|  | <p><b>Key button</b></p> <p>LAY5-BG21(XB2-BG21)<br/>           LAY5-BG25(XB2-BG25)<br/>           LAY5-BG03(XB2-BG03)<br/>           LAY5-BG33(XB2-BG33)<br/>           LAY5-BG41(XB2-BG41)<br/>           LAY5-BG45(XB2-BG45)<br/>           LAY5-BG53(XB2-BG53)</p>  | <p>NO 2-position locked<br/>           NO+NC 2-position locked<br/>           NO+NO 3-position locked<br/>           NO+NO 3-position locked<br/>           NO+NC 2-position reset<br/>           NO+NC 2-position reset<br/>           NO+NO 3-position reset</p> |   |

2014~2015



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