

# Electronic circuit breaker with thermomagnetic characteristic **PM-0724-400-0**



Picture shows PC-0724-800-0, PM-0724-400-0

## Advantages

|  |
|--|
| Adjustable tripping current for each output channel via current selector switch  |
| Ability to turn-on high load capacitance at each channel   |
| Sequential and load-dependent switching-on of channels   |
| Comprehensive single-channel-diagnostics and remote switching on/off of each output channel via 2-wire-interface or potential-free signal output |
| LED signalisation and remote request for each output channel   |
| Group alarm contact  |

## Applications

ECONOMY SMART circuit breakers with a thermomagnetic characteristic represent an economical alternative to the classic circuit breaker. They also ensure reliable tripping even in the case of high line resistance. This makes the circuit breakers ideal for use in standard machine production. The electronic circuit breaker distributes and monitors the load current over several current circuits. Overloads and short circuits on an output are reliably recognized. The electronics permit brief current peaks and switch longer overloads off. The rated current for each output can be individually set with a current selector switch accessible from the front. The outputs are activated depending on the time delay and load to avoid an overload current. If the rated current is exceeded for a certain amount of time, the output will be switched off automatically and can be reactivated after a waiting time (thermal relaxation) using the pushbutton or the remote signal input S1. The pushbutton can also be used to switch the output manually. It is possible to read out the state of each output using the three signal contacts. The state of each output is also indicated with a multi-colored LED.

## Standards

Safety:  
EN 60950-1, EN 50178,  
EN/IEC 60204-1

EMC:  
EN 61000-6-2, EN 61000-6-3

Safety extra-low voltage (SELV/PELV):  
IEC 60364-4-41 (DIN VDE 0100-410)

CE acc. to 2004/108/EG (EMC-Directive)

## Approvals



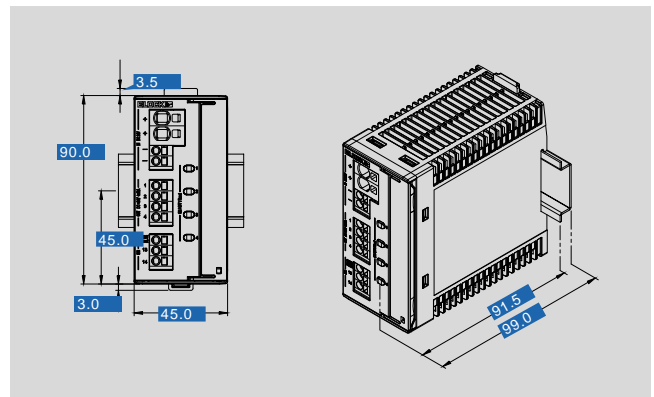
UL 2367, UL 508, DNV GL



# Electronic circuit breaker with thermomagnetic characteristic PM-0724-400-0

| Type  | PM-0724-400-0                                     |
|---|---|
| <b>Electrical data</b>                            |   |
| Special features                                  |   |
| Characteristics                                   | -   |
| Input   |   |
| Input rated voltage                               | 24 Vdc  |
| Input voltage range                               | 18 - 30 Vdc                                       |
| Maximal residual ripple of supplied input voltage | 3 %   |
| Required input voltage for turning-on of outputs  | 19.5 Vdc (Turn-off Threshold 18 Vdc)              |
| Max. total input current                          | 40 A  |
| Max. input current for each pole of terminal      | 40 A  |
| Over voltage protection                           | Suppressor diode 33 Vdc                           |
| Stand-by current                                  | 35 mA @ 24 Vdc                                    |
| Power losses in stand-by mode                     | 0.84 W @ 24 Vdc                                   |
| Output  |   |
| Output rated voltage                              | 24 Vdc  |
| Output rated current                              | 4 x 2 - 10 A, adjustable                          |
| Maximum voltage drop between input and output     | 200 mV @ 4 x 10 A                                 |
| Initialization time of module                     | 250 ms  |
| Turn-on delay of outputs                          | Load dependent, min. 50 ms / max. 5 s             |
| Waiting periode after switch-off of an output     | 500 ms (short circuit) ... 10 s (overload)        |
| Efficiency  | 99.0 %  |
| Max. power losses                                 | 10 W @ 4 x 10 A                                   |
| Internal output fuse                              | 15 A  |
| Resistance to reverse feed max.                   | 35 Vdc  |
| Parallel use of outputs                           | Not allowed                                       |
| Serial use of outputs                             | Not allowed                                       |
| Signaling   |   |
| Status indicator                                  | LED (red, green, orange)                          |
| Signal input 1                                    | S1: 24 Vdc (On/Off/Reset)                         |
| Signal output 2                                   | S2: 24 Vdc, max. 25 mA (status output channels)   |
| Signal output 3                                   | S3: 24 Vdc, max. 25 mA (Common signalling output) |
| Approvals   |   |
| Approvals   | cURus, cULus, DNV GL                              |
| Environment                                       |   |
| Storage temperature                               | -25 °C to +85 °C                                  |
| Ambient temperature                               | -25 °C to +70 °C                                  |
| Derating  | -   |
| Type of cooling                                   | Natural convection                                |
| Required minimum spacing (left/right)             | 0 mm  |
| Required minimum spacing (over/under)             | 40 mm   |
| Safety and protection                             |   |
| Protection index                                  | IP 20   |
| Safety class                                      | III, without PE connection                        |
| Degree of pollution                               | 2   |
| Order numbers                                     |   |
| <b>Order Number</b>                               | <b>PM-0724-400-0</b>                              |

| Type   | PM-0724-400-0                         |
|--|---------------------------------------|
| <b>Mechanical data</b>   |                                       |
| Terminal and mounting  |                                       |
| Mounting position  | horizontal for standard rail DIN TS35 |
| Input terminals (2 x "-"), 1 direct plug-in technology Push-in | max. 2,5 mm <sup>2</sup>              |
| Input terminals (2 x "+"), 1 direct plug-in technology Push-in | max. 6 mm <sup>2</sup>                |
| Terminals signalling (direct plug-in technology Push-in)       | max. 2,5 mm <sup>2</sup>              |
| Output terminals ("+"), direct plug-in technology Push-in      | max. 2,5 mm <sup>2</sup>              |
| Measures and weights   |                                       |
| Weight   | 0.20 kg                               |



Subject to change.