

# Electronic circuit breaker with thermomagnetic characteristic **PM-0748-400-0**



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



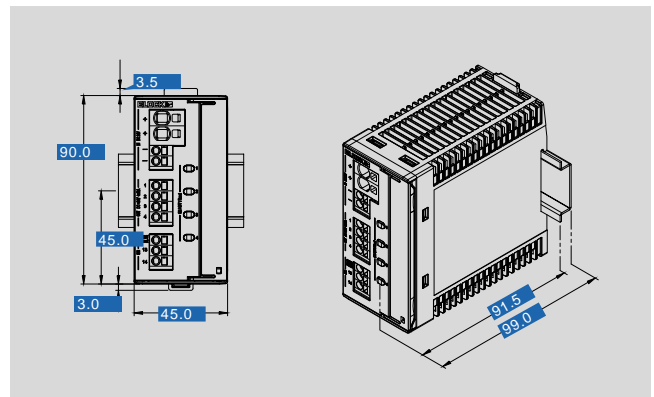
DNV GL



# Electronic circuit breaker with thermomagnetic characteristic PM-0748-400-0

Type	PM-0748-400-0
<b>Electrical data</b>	
Special features	
Characteristics	-
Input	
Input rated voltage	48 Vdc
Input voltage range	32 - 58 Vdc
Maximal residual ripple of supplied input voltage	3 %
Required input voltage for turning-on of outputs	35 Vdc
Max. total input current	40 A
Max. input current for each pole of terminal	40 A
Over voltage protection	Suppressor diode 68 Vdc
Stand-by current	17 mA
Power losses in stand-by mode	0.82 W
Output	
Output rated voltage	48 Vdc
Output rated current	4 x 2 - 10 A, adjustable
Maximum voltage drop between input and output	175 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) ... 20 s (overload)
Efficiency	99.0 %
Max. power losses	8 W (4 x 10 A)
Internal output fuse	15 A
Resistance to reverse feed max.	58 Vdc
Parallel use of outputs	Not allowed
Serial use of outputs	Not allowed
Signaling	
Status indicator	LED (red, green, orange)
Signal input 1	S1: 15 - 58 Vdc (On / Off / Reset)
Signal output 2	S2: 24 Vdc, 20 mA, short circuit proof, status report of outputs
Signal output 3	S3: 24 Vdc, 20 mA, short circuit proof; high = OK, low = min. one channel tripped
Approvals	
Approvals	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-0748-400-0</b>

Type	PM-0748-400-0
<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	0.14 kg



Subject to change.