

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 accessible from the front
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
LED signalization and remote request for each output channel
Group alarm contact for simple diagnosis

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, GL



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Electrical data

Type	PM-0748-400-0
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 V
Stand-by current	17 mA
Power losses in stand-by mode	0.82 W
Output	
Output rated voltage	48 Vdc
Output rated current	4x (2, 3, 4, 6, 8, 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 %
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 S1	15 - 58 Vdc (On / Off / Reset)
Signal output S2	"S2": 24 Vdc, 20 mA, short circuit proof, status report of outputs
Signal output S3	"S3": 24 Vdc, 20 mA, short circuit proof; high = OK, low = min. one channel tripped
Approvals	
Approvals	-
Environment	
Storage temperature	-25° C ... +85° C
Ambient temperature	-25° C ... +70° C
Derating	-
Cooling method	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	
Order Number	PM-0748-400-0



Mechanical data

Type	PM-0748-400-0
Input	
Input terminals (2 x "-"), 1) direct plug-in technology Push-in 2) pluggable, WAGO series 721	1) max. 2,5 mm ²
Input terminals (2 x "+"), 1) direct plug-in technology Push-in 2) pluggable, WAGO series 831	1) max. 6 mm ²
Output	
Output terminals ("+"), 1) direct plug-in technology Push-in 2) pluggable, WAGO series 721	1) max. 2,5 mm ²
Signaling	
Connections signalling, 1) direct plug-in technology Push-In 2) pluggable, WAGO series 721	1) max. 2,5 mm ²
Terminal and mounting	
Mounting position	horizontal for standard rail DIN TH 35
Measures and weights	
Weight	0.14 kg

