

# Electronic circuit breaker with thermomagnetic characteristic

## PM-0712-400-0



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



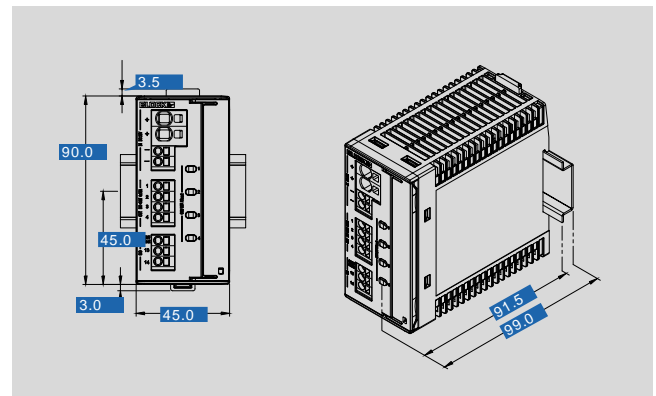
UL 2367, UL 508, GL



# Electronic circuit breaker with thermomagnetic characteristic PM-0712-400-0

Type	PM-0712-400-0
<b>Electrical data</b>	
<b>Input</b>	
Input rated voltage	12 Vdc
Input voltage range	10 - 16 Vdc
Maximal residual ripple of supplied input voltage	3 %
Required input voltage for turning-on of outputs	10.5 V (Turn-off Threshold 10 V)
Max. total input current	40 A
Max. input current for each pole of terminal	40 A
Over voltage protection	Suppressor diode 33 V
Stand-by current	44 mA @ 12 V
Power losses in stand-by mode	0.53 W @ 12 V
<b>Output</b>	
Output rated voltage	12 Vdc
Output rated current	4 x (2, 3, 6, 8, 10 A)
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 %
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
<b>Signaling</b>	
Status indicator	LED (red, green, orange)
Signal input S1	DC 12-24 V (On/Off/Reset)
Signal output S2	DC 12 V, max. 25 mA (status output channels)
Signal output S3	DC 12 V, max. 25 mA (Summation message)
<b>Approvals</b>	
Approvals	cURus, cULus, GL
<b>Environment</b>	
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
<b>Safety and protection</b>	
Protection index	IP 20
Safety class	III, without PE connection
Degree of pollution	2
<b>Order numbers</b>	
<b>Order Number</b>	<b>PM-0712-400-0</b>

Type	PM-0712-400-0
<b>Mechanical data</b>	
<b>Input</b>	
Input terminals (2 x "-"), 1) direct plug-in technology Push-in 2) pluggable, WAGO series 721	1) max. 2,5 mm <sup>2</sup>
Input terminals (2 x "+"), 1) direct plug-in technology Push-in 2) pluggable, WAGO series 831	1) max. 6 mm <sup>2</sup>
<b>Output</b>	
Output terminals ("+"), 1) direct plug-in technology Push-in 2) pluggable, WAGO series 721	1) max. 2,5 mm <sup>2</sup>
<b>Signaling</b>	
Connections signalling, 1) direct plug-in technology Push-In 2) pluggable, WAGO series 721	1) max. 2,5 mm <sup>2</sup>
<b>Terminal and mounting</b>	
Mounting position	horizontal for standard rail DIN TH 35
<b>Measures and weights</b>	
Weight	0.20 kg



Subjects to change.