

POWER MINI

POWER MINI

Slim and efficient

Power Mini are efficient switched mode power supplies in slim plastic casing.
The devices cover the lower and average power requirements from 25 W to 100 W.

Power range from 25 to 100 W
Universal input of 85 to 264 Vac
Stabilized and variable output voltage



Single-phase

12Vdc 2A	12Vdc 4A	12Vdc 8A
24Vdc 1A	24Vdc 2A	24Vdc 4A
48Vdc 2A		



Highlights

✓ Active "DC OK" signal contact

✓ Constant current limiting
on overload

✓ Push-In
connection
technology

✓ Low standby loads <1 W

✓ Conforms to domestic appliances
EN 60335-1

Single phase, primary switched mode power supply

PM-0112-020-0



Advantages

- Stabilised and adjustable output voltage
- Low stand-by consumption <1 W
- Constant current characteristic
- DC OK signalling
- Parallel operation option
- Push-In terminals
- Panel installation on mounting rails

Applications

Efficient, primary switched mode power supply in slim plastic housing. A powerful and flexible option that's still light and compact. Our real all-rounders, these power supply units are suitable for a highly diverse range of applications in solar, measurement and control technology as well as industrial and building automation. The devices cover the lower and average power requirements from 25 W to 100 W. Versions with 12 V, 24 V, and 48 V are available, enabling a whole range of applications. A version with 3.8 A rated current is available for establishing NEC Class 2 circuits. All power supplies also comply with the EN 60335-1 standard for domestic appliances. The output voltage can be easily set using the rotary potentiometer on the front of the housing. The DIN rail fastening method and push-in connection terminals enable fast and secure mounting.

Standards

Primary switched mode power supply
to UL 60950, UL 508

Safety:
EN 61558-2-16, EN 60950-1, EN 60335-1

EMC:
EN 61204-3

Approvals

UL/CSA 60950, UL 508, GL (in preparation)



Single phase, primary switched mode power supply

PM-0112-020-0

Electrical data

Type	PM-0112-020-0
Input	
Input rated voltage	100 - 240 Vac
Input voltage range	85 - 264 Vac (120 - 373 Vdc)
Input voltage derating	-2,5 %/Vac < 95 Vac
Rated frequency range	44 Hz - 66 Hz / 0 Hz
Input rated current (rated load)	0.44 A (100 Vac) / 0.22 A (240 Vac)
Starting current limiter	< 30 A, NTC
Switch-on time	1.5 s (100 Vac) / 0.4 s (230 Vac)
Power factor	0.48
Input fuse internal	2 A
Recommended back-up fuse (circuit breaker)	6 A, 10 A, 16 A, characteristic B, C
Mains buffering	15 ms (100 Vac) / 120 ms (230 Vac)
Transient surge voltage protection	varistor
Output	
Output rated voltage	12 Vdc
Output voltage range	11.5 - 14.5 Vdc
Output rated current	2 A / 2.2 A up to max. 40° C
Output limited current	2.2 ... 2.4 A (constant current)
Parallel connection	Yes
Serial operation	Yes
Power dissipation, no load/rated load	0.7 W / 5.3 W (230 Vac)
Max. power losses	5.7 W (100 Vac) / 12 V / 2 A)
Efficiency	82 %
Ripple factor	typ. 20 mVss
Resistance to reverse feed max.	25 Vdc
Over-voltage-protection	max. 35 Vdc
Signaling	
Status display	LED green Uout > typ. 10 Vdc LED lit permanently
Signal output	Active high signal Uout > typ. 10 Vdc max. 40 mA@12 Vdc short circuit proof
Environment	
Storage temperature	-25° C ... +85° C
Ambient temperature	-25° C ... +70° C
Derating	-3 %/K > +50° C
Mounting position	horizontal for standard rail DIN TH 35
Cooling method	Natural convection
Required minimum spacing (left/right)	-
Required minimum spacing (over/under)	50 mm
Safety and protection	
Protection index	IP 20
Safety class	II, without PE connection
Order numbers	
Order Number	PM-0112-020-0

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Type	PM-0112-020-0
Input	
Terminals Input	Push-In Terminals, max 2.5 mm ²
Output	
Terminals Output	Push-In Terminals, max 2.5 mm ²
Signaling	
Terminals signaling	Push-In terminals, max 2.5 mm ²
Measures and weights	
Weight	0.13 kg
Dimension (W x H x D)	22.5 x 90 x 90.5 mm



Single phase, primary switched mode power supply

PM-0112-040-0

Electrical data

Type	PM-0112-040-0
Input	
Input rated voltage	100 - 240 Vac
Input voltage range	85 - 264 Vac (120 - 373 Vdc)
Input voltage derating	-2,5 %/Vac < 95 Vac
Rated frequency range	44 Hz - 66 Hz / 0 Hz
Input rated current (rated load)	0.83 A (100 Vac) / 0.41 A (240 Vac)
Starting current limiter	< 30 A, NTC
Switch-on time	1.5 s (100 Vac) / 0.7 s (230 Vac)
Power factor	0.48
Input fuse internal	4 A
Recommended back-up fuse (circuit breaker)	6 A, 10 A, 16 A, characteristic B, C
Mains buffering	15 ms (100 Vac) / 120 ms (230 Vac)
Transient surge voltage protection	varistor
Output	
Output rated voltage	12 Vdc
Output voltage range	11.5 - 14.5 Vdc
Output rated current	4 A / 4.2 A up to max. 40° C
Output limited current	4.4 ... 4.8 A (constant current)
Parallel connection	Yes
Serial operation	Yes
Power dissipation, no load/rated load	<1 W / 8 W (230 Vac)
Max. power losses	9.1 W (100 Vac) / 12 V / 4 A)
Efficiency	86 %
Ripple factor	typ. 20 mVss
Resistance to reverse feed max.	25 Vdc
Over-voltage-protection	max. 35 Vdc
Signaling	
Status display	LED green Uout > typ. 10 Vdc LED lit permanently
Signal output	Active high signal Uout > typ. 10 Vdc max. 40 mA@12 Vdc short circuit proof
Environment	
Storage temperature	-25° C ... +85° C
Ambient temperature	-25° C ... +70° C
Derating	-3 %/K > +50° C
Mounting position	horizontal for standard rail DIN TH 35
Cooling method	Natural convection
Required minimum spacing (left/right)	-
Required minimum spacing (over/under)	50 mm
Safety and protection	
Protection index	IP 20
Safety class	II, without PE connection
Order numbers	
Order Number	PM-0112-040-0

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Type	PM-0112-040-0
Input	
Terminals Input	Push-In Terminals, max 2.5 mm ²
Output	
Terminals Output	Push-In Terminals, max 2.5 mm ²
Signaling	
Terminals signaling	Push-In terminals, max 2.5 mm ²
Measures and weights	
Weight	0.21 kg
Dimension (W x H x D)	45 x 90 x 90.5 mm



Single phase, primary switched mode power supply

PM-0112-070-0

Electrical data

Type	PM-0112-070-0
Input	
Input rated voltage	100 - 240 Vac
Input voltage range	85 - 264 Vac (120 - 373 Vdc)
Input voltage derating	-2,5 %/Vac < 95 Vac
Rated frequency range	44 Hz - 66 Hz / 0 Hz
Input rated current (rated load)	1.87 A (100 Vac) / 0.94 A (240 Vac)
Starting current limiter	< 30 A, NTC
Switch-on time	0.5 s (100 Vac) / 0.3 s (230 Vac)
Power factor	0.55
Input fuse internal	4 A
Recommended back-up fuse (circuit breaker)	6 A, 10 A, 16 A, characteristic B, C
Mains buffering	15 ms (100 Vac) / 80 ms (230 Vac)
Transient surge voltage protection	varistor
Output	
Output rated voltage	12 Vdc
Output voltage range	11,5 - 14,5 Vdc
Output rated current	7 A / 7,5 A up to max. 40° C
Output limited current	7,7 ... 8 A (constant current)
Parallel connection	Yes
Serial operation	Yes
Power dissipation, no load/rated load	<1 W / 16,2 W (230 Vac)
Max. power losses	19,8 W (100 Vac / 12 V / 7 A)
Efficiency	86 %
Ripple factor	typ. 20 mVss
Resistance to reverse feed max.	25 Vdc
Over-voltage-protection	max. 32 Vdc
Signaling	
Status display	LED green Uout > typ. 10 Vdc LED lit permanently
Signal output	Active high signal Uout > typ. 10 Vdc max. 40 mA@12 Vdc short circuit proof
Environment	
Storage temperature	-25° C ... +85° C
Ambient temperature	-25° C ... +70° C
Derating	-3 %/K > +50° C
Mounting position	horizontal for standard rail DIN TH 35
Cooling method	Natural convection
Required minimum spacing (left/right)	-
Required minimum spacing (over/under)	50 mm
Safety and protection	
Protection index	IP 20
Safety class	II, without PE connection
Order numbers	
Order Number	PM-0112-070-0

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Type	PM-0112-070-0
Input	
Terminals Input	Push-In Terminals, max 2.5 mm ²
Output	
Terminals Output	Push-In Terminals, max 2.5 mm ²
Signaling	
Terminals signaling	Push-In terminals, max 2.5 mm ²
Measures and weights	
Weight	0.40 kg
Dimension (W x H x D)	52 x 90 x 103.5 mm



Single phase, primary switched mode power supply

PM-0124-010-0

Electrical data

Type	PM-0124-010-0
Input	
Input rated voltage	100 - 240 Vac
Input voltage range	85 - 264 Vac (120 - 373 Vdc)
Input voltage derating	-2,5 %/Vac < 95 Vac
Rated frequency range	44 Hz - 66 Hz / 0 Hz
Input rated current (rated load)	0.43 A (100 Vac) / 0.2 A (240 Vac)
Starting current limiter	< 30 A, NTC
Switch-on time	2.3 s (100 Vac) / 0.74 s (230 Vac)
Power factor	0.48
Input fuse internal	2 A
Recommended back-up fuse (circuit breaker)	6 A, 10 A, 16 A, characteristic B, C
Mains buffering	20 ms (100 Vac) / 120 ms (230 Vac)
Transient surge voltage protection	varistor
Output	
Output rated voltage	24 Vdc
Output voltage range	23 - 28,5 Vdc
Output rated current	1 A / 1,2 A up to max. 40° C
Output limited current	125 ... 14 A (constant current)
Parallel connection	Yes
Serial operation	Yes
Power dissipation, no load/rated load	< 1 W / 4 W (230 Vac)
Max. power losses	5 W (100 Vac / 24 V / 1 A)
Efficiency	86 %
Ripple factor	typ. 20 mVss
Resistance to reverse feed max.	35 Vdc
Over-voltage-protection	max. 39 Vdc
Signaling	
Status display	LED green Uout > typ. 21,5 Vdc LED lit permanently
Signal output	Active high signal Uout > typ. 21,5 Vdc max. 20 mA@24 Vdc short circuit proof
Environment	
Storage temperature	-25° C ... +85° C
Ambient temperature	-25° C ... +70° C
Derating	-3 %/K > +50° C
Mounting position	horizontal for standard rail DIN TH 35
Cooling method	Natural convection
Required minimum spacing (left/right)	-
Required minimum spacing (over/under)	50 mm
Safety and protection	
Protection index	IP 20
Safety class	II, without PE connection
Order numbers	
Order Number	PM-0124-010-0

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Type	PM-0124-010-0
Input	
Terminals Input	Push-In Terminals, max 2,5 mm ²
Output	
Terminals Output	Push-In Terminals, max 2,5 mm ²
Signaling	
Terminals signaling	Push-In terminals, max 2,5 mm ²
Measures and weights	
Weight	0,13 kg
Dimension (W x H x D)	22,5 x 90 x 90,5 mm



Single phase, primary switched mode power supply

PM-0124-020-0

Electrical data

Type	PM-0124-020-0
Input	
Input rated voltage	100 - 240 Vac
Input voltage range	85 - 264 Vac (120 - 373 Vdc)
Input voltage derating	-2,5 %/Vac < 95 Vac
Rated frequency range	44 Hz - 66 Hz / 0 Hz
Input rated current (rated load)	0.73 A (100 Vac) / 0.37 A (240 Vac)
Starting current limiter	< 30 A, NTC
Switch-on time	0.5 s (100 Vac) / 0.27 s (230 Vac)
Power factor	0,47
Input fuse internal	4 A
Recommended back-up fuse (circuit breaker)	6 A, 10 A, 16 A, characteristic B, C
Mains buffering	20 ms (100 Vac) / 120 ms (230 Vac)
Transient surge voltage protection	varistor
Output	
Output rated voltage	24 Vdc
Output voltage range	23 - 28.5 Vdc
Output rated current	2 A / 2.2 A up to max. 40° C
Output limited current	2.2 ... 2.4 A (constant current)
Parallel connection	Yes
Serial operation	Yes
Power dissipation, no load/rated load	< 1 W / 4 W (230 Vac)
Max. power losses	7 W (100 Vac / 24 V / 2 A)
Efficiency	89 %
Ripple factor	typ. 20 mVss
Resistance to reverse feed max.	35 Vdc
Over-voltage-protection	max. 37 Vdc
Signaling	
Status display	LED green Uout > typ. 21.5 Vdc LED lit permanently
Signal output	Active high signal Uout > typ. 21.5 Vdc max. 20 mA@24 Vdc short circuit proof
Environment	
Storage temperature	-25° C ... +85° C
Ambient temperature	-25° C ... +70° C
Derating	-3 %/K > +50° C
Mounting position	horizontal for standard rail DIN TH 35
Cooling method	Natural convection
Required minimum spacing (left/right)	-
Required minimum spacing (over/under)	50 mm
Safety and protection	
Protection index	IP 20
Safety class	II, without PE connection
Order numbers	
Order Number	PM-0124-020-0

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Type	PM-0124-020-0
Input	
Terminals Input	Push-In Terminals, max 2.5 mm ²
Output	
Terminals Output	Push-In Terminals, max 2.5 mm ²
Signaling	
Terminals signaling	Push-In terminals, max 2.5 mm ²
Measures and weights	
Weight	0.21 kg
Dimension (W x H x D)	45 x 90 x 90.5 mm



Single phase, primary switched mode power supply

PM-0124-038-0

Electrical data

Type	PM-0124-038-0
Input	
Input rated voltage	100 - 240 Vac
Input voltage range	85 - 264 Vac (120 - 373 Vdc)
Input voltage derating	-2,5 %/Vac < 95 Vac
Rated frequency range	44 Hz - 66 Hz / 0 Hz
Input rated current (rated load)	1.5 A (100 Vac, 91 W) / 0.6 A (240 Vac, 91 W)
Starting current limiter	< 30 A, NTC
Switch-on time	<0.5 s (100 Vac) / <0.2 s (230 Vac)
Power factor	0.5
Input fuse internal	4 A
Recommended back-up fuse (circuit breaker)	6 A, 10 A, 16 A, characteristic B, C
Mains buffering	>15 ms (100 Vac) / >80 ms (230 Vac)
Transient surge voltage protection	varistor
Output	
Output rated voltage	24 Vdc
Output voltage range	23 - 28.5 Vdc (> 24 Vdc constant capacity)
Output rated current	3.8 A / NEC Class 2
Output limited current	3.8 ... 3.2 A (constant current, Class 2)
Parallel connection	Yes
Serial operation	Yes
Power dissipation, no load/rated load	2.8 W / 14 W (230 Vac)
Max. power losses	<20 W (100 Vac / 91 W)
Efficiency	87 %
Ripple factor	typ. 20 mVss
Resistance to reverse feed max.	35 Vdc
Over-voltage-protection	max. 40 Vdc
Signaling	
Status display	LED green Uout > typ. 21.5 Vdc LED lit permanently
Signal output	Active high signal Uout > typ. 21.5 Vdc max. 20 mA@24 Vdc short circuit proof
Environment	
Storage temperature	-25° C ... +85° C
Ambient temperature	-25° C ... +70° C
Derating	-3 %/K > +50° C
Mounting position	horizontal for standard rail DIN TH 35
Cooling method	Natural convection
Required minimum spacing (left/right)	-
Required minimum spacing (over/under)	50 mm
Safety and protection	
Protection index	IP 20
Safety class	II, without PE connection
Order numbers	
Order Number	PM-0124-038-0

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Type	PM-0124-038-0
Input	
Terminals Input	Push-In Terminals, max 2.5 mm ²
Output	
Terminals Output	Push-In Terminals, max 2.5 mm ²
Signaling	
Terminals signaling	Push-In terminals, max 2.5 mm ²
Measures and weights	
Weight	0.39 kg
Dimension (W x H x D)	52 x 90 x 103.5 mm



Single phase, primary switched mode power supply

PM-0124-040-0

Electrical data

Type	PM-0124-040-0
Input	
Input rated voltage	100 - 240 Vac
Input voltage range	85 - 264 Vac (120 - 373 Vdc)
Input voltage derating	-2,5 %/Vac < 95 Vac
Rated frequency range	44 Hz - 66 Hz / 0 Hz
Input rated current (rated load)	1.52 A (100 Vac) / 0.66 A (240 Vac)
Starting current limiter	< 30 A, NTC
Switch-on time	0.24 s (100 Vac) / 0.14 s (230 Vac)
Power factor	0.5
Input fuse internal	4 A
Recommended back-up fuse (circuit breaker)	6 A, 10 A, 16 A, characteristic B, C
Mains buffering	15 ms (100 Vac) / 80 ms (230 Vac)
Transient surge voltage protection	varistor
Output	
Output rated voltage	24 Vdc
Output voltage range	23 - 28.5 Vdc
Output rated current	4 A / 4.2 A up to max. 40° C
Output limited current	4.4 ... 4.7 A (constant current)
Parallel connection	Yes
Serial operation	Yes
Power dissipation, no load/rated load	< 1 W / 12 W (230 Vac)
Max. power losses	15 W (100 Vac) / 24 V / 4 A
Efficiency	89 %
Ripple factor	typ. 20 mVss
Resistance to reverse feed max.	35 Vdc
Over-voltage-protection	max. 40 Vdc
Signaling	
Status display	LED green Uout > typ. 21.5 Vdc LED lit permanently
Signal output	Active high signal Uout > typ. 21.5 Vdc max. 20 mA@24 Vdc short circuit proof
Environment	
Storage temperature	-25° C ... +85° C
Ambient temperature	-25° C ... +70° C
Derating	-3 %/K > +50° C
Mounting position	horizontal for standard rail DIN TH 35
Cooling method	Natural convection
Required minimum spacing (left/right)	-
Required minimum spacing (over/under)	50 mm
Safety and protection	
Protection index	IP 20
Safety class	II, without PE connection
Order numbers	
Order Number	PM-0124-040-0

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Type	PM-0124-040-0
Input	
Terminals Input	Push-In Terminals, max 2.5 mm ²
Output	
Terminals Output	Push-In Terminals, max 2.5 mm ²
Signaling	
Terminals signaling	Push-In terminals, max 2.5 mm ²
Measures and weights	
Weight	0.39 kg
Dimension (W x H x D)	72 x 90 x 103.5 mm



Single phase, primary switched mode power supply

PM-0148-020-0

Electrical data

Type	PM-0148-020-0
Input	
Input rated voltage	100 - 240 Vac
Input voltage range	85 - 264 Vac (120 - 373 Vdc)
Input voltage derating	-2,5 %/Vac < 95 Vac
Rated frequency range	44 Hz - 66 Hz / 0 Hz
Input rated current (rated load)	1.79 A (100 Vac) / 0.9 A (240 Vac)
Starting current limiter	< 30 A, NTC
Switch-on time	0.5 s (100 Vac) / 0.3 s (230 Vac)
Power factor	0.5
Input fuse internal	4 A
Recommended back-up fuse (circuit breaker)	6 A, 10 A, 16 A, characteristic B, C
Mains buffering	15 ms (100 Vac) / 80 ms (230 Vac)
Transient surge voltage protection	varistor
Output	
Output rated voltage	48 Vdc
Output voltage range	40 - 56 Vdc
Output rated current	2 A / 2.1 A up to max. 40° C
Output limited current	2.2 ... 2.4 A (constant current)
Parallel connection	Yes
Serial operation	Yes
Power dissipation, no load/rated load	< 1 W / 16.2 W (230 Vac)
Max. power losses	19.8 W (100 Vac) / 48 V / 2 A)
Efficiency	86 %
Ripple factor	typ. 20 mVss
Resistance to reverse feed max.	63 Vdc
Over-voltage-protection	max. 60 Vdc
Signaling	
Status display	LED green Uout > typ. 39 Vdc LED lit permanently
Signal output	Active high signal Uout > typ. 39 Vdc max. 10 mA@48 Vdc short circuit proof
Environment	
Storage temperature	-25° C ... +85° C
Ambient temperature	-25° C ... +70° C
Derating	-3 %/K > +50° C
Mounting position	horizontal for standard rail DIN TH 35
Cooling method	Natural convection
Required minimum spacing (left/right)	-
Required minimum spacing (over/under)	50 mm
Safety and protection	
Protection index	IP 20
Safety class	II, without PE connection
Order numbers	
Order Number	PM-0148-020-0

Mechanical data

Type	PM-0148-020-0
Input	
Terminals Input	Push-In Terminals, max 2.5 mm ²
Output	
Terminals Output	Push-In Terminals, max 2.5 mm ²
Signaling	
Terminals signaling	Push-In terminals, max 2.5 mm ²
Measures and weights	
Weight	0.39 kg
Dimension (W x H x D)	52 x 90 x 103.5 mm

Neuheiten Product News

Elektronische Schutzschalter

Electronic circuit breakers

Varianten / Technische Daten

Versions / Technical data





Elektronische Schutzschalter Electronic circuit breakers



Elektronische Schutzschalter Electronic circuit breakers

Elektronische Schutzschalter dienen der selektiven Absicherung von DC-Stromkreisen. Sie schützen Stromkreise gegen Überstrom und Kurzschluss wesentlich genauer als klassische Leitungsschutzschalter.

Electronic circuit breakers are used for selective protection of DC circuits. They protect circuits against overcurrents and short circuits with a much higher degree of precision compared to classic circuit breakers.

Besonderheiten Highlights

✓ Zuverlässiges Einschalten hoher Kapazitäten ($> 50.000\mu\text{F}$)
Reliable switch-on of high capacities ($> 50.000 \mu\text{F}$)

✓ Summenfehlerkontakt für einfache Ferndiagnose
Group alarm signal for simple diagnosis

✓ Optimale Kennlinie für jede Applikation
Optimum tripping characteristic for any application

✓ Sequentialles und lastabhängiges Zuschalten der Kanäle
Sequential and load-dependent switching-on of channels

✓ Einstellbarer Auslösestrom pro Kanal
Adjustable tripping current per channel

✓ Umfangreiche Einzelkanal-diagnose
Comprehensive single-channel diagnosis

✓ Fern-Ein/Ausschalten beliebiger Kanäle
Remote switch-on/off of any channels

✓ Fern-Wiedereinschalten ausgelöster Kanäle
Remote reset of tripped channels

Platzsparend

BLOCK Schutzschalter minimieren den Platzbedarf auf bis zu 5,25 mm pro Kanal mit allen 8-Kanal-Modulen.

Space saving

BLOCK circuit breakers minimise space requirements to only 5.25 mm per channel for all 8-channel units.

Intelligenter Überstromschutz

Integrierbar in den gesamten Steuerungs- und Überwachungsprozess.

Intelligent overcurrent protection

Integrable in the complete management and monitoring process.

Zulassungen Approvals

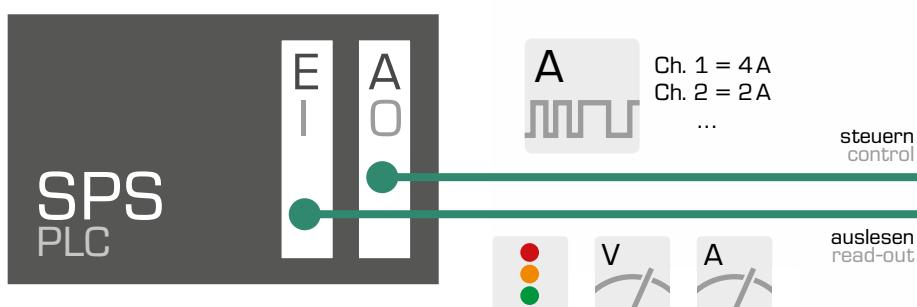


ECONOMY REMOTE **NEW**

Elektronischer Schutzschalter, besonders geeignet für den Serienmaschinenbau
 Electronic circuit breaker, particularly suitable for standard machine production

Dank einstellbarer Auslöseströme direkt durch die SPS wird die Inbetriebnahmezeit einer Serienmaschine verkürzt.
 Der ökonomische REMOTE-Schutzschalter verhindert somit nicht-autorisierte Stromwertänderungen am Gerät.

The start-up time of a production machine is shortened thanks to adjustable tripping currents being transmitted directly through the PLC. The economical REMOTE circuit breaker thus prevents non-authorised current value changes in the equipment.

ECONOMY REMOTE**Besonderheiten Highlights**

✓ Zuverlässiges Einschalten hoher Kapazitäten ($> 50.000\mu F$)
 Reliable switch-on of high capacities ($> 50.000 \mu F$)

✓ Stufig einstellbare Auslöseströme über 2-Draht-Schnittstelle
 Stepped setting of tripping currents via 2-wire interface

✓ Umfangreiche Einzelkanaldiagnose
 Comprehensive single-channel diagnosis

✓ Fern-Ein/Ausschalten beliebiger Kanäle
 Remote switch-on/off of any channels

**ECONOMY REMOTE**

POWER COMPACT
8 Kanal Channels



Maße:
Dimensions:
A: 127 mm
B: 42 mm
C: 116.5 mm

Ausgang Output	Bestell-Nr. Order No
24 V / 8x 1-6 A	PC-0724-480-0
24 V / 8x 2-10 A	PC-0724-800-0
NEW 24 V / 8x 2-10 A	PC-0724-800-1

POWER MINI
4 Kanal Channels



Maße:
Dimensions:
A: 90 mm
B: 45 mm
C: 90.5 mm

Ausgang Output	Bestell-Nr. Order No
12 V / 4x 2-10 A	PM-0712-400-0
24 V / 4x 1-6 A	PM-0724-240-0
24 V / 4x 2-10 A	PM-0724-400-0
NEW 24 V / 4x 2-10 A	PM-0724-400-1
NEW 48 V / 4x 2-10 A	PM-0748-400-0

POWER MINI
2 Kanal Channels



Maße:
Dimensions:
A: 90 mm
B: 45 mm
C: 90.5 mm

Ausgang Output	Bestell-Nr. Order No
12 V / 2x 2-10 A	PM-0712-200-0
24 V / 2x 1-6 A	PM-0724-120-0
24 V / 2x 2-10 A	PM-0724-200-0
NEW 24 V / 2x 2-10 A	PM-0724-200-1
NEW 48 V / 2x 2-10 A	PM-0748-200-0

ECONOMY SMART

Thermomagnetische Kennlinie
Thermomagnetic characteristic

Stufig einstellbare Auslöseströme über Stromwahlschalter:
Stepped setting of tripping currents via current selector switch:

1-6 A = 1/2/3/4/5/6 A
2-10 A = 2/3/4/6/8/10 A

POWER COMPACT
8 Kanal Channels



Maße:
Dimensions:
A: 127 mm
B: 42 mm
C: 116.5 mm

Ausgang Output	Bestell-Nr. Order No
NEW 24 V / 8x 2-10 A	PC-3724-800-0

POWER MINI
4 Kanal Channels



Maße:
Dimensions:
A: 90 mm
B: 45 mm
C: 90.5 mm

Ausgang Output	Bestell-Nr. Order No
NEW 24 V / 4x 2-10 A	PM-3724-400-0

POWER MINI
2 Kanal Channels



Maße:
Dimensions:
A: 90 mm
B: 45 mm
C: 90.5 mm

Ausgang Output	Bestell-Nr. Order No
NEW 24 V / 2x 2-10 A	PM-3724-200-0

ECONOMY REMOTE

Thermomagnetische Kennlinie
Thermomagnetic characteristic

Stufig einstellbare Auslöseströme über 2-Draht-Schnittstelle:
Stepped setting of tripping currents via 2-wire interface

2-10 A = 2/3/4/6/8/10 A

Auslösestrom ab Werk: 10 A
Factory setting:
tripping currents 10 A

Entscheidungshilfe Decision support

Elektronische Schutzschalter
Electronic circuit breaker

Auslösekennlinie: (thermomagnetisch)
Tripping characteristic: (thermagnetic)

Auslösekennlinie: (aktive Strombegrenzung)
Tripping characteristic: (active current limiting)

Einstellbarkeit Auslöseströme
über Stromwahlschalter
Setting of tripping currents
via current selector switch

Einstellbarkeit Auslöseströme
über 2-Draht-Schnittstelle
Setting of tripping currents
via 2-wire interface

Einstellbarkeit Auslöseströme
über Stromwahlschalter
Setting of tripping currents
via current selector switch

Fest voreingestellte
Auslöseströme
Preset tripping
currents

ECONOMY SMART

ECONOMY REMOTE

BASIC SMART

BASIC FIX

POWER COMPACT 8 Kanal Channels	POWER MINI 4 Kanal Channels	POWER MINI 2 Kanal Channels	BASIC SMART
 Maße: Dimensions: A: 127 mm B: 42 mm C: 116.5 mm	 Maße: Dimensions: A: 90 mm B: 45 mm C: 90.5 mm	 Maße: Dimensions: A: 90 mm B: 45 mm C: 90.5 mm	Aktive Strombegrenzung Active current limiting
Ausgang Output	Ausgang Output	Ausgang Output	
24V / 8x 0.5-6A	24V / 4x 0.5-6A	24V / 2x 0.5-6A	0.5-6A = 0.5/1/2/3/4/6A
PC-0824-480-0	PM-0824-240-0	PM-0824-120-0	2-12A = 2/4/6/8/10/12A
24V / 8x 0.5-6A	24V / 4x 0.5-6A	24V / 2x 0.5-6A	
PC-0824-480-1	PM-0824-240-1	PM-0824-120-1	
24V / 4x 2-12A	24V / 4x 2-12A	24V / 2x 2-12A	
PM-0824-480-0	PM-0824-240-2	PM-0824-120-2	
mit steckbarer Federzugklemme (Tiefe um 27.5 mm erhöht) with plug-in spring-loaded terminal (depth increased by 27.5 mm)			

POWER MINI 4 Kanal Channels	POWER MINI 2 Kanal Channels	BASIC FIX
 Maße: Dimensions: A: 90 mm B: 45 mm C: 90.5 mm	 Maße: Dimensions: A: 90 mm B: 45 mm C: 90.5 mm	Aktive Strombegrenzung Active current limiting
Ausgang Output	Ausgang Output	Fest voreingestellte Auslöseströme Preset tripping currents
24V / 4x 6A	24V / 2x 6A	
PM-2824-240-0	PM-2824-120-0	
24V / 2x 3A+2x 6A	24V / 2x 3A+2x 6A	
PM-2824-180-0		

ECONOMY SMART	ECONOMY REMOTE	BASIC SMART	BASIC FIX
✓		✓	
	✓		
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	
✓	✓	✓	✓
		✓	
✓	✓	✓	✓
✓	✓	✓	✓
	✓		
✓			✓

Ausstattung im Überblick Features

- Einstellbare Auslöseströme pro Kanal über Stromwahlschalter
Setting of tripping currents per channel via current selector switch
- Einstellbare Auslöseströme pro Kanal über 2-Draht-Schnittstelle
Setting of tripping currents per channel via 2-wire interface
- Fern-Ein / Ausschalten beliebiger Kanäle
Remote switch-on/off of any channels
- Statusübertragung "Ein" / "Aus" / "Ausgelöst" pro Kanal
"On"/"off"/"tripped" status transmission per channel
- Statusübertragung "Überstrom" pro Kanal
"Overcurrent" status transmission per channel
- Datenübertragung "aktuelle Eingangsspannung" / "eingestellter Auslösestrom" pro Kanal
"Actual input voltage" / "set tripping current" data transmission per channel
- Datenübertragung "aktuelle Ausgangsströme" pro Kanal
"Actual output currents" data transmission per channel
- Summenfehlerkontakt für ausgelöste Kanäle
Group alarm signal for tripped channels
- Fern-Wiedereinschalten ausgelöster Kanäle
Remote reset of tripped channels
- Aktive Strombegrenzung typ. $1.7 \times I_N$
Active current limiting typ. $1.7 \times I_{rated}$
- Aktive Strombegrenzung typ. $1.3 \times I_N$
Active current limiting typ. $1.3 \times I_{rated}$

Electronic Circuit Breaker with thermomagnetic characteristic **PM-0712-200-0**



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 (in preparation)



Electronic Circuit Breaker with thermomagnetic characteristic **PM-0712-200-0**

Electrical data	Type	PM-0712-200-0	Type	PM-0712-200-0
	Input	30	Input	30
Input rated voltage	12 Vdc		Push-In terminals, max. 2.5 mm ²	
Input voltage range	10 - 16 Vdc		Push-In terminals, max. 6 mm ²	
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	20 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			
Output				
Output rated voltage	12 Vdc			
Output rated current	2 x 2 - 10 A			
Maximum voltage drop between input and output	200 mV @ 2 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)			
Max. power losses	5.3 W @ 2 x 10 A			
Efficiency	99 %			
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 display	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)			
Environment				
Storage temperature	-25° C ... +85° C			
Ambient temperature	-25° C ... +70° C			
Derating	-			
Cooling method	Natural convection			
Required minimum spacing (left/right)	-			
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-0712-200-0			

Subjects to change.



Electronic Circuit Breaker with thermomagnetic characteristic **PM-0712-400-0**

Electrical data	Type	PM-0712-400-0	Type	PM-0712-400-0
	Input		Input	
	Input rated voltage	12 Vdc	Input terminals (2 x "-")	Push-In terminals, max. 2.5 mm ²
	Input voltage range	10 - 16 Vdc	Input terminals (2 x "+")	Push-In terminals, max. 6 mm ²
	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		
Output				
	Output rated voltage	12 Vdc		
	Output rated current	4 x 2 - 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)		
	Max. power losses	10 W @ 4 x 10 A		
	Efficiency	99 %		
	Internal output fuse	15 A		
Signaling	Resistance to reverse feed max.	35 Vdc		
	Parallel use of outputs	Not allowed		
	Serial use of outputs	Not allowed		
	Status display	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)		
	Environment			
Derating	Storage temperature	-25° C ... +85° C		
	Ambient temperature	-25° C ... +70° C		
		Max. output current per channel: 10 A		
		Total current (all channels together):		
		max. 40A @ 40°C		
		max. 35A @ 50°C		
		max. 25A @ 60°C		
		max. 20A @ 70°C		
	Cooling method	Natural convection		
	Required minimum spacing (left/right)	-		
Safety and protection	Required minimum spacing (over/under)	40 mm		
	Protection index	IP 20		
	Safety class	III, without PE connection		
	Degree of pollution	2		
Order numbers	Order Number	PM-0712-400-0		

Subjects to change.



Electronic Circuit Breaker with thermomagnetic characteristic **PM-0724-120-0**

Electrical data	Type	PM-0724-120-0	Type	PM-0724-120-0
	Input	30	Input	30
Input rated voltage	24 Vdc		Push-In terminals, max. 2.5 mm ²	
Input voltage range	18 - 30 Vdc		Push-In terminals, max. 6 mm ²	
Maximal residual ripple of supplied input voltage	3 %			
Required input voltage for turning-on of outputs	19.5 V (Turn-off Threshold 18 V)			
Max. total input current	12 A			
Max. input current for each pole of terminal	40 A			
Over voltage protection	Suppressor diode 33 V			
Stand-by current	35 mA @ 24 V			
Power losses in stand-by mode	0.84 W @ 24 V			
Output				
Output rated voltage	24 Vdc			
Output rated current	2 x 1 - 6 A			
Maximum voltage drop between input and output	120 mV @ 2 x 6 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)			
Max. power losses	2.5 W @ 2 x 6 A			
Efficiency	99 %			
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 display	LED (red, green, orange)			
Signal input S1	DC 24 V (On/Off/Reset)			
Signal output S2	DC 24 V, max. 25 mA (status output channels)			
Signal output S3	DC 24 V, max. 25 mA (Summation message)			
Environment				
Storage temperature	-25° C ... +85° C			
Ambient temperature	-25° C ... +70° C			
Derating	-			
Cooling method	Natural convection			
Required minimum spacing (left/right)	-			
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-0724-120-0			

Subjects to change.



Electronic Circuit Breaker with thermomagnetic characteristic **PM-0724-200-0**

Electrical data	Type	PM-0724-200-0	Type	PM-0724-200-0
	Input	30	Input	30
Input rated voltage	24 Vdc		Push-In terminals, max. 2.5 mm ²	
Input voltage range	18 - 30 Vdc		Push-In terminals, max. 6 mm ²	
Maximal residual ripple of supplied input voltage	3 %			
Required input voltage for turning-on of outputs	19.5 V (Turn-off Threshold 18 V)			
Max. total input current	20 A			
Max. input current for each pole of terminal	40 A			
Over voltage protection	Suppressor diode 33 V			
Stand-by current	35 mA @ 24 V			
Power losses in stand-by mode	0.84 W @ 24 V			
Output				
Output rated voltage	24 Vdc			
Output rated current	2 x 2 - 10 A			
Maximum voltage drop between input and output	200 mV @ 2 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)			
Max. power losses	5.5 W @ 2 x 10 A			
Efficiency	99 %			
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 display	LED (red, green, orange)			
Signal input S1	DC 24 V (On/Off/Reset)			
Signal output S2	DC 24 V, max. 25 mA (status output channels)			
Signal output S3	DC 24 V, max. 25 mA (Summation message)			
Environment				
Storage temperature	-25° C ... +85° C			
Ambient temperature	-25° C ... +70° C			
Derating	-			
Cooling method	Natural convection			
Required minimum spacing (left/right)	-			
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-0724-200-0			

Subjects to change.



Electronic Circuit Breaker with thermomagnetic characteristic **PM-0724-200-1**

Electrical data	Type	PM-0724-200-1	Type	PM-0724-200-1
	Input		Input	
	Input rated voltage	24 Vdc	Input terminals (2 x "-")	Pluggable, WAGO-Serie 721, max. 2.5 mm ²
	Input voltage range	18 - 30 Vdc	Input terminals (2 x "+")	Pluggable, WAGO-Serie 721, max. 2.5 mm ²
	Maximal residual ripple of supplied input voltage	3 %	Output	
	Required input voltage for turning-on of outputs	19.5 V (Turn-off Threshold 18 V)	Output terminals ("+"')	Pluggable, WAGO-Serie 721, max. 2.5 mm ²
	Max. total input current	20 A	Signaling	
	Max. input current for each pole of terminal	40 A	Terminals signaling	Pluggable, WAGO-Serie 721, max. 2.5 mm ²
	Over voltage protection	Suppressor diode 33 V	Terminal and mounting	
	Stand-by current	35 mA @ 24 V	Mounting position	horizontal for standard rail DIN TH 35
	Power losses in stand-by mode	0.84 W @ 24 V	Measures and weights	
Output				
	Output rated voltage	24 Vdc	Weight	0.20 kg
	Output rated current	2 x 2 - 10 A	Dimensions W x H x D	45 x 90 x 90,5 mm
	Maximum voltage drop between input and output	200 mV @ 2 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)		
	Max. power losses	5.5 W @ 2 x 10 A		
	Efficiency	99 %		
	Internal output fuse	15 A		
Signaling	Resistance to reverse feed max.	35 Vdc		
	Parallel use of outputs	Not allowed		
	Serial use of outputs	Not allowed		
Environment	Status display	LED (red, green, orange)		
	Signal input S1	DC 24 V (On/Off/Reset)		
	Signal output S2	DC 24 V, max. 25 mA (status output channels)		
	Signal output S3	DC 24 V, max. 25 mA (Summation message)		
Safety and protection	Safety and protection			
	Protection index	IP 20		
	Safety class	III, without PE connection		
	Degree of pollution	2		
Order numbers	Order numbers			
	Order Number	PM-0724-200-1		

Subjects to change.



Electronic Circuit Breaker with thermomagnetic characteristic **PM-0724-240-0**

Type		PM-0724-240-0	Type	PM-0724-240-0
Input			Input	
Input rated voltage	24 Vdc		Input terminals (2 x "-")	Push-In terminals, max. 2.5 mm ²
Input voltage range	18 - 30 Vdc		Input terminals (2 x "+")	Push-In terminals, max. 6 mm ²
Maximal residual ripple of supplied input voltage	3 %			
Required input voltage for turning-on of outputs	19.5 V (Turn-off Threshold 18 V)			
Max. total input current	24 A			
Max. input current for each pole of terminal	40 A			
Over voltage protection	Suppressor diode 33 V		Output terminals (""+")	Push-In terminals, max. 2.5 mm ²
Stand-by current	35 mA @ 24 V			
Power losses in stand-by mode	0.84 W @ 24 V			
Output			Signaling	
Output rated voltage	24 Vdc		Terminals signaling	Push-In terminals, max. 2.5 mm ²
Output rated current	4 x 1 - 6 A			
Maximum voltage drop between input and output	120 mV @ 4 x 6 A			
Initialization time of module	250 ms			
Turn-on delay of outputs	Load dependent, min. 50 ms / max. 5 s		Terminal and mounting	
Waiting periode after switch-off of an output	500 ms (short circuit) .. 10 s (overload)		Mounting position	horizontal for standard rail DIN TH 35
Max. power losses	4.2 W @ 4 x 6 A		Measures and weights	
Efficiency	99 %		Weight	0.20 kg
Internal output fuse	15 A		Dimensions W x H x D	45 x 90 x 90,5 mm
Resistance to reverse feed max.	35 Vdc			
Parallel use of outputs	Not allowed			
Serial use of outputs	Not allowed			
Signaling				
Status display	LED (red, green, orange)			
Signal input S1	DC 24 V (On/Off/Reset)			
Signal output S2	DC 24 V, max. 25 mA (status output channels)			
Signal output S3	DC 24 V, max. 25 mA (Summation message)			
Environment				
Storage temperature	-25° C ... +85° C			
Ambient temperature	-25° C ... +70° C			
Derating	-			
Cooling method	Natural convection			
Required minimum spacing (left/right)	-			
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-0724-240-0			

Subjects to change.



Electronic Circuit Breaker with thermomagnetic characteristic **PM-0724-400-0**

Electrical data	Type	PM-0724-400-0	Type	PM-0724-400-0
	Input		Input	
	Input rated voltage	24 Vdc	Input terminals (2 x "-")	Push-In terminals, max. 2.5 mm ²
	Input voltage range	18 - 30 Vdc	Input terminals (2 x "+")	Push-In terminals, max. 6 mm ²
	Maximal residual ripple of supplied input voltage	3 %		
	Required input voltage for turning-on of outputs	19.5 V (Turn-off Threshold 18 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	35 mA @ 24 V		
	Power losses in stand-by mode	0.84 W @ 24 V		
	Output		Output	
	Output rated voltage	24 Vdc	Output terminals (""+")	Push-In terminals, max. 2.5 mm ²
	Output rated current	4 x 2 - 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)		
	Max. power losses	10 W @ 4 x 10 A		
	Efficiency	99 %		
	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 display	LED (red, green, orange)		
	Signal input S1	DC 24 V (On/Off/Reset)		
	Signal output S2	DC 24 V, max. 25 mA (status output channels)		
	Signal output S3	DC 24 V, max. 25 mA (Summation message)		
	Environment			
	Storage temperature	-25° C ... +85° C		
	Ambient temperature	-25° C ... +70° C		
		Max. output current per channel: 10 A Total current (all channels together): max. 40A @ 40°C max. 35A @ 50°C max. 25A @ 60°C max. 20A @ 70°C		
	Derating			
	Cooling method	Natural convection		
	Required minimum spacing (left/right)	-		
	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-0724-400-0		

Subjects to change.



Electronic Circuit Breaker with thermomagnetic characteristic **PM-0724-400-1**

Type		PM-0724-400-1	Type		PM-0724-400-1
Electrical data	Input	24 Vdc	Mechanical data	30	Input
	Input rated voltage	24 Vdc		Input terminals (2 x "-")	Pluggable, WAGO-Serie 721, max. 2.5 mm ²
	Input voltage range	18 - 30 Vdc		Input terminals (2 x "+")	Pluggable, WAGO-Serie 831, max. 10 mm ²
	Maximal residual ripple of supplied input voltage	3 %		Output	
	Required input voltage for turning-on of outputs	19.5 V (Turn-off Threshold 18 V)		Output terminals ("+"')	Pluggable, WAGO-Serie 721, max. 2.5 mm ²
	Max. total input current	40 A		Signaling	
	Max. input current for each pole of terminal	40 A		Terminals signaling	Pluggable, WAGO-Serie 721, max. 2.5 mm ²
	Over voltage protection	Suppressor diode 33 V		Terminal and mounting	
	Stand-by current	35 mA @ 24 V		Mounting position	horizontal for standard rail DIN TH 35
	Power losses in stand-by mode	0.84 W @ 24 V		Measures and weights	
Output					
Output rated voltage		24 Vdc		Weight	0.20 kg
Output rated current		4 x 2 - 10 A		Dimensions W x H x D	45 x 90 x 90,5 mm
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)			
Max. power losses		10 W @ 4 x 10 A			
Efficiency		99 %			
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 display		LED (red, green, orange)			
Signal input S1		DC 24 V (On/Off/Reset)			
Signal output S2		DC 24 V, max. 25 mA (status output channels)			
Signal output S3		DC 24 V, max. 25 mA (Summation message)			
Environment					
Storage temperature		-25° C ... +85° C			
Ambient temperature		-25° C ... +70° C			
Derating		Max. output current per channel: 10 A Total current (all channels together): max. 40A @ 40°C max. 35A @ 50°C max. 25A @ 60°C max. 20A @ 70°C			
Cooling method		Natural convection			
Required minimum spacing (left/right)		-			
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-0724-400-1			

Subjects to change.

Electronic Circuit Breaker with current limiting

PM-0824-120-0



Advantages

- Adjustable tripping current for each output channel via current selector switch accessible from the front
- Selective immediate switch off of defective circuits in the event of critical supply voltage
- 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
- Further diagnoses of input voltage and the current of each circuit
- Group alarm contact for simple diagnosis

Applications

The BASIC SMART circuit breakers guarantee maximum system availability. In the event of overload, only the faulty current paths are reliably switched off without affecting the remaining circuits thanks to active current limiting to 1.7 times the rated current. 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 (in preparation)



Electronic Circuit Breaker with current limiting **PM-0824-120-0**

Electrical data	Type	PM-0824-120-0	Type	PM-0824-120-0
	Input	30	Input	30
Input rated voltage	24 Vdc		Push-In terminals, max 2.5 mm ²	
Input voltage range	18 - 30 Vdc		Push-In terminals, max 6 mm ²	
Maximal residual ripple of supplied input voltage	3 %			
Required input voltage for turning-on of outputs	19.5 V (Turn-off Threshold 18 V)			
Max. total input current	12 A			
Max. input current for each pole of terminal	40 A			
Over voltage protection	Suppressor diode 33 V			
Stand-by current	32 mA @ 24 V			
Power losses in stand-by mode	0.77 W @ 24 V			
Output				
Output rated voltage	24 Vdc			
Output rated current	2 x 0.5 - 6 A			
Maximum voltage drop between input and output	145 mV @ 2 x 6 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)			
Max. power losses	2.5 W @ 2 x 6 A			
Efficiency	99 %			
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 display	LED (red, green, orange)			
Signal input S1	24 Vdc (On/Off/Reset)			
Signal output S2	24 Vdc, max. 25mA (status output channels)			
Signal output S3	24 Vdc, max 25mA (Summation message)			
Environment				
Storage temperature	-25° C ... +85° C			
Ambient temperature	-25° C ... +70° C			
Derating	-			
Cooling method	Natural convection			
Required minimum spacing (left/right)	-			
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-0824-120-0			

Subjects to change.



Electronic Circuit Breaker with current limiting **PM-0824-120-1**

Electrical data	Type	PM-0824-120-1	Type	PM-0824-120-1
	Input		Input	
	Input rated voltage	24 Vdc	Input terminals (2 x "-")	Pluggable, WAGO-Serie 721, max. 2.5 mm ²
	Input voltage range	18 - 30 Vdc	Input terminals (2 x "+")	Pluggable, WAGO-Serie 831, max. 10 mm ²
	Maximal residual ripple of supplied input voltage	3 %	Output	
	Required input voltage for turning-on of outputs	19.5 V (Turn-off Threshold 18 V)	Output terminals ("+"')	Pluggable, WAGO-Serie 721, max. 2.5 mm ²
	Max. total input current	12 A	Signaling	
	Max. input current for each pole of terminal	40 A	Terminals signaling	Pluggable, WAGO-Serie 721, max. 2.5 mm ²
	Over voltage protection	Suppressor diode 33 V	Terminal and mounting	
	Stand-by current	32 mA @ 24 V	Mounting position	horizontal for standard rail DIN TH 35
	Power losses in stand-by mode	0.77 W @ 24 V	Measures and weights	
Output			Weight	0.20 kg
	Output rated voltage	24 Vdc	Dimensions W x H x D	45 x 90 x 90.5 mm
	Output rated current	2 x 0.5 - 6 A		
	Maximum voltage drop between input and output	145 mV @ 2 x 6 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)		
	Max. power losses	2.5 W @ 2 x 6 A		
	Efficiency	99 %		
	Internal output fuse	15 A		
Signaling	Resistance to reverse feed max.	35 Vdc		
	Parallel use of outputs	Not allowed		
	Serial use of outputs	Not allowed		
Environment	Status display	LED (red, green, orange)		
	Signal input S1	24 Vdc (On/Off/Reset)		
	Signal output S2	24 Vdc, max. 25mA (status output channels)		
	Signal output S3	24 Vdc, max 25mA (Summation message)		
Safety and protection	Safety and protection			
	Protection index	IP 20		
	Safety class	III, without PE connection		
	Degree of pollution	2		
Order numbers	Order numbers	PM-0824-120-1		
	Order Number	PM-0824-120-1		



Electronic Circuit Breaker with current limiting **PM-0824-240-0**

Electrical data	Type	PM-0824-240-0	Type	PM-0824-240-0
	Input		Input	
	Input rated voltage	24 Vdc	Input terminals (2 x "-")	Push-In terminals, max 2.5 mm ²
	Input voltage range	18 - 30 Vdc	Input terminals (2 x "+")	Push-In terminals, max 6 mm ²
	Maximal residual ripple of supplied input voltage	3 %		
	Required input voltage for turning-on of outputs	19.5 V (Turn-off Threshold 18 V)		
	Max. total input current	24 A		
	Max. input current for each pole of terminal	40 A		
	Over voltage protection	Suppressor diode 33 V		
	Stand-by current	32 mA @ 24 V		
Electrical data	Power losses in stand-by mode	0.77 W @ 24 V		
	Output			
	Output rated voltage	24 Vdc	Output terminals (""+")	Push-In terminals, max 2.5 mm ²
	Output rated current	4 x 0.5 - 6 A		
	Maximum voltage drop between input and output	145 mV @ 4 x 6 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)		
	Max. power losses	4.3 W @ 4 x 6 A		
	Efficiency	99 %		
Electrical data	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 display	LED (red, green, orange)		
	Signal input S1	24 Vdc (On/Off/Reset)		
	Signal output S2	24 Vdc, max. 25mA (status output channels)		
	Signal output S3	24 Vdc, max 25mA (Summation message)		
	Environment			
Safety and protection	Storage temperature	-25° C ... +85° C		
	Ambient temperature	-25° C ... +70° C		
	Derating	-		
	Cooling method	Natural convection		
	Required minimum spacing (left/right)	-		
	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-0824-240-0		

Subjects to change.



Electronic Circuit Breaker with current limiting **PM-0824-240-1**

Electrical data	Type	PM-0824-240-1	Type	PM-0824-240-1
	Input		Input	
	Input rated voltage	24 Vdc	Input terminals (2 x "-")	Pluggable, WAGO-Serie 721, max. 2.5 mm ²
	Input voltage range	18 - 30 Vdc	Input terminals (2 x "+")	Pluggable, WAGO-Serie 831, max. 10 mm ²
	Maximal residual ripple of supplied input voltage	3 %	Output	
	Required input voltage for turning-on of outputs	19.5 V (Turn-off Threshold 18 V)	Output terminals ("+"')	Pluggable, WAGO-Serie 721, max. 2.5 mm ²
	Max. total input current	24 A	Signaling	
	Max. input current for each pole of terminal	40 A	Terminals signaling	Pluggable, WAGO-Serie 721, max. 2.5 mm ²
	Over voltage protection	Suppressor diode 33 V	Terminal and mounting	
	Stand-by current	32 mA @ 24 V	Mounting position	horizontal for standard rail DIN TH 35
	Power losses in stand-by mode	0.77 W @ 24 V	Measures and weights	
	Output		Weight	0.20 kg
	Output rated voltage	24 Vdc	Dimensions W x H x D	45 x 90 x 90.5 mm
	Output rated current	4 x 0.5 - 6 A		
	Maximum voltage drop between input and output	145 mV @ 4 x 6 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)		
	Max. power losses	4.3 W @ 4 x 6 A		
	Efficiency	99 %		
	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 display	LED (red, green, orange)		
	Signal input S1	24 Vdc (On/Off/Reset)		
	Signal output S2	24 Vdc, max. 25mA (status output channels)		
	Signal output S3	24 Vdc, max 25mA (Summation message)		
	Environment			
	Storage temperature	-25° C ... +85° C		
	Ambient temperature	-25° C ... +70° C		
	Derating	-		
	Cooling method	Natural convection		
	Required minimum spacing (left/right)	-		
	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-0824-240-1		

Subjects to change.



Electronic Circuit Breaker with current limiting **PM-0824-240-2**

Electrical data	Type	PM-0824-240-2	Type	PM-0824-240-2
	Input		Input	
	Input rated voltage	24 Vdc	Input terminals (2 x "-")	Push-In terminals, max 2.5 mm ²
	Input voltage range	18 - 30 Vdc	Input terminals (2 x "+")	Push-In terminals, max 6 mm ²
	Maximal residual ripple of supplied input voltage	3 %		
	Required input voltage for turning-on of outputs	19.5 V (Turn-off Threshold 18 V)		
	Max. total input current	24 A		
	Max. input current for each pole of terminal	40 A		
	Over voltage protection	Suppressor diode 33 V		
	Stand-by current	22.7 mA @ 24 V		
	Power losses in stand-by mode	0.55 W @ 24 V		
Output				
	Output rated voltage	24 Vdc		
	Output rated current	2 x 2 - 12 A		
	Maximum voltage drop between input and output	210 mV @ 2 x 12 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)		
	Max. power losses	5.58 W @ 2 x 12 A		
	Efficiency	99 %		
	Internal output fuse	15 A		
Signaling	Resistance to reverse feed max.	35 Vdc		
	Parallel use of outputs	Not allowed		
	Serial use of outputs	Not allowed		
	Status display	LED (red, green, orange)		
	Signal input S1	24 Vdc (On/Off/Reset)		
	Signal output S2	24 Vdc, max. 25mA (status output channels)		
	Signal output S3	24 Vdc, max 25mA (Summation message)		
	Environment			
Safety and protection	Storage temperature	-25° C ... +85° C		
	Ambient temperature	-25° C ... +70° C		
	Derating	-		
	Cooling method	Natural convection		
	Required minimum spacing (left/right)	-		
	Required minimum spacing (over/under)	40 mm		
Order numbers		PM-0824-240-2		
Order Number		PM-0824-240-2		

Subjects to change.



Electronic Circuit Breaker with current limiting **PM-0824-480-0**

Electrical data	Type	PM-0824-480-0	Type	PM-0824-480-0
	Input		Input	
	Input rated voltage	24 Vdc	Input terminals (2 x "-")	Push-In terminals, max 2.5 mm ²
	Input voltage range	18 - 30 Vdc	Input terminals (2 x "+")	Push-In terminals, max 6 mm ²
	Maximal residual ripple of supplied input voltage	3 %		
	Required input voltage for turning-on of outputs	19.5 V (Turn-off Threshold 18 V)		
	Max. total input current	48 A		
	Max. input current for each pole of terminal	40 A		
	Over voltage protection	Suppressor diode 33 V		
	Stand-by current	32 mA @ 24 V		
Electrical data	Power losses in stand-by mode	0.77 W @ 24 V		
	Output			
	Output rated voltage	24 Vdc	Output terminals (""+")	Push-In terminals, max 2.5 mm ²
	Output rated current	4 x 2 - 12 A		
	Maximum voltage drop between input and output	240 mV @ 4 x 12 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)		
	Max. power losses	12.3 W @ 4 x 12 A		
	Efficiency	99 %		
Electrical data	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 display	LED (red, green, orange)		
	Signal input S1	24 Vdc (On/Off/Reset)		
	Signal output S2	24 Vdc, max. 25mA (status output channels)		
	Signal output S3	24 Vdc, max 25mA (Summation message)		
	Environment			
Safety and protection	Storage temperature	-25° C ... +85° C		
	Ambient temperature	-25° C ... +70° C		
	Derating	-		
	Cooling method	Natural convection		
	Required minimum spacing (left/right)	-		
	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-0824-480-0		

Subjects to change.