

Control & Monitoring Relays

Single Phase Current Relay MXC-20



DESCRIPTION

Single phase current relay for detecting a level of AC or DC current.

When the monitored current rises and reaches the determined setpoint, which is adjusted on the front panel, the relay energises. When the current drops and passes the setpoint, minus the hysteresis which is adjustable on the front, the relay de-energises. With inverted relay function the internal relay work the opposite way.

The Current Relay has a latch function where the relay after energising will remain energised, regardless of input current, until the latch jumper or the operating current is disconnected. Typically used in safety circuits.

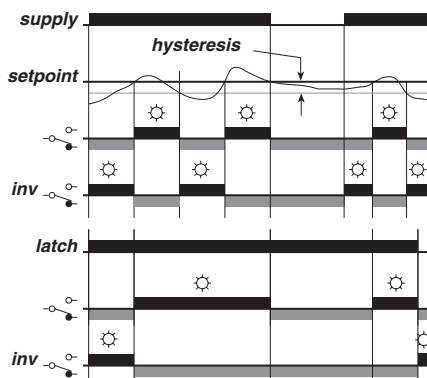
Features

- Monitoring of 10mA - 5A AC/DC in 5 ranges.
- Adjustable setpoint.
- Adjustable hysteresis 3-35%.
- Automatic locking function (Latch).
- Inversion of the relay function.
- Output SPDT.
- Operating voltage 24VDC , 24VAC, 115VAC, 230VAC or 400VAC.

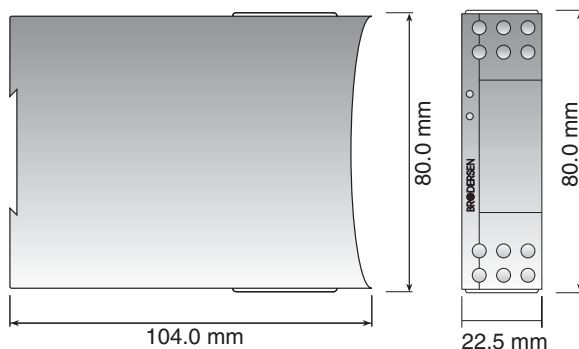
VERSIONS/ORDERING CODES

Type:	Single phase current relay	MXC-20	MXC-20.	230.	1
Supply voltage					
24V DC		924			
24V AC		024			
115V AC		115			
230V AC		230			
400V AC		400			
Measuring range:					
10-50mA		1			
40-200mA		2			
0,1A-0,5A		3			
0,4A-2A		4			
1-5A		5			

OPERATION



MECHANICAL DIMENSIONS



TECHNICAL DATA

Input

Input signal	Impedance	I _{max}
10-50mA AC/DC	4,7Ohm	0,7A
40-200mA AC/DC	1Ohm	1,4A
0,1-0,5A AC/DC	0,47Ohm	2,5A
0,4-2A AC/DC	0,1Ohm	5,5A
1-5A AC/DC	0,047Ohm	8A

Frequency at AC-input:	45-65 Hz.
Accuracy:	1%.
Temperature drift	Max. 0,05%/°C.
Setting accuracy:	Typically ± 10%.
Hysteresis:	Adjustable 3-35%.
Response time:	Time constant τ = 0,2s, Worst case of response time max. 5 x τ.
Voltage drop:	0,2V@FS.

Output:

SPDT relay	
Contact material:	AgNi 0,15 with hardened gold plating Au.
Max load AC:	8A/240V AC (cosφ=1) Max. breaking capacity 2000VA, Inductive load. See fig. 1.
Max load DC:	8A/24V DC Max. breaking capacity 50-270W see fig. 2.
Max. in rush current:	15A (max. 4s/duty cycle less than 10%).
Min. in rush current:	10mA, 24V DC.
Frequency :	Max. 1000 operations pr. hour.
Life span:	Mech. Min. 3 x 10 ⁷ operations. Elect. Min 1x 10 ⁵ operations with full load.
Delay;	<20ms.

Supply voltage:

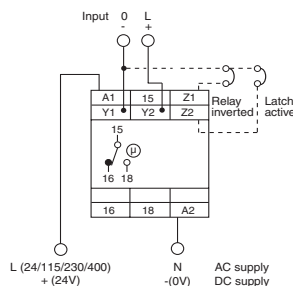
Versions:	924=24V DC (20,4-27,6)V DC.
	024=24V AC (20,4-27,6)V AC.
	115=115V AC (98-132)V AC.
	230=230V AC (196-264)V AC.
	400=400VAC (340-460)V AC.

Net frequency:	40-70Hz.
Consumption:	AC; max. 3VA DC; max. 2W

General data:

Ambient temperature:	-20 to 55°C.
Storage temperature:	-40 to 80°C.
Mounting:	35mm DIN-rail (EN50022).
Terminals:	Screw terminals with dual compartment. Terminal screws are combined crosshead/slotted. Up to 2 x 2,5mm ² wire (2 x 1,5mm ² inc. ferrule). Recommended torque, 0,5Nm. Max. 0,7 Nm. (VDE0609-1). Terminal identification in accordance with DIN46199/EN50005.
Indicators:	Green LED = operating voltage. Red LED = relay switched on.
Protection:	IP20.
Electrical isolation:	3,75kVAC (1 min.) between input, supply and relay output (EN61010).
Housing:	Noryl (GE), UL94V1. Black
Terminal block:	Noryl (GE), UL94V0. Black
Weight:	180 g.

WIRING DIAGRAM



Coding:
Relay inverter: Jumper Y1-Z1
Latching: Jumper Y1-Z2

SPECIFICATIONS:

- MXC-20 is designed and developed with regard to relevant specifications:
- EN60204-1 / VDE0113 electrical material on machines.
 - VDE0110 / IEC664 Isolation specifications/creepage and clearance distances.
 - Electrical safety in accordance with EN61010.
 - IEC414 Safety regulations for control and monitoring equipment.
 - EMC: Emission EN50081-1.
Immunity EN50082-2.
 - Humidity in accordance with IEC68-2-3; RH=95%, 40°C
 - Vibration in accordance with IEC68-2-6;
 - Shock when mounted, in accordance with IEC68-2-27.

MXC-20 is CE-marked in accordance with EMC- and the Low Voltage Directive.

OUTPUT LOAD DIAGRAMS

Fig.1

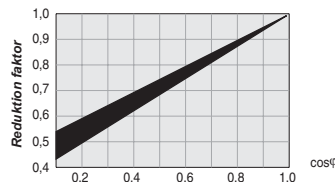
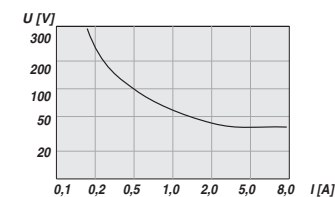


Fig. 2



INTRO...
MCP-10
MCU-10 DV/AV
MCU-10 DC/AC
MCU-10 P/N/T
MCU-10 J/K/S/R
MCU-10 U
MXV-10
MXV-20
MXC-10
MXC-20
MXC-30
MXV-30
MXP-10
MXP-20
MXL-10
MXT-10



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