

Order code	Rated current Ie	Auxiliary supply voltage	Qty per pkg	Wt
	[A]	[V]	n°	[kg]

Single-phase system.
AC/DC minimum and maximum current control. Delayed trip.
Auxiliary AC/DC power supply.
Automatic or manual reset.

PMA40 240	0.02-0.05- 0.25-1-5- 16A	24-240V AC/DC	1	0.166
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General characteristics

- Current monitoring relay for AC/DC minimum and maximum current control, AC/DC multivoltage auxiliary power supply
- Direct connection up to 16A max or by current transformer (CT)
- Excellent tripping accuracy
- TRMS current measurements (True Root Mean Square)
- Automatic or manual resetting (manual resetting by power removal)
- 2 relay outputs (Min and Max), configurable, each with 1 changeover contact (SPDT)
- Modular DIN 43880 housing, 3 module
- IEC protection degree: IP40 on front (only when placed in IP40 enclosure or control board); IP20 at terminals.

ADJUSTMENTS

- "Imax" Maximum current tripping threshold 5-100% Ie
- "Imin" Minimum current tripping threshold 5-100% Ie
- "Trip delay" Minimum and maximum current tripping time 0.1-30s
- "Inhibition time" Tripping time at power up 1-60s
- "Ie" Current scale selection: 20mA, 50mA, 250mA, 1A, 5A or 16A
- "Mode"
 - Separate or common relay outputs
 - Relay output normally energised or de-energised
 - Tripping memory (Latch) On or Off.

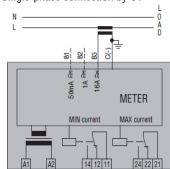
Certifications and compliance

Certifications obtained: EAC; UL Listed, for USA and Canada (cULus - File E93601), as Auxiliary Devices - Modular ampere monitoring relays.
Compliant with standards: IEC/EN 60255-5, IEC/EN 61000-6-2, IEC/EN 61000-6-3, UL 508, CSA C22.2 n° 14.

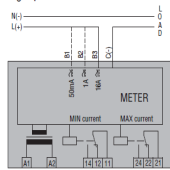
Current monitoring relay for 1-phase systems

PMA40

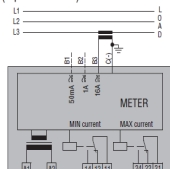
Single-phase connection by CT



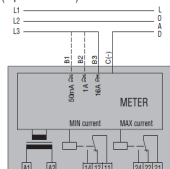
Single-phase direct connection



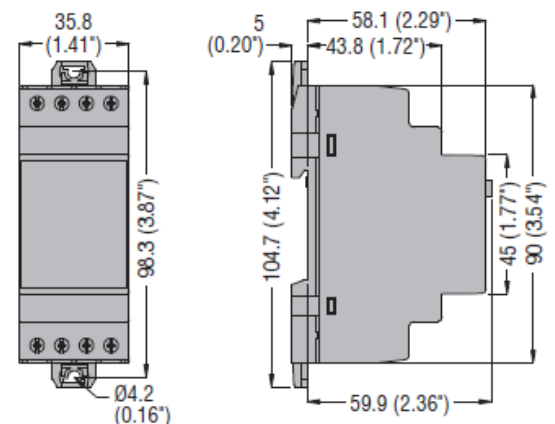
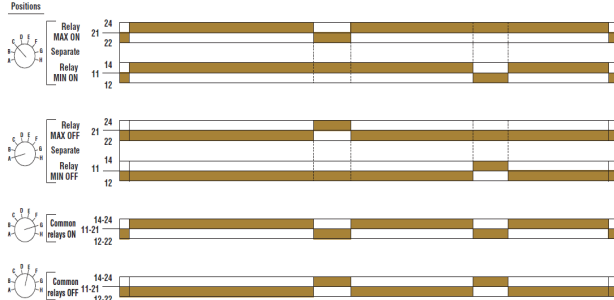
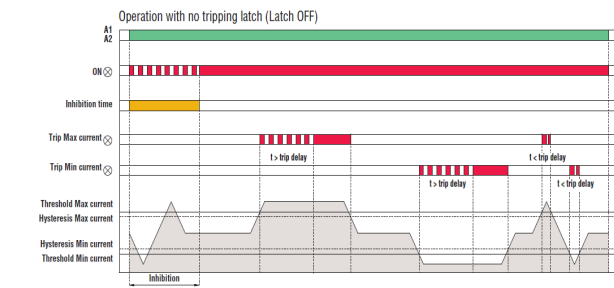
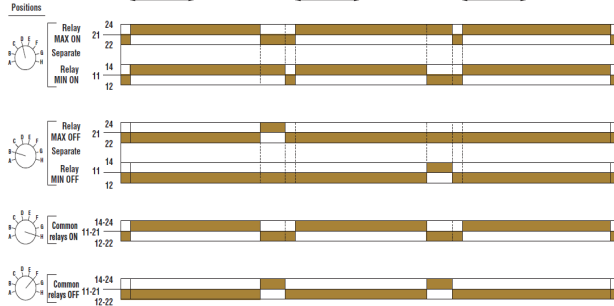
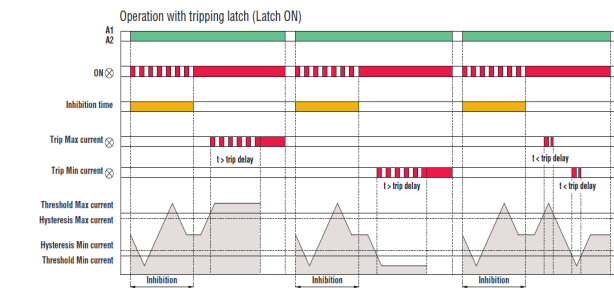
Three-phase connection by CT (1 phase control)



Three-phase direct connection (1 phase control)



Mode	Operation	Relay output	Latch
A	Separate relays	OFF	OFF
B	Separate relays	ON	ON
C	Common relays	ON	OFF
D	Common relays	OFF	ON
E	Common relays	OFF	OFF
F	Common relays	ON	ON
G	Common relays	ON	OFF
H	Common relays	OFF	ON



TYPE	PMA20	PMA30	PMA40	
DESCRIPTION	Single-phase maximum current monitoring AC/DC multiscale	Single-phase minimum or maximum current monitoring AC/DC multiscale	Single-phase minimum and maximum current monitoring AC/DC multiscale	
CONTROL CIRCUIT				
Rated current to be monitored Ie	5 or 16A		0.02 - 0.05 - 0.25 - 1 - 5 - 16A	
Rated frequency	50/60Hz ±5%			
Overload capacity	5 Ie for 1s 160A for 10ms Constant 16A	50mA - 1A inputs		16A input
		5 Ie for 1s 10Ie for 10ms Constant 2Ie		5 Ie for 1s 160A for 10ms Constant 16A
Connection	Direct or by current transformer			
Adjustment	Tripping values	5-100% f.s.		
	Tripping time	0.1-30s		
	Inhibition time	1-60s		
	Resetting hysteresis	1-50%	3% fixed	
Resetting	Automatic / Manual			
External input	Resetting / Inhibition		—	
Repeat accuracy	±1% with constant parameters			
AUXILIARY SUPPLY				
Auxiliary supply voltage Us	24-240VAC/DC			
Operating range	0.85-1.1 Us			
Rated frequency	50/60Hz ±5%			
Power consumption (maximum)	3.2VA		7VA	
Power dissipation (maximum)	1.6W		1.7W	
RELAY OUTPUTS				
Number of relays	1		2	
Relay state	Normally energised / de-energised (selectable)			
Contact arrangement	1 changeover contact SPDT each			
Rated operational voltage	250VAC			
Maximum switching voltage	400VAC			
IEC conventional free air thermal current Ith	8A			
UL/CSA and IEC/EN 60947-5-1 designation	B300			
Electrical life (with rated load)	10 ⁵ cycles			
Mechanical life	30x10 ⁶ cycles			
Indications	1 green LED for power on/inhibition 1 red LED for tripping		1 green LED for power on/inhibition 2 red LEDs for max/min tripping	
CONNECTIONS				
Tightening torque maximum	0.8Nm (7lbin; 7-9lbin per UL/CSA)			
Conductor section min-max	0.2-4.0mm ² (24-12AWG; 18-12 AWG per UL/CSA)			
INSULATION (input-output)				
IEC rated insulation voltage Ui	415V			
IEC rated impulse withstand voltage Uimp	4kV			
IEC power frequency withstand voltage	2.5kV			
AMBIENT CONDITIONS				
Operating temperature	-20...+60°C			
Storage temperature	-30...+80°C			
HOUSING				
Material	Self-extinguishing polyamide			