PMA50A415

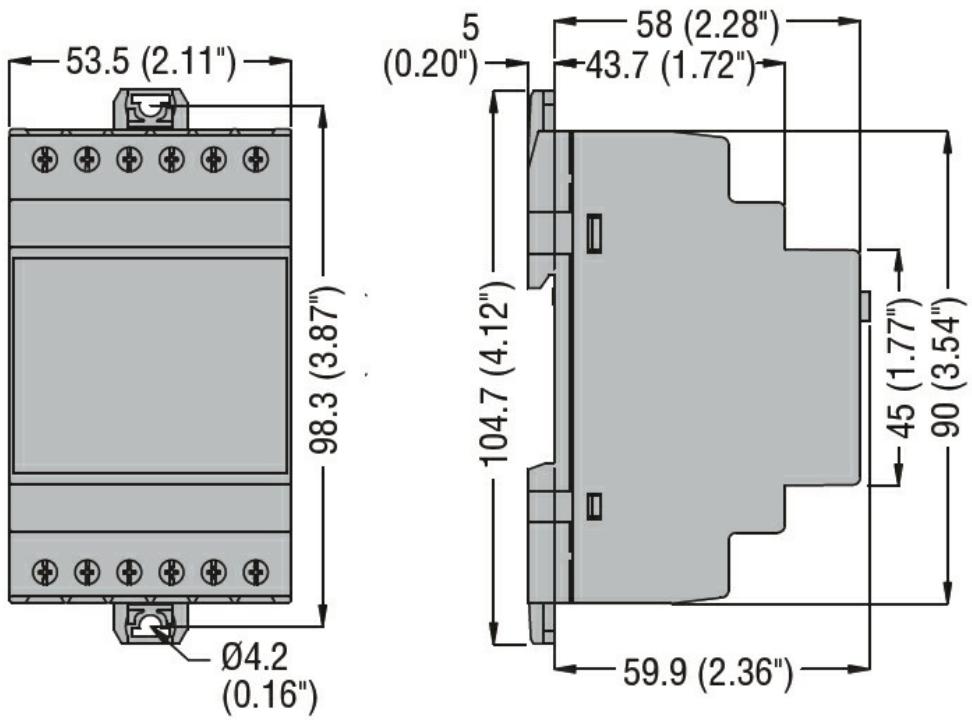
PUMP PROTECTION RELAY FOR SINGLE AND THREE-PHASE SYSTEMS, MAXIMUM AC CURRENT AND MINIMUM COSΦ. PHASE LOSS AND INCORRECT PHASE SEQUENCE, 5A OR 16A

Product designation			Pump protection relays
Product type designation			PMA50
General characteristics			
Description			Pump protection relay (motor under-load and over-current control) monitoring for max AC current, min cosϕ, phase loss and incorrect phase sequence
Type of system			Single-phase and three-phase
Power supply			
Auxiliary supply voltage Us			380…415VAC
Operating voltage range			0.85…1.1 Us
Rated frequency		Hz	50/60 ±5%
Power consumption Max		VA	4.5
Power dissipation Max		W	2.3
Control circut			
Rated current (Ie)		A	5 or 16
Overload capacity			5Ie for 1s - 160A for 10ms - Constant 16A
Connection			Direct or by current transformer
Current set-point (% Ie)	Max	%	10…100
Minimum cospϕ set-point			0.1…0.99
Tripping delay		s	0.1…10
Automatic resetting delay		min	OFF…100
Resetting hysteresis		%	3% for overcurrent, 0.03 for cosϕ
Inhibition time		s	1…60
Type of reset			Automatic or manual
External input			Consent input for running/resetting
Repeat accuracy		%	±1 (with constant parameters)
Tripping time for phase loss		ms	60
Voltage inputs			

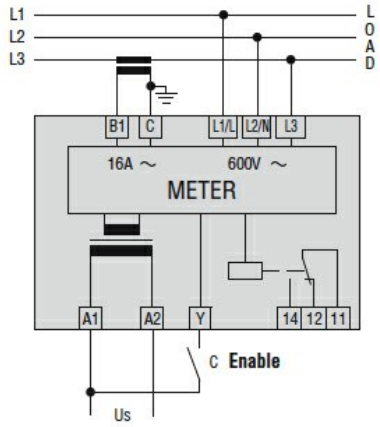
Measurement range		V	80…660VAC
Frequency range		Hz	50/60 ±5%
Relay outputs			
Number of relays		Nr.	1
Relay state			Normally energised De-energises at tripping
Contact arrangement			1 changeover SPDT each
Rated operational voltage AC (IEC)		VAC	250
Maximum switching voltage		VAC	400
IEC Conventional free air thermal current Ith		A	8
UL/CSA and IEC/EN 60947-5-1 designation			B300
Electrical life (with rated load)		cycles	100000
Mechanical life		cycles	30000000
Functions			
Modular version			3U
Maximum AC current			Yes
Minimum cosϕ for dry running pump protection			Yes
Phase loss			Yes
Incorrect phase sequence			Yes
Indications			
Indication			1 green LED for power on / Inhibition and 2 red LEDs for tripping
Connections			
Tightening torque for terminals			
	max	Nm	0.8
	max	lbin	7
Conductor cross section			
AWG/Kcmil			
	min	AWG	24
	Max	AWG	12
IEC			
	min	mm²	0.2
	Max	mm²	4
Insulations			
Rated insulation voltage Ui		V	600
Rated impulse withstand voltage Uimp		kV	6
Operating frequency withstand voltage		kV	2.5
Ambient conditions			
Temperature			
Operating temperature			
	min	°C	-20
	max	°C	+60
Storage temperature			
	min	°C	-30
	max	°C	+80
Housing			
Execution (n° of modules)			3

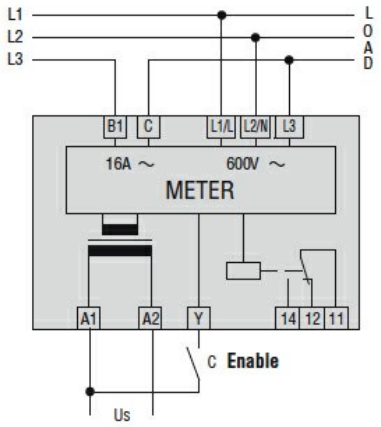
Material		Self-extinguishing polyamide
Mounting		Modular DIN 43880 housing
IEC degree of protection		IP40 on front; IP20 at terminals
Dimensions (W x H x D)	mm	53.5 x 104.7 x 64.9
Weight	g	251

Dimensions [mm (in)]



Wiring diagrams





Certifications and compliance

Compliance

CSA C22.2 n° 14
IEC/EN 60255-5
IEC/EN 61000-6-2
IEC/EN 61000-6-3
UL 508

Certificates

	cULus
	EAC

ETIM classification

ETIM 8.0	EC001440 - Current monitoring relay