

PMA50A480 PUMP PROTECTION RELAY FOR SINGLE AND THREE-PHASE SYSTEMS, MAXIMUM AC electric CURRENT AND MINIMUM COSP. PHASE LOSS AND INCORRECT PHASE SEQUENCE, 5A OR 16A



| Product designation Product type designation General characteristics | | | Pump protection relays PMA50 |
|---|-----|--------------------|--|
| Description | | | Pump protection relay (motor under-load and over-current control) monitoring for max AC current, min cos\u03c6, phase loss and incorrect phase sequence |
| Type of system | | | Single-phase and three-phase |
| Power supply | | | · |
| Auxiliary supply voltage Us | | | 440480VAC |
| 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 (le) | | Α | 5 or 16 |
| Overload capacity | | | 5le for 1s - 160A for 10ms - Constant 16A |
| | | | Direct or by |
| Connection | | | current transformer |
| Connection Current set-point (% le) | Max | % | transformer |
| Current set-point (% le) | Max | % | transformer 10100 |
| Current set-point (% le) Minimum cospø set-point | Max | | transformer 10100 0.10.99 |
| Current set-point (% le) Minimum cospφ set-point Tripping delay | Max | S | transformer 10100 0.10.99 0.110 |
| Current set-point (% le) Minimum cospø set-point | Max | | transformer 10100 0.10.99 0.110 OFF100 3% for overcurrent, 0.03 |
| Current set-point (% le) Minimum cosp¢ set-point Tripping delay Automatic resetting delay | Max | s min | transformer 10100 0.10.99 0.110 OFF100 3% for |
| Current set-point (% le) <u>Minimum cospø set-point</u> <u>Tripping delay</u> <u>Automatic resetting delay</u> Resetting hysteresis | Max | s min % | transformer 10100 0.10.99 0.110 OFF100 3% for overcurrent, 0.03 for cosø |
| Current set-point (% le) Minimum cospø set-point Tripping delay Automatic resetting delay Resetting hysteresis Inhibition time | Max | s min % | transformer 10100 0.10.99 0.110 OFF100 3% for overcurrent, 0.03 for cosφ 160 Automatic or manual Consent input for running/resetting |
| Current set-point (% le) Minimum cosp¢ set-point Tripping delay Automatic resetting delay Resetting hysteresis Inhibition time Type of reset External input Repeat accuracy | Max | s min % | transformer 10100 0.10.99 0.110 OFF100 3% for overcurrent, 0.03 for cos¢ 160 Automatic or manual Consent input for running/resetting ±1 (with constant parameters) |
| Current set-point (% le) Minimum cosp¢ set-point Tripping delay Automatic resetting delay Resetting hysteresis Inhibition time Type of reset External input | Max | s min % s | transformer 10100 0.10.99 0.110 OFF100 3% for overcurrent, 0.03 for cos¢ 160 Automatic or manual Consent input for running/resetting ±1 (with constant |

The characteristics described in this document are subject to updates or modifications at any time. The descriptions, technical and functional information, illustrations and instructions in this brochure are purely illustrative, and are consequently not contractually binding

PMA50A480



ENERGY AND AUTOMATION

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

| Relay cotpoins Nr. 1 Number of relays Nr. 1 Relay state mergised De- energises at tripping Normally energises at tripping Contact arrangement 1 changeover SPDT each Rated operational voltage AC (IEC) VAC 250 Maximum switching voltage VAC 400 250 Maximum switching voltage VAC 400 UCSA and IECCN 06947-51 designation E300 250 Electrical life (with rated load) cycles 30000000 Mechanical life cycles 30000000 Maximum AC current Yes 900 Maximum AC surent Yes 9000000 Maximum AC surent Yes 900 Indication Yes 900000 Indication Yes 9000000 Indication 1 green LED for tripping 1 green LED for tripping Connections 1 green LED for tripping 1 green LED for tripping Conductor cross section max 1 green LED for tripping AWG/Kcmill min AWG 24 Max Max 12 1 | Measurement range | e | | V | 80660VAC |
|--|-----------------------|-----------------------|-----|--------|------------------|
| Number of relays Nr. 1 Relay state Normally energised De- energises at tripping Normally energises at tripping Contact arrangement 1 changeover SPDT each Rated operational voltage AC (IEC) VAC Rated operational voltage AC (IEC) VAC EC Conventional free air thermal current Ith A Baximum switching voltage VAC EC Conventional free air thermal current Ith A UL/CSA and IEC/EN (0947-5-1 designation B300 Electrical Iffe (with rated load) cycles Obdular version 3U Modular version 3U Maximum AC current Yes Indication Yes Indication Yes Indication Yes Indication I green LED for power on / Inhibition and 2 Indication I green LED for tripping Conductor cross section Nm AWG/Kcmil min IEC min< mm² | Frequency range | | | Hz | 50/60 ±5% |
| Relay state Normally energises at tripping Contact arrangement 1 changeover SPDT each Related operational voltage AC (IEC) VAC Related operational voltage AC (IEC) VAC Maximum switching voltage VAC U/CSA and IEC/EN 6094-75-1 designation B300 Electrical life (with rated load) cycles Machanical life correction B300 Functions 30 Workarrical life correction Yes Maximum AC current Yes Maximum AC current Yes Maximum AC current Yes Indication Yes Indication 1 green LED for power on / Indication Indication 1 green LED for power on / Indication Indication 1 green LED for power on / Indication Conductor cross section 1 green LED for power on / Informed place sequence Max Nm 0.8 max Relat insulation voltage Ui V AWG/Kcmil IEC Max AWG Rated insulation voltage Ui V Rated insulation voltage Ui V <td>Relay outputs</td> <td></td> <td></td> <td></td> <td></td> | Relay outputs | | | | |
| Relay state energised De- energises at tripping Contact arrangement 1 changeover SPDT each Rated operational voltage AC (IEC) VAC Waximum switching voltage VAC UCCSA and IEC/EN (0947-5-1 designation B 300 Electrical life (with rated load) cycles 100000 waximum switching voltage VAC Electrical life (with rated load) cycles 100000 waximum accurrent Yes Maximum AC current Yes Infinitum accel for dry running pump protection Yes Incorrect phase sequence Yes Indication 1 green LED for power on / Inhibition and 2 Indication 1 green LED for tripping Connections 1 green LED for tripping Connections 1 green LED for tripping Conductor cross section 1 green LED for tripping AdWG/Kcmil max Nm AWG/Kcmil max Nm IEC min AWG Auward voltage Uimp V 6000 Rated insulation voltage Uimp KV 6 Operating temperature min °C Aubert of temperature min< °C | Number of relays | | | Nr. | 1 |
| Relay State energises at tripping Contact arrangement 1 changeover sPDT each Rated operational voltage AC (IEC) VAC Rated operational voltage AC (IEC) VAC Maximum switching voltage VAC UCSA and IEC/EN 60947-5-1 designation B 3300 Electrical life (with rated load) cycles Mechanical life cycles Mechanical life cycles Mechanical life Yes Modular version 3U Maximum AC current Yes Modular version 3U Maximum AC current Yes Indication Yes Indication Yes Indication lignen LED for power on / Inhibition and 2 red LEDs for tripping Conductor cross section max AWG/Kcmil max Max AWG IEC with stand voltage Ui Operating trequency withstand voltage kV Averter KV Indication V Indication 0.2 Max | | | | | Normally |
| Contact arrangement It itspiping Itsping Itspi | Relay state | | | | |
| Contact arrangement sPDT each SPDT e | riolay olato | | | | |
| Contract and any enterint SPDT each Rated operational voltage AC (IEC) VAC 250 Maximum switching voltage VAC 400 IEC Conventional free air thermal current th A 8 UL/CSA and IEC/EN 60947-5-1 designation B300 Electrical life cycles 100000 Mechanical life cycles 30000000 Functions Store Store Functions Vac 400 Cycles 30000000 Maximum AC current Yes Store Yes Incorrect phase sequence Yes Phase loss Yes Incorrect phase sequence Yes Indication Inhibition and 2 Indication areal LED for power on / Inhibition and 2 red LEDs for tripping Conductor cross section max Nm 0.8 max AWG/Kcmil min mm² 2.4 Max IEC min mm² 2.4 4 Operating frequency withstand voltage kV 6 0 0 Ope | | | | | |
| Rated operational voltage AC (IEC) VAC 250 Maximum switching voltage VAC 400 EC 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 100000 Mechanical life cycles 300000000 Functions 3U Maximum AC current Yes Modular version 3U Maximum AC current Yes Yes Indications Yes Minimum cosh for dry running pump protection Yes Incorrect phase sequence Yes Indication Yes Indications 1 green LED for power on / Inhibition and 2 red LEDs for tripping Connections max Nm 0.8 max Nm 0.8 max Conductor cross section AWG/Kcmil min mm³ 0.2 max Max MWG 12 IEC min< mm³ | Contact arrangeme | nt | | | |
| Maximum switching voltage VAC 400 IEC Conventional free air thermal current lth A 8 U/CSA and IEC/IN 6094/5-51 designation B300 Electrical life (with rated load) cycles 3000000 Electrical life (with rated load) cycles 3000000 Wethanical life cycles 3000000 Functions 3U Maximum AC current Yes Yes Modular version 3U Maximum AC current Yes Incorrect phase sequence Yes Yes Indication 1 green LED for power on / Inhibition and 2 red LEDs for tripping Yes for power on / Inhibition and 2 red LEDs for tripping Connections max Nm 0.8 max Conductor cross section max Nm 0.8 max IEC min< MWG 24 | Rated operational v | voltage AC (IEC) | | VAC | |
| IEC Conventional free air thermal current lth A 8 UL/CSA and IE/C/EN 60947-5-1 designation B300 Electrical life cycles 100000 Mechanical life cycles 3000000 Functions 3U Modular version 3U Maximum AC current Yes Minimum cos§ for dry running pump protection Yes Incorrect phase sequence Yes Indication 1 green LED for power on / Inhibition and 2 Indication red LEDs for remainal line Connections max Tightening torque for terminats max Max/Kcmil min AWG IEC min MWG AWG/Kcmil Max AWG IEC min mm² Max MWG IEC min mm² IEC min mm² Max AWG IEC min MWG IEC min Max IEC min MWG IEC Max IEC min Max IEC | | | | | |
| UL/CSA and IEC/EN 60947-5-1 designation B300 Electrical life (with rated load) cycles 100000 Mechanical life cycles 3000000 Functions 3U Maximum AC current Yes Minimum coso for dry running pump protection Yes Yes Incorrect phase sequence Yes Yes Indications 1 green LED for power on / Inhibition and 2 red LEDs for tripping Yes Connections max Nm 0.8 Conductor cross section max Nm 0.8 AWG/Kcmil min <mm²< td=""> 0.2 Max IEC min<mm²< td=""> 0.2 Max Isolation vottage Ui V 600 600 Rated insulation vottage Ui V 600 600 Ambient conditions KV 6 600 Coperating frequency withstand voltage KV 6 600 Operating trequency withstand voltage KV 6 600 Storage temperature min °C -20 Max</mm²<></mm²<> | | | | | |
| Electrical life (with rated load) cycles 100000 Mechanical life cycles 30000000 Functions 3U 3U Maximum AC current Yes Yes Minimum cos\phi for dry running pump protection Yes Yes Incorrect phase loss Yes Yes Indications 1 green LED for power on / Inhibition and 2 red LEDs for tripping Yes Indication max Nm 0.8 Tightening lorque for terminals max Nm 0.8 Tightening lorque for terminals max Nm 0.8 Tightening lorque for terminals min AWG 24 Max MWG 12 IEC IEC min< mm² | | | | | |
| Mechanical life cycles 30000000 Functions 3U Maximum AC current Yes Minimum cosol for dry running pump protection Yes Phase loss Yes Incorrect phase sequence Yes Indications 1 green LED for power on / Indication Indication 1 green LED for power on / Inhibition and 2 red LEDs for tripping Connections nax Tightening torque for terminals max Max MWG 12 IEC min <mm²< td=""> AWG/Kcmil Max Maxet dinsulation voltage Ui V Rated insulation voltage Ui V Operating frequency withstand voltage KV Ambient conditions KV Temperature min °C Operating temperature min °C Max °C 460</mm²<> | | | | cvcles | |
| Functions 3/1 Modular version 3/1 Maximum AC current Yes Minimum cost for dry running pump protection Yes Phase loss Yes Indications Yes Indication 1 green LED for power on / Inhibition and 2 red LEDs for tripping Connections 1 green LED for power on / Inhibition and 2 red LEDs for tripping Connections 1 Conductor cross section max AWG/Kcmil min AWG/Kcmil Max IEC min <mm²< td=""> Maxa AWG 12 IEC min<mm²< td=""> Max aWG 12 IEC with stand voltage Uimp KV 6 Operating frequency with stand voltage kV Arded insulation voltage Uimp kV KV 6 Operating frequency withstand voltage kV Operating temperature min Max °C Storage temperature min min °C Storage temperature<!--</td--><td></td><td></td><td></td><td>-</td><td></td></mm²<></mm²<></mm²<></mm²<></mm²<> | | | | - | |
| Modular version 3U Maximum AC current Yes Minimum cos¢ for dry running pump protection Yes Phase loss Yes Incorrect phase sequence Yes Indications 1 green LED for power on / Inhibition and 2 red LEDs for tripping Connections 1 green LED for power on / Inhibition and 2 red LEDs for tripping Connections max Tightening torque for terminals max MWG/Kcmil max Max AWG AWG/Kcmil min Max AWG IEC min IEC min Max AWG Max Mm AWG/Kcmil min Max MWG IEC min TeC min Max MWG Auted insulation voltage Ui V Rated insulation voltage Uimp kV Rated insulation voltage Uimp kV Coperating frequency withstand voltage kV Ambient conditions min< "C | | | | 0,0100 | |
| Maximum AC current Yes Minimum cost for dry running pump protection Phase loss Phase sequence Pres Phase loss Phase sequence Pres Phase loss Ph | Modular version | | | | 3U |
| Minimum cos¢ for dry running pump protection Yes Phase loss Yes Incorrect phase sequence Yes Indications Indication Indication Inhibition and 2 red LEDs for tripping Connections Tightening torque for terminals MWG/Kcmil Min AWG 24 Max Nm 0.8 max lbin 7 Conductor cross section AWG/Kcmil Min MWG 24 Max AWG 12 IEC Min mm² 0.2 Max mm² 4 IEC Min mm² 0.2 Max mm² 4 Insulations Rated insulation voltage Ui V 600 Rated impulse withstand voltage Uimp Ambient conditions Temperature Operating temperature Operating temperature Operating temperature Min °C -30 max °C +80 Housing | | nt | | | |
| Phase loss Yes Incorrect phase sequence Yes Indications 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 insulation voltage V 7 600 Rated insulation V 7 7 Rated Insulation V 7 7 | | | | | |
| Incorrect phase sequence Yes Indications Indications Indication In | Phase loss | 5 51 11 | | | |
| Indications Indications Indication Indicatio | - | quence | | | |
| Indication $1 \text{ green LED for power on / Inhibition and 2 red LEDs for tripping}}$ Connections $1 \text{ green LED for tripping}$ Tightening torque for terminals $1 \text{ green LED for tripping}$ Tightening torque for terminals $1 \text{ green LED for tripping}$ Conductor cross section $1 \text{ green LED for tripping}$ Rated insulation voltage $1 g$ | | | | | |
| Indication with the set of the se | | | | | 1 green LED for |
| red LEDs for tripping Connections max Nm 0.8 max Nm 0.8 max Nm 0.8 max Nm 0.4 AWG/Kcmil min AWG 24 Max AWG 12 12 IEC min Mm² 0.2 Max mm² 4 14 Insulations Rated insulation voltage Ui V 600 Rated insulation voltage Uimp kV 6 Operating frequency withstand voltage Uimp kV 6 Operating temperature min °C -20 min °C -20 Moderating temperature min °C -20 min< | | | | | |
| Max Mm 0.8 max Nm 0.7 Conductor cross section 7 IEC 7 IEC 7 Rated insulation voltage Ui V 600 Rated insulation voltage Uinp KV 6 Operating frequency withstand voltage kV 2.5 Ambient conditions | Indication | | | | Inhibition and 2 |
| Connections Tightening torque for terminals max Nm 0.8 max Ibin 7 Conductor cross section AWG/Kcmil min AWG 24 Max AWG 12 12 12 IEC min mm² 0.2 Max mm² 4 12 Insulations mm² 4 Rated insulation voltage Ui V 600 Rated insulation voltage Uimp kV 6 Operating frequency withstand voltage kV 2.5 Ambient conditions Temperature min °C -20 Max °C -20 max °C +60 Motionation conditions min °C -20 max °C +60 Motionation conditions min °C -20 max °C +60 Storage temperature min °C -30 max °C +80 Housing Housing Housing Housing Housing Housing Housing | | | | | red LEDs for |
| Tightening torque for terminals max Nm 0.8 max Ibin 7 Conductor cross section min AWG 24 Max AWG 12 12 IEC min mm² 0.2 Max Max MWG 4 Insulations Rated insulation voltage Ui V 600 Rated insulation voltage Uimp kV 6 0 Operating frequency withstand voltage kV 6 0 Ambient conditions kV 6 0 Temperature min °C -20 Max °C -20 max °C -20 Motion Conditions min °C -20 max °C -20 Max °C -20 max °C -20 max °C -20 Max °C -20 max °C -20 max °C -20 Max °C -20 max °C -20 max °C | | | | | tripping |
| $\begin{array}{c c c c c c c c } & & & & & & & & & & & & & & & & & & &$ | Connections | | | | |
| max Ibin 7 Conductor cross section AWG/Kcmil init and a and | Tightening torque for | or terminals | | | |
| Conductor cross section AWG/Kcmil min AWG 24 Max AWG 12 IEC min mm² 0.2 Max mm² 4 Insulations www.mm² 4 Rated insulation voltage Ui V 600 Rated impulse withstand voltage Uimp kV 6 Operating frequency withstand voltage kV 2.5 Ambient conditions min °C -20 Temperature Operating temperature min °C -20 Storage temperature min °C -30 max °C +80 Housing Housing min °C -30 max °C +80 | | | max | Nm | 0.8 |
| AWG/Kcmil $min AWG 24$ Max AWG 12IEC $min mm^2 0.2$ Max mm² 4Issulations $min mm^2 4$ Rated insulation voltage UiVRated impulse withstand voltage UimpkVOperating frequency withstand voltagekVOperating frequency withstand voltagekVOperating frequency withstand voltagekVOperating frequency withstand voltagekVStorage temperaturemin °C $min °C + 600$ $recoment - 600$ Storage temperature $min °C + 600$ Housing $recoment - 700$ max °C + 800 | | | max | lbin | 7 |
| min MaxAWG AWG24 12IECmin mm²0.2 Maxmin mm²mm² 44InsulationsV600Rated insulation voltage UiV600Rated impulse withstand voltage UimpkV6Operating frequency withstand voltagekV2.5Ambient conditionsTemperatureOperating temperatureMax°C+60Storage temperaturemin max°C-30 maxMousing | Conductor cross se | ection | | | |
| Max AWG 12 IEC min mm² 0.2 Max mm² 4 Insulations V 600 Rated insulation voltage Ui V 6 Operating frequency withstand voltage Uimp kV 6 Operating frequency withstand voltage kV 2.5 Ambient conditions V 600 Temperature V 2.5 Max °C -20 max °C -20 max °C +60 Storage temperature min °C -30 Max °C +80 Housing V -30 -30 | | AWG/Kcmil | | | |
| IECminmm²0.2Maxmm²4InsulationsV600Rated insulation voltage UiV6Qperating frequency withstand voltagekV6Operating frequency withstand voltagekV2.5Ambient conditionsTemperaturemin°CTemperatureMin°C-20Max°C+60Storage temperatureMin°C-30maxMousingWWWHousingWWW | | | min | AWG | 24 |
| minmm20.2 Max0.2 mm24InsulationsRated insulation voltage UiV600Rated impulse withstand voltage UimpKV6Operating frequency withstand voltageKV2.5Ambient conditionsV2.5TemperatureV0Operating temperaturemin°CStorage temperaturemin°CStorage temperaturemin°CMax°C+60HousingN°CHousingNN | | | Max | AWG | 12 |
| 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 V 600 Temperature Operating temperature V 2.5 Max °C -20 -20 max °C +60 -20 Storage temperature min °C -30 Max °C +80 -400 | | IEC | | | |
| Insulations V 600 Rated insulation voltage Uimp kV 6 Operating frequency withstand voltage kV 2.5 Ambient conditions Temperature min °C -20 Max °C +60 +60 Storage temperature min °C -30 Mousing Min °C +80 | | | min | mm² | 0.2 |
| Rated insulation voltage Ui V 600 Rated impulse withstand voltage Uimp kV 6 Operating frequency withstand voltage kV 2.5 Ambient conditions V 7 Temperature Operating temperature V 7 Min °C -20 -20 Max °C +60 -20 Max °C +80 -20 Housing Max °C -30 | | | Max | mm² | 4 |
| Rated impulse withstand voltage Uimp kV 6 Operating frequency withstand voltage kV 2.5 Ambient conditions V 2.5 Temperature Operating temperature min °C -20 Min °C +60 +60 Storage temperature min °C -30 Mousing Housing Note that the store of | Insulations | | | | |
| Operating frequency withstand voltage kV 2.5 Ambient conditions Temperature min °C -20 Max °C +60 *C +60 Storage temperature min °C -30 Max °C +80 *C | | | | | 600 |
| Ambient conditions Temperature Operating temperature min °C -20 max °C +60 Storage temperature min °C -30 max °C +80 Housing | | | | | |
| Temperature Operating temperature min °C -20 max °C +60 Storage temperature min °C -30 max °C +80 Housing Value Value Value | | | | kV | 2.5 |
| Operating temperature min °C -20 max °C +60 Storage temperature min °C -30 max °C +80 Housing Max °C +80 | | | | | |
| min °C -20 max °C +60 Storage temperature min °C -30 max °C +80 Housing | Temperature | | | | |
| max °C +60 Storage temperature min °C -30 max °C +80 | | Operating temperature | | | |
| Storage temperature min °C -30 max °C +80 Housing | | | min | | |
| min °C -30 max °C +80 Housing | | | max | °C | +60 |
| max °C +80 Housing | | Storage temperature | | | |
| Housing | | | min | | |
| | | | max | °C | +80 |
| Execution (n° of modules) 3 | Housing | | | | |
| | Execution (n° of mo | odules) | | | 3 |

PMA50A480

The characteristics described in this document are subject to updates or modifications at any time. The descriptions, technical and functional information, illustrations and instructions in this brochure are purely illustrative, and are consequently not contractually binding

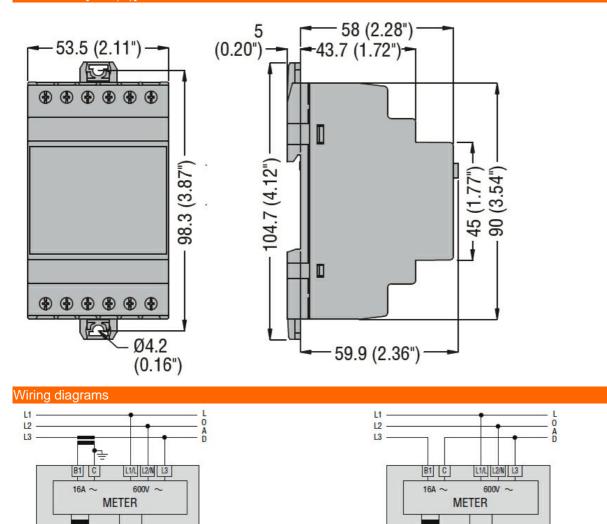


ENERGY AND AUTOMATION

PMA50A480 PUMP PROTECTION RELAY FOR SINGLE AND THREE-PHASE SYSTEMS, MAXIMUM AC electric CURRENT AND MINIMUM COSP. PHASE LOSS AND INCORRECT PHASE SEQUENCE, 5A OR 16A

| 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)]



Certifications and compliance

A2

Us

14 12 11

c Enable

Compliance

A1

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

Us

A1

14 12 1

c Enable

Certificates

PMA50A480



ENERGY AND AUTOMATION

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

| | cULus | | |
|--------------------|-------|--|----------|
| | EAC | | |
| TIM classification | | | |
| | | | EC001440 |

ETIM 8.0

ΕT

EC001440 -Current monitoring relay