



Installation Instructions

PxE Series

Three-Phase Monitor Relays

December 2025

901-0000-370



Potentially hazardous voltages are present. Electrical shock can cause death or serious injury. Installation should be done by qualified personnel following all National, State & Local Codes.



Présence de tensions potentiellement dangereuses. Une décharge électrique peut causer la mort ou des blessures graves. L'installation devrait être effectuée par du personnel qualifié suivant tous les codes nationaux, provinciaux et locaux.

BE SURE TO REMOVE ALL POWER SUPPLYING THIS EQUIPMENT BEFORE CONNECTING OR DISCONNECTING WIRING. READ INSTRUCTIONS BEFORE INSTALLING OR OPERATING THIS DEVICE. KEEP FOR FUTURE REFERENCE.

Installation & Wiring

- Mount the PxE product on 35mm DIN Rail in a suitable enclosure. Hook the fixed (upper) DIN clip over the top edge of the DIN rail and rotate the product downward applying pressure to snap the lower DIN clip over the rail edge, securing the product to the rail.
- Wire the product as appropriate for your installation, using the wiring diagram on the side of the product or the wiring diagram in this document. Use 14-22 AWG solid or stranded copper wire with a terminal tightening torque of 4 in-lbs (0.45 N-m).

Setting the Dials

- Some PxE products have up to 4 blue dials on the front face. Rotate each dial's pointer to the desired setting. For assistance on setting the dials, see the "Product Operation" section. A 1/8" (3mm) flat-blade (slotted) or Philips screwdriver is recommended for dial adjustments. The voltage range is printed on the product label for reference. Please note that the dial markings are for reference only and may not be exact.

Product Operation

Set the Voltage Line to Line, "VOLT (L-L)", knob to the desired monitored voltage. The PxE120 has an adjustable range of 102-138V, the PxEU has an adjustable range of 208-480V, and the PxE575 has an adjustable range of 460-600V.

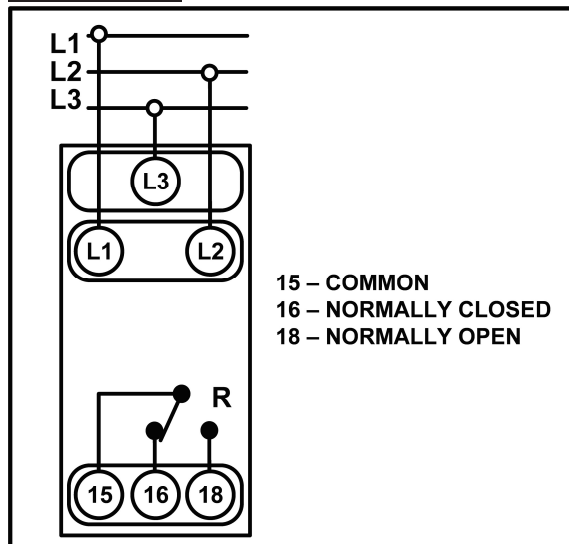
Set the Undervoltage, "Vmin (%)", knob between 80% and 95% of the Voltage Line to Line setting. This value should be the same as the minimum operating voltage for the equipment to be adequately protected.

Set the Unbalance, "UNBAL (%)", knob between 4% and 10% or OFF. This setting should be the maximum allowable percentage unbalance in phase voltage that the three-phase system can tolerate. Too low of a setting can cause nuisance tripping. Too high of a setting may not adequately protect the system.

Set the "Trip Delay (S)" knob to control the maximum time period that an unbalance, undervoltage, or overvoltage condition should be allowed to last before a fault is triggered. Too short of a delay will cause nuisance tripping if there are momentary changes in the three-phase voltage. Too long of a delay could allow damage to the equipment. It is recommended that the setting should be at least slightly longer than the time a three-phase load is drawing its inrush or startup current. This will avoid nuisance tripping caused by the starting current dropping voltage temporarily.

Catalog Number	Function	Adjustable Settings
PME120 PME575 PMEU	Phase Loss, Phase Reversal, Phase Unbalance, Undervoltage, Overvoltage	Voltage Line to Line Undervoltage % (Vmin) Unbalance % Trip Delay
PAE120 PAE575 PAEU	Phase Loss, Phase Reversal, Undervoltage	Voltage Line to Line Undervoltage % (Vmin)
PLE120 PLE575 PLEU	Phase Loss, Phase Reversal	None
PCE120 PCE575 PCEU	Phase Reversal	None
PDE120 PDE575 PDEU	Phase Loss	None

Wiring Diagram



LED Flash Codes

GREEN		ALL THREE PHASES PRESENT
		RESTART
RED	OFF	NO FAULT
		W/ GREEN: PHASE REVERSAL
		W/O GREEN: PHASE LOSS
		UNBALANCE
		LOW VOLT (UNDERVOLTAGE)
		HIGH VOLT (OVERVOLTAGE)

Specifications

OUTPUT CHARACTERISTICS	
Number and Type of Contacts	SPDT
Contact Ratings	8A @ 250VAC / 24VDC @ ≤60°C 4A @ 250VAC / 24VDC @ 65°C
Green LED Output (V)	See LED Flash Codes:
Red LED Output (F)	See LED Flash Codes:

INPUT CHARACTERISTICS	
Control Voltage Range (Vmax)	PxE120: 102-138VAC at 50/60Hz PxEU: 208-480VAC at 50/60Hz Px575: 460-600VAC at 50/60Hz
Maximum Consumption	25VA
Voltage Setting Accuracy	Maximum Setting: -0%/+5%, Minimum Setting: -5%/+0%

TIMING CHARACTERISTICS	
Restart Delay	1 Second
Drop-out Due to Phase Loss or Phase Reversal	100ms Fixed
Drop-out Due to Undervoltage, Overvoltage, or Unbalance	0.3–30 Seconds
Timing Setting Accuracy	Maximum Setting: -0%/+5%, Minimum Setting: -50%/+0%

ENVIRONMENTAL CHARACTERISTICS	
Operating Temperature	-28°C to 65°C (-18°F to 149°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)

Troubleshooting

- If a product displays a “Phase Loss” while all 3 phases are present, this indicates a severe phase unbalance within the system.
- If the unit fails to operate as expected, check that all connections are correct per the connection diagram on the product. If problems continue, visit our website at <https://www.macromatic.com/contact-us/> to request support.

Warranty

All catalog-listed products manufactured by Macromatic are warranted to be free from defects in workmanship or material under normal service and use for a period of five (5) years from the date of manufacture.