



3 FASES

Three-phase electronic voltage protector. Omega rail-mounted.

Overview

The BREAKERMATIC 3-Phase Omega Rail monitors the line and phase voltages of a three-phase appliance, protecting it against voltage fluctuations and preventing the machine from starting when the direction of rotation dictated by the phases has been reversed or when a phase is missing. It has high and low cut-off voltage settings and a delay time setting.

It has an output relay that can control an external contactor or any stop signal that allows the machine to stop. The disconnection operation is automatic, as is reset after a fault. Five LEDs display faults and the protector's status.

The protector can be mounted using an omega rail (DIN rail) for electrical panels, or directly to a wall using screws placed through built-in fixing hooks.

Ideal for:

Hydro pneumatic pumps - Elevators and three-phase motors - Refrigeration, ventilation, and air conditioning equipment - Industrial transport.

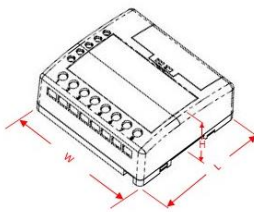
Operation

1. **Protection against steady-state voltage variations.** The BREAKERMATIC 3-Phase disconnects the output if the steady-state line voltage is above the voltage set on the "high voltage" knob or below the voltage set on the "low voltage" knob. The response time is 1 second. The voltage must remain outside the range longer than the response time for the disconnection to be activated. While the fault persists, the corresponding indicator will remain lit.
2. **Reconnection delay or standby cycle.** When the protector is energized, or at the end of a voltage fault, the protector will initiate a time delay before connecting the output. The duration of the time delay can be adjusted using the "wait cycle" knob between 5 s and 300 s (5 min). The standby cycle protects sensitive equipment from short operating cycles.
3. **Detection of blackouts, sags, etc.** The protector will disconnect the load if it detects a sudden voltage drop below 50% of the nominal voltage and will initiate a standby cycle. The response time of the blackout detector is instantaneous; the minimum blackout duration is specified in the specifications, but it is guaranteed to be greater than the maximum transfer time on the distribution lines. Therefore, this maneuver does not affect the protector and does not disconnect the load.
4. **Absence of a phase.** The protector will disconnect the output and indicate absence of a phase.
5. **Reversal of the direction of rotation or phase sequence.** If the phase sequence is reversed, the protector will immediately disconnect the output. The response time to this disturbance is less than one line cycle.

Models

Model	Voltaje de línea	Nominal amperage	Frequency	Nro. Fases	Cut off voltages	Reconnect ion delay	Response delay	Desbalance	Ausencia de fase	Inversión de giro	Languag e
PTE208-AD0EST	208VAC	5A	50/60 Hz	3	Ajustables	ajustable	1s	No	Yes	Yes	Esp. - Ing.
PTE440-AD0EST	440VAC	5A	50/60 Hz	3	Ajustables	Ajustable	1s	No	Yes	Yes	Esp. - Ing.
PTE480-AD0EST	480VAC	5A	50/60 Hz	3	Ajustable	ajustable	1s	No	Yes	Yes	Esp. - Ing.

Specifications

Electrical					
	Model	PTE208	PTE440	PTE380	
Nominal Line voltage		208	440	480	VAC
Nominal Frequency		50 / 60			Hz
Steady state voltage protection					
Low cut-off voltage, minimum position		140 +/- 3%	300 +/- 3%	340 +/- 3%	VAC
Low cut-off voltage, maximum position		210 +/- 3%	440 +/- 3%	480 +/- 3%	VAC
High cut-off voltage, minimum position		210 +/- 3%	440 +/- 3%	480 +/- 3%	VAC
High cut-off voltage, maximum position		280 +/- 3%	580 +/- 3%	620 +/- 3%	VAC
Reconnection Hysteresis		5 +/- 0.5			VAC
Response delay		1 +/- 20%			s.
Stand by cycle					
Reconnection delay time, minimum position		5 +/- 5%			seg
Reconnection delay time, maximum position		5:00 +/- 5%			Min:seg
Blackout detection					
Minimum blackout duration (0% nominal voltage)		32 -64			ms
Minimum brownout duration (50% nominal voltage)		>100			ms
Interrupter (control output)					
Switching capacity					
Current (Amperage) TC-NA		5			A
Current (Amperage) TC-NC		5			A
Voltage between Contacts		Nominal Voltage			
Apparent Power (No load)		7	24	24	VA
Mechanicals					
Dimensions					
		Length L	102		mm
		Width W	109		mm
		Height H	43		mm
		Weight	260		gr.
Connection terminals					
Screw thread		6-32			
Screwdriver					
Phillips		PH2			
Flat		1.0 x 5.5			mm
Tightening torque min./max.		0.8 / 1			Nm
Wire section / gauge (solid or multifilament) (see notes 1,2, y 3)					
Minimum		0.34/ 22			mm² / AWG
Maximum		4 / 8			mm² / AWG
Recommended wire stripping length		7-8			Mm
Isolation materials					
Enclosure		ABS			
Terminals block		PBT			
Printed circuit board		FR4			
Flame retardant classification (UL94)					
Enclosure		V0, 5VA			
Terminals block		V0			
Printed circuit board		V0			
Isolation resistance (NTC1650:2004 Num 17.1)		>550			Mohms
Dielectric strength (NTC1650:2004 num 17.2)		>2			KV
Environmental					
Maximum operating ambient temperature		45			°C
Place of use: Indoor use, in a dry and ventilated place		Yes			
Outdoor use and/or in wet places		No			
Enclosure ingress protection IP (IEC 60529)		IP40			

Note 1: The supplied terminals are for 12-10 AWG (2.05-2.5 mm²) wire.

Note 2: For two identical conductors on a single terminal, a maximum of 2.5 mm² or 10 AWG is required.

Note 3: The current draw of this protector is less than 40 mA per phase. We recommend wiring with 16-20 AWG wire gauge. In all cases, consider the coil current of the contactor to be used when selecting the wire gauge.

Product certificates

NOM NOM-003-SCFI-2014 (NMX-J-515-ANCE)

Shipping packaging

Type	Capacity	Dimensions (Length x Width x Height) (cm)	Weight (Kg)
Carton CC48	48 pcs (6 x 8 pack)	58 x 33 x 52	14.05
Carton CC 8 pack	8 pcs in blister	28 x 18.58 x 22	2.34