

TPM Motor protectors

Toscano offers an interesting range of protectors, which avoid motor burns because of frequent and common problems: overload, two phase working, phase reversal, imbalance, jammed impeller, ground failure, short circuit and underload. Premature failure motor protection, even in extreme circumstances. Dry running protection (without probes): TPM2.

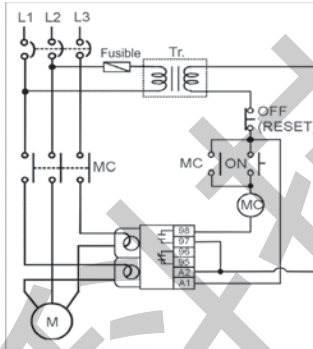
Relays work by embedded current sensors with independent trip start time adjustment (D-time) and start time (O-time).

Besides competitive price, the wide range adjustment (only three calibers for all the range) reduces storage and stock control is easier.

Trip time defined curve (not inverse). Extensively used and accepted by all motors and pumps.

overload, underload, phase loss, locked rotor/running

TPM-SSD

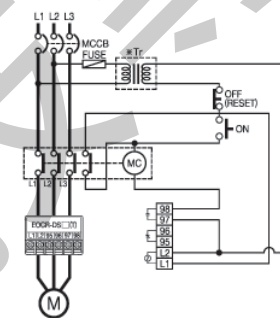


overload, phase loss, phase reversal, locked rotor

TPM-DS3



EASY THERMAL OVERLOAD RELAY REPLACEMENT

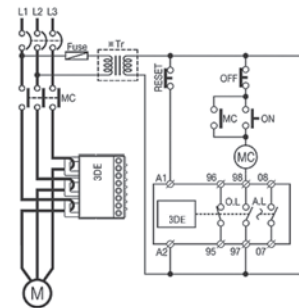


overload, underload, phase loss, phase reversal, phase imbalance, locked rotor, stall

TPM-3DE



- ground fault protection included
- output 4-20 mA included



Specifications

Current range	05) 0,5 - 6A 30) 3 - 30A 60) 10 - 60A > 60 A: External current transformer /5	05) 0,5 - 5A 30) 3 - 30A 60) 5 - 60A > 60 A: External current transformer /5	0,5 - 60A (overload) 0,5 - 59A (underload) 5 - 50% (imbalance phase) > 60A: external current transformer /5
Operating time	D-TIME: FIXED 5 s. O-TIME: 1 - 30 s.	D-TIME: 1 - 50 s. O-TIME: 0,2 - 10 s.	D-TIME: 1 - 200 s. O-TIME: 1 - 30 s. U-TIME: 0,2 - 30 s.
Operating temperature	-20° + 60° C / 30 - 85 % Hr	-25° + 70° C / 45 - 85 % Hr	-25° + 70° C / 45 - 85 % Hr
Accuracy	Current: ±5% Time: ±5%	Current: ±5% Time: ±10%	Current: ±5% Time: ±5%
Control voltage	230V AC - 50/60 Hz	230 or 440V AC - 50/60 Hz	230V AC - 50/60 Hz
Current sensor	2 Current transformer (passant wire)	3 Current transformer (passant wire)	3 Current transformer (passant wire)
Trip indication	Display (complete diagnosis)	LED	Display (complete diagnosis)
Output contacts	SPDT 3A / 250V AC NC y NO	2-SPST 3 A / 250 Vac NC y NO	SP 3A / 250V AC (*) SPST 3A / 250V AC (**)
Reset	Manual or electrical (remote)	Manual or electrical (remote)	Manual or electrical (remote)
Consumption	<2W	<1W	<1W
Assembly	Rail Din or panel	Rail Din	Rail Din
Sizes (A x B x C)	56 x 77 x 70	57 x 40 x 85	70 x 69 x 77
			3DE: (*) NO (**) NC 3EZ: (*) NO (**) NO 3DE420: (*) NO (**) NC