

# Winding Protection Relays

## WTR D1

Winding Protection Relay (PTC Thermistor Relay)



# P1 MPT1 Winding Protection Relay (PTC Thermistor Relay)

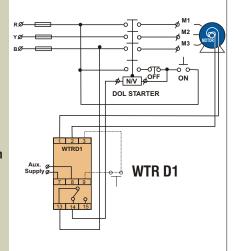


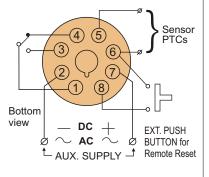
175 gms

Supply Voltage		
Auxiliary	24 / 48 / 110 / 220 /240 / 380 / 415 / 440V AC / 24 V DC ±10%	110 / 220 / 240 / 380 / 415 / 440 V AC / 24 V DC ±10%
Output Contacts	1 CO	100
Trip Setting		
Thermistor Sensor Healthy	40 ohm - 4 K ohm	
Thermistor Sensor Trip	4.1 K ohm - 5.5 K ohm	
Thermistor Sensor Open	5.6 K ohm & above	
Thermistor Sensor Short	40 ohm & below	
Trip time delay	Less than 2 secs.	
Resetting Mode	Auto / Manual (optional)	
Dimensions (mm)		
Overall (L x W x D)	76 x 30.5 x 117.5	50 x 40 x 40
Mounting (L x W)	68 mm centre to centre	8 pin plug-in

Wherever not specified Contact Rating: 5A @ 230 V AC (resistive)

300 gms.





# **PTC**



PTC Thermistors are semi conductor sensors. These have typical characteristics that change their resistance instantly at a specified pre-defined response temperature (NRT). As soon as the surrounding temperature of PTC reaches it's NRT value the body resistance of PTC Thermistor rises sharply from 200 / 250 Ohms to more than 5000 Ohms.

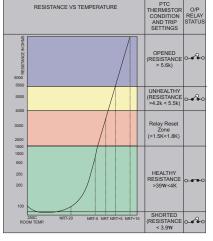
The PTC Thermistors are embedded in the overhang location of the motor windings.

The NRT value of PTC is selected according to the Insulation Class of the copper windings of motor or transformers.

### Selection Chart for NRT of PTC Thermistors.

NRT	Class	Cable Colour
0C	of Ins.	Code
70	-	White - Brown
80	-	White - White
90	-	Green - Green
100	Α	Red - Red
110	-	Brown - Brown
120	Е	Grey - Grey
130	В	Blue - Blue
140	-	White - Blue
150	F	Black - Black
160	_	Blue - Red
170	Н	White - Green
180	С	White - Red
190	-	Orange - Black

### TYPICAL CHARACTERISTICS OF PTC (THERMISTOR)



#### **Ordering Information**

- Product Family Name
- Model Name
- 3 Phase System Voltage
- Auxiliary Supply Voltage
- Single or Triple PTC
- Class of Insulation of windings
- Temperature of PTC
- Application