




# PTC Thermistor Relay Series PD 225

- Monitors and Protects Motors with Integrated PTC Resistor sensors
- Protection against Over heating for Heavy Duty Load, High Switching Frequency, High operating temperature & Insufficient cooling conditions
- Wide Auxiliary Supply Voltage: 24 VAC/DC, 110 - 240 VAC & 220 - 415 VAC
- LED Indications for Healthy, Unhealthy, Sensor Open/Short conditions
- 1 C/O & 2 C/O Configuration
- Reset Options: Auto, Manual and Remote



Cat. No.		MJ81BK	MJ93BK	MJA3BK
<b>Parameters</b>				
Supply Voltage (φ)		110 - 240 VAC	220 - 440 VAC	24 VAC/DC
Supply Variation		-20% to + 10% (of φ)		
Frequency		50/60 Hz		
Power Consumption (Max.)		3 VA		2 VA
Trip Settings	Trip Level	3.6 kΩ, (± 5%)		
	Reset Level	1.6 kΩ, (± 5%)		
	Sensor Short	< 20Ω, (± 4Ω)		
	Hysteresis	20Ω, (± 4Ω)		
	Sensor Open	> 10 kΩ, (± 5%)		
Max Cold Res(Ω) of Sensor Chain		< 1.5 kΩ		
Reset Mode		Auto, Manual, Remote		
Repeat Accuracy		1%		
Time Delay	ON Delay	500 ms		
	OFF Delay	100 ms		
	Reset Time	150 ms		
Output	Relay Output	1 C/O	2 C/O	2 C/O
	Contact Rating	6A (Resistive) @ 250 VAC / 28 VDC		
	Electrical Life	1 x 10 <sup>7</sup>		
	Mechanical Life	3 x 10 <sup>6</sup>		
Utilization Category	AC - 15	Rated Voltage (Ue): 120/240 V, Rated Current (Ie): 3.0/1.5 A		
	DC - 13	Rated Voltage (Ue): 24/125/250 V, Rated Current (Ie): 2.0/0.22/0.1 A		
LED Indications	Green LED	Continuous ON → Healthy	Flashing → Sensor Open	
	Red LED	Continuous ON → Relay ON	Flashing → Sensor Short	
	All LEDs OFF	Power Supply Fail		
Operating Temperature		- 15° C to +60° C		
Storage Temperature		- 25° C to +80° C		
Humidity (Non Condensing)		95% (Rh)		
Enclosure		Flame Retardant UL94-V0		
Dimension (W x H x D) (in mm)		22.5 X 83 X 100.5		
Weight (unpacked)		120 g		
Mounting		Base / DIN rail		
Certification		  		
Degree of Protection		IP 20 for Terminals, IP 40 for Enclosure		
<b>EMI / EMC</b>				
Harmonic Current Emissions		IEC 61000-3-2	Ed. 3.0 (2005-11) Class A	
ESD		IEC 61000-4-2	Ed. 1.2 (2001-04) Level II	
Radiated Susceptibility		IEC 61000-4-3	Ed. 3.0 (2006-02) Level III	
Electrical Fast Transients		IEC 61000-4-4	Ed. 2.0 (2004-07) Level IV	
Surges		IEC 61000-4-5	Ed. 2.0 (2005-11) Level IV	
Conducted Susceptibility		IEC 61000-4-6	Ed. 2.2 (2006-05) Level III	
Voltage Dips & Interruptions (AC)		IEC 61000-4-11	Ed. 2.0 (2004-03) All 7 Levels	
Voltage Dips & Interruptions (DC)		IEC 61000-4-29	Ed. 2.0 (2004-03) All 5 Levels	
Conducted Emission		CISPR 14-1	Ed. 5.0 (2005-11) Class B	
Radiated Emission		CISPR 14-1	Ed. 5.0 (2005-11) Class B	
<b>Environmental</b>				
Cold Heat		IEC 60068-2-1	Ed. 6.0 (2007-03)	
Dry Heat		IEC 60068-2-2	Ed. 5.0 (2007-07)	
Vibration		IEC 60068-2-6	Ed. 7.0 (2007-12) 5g	
Repetitive Shock		IEC 60068-2-27	Ed. 4.0 (2008-02) 40g, 6ms	
Non-Repetitive Shock		IEC 60068-2-27	Ed. 4.0 (2008-02) 30g, 15ms	

## ORDERING INFORMATION

Cat. No.	Description
MJ81BK	110 - 240 VAC, PTC Thermistor Relay, 1 C/O
MJ91BK	220 - 440 VAC, PTC Thermistor Relay, 1 C/O
MJ83BK	110 - 240 VAC, PTC Thermistor Relay, 2 C/O
MJ93BK	220 - 440 VAC, PTC Thermistor Relay, 2 C/O
MJA3BK	24 VAC/DC, PTC Thermistor Relay, 2 C/O

Codigo NDU 0506051GI

UL Approval not applicable for Cat Nos. MJ83BK & MJ93BK.