

PROGRAMMABLE TEMPERATURE INDICATOR

DPM 4003



The Model 4003, 4 digit (9999) LED Universal Temperature Indicator / Controller can be applied in any application where temperature needs to be displayed and controlled. This DIN 48x96, high accuracy, high-quality panel meter is designed for accurate measurement & display (in °C, °F or K) of temperature from thermocouples (selectable from the front pushbuttons) of Type J, K, N, R, S, T, W5 and from RTDs such as PT100. Ni100 RTD is available as an option as well as other thermocouple types. The thermocouple and RTD signals are accurately linearised by the internal microprocessor. Options include programmable analogue retransmission, single, dual, three & four alarms, peak hold, RS232/485 output. The retransmission is rangeable from the front pushbuttons. The instrument is designed to comply with European CE standards EN 50081 and EN 50082.

• FEATURES

DIN 48 x 96 enclosure
 Touch button programmable
 Programmable for °C, °F, and K, 4 digit display.
 Programmable for TC of Type J, K, N, S, R, T, W5.
 Programmable for RTDs such as PT100.
 Bright Red LED display (optional green)
 Low cost - high performance design
 Retransmission option with programmable zero & span
 RS232 & RS485 bus communication option.

• OPTIONS

3001-P	Dual setpoints / alarms (P-MOS solid state)	3009	Parallel BCD output
3001-M	Dual setpoints / alarms (electromechanical)	3010	95-265V AC/DC power supply
3002	RS 485 output	3012	Peak hold
3003	0 / 4 - 20 mA retransmission	3013	RS 232 output
3004-P	1 setpoint / alarm (P-MOS solid state)	3017	3 setpoints / alarms
3004-M	1 setpoint / alarm (electromechanical)	3018	4 setpoints / alarms
3006	Isolated input/output (order with 3002/3/7/13)	3019	Green display
3007	5 / 10V retransmission		
3008	Galvanic isolated DC supply (12V / 24V)		

• INPUT RANGES & ELECTRICAL SPECIFICATIONS

The probes are linearised in the following temp. ranges:

Type J : -25°C to +900°C	Accuracy : $\pm 0.3^{\circ}\text{C} \pm 1$ count
Type K : -25°C to +1275°C	Cold junction accuracy : $\pm 0.5^{\circ}\text{C}$ after 30 minutes
Type N : +200°C to +1200°C	Warm up time : 30 minutes
Type S : +625°C to +1750°C	Temperature coeff. : ± 30 ppm / $^{\circ}\text{C}$ typical
Type R : +625°C to +1750°C	Conversion time : 1 second
Type T- : -235°C to +25°C	Operating temperature range : 0 to +50°C
Type T+ : -35.0°C to 330.0°C	Storage temperature range : -40 to +85°C
Type W5 : +1150°C to +2050°C	Data retention : 10 years minimum
PT100 : -165.0°C to +600.0°C (max 999.9°F)	European CE standard : CE to EN50081 & EN50082
Ni100 (option) : -60.0°C to +235.0°C	RF immunity : Self recovery
TC resolution : 1°C (Type T+ is 0.1°C)	Alarms, electromechanical : 250V AC, 30V DC, 2A, PF=1
RTD resolution : 0.1°C	Alarms, photomos : 400 V AC/DC, 0.5A, PF=1
	Retransmission accuracy : 0.1% (over full temp. range)

• PROGRAMMABLE SETTINGS

Display : $^{\circ}\text{C}$, $^{\circ}\text{F}$, or Kelvin	*Retransmission zero : -1999 to 9999
Broken TC : Selectable high or low	*Retransmission span : -1999 to 9999
Broken RTD : Selectable high or low	*Alarm values : -1999 to 9999
Other thermocouples and RTDs are available. Please consult the factory for special requirements.	*Alarm hysteresis : 0 to 9999 (default 1)
	*Alarm delay : 0 to 255 seconds (default 0)
	*Alarm relay settings : Selectable HIGH or LOW alarm
	*Alarm relay state : Selectable normally open or normally closed
* indicates option	*RS485 address : 1 to 127
	*RS232 / RS485 baud : 2400, 4800, 9600, 19200

NOTE The DPM is normally supplied factory set as per customer's requirements, and does therefore not need programming upon delivery.

• ORDERING EXAMPLE

Option modules (see page 1)

MODEL 4003 - 3001P - 3003
Input : PT100
Aux Supply : 230 VAC
Retransmission : 4 - 20 mA = 0 - 300.0 $^{\circ}\text{C}$
Setpoints : 2 setpoints with solid state relays

• POWER SUPPLY

115 / 230 VAC $\pm 10\%$ (standard), 3.5VA, 50/60Hz, link selectable
12VDC or 24VDC non-isolated on request, 5VA
12VDC isolated switch mode power supply option (Option 3008-12), 5VA
24VDC isolated switch mode power supply option (Option 3008-24), 5VA
95V-265V AC/DC switch mode power supply option (Option 3010), 5VA

GUARANTEE

This product is guaranteed against faulty workmanship or defective material, for a period of 3 (three) years from date of delivery by INSTROTECH.

INSTROTECH undertakes to replace without charge all defective equipment which is returned to it (transportation costs prepaid) during the period of guarantee, provided there is no evidence that the equipment has been abused or mishandled in any way.

INSTROTECH reserves the right to alter any specification without notice.

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