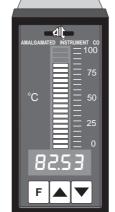
# **Intelligent PM4 Monitors** Models PM4-RT3 and PM4-RX3

Measures temperature from 100 RTD (Pt100), 1000 RTD (Pt1000) or LM335 & AD590 solid state sensors

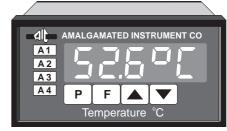


Wide choice of displays available



20 segment LED bar graph plus 7.6mm LED 4 digit display with keypad





14.2mm LED 5 digit plus keypad and alarm LEDs



AMALGAMATED INSTRUMENT CO

12.7mm LCD 4 digit

## **Description**

The PM4 range of microprocessor based industrial monitors utilises the latest design in computer technology. The instruments can function as an accurate monitor, alarm, controller, signal conditioner or transmitter and are designed to meet a wide variation in user requirements. The PM4-RT accepts its input from  $100\dot{\Omega}$  RTDs (Pt100),  $1000\Omega$ RTDs (Pt1000), LM335 or AD590 temperature transducers. The instruments feature flexible pushbutton calibration and programming and may be scaled to read the temperature in ℃ or F with a resolution of 0.01°0.1° or 1°. The display may be programmed to show units **°£** or **°F** e.g. **522°£**.

The programmable digital filter improves stability by smoothing out short term interference. Each instrument is supplied with a single relay output as standard, relays are configurable as alarm or PI control (time division or frequency). Optional outputs include additional relays, isolated outputs, analog (4-20mA, 0-1V, 0-10V configurable as retransmission or PI control), serial (RS232 or RS485 - choice of ASCII or Modbus RTU protocols) or digital (BCD or binary).

An external input is configurable to perform one of various functions e.g. peak hold, peak and valley memory, two level brightness switching, scale switching, setpoint only access or security lock out. Electrical isolation between power supply, input signal and retransmission eliminates grounding and common mode voltage problems. This isolation feature makes the PM4 ideal for interfacing to PLCs, computers and other data acquisition equipment.

## **Features**

- Pushbutton calibration and setup
- Displays temperature in <sup>o</sup>C or <sup>o</sup>F
- Isolation between input signal/output/power supply
- 240V, 110V, 24V AC or wide range 9 to 55V DC operation (factory configured)
- Programmable digital filter
- 2 year guarantee
- Relay output (5A at 240VAC) configurable as alarm or PI control (time or frequency)
- Rugged construction
- Remote input to perform special functions e.g. max/min, peak/display hold,two level brightness switching, scale switching, setpoint only access or security lockout

# **Options**

- Up to six additional relay outputs (5A), alarm or PI control operation
- Optically isolated Analog output 4-20mA, 0-1V and 0-10V (retransmission or PI control)
- RS232/RS485 serial output (choice of ASCII or Modbus RTU protocols)
- Binary or BCD retransmission
- Other models available to measure: temperature (thermocouples), weight, frequency (rate), 4-20mA/DCvolts, ACVolts/amps, pulse totaliser, conductivity, pH, BCD, RS232, RS485 etc. PM4RTFR-1.0-1

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### **SPECIFICATIONS**

Specifications are subject to change without notice

#### **TECHNICAL SPECIFICATIONS**

Input types:  $100\Omega$  RTD,  $1000\Omega$  RTD

LM335, AD590 (semiconductor)  $100\Omega$  (Pt100) = -180 to  $650^{\circ}$ C Ranges:

 $1000\Omega$  (Pt1000) = -180 to 550°C

LM335 & AD59 $\hat{0}$  = -50 to 150 $^{\circ}$ C

ADC resolution: 1 in 20.000

Accuracy: 0.1% when calibrated

Sample rate: 4 per sec ADC conversion: Dual slope ADC Microprocessor: MC68H11 CMOS

Ambient temp: LED models -10 to 60°C

LCD models -10 to 50°C

Humidity: 5 to 95% non condensing

Display types: LED models:

4 digit 20mm,

5 digit 14.2mm plus status LED's

and 4 way keypad.

LED bar graph 20 segment bar plus 4 digit 7.6mm plus 3 way

kevpad

LĆD models: 4 digit 12.7mm 6 digit 12.7mm

Power supply: AC 240V, 110V, 24V AC 50/60Hz

or wide range 9 to 55V DC

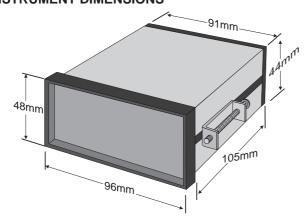
(factory configured) ÀC supply 4VA max.

Power usage: DC supply, consult supplier

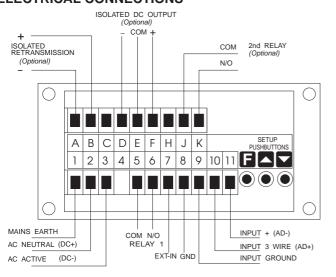
(depends on display type &

options)

#### **INSTRUMENT DIMENSIONS**



#### **ELECTRICAL CONNECTIONS**



Output 1 x relay, form, A rated 5A

resistive (standard):

Relay action: Programmable N.O. or N.C.

#### **OUTPUT OPTIONS**

Extra relays: Up to 6 extra relays may be fitted.

Same specs as rélay 1

(form C<sup>'</sup>optional)

Retransmission: Analog 4 to 20mA, 0 to 1V

and 0 to 10V link selectable Serial RS232 or RS485 (ASCII or

Modbus RTU protocols) **Digital** BCD/Binary

#### PHYSICAL CHARACTERISTICS

Bezel size: DIN 48mm x 96mm x 10mm Case size: 44mm x 91mm x 120mm behind

face of panel

Panel cut out: 45mm x 92mm +1mm &- 0mm

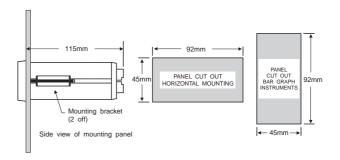
Connections: Plug in screw terminals

(max 2.5mm<sup>2</sup> wire)

400 gms basic model, 450 gms with option card

#### PANEL MOUNT INSTALLATION

Weight:



#### **ORDER CODE** PM4-RT- \_\_\_\_\_ - \_\_\_ - \_\_\_\_ \_\_\_ POWER SUPPLY PM4-RT-7-00-000 1 1 0 9 to 55 VDC DISPLAY TYPE PM4-RT- | | | - | | | - | | | | 4 DIGIT LED . . . 5 DIGIT LED + KEYPAD & ALARM LED's. . . . . . BARGRAPH + 4 DIGIT DISPLAY . . . . . . . . . . BARGRAPH + 4 DIGIT DISPLAY + KEYPAD . . . . B P 4 C 6 DIGIT LCD . . . . RETRANSMISSION OUTPUT PM4-RT- | | | - | | - | | | | | ANALOG (4-20mA, 0-1V, 0-10V selectable). . . . . EXTRA RELAY OUTPUTS PM4-RT- | | | - | | - | | | | | 1 EXTRA RELAY. . . . . . . . . . . . . . . . 3 EXTRA RELAYS..... 6 EXTRA RELAYS.....