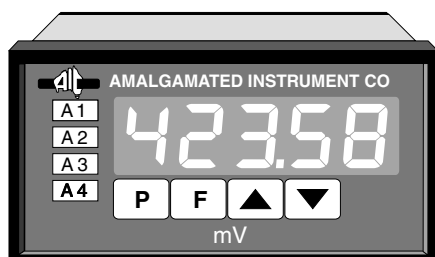


Intelligent PM4 Monitors

Model PM4-OR

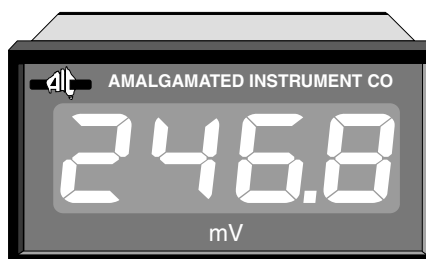
Redox (ORP) measurement



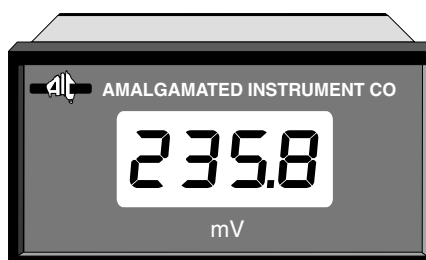
14.2mm LED 5 digit plus keypad and annunciator LEDs



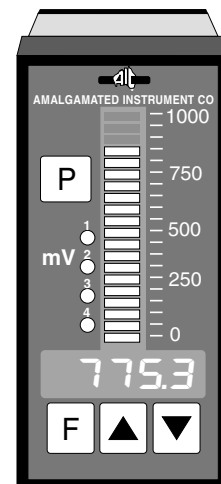
pH MODEL ALSO AVAILABLE



20mm LED 4 digit



12.7mm LCD 4 digit



20 segment LED bar graph plus 7.6mm LED 5 digit display with keypad

Description

The microprocessor based PM4 series Redox monitor can function as monitor/controller/transmitter /computer interface. The PM4 Process Monitors are designed to meet a wide variation in user requirements.

Model PM4-OR accepts an input from any conventional platinum Redox electrode. The instruments feature flexible pushbutton calibration and programming. The PM4's uncalibrate mode sets the calibration back to that of an ideal electrode. This feature is useful when the electrode is replaced and "on the spot" recalibration is inconvenient.

The programmable digital filter improves stability by smoothing out short term interference. Each instrument is supplied with a single control/alarm relay as standard - configurable as an alarm relay or PI control output (time duration or frequency).

A remote input is configurable to perform one of various functions e.g. display hold, maximum memory, minimum memory, display brightness switching, easy access to setpoints, setpoint only access and 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.

Optional outputs include extra relays - configurable as alarm, trailing or PI control (time duration or frequency control output) - isolated DC voltage (to power external transmitter/sensor) and isolated analog 4-20mA, 0-1V, 0-10V output (single or dual channel) or serial RS232/RS485 with choice of ASCII or Modbus RTU protocol.

Features

- Pushbutton calibration and setup
- Isolation between input signal/output/power supply
- 240V, 110V, 32V, 24V AC, 12 to 48V DC or 50 to 110 V DC operation (factory configured)
- Programmable digital filter
- Computer tested
- Alarm/control relay output (5A)
- Rugged construction
- Remote input for "grab sample" calibration
- 2 year guarantee

Options

- Extra relay outputs (5A) configurable as alarm, trailing or PI control
- Optically isolated analog output 4-20mA, 0-1V and 0-10V single or dual channel. First channel configurable as retransmission or PI control
- RS232/RS485 serial output, choice of ASCII or Modbus RTU protocols
- Isolated DC output to power transmitters etc.
- Other models available to measure: pH, conductivity, temperature, weight, frequency(rate), 4-20mA/DC volts, AC volts/amps, pulse totaliser, conductivity, BCD, RS232, RS485 etc.

SPECIFICATIONS

Specifications are subject to change without notice

TECHNICAL SPECIFICATIONS

Redox Input: Standard platinum Redox electrode (-2V to +2V nominal)

Temperature input: 100Ω & 1000Ω RTD (for indication only) or LM335 sensor

Input resistance: Greater than 10¹⁰Ω

Accuracy: 0.2% of full scale (OR)

Sample rate: 1 per sec (approx.)

ADC conversion: 10 bit successive approximation

Microprocessor: MC68HC11 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 LEDs and 4 way keypad. 6 digit 14.2mm plus 4 way keypad. LED bar graph 20 segment bar 5 digit 7.6mm plus 4 way keypad. **LCD model:** 4 digit 12.7mm,

Power supply: AC 240V, 110V, 32V, 24V 12 to 48 V DC or 50 to 110 V DC supply (factory configured)

Power usage: AC supply 4 VA max, DC supply, consult supplier (depends on display type & options)

Output (standard): 1 x relay, form A rated 5A resistive

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

OUTPUT OPTIONS

Extra relays: Same specs as relay 1 (form C optional)

Retransmission: **Analog** 4 to 20mA, 0 to 1V and 0 to 10V link selectable (single or dual channel) **Serial** RS232 or RS485, choice of ASCII or Modbus RTU protocols

DC voltage out: Isolated 24V (±12V), 20mA

PHYSICAL CHARACTERISTICS

Bezel size: DIN 48mm x 96mm x 10mm

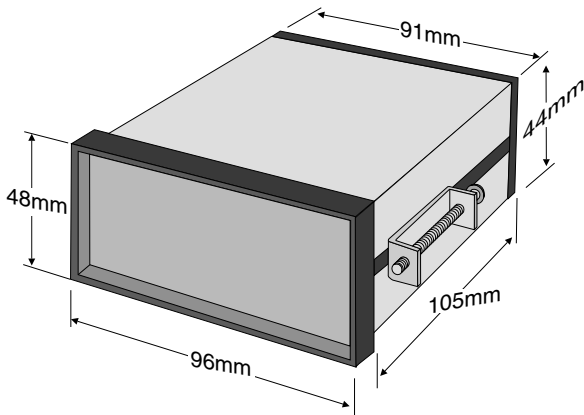
Case size: 44mm x 91mm x 120mm behind face of panel

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

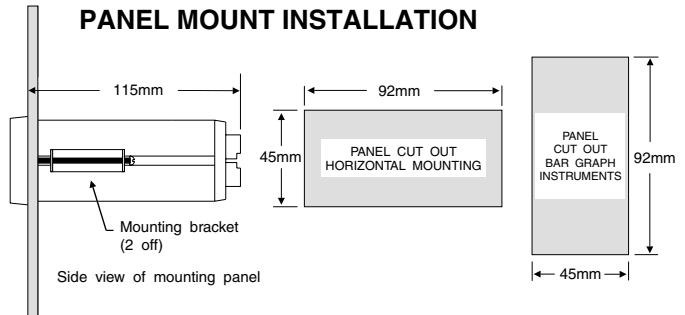
Connections: Plug in screw terminals (max 2.5mm² wire)

Weight: 400 gms basic model, 450 gms with option card

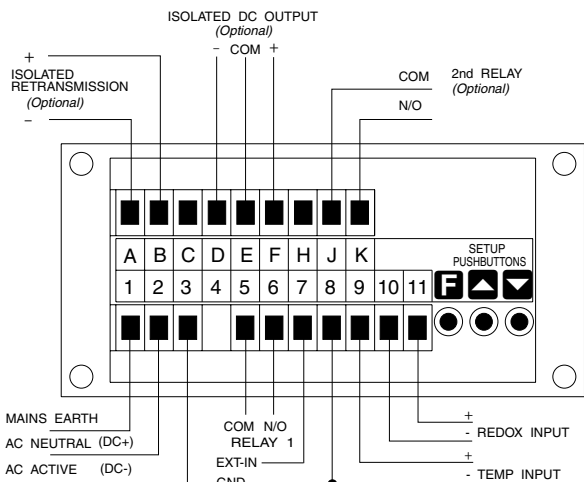
INSTRUMENT DIMENSIONS



PANEL MOUNT INSTALLATION



ELECTRICAL CONNECTIONS



ORDER CODE

PM4-OR- [] [] [] - [] [] [] - [] [] [] []

POWER SUPPLY

PM4-OR- [] [] [] - [] [] - [] [] [] []

240 VAC	[2] [4] [0]
110 VAC	[1] [1] [0]
32 VAC	[3] [2]
24 VAC	[2] [4]
12 to 48 VDC	[D] [C]
50 to 110 VDC	[D] [C] [H]

DISPLAY TYPE

PM4-OR- [] [] [] - [] [] [] - [] [] [] []

4 DIGIT LED	[4] [E]
5 DIGIT LED + KEYPAD & ALARM LEDs	[5] [E]
6 DIGIT LED + KEYPAD	[6] [E]
BAR GRAPH + 5 DIGIT DISPLAY + KEYPAD	[5] [B] [P]
4 DIGIT LCD	[4] [C]

RETRANSMISSION OUTPUT

PM4-OR- [] [] [] - [] [] - [] [] [] []

ANALOG (4-20mA, 0-1V, 0-10V selectable)	[A]
DUAL ANALOG (4-20mA, 0-1V, 0-10V selectable)	[A] [A]
RS232	[2]
RS485	[4]

EXTRA RELAY OUTPUTS

PM4-OR- [] [] [] - [] [] - [] [] [] []

1 EXTRA RELAY	[R]
3 EXTRA RELAYS	[R] [R] [R]
6 EXTRA RELAYS	[R] [6]

DC VOLTAGE OUTPUT (to power external sensors/transmitters etc.)

PM4-OR- [] [] [] - [] [] - [] [] [] []

24V (can be connected as ±12V)	[1] [2]
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