

Panel Mount Instruments

PM4-OR Redox (ORP) Monitor



4 digit LED 20mm digit height



5 digit LED 14.2mm digit height



4 digit LCD 12.7mm digit height

Description

The intelligent, microprocessor based, panel mount PM4-OR monitor can function as an indicator/controller/transmitter/ computer interface.

The PM4-OR accepts its input from any conventional ORP electrode and features flexible pushbutton calibration and programming. The PM4's "uncalibrate" function 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.

A versatile input which accepts any one of three standard temperature sensors is provided for automatic temperature compensation. The temperature can also be displayed if required.

The programmable digital filter improves stability by smoothing out short term interference. Each instrument is supplied with a single control/alarm relay as standard.

Optional outputs include additional relays, isolated single or dual channel analog output (4-20mA, 0-1VDC, 0-10VDC), serial communications RS232 or RS485 - choice of ASCII or Modbus RTU protocols). The optional relays can be programmed for setpoint or trailing operation.

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 signals and retransmission eliminates grounding and common mode voltage problems.

Features

- Selectable Redox (ORP) or temperature display
- Pushbutton calibration and setup
- Automatic temperature compensation
- High brightness LED displays
- Display flashing over/under range warning
- 240V, 110V, 24VAC, 12-48VDC (factory configured) - for other variations see specifications (over)
- Programmable digital filter, improves stability
- Alarm/control relay output
- Remote input to perform special functions
- 2 year guarantee

Sensors

A wide variety of pH sensors is available to suit most applications - visit [pH and ORP sensors](#)

Other display examples



Circular graph and 5 digit display



20 segment bargraph and 5 digit display

PM4OR-3.5-0

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Specifications

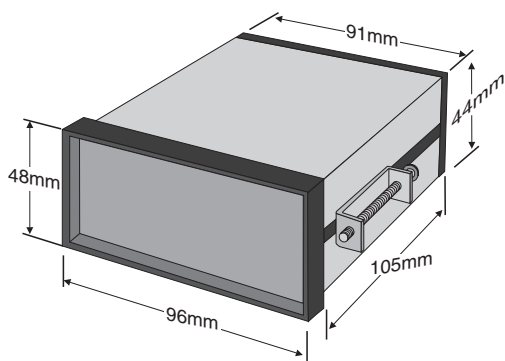
Technical Specifications

Input types:	Standard platinum Redox (ORP) electrode (-2V to +2V nom.)
Input resistance:	Greater than $10^{10}\Omega$
Temperature Input:	100 Ω RTD, 1000 Ω RTD, LM335 or manual
Accuracy:	0.2% of full scale (ORP)
Sample Rate:	Approx. 1 sample per second
Microprocessor:	MC68HC11 CMOS
Ambient temp:	LED models -10°C to 60°C LCD models -10°C to 50°C
Humidity:	5% to 95% non condensing
Display types:	LED models: 4 digit 20mm, 5 digit 14.2mm plus status LEDs + 4 way keypad. LCD models: 4 digit 12.7mm
Power supply:	240, 110, 32, 24VAC 50/60Hz, 12 to 48VDC or 50 to 110VDC (factory configured)
Power usage:	AC supply 4 VA max, DC supply, consult supplier
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 or 0 to 10V link selectable (single or dual channel versions) Serial RS232 or RS485, choice of ASCII or Modbus RTU protocols Digital Binary or BCD
DC voltage out:	Isolated 24V ($\pm 12V$), 20mA

Physical Characteristics

Bezel size:	DIN 48mm x 96mm x 10mm
Case size:	44mm x 91mm x 115mm behind face of panel
Panel cut out:	45mm x 92mm (+1mm & -0mm)
Connections:	Plug in screw terminals (max 2.5mm ² wire)
Weight:	400g basic model, 450g with option card

PM4-OR case dimensions



PM4-OR Order Codes

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

Power Supplies

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

240VAC	[240]
110VAC	[110]
32VAC	[32]
24VAC	[24]
12 to 48VDC	[DC]
50 to 110VDC	[DCH]

Display Type

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

4 DIGIT LED	[4E]
5 DIGIT LED + KEYPAD & ALARM LEDs	[5E]
BARGRAPH + 5 DIGIT DISPLAY + KEYPAD	[5BP]
CIRCULAR BARGRAPH + 5 DIGIT DISPLAY + KEYPAD	[5GP]
4 DIGIT LCD	[4C]

Options

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

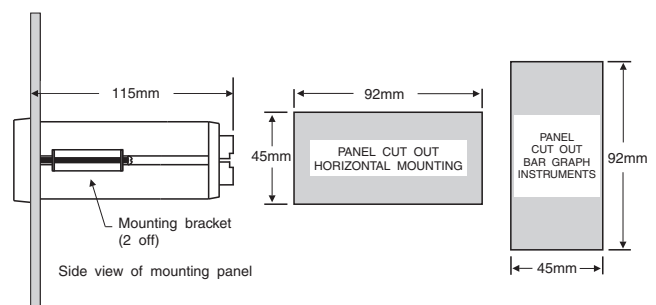
ANALOG (4-20mA, 0-1V or 0-10V selectable)	[A]
DUAL ANALOG (4-20mA, 0-1V or 0-10V selectable)	[AA]
RS232	[2]
RS485	[4]
BCD/Binary NPN	[DN]
BCD/Binary PNP	[DP]
DC VOLTAGE OUTPUT 24V ($\pm 12V$)	[12]
1 EXTRA RELAY	[R]
3 EXTRA RELAYS	[RRR]
6 EXTRA RELAYS	[R6]

The valid optional output combinations for PM4-OR models are: -R12, -AR, -ARRR, -AAR, -A12, -AR12, -AR6, -A2, -A2R, -A4, -A4R, -2R, -212, -2R12, -4R, -412, -4R12, -DNR, -DN12, -DNR12, -DPR, -DP12, -DPR12

PM4-OR Accessories

Description	Model No.
IP65 access cover	COVER-IP65
Wall mount enclosure	ENC-PM1-01
Wall mount encl. with IP65 cover	ENC-IP65-PM1-01
Surface mount kit	PM4-OPT-SMKIT
Portable/bench enclosure AC	ENC-PM-AC
Portable/bench enclosure DC	ENC-PM-DC

PM4-OR panel mounting details



Wiring diagrams and full operations manual are available from www.aicpl.com.au/pdf/pm4phman.pdf.