

Panel Mount Instruments PM4-PH pH or ORP Monitor



With automatic temperature compensation and temperature display



4 digit LED 20mm digit height



5 digit LED 14.2mm digit height



4 digit LCD 12.7mm digit height



Circular graph
and 5 digit display



20 segment
bargraph and
5 digit display

Features

- Selectable pH or temperature display
- Can be configured for pH or ORP (Redox) sensor
- Pushbutton calibration and setup
- Two point, offset or grab sample calibration
- Automatic temperature compensation
- High brightness LED displays
- Display flashing over/under range warning
- 240V, 110V, 24VAC, 12-48VDC supply (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

Optional outputs

- Serial output RS232 or RS485 ASCII or Modbus RTU
- Analog output single or dual versions. One output can be configured for either retransmission or PI control
- 1, 3 or 6 extra relay outputs
- Inbuilt or externally mounted 2MByte data logger with serial communications and Windows compatible software

Sensors

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

Other pH/ORP(Redox) and related products

See also models:

RM4-PH [DIN rail mount](#)

TP4-PH [dual input wall mount IP65](#)

TH3-PH [pH transmitters](#)

[Datalogger](#)

[Download software](#)

PM4PH-4.3-0

Specifications

Technical Specifications

Input types: pH - any electrode where $E_0=7$ or standard platinum Redox (ORP) electrode (-2V to +2V nom.)

Input resistance: Greater than $10^{10}\Omega$

Temperature Input: 100 Ω 1000 Ω RTD, LM335, 3k Ω Balco thermistor or manual

Measuring range: pH 0.00 to 14.00
Temperature -40 to 130°C

Accuracy: 0.2% of full scale (pH)

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 14mm, status LEDs, keypad.
LED bar graph 20 segment bar, 5 digit display, keypad
16 segment circular bargraph, 5 digit display, keypad
LCD models:
4 digit 12.7mm

Power supply: 240, 110, 32, 24VAC 50/60Hz,
12-48VDC or 50-110VDC
(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 - see order codes for full list

Extra relays: 1, 3 or 6 extra relays
Same specs as relay 1
(form C optional)

Retransmission: Analog 4-20mA, 0-1V or 0-10V
(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

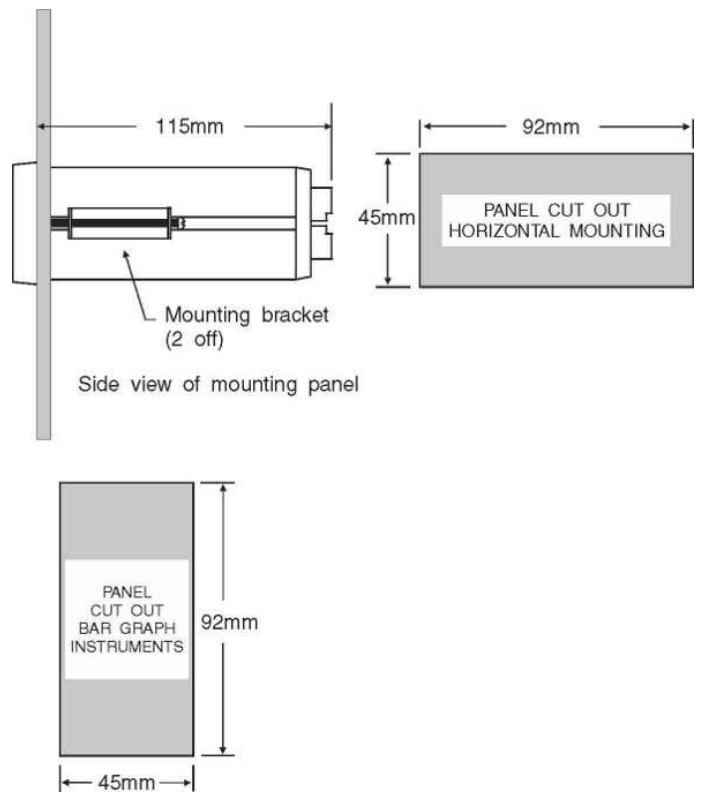
Case size: 44mm x 91mm x 115mm
behind face of panel

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

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

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

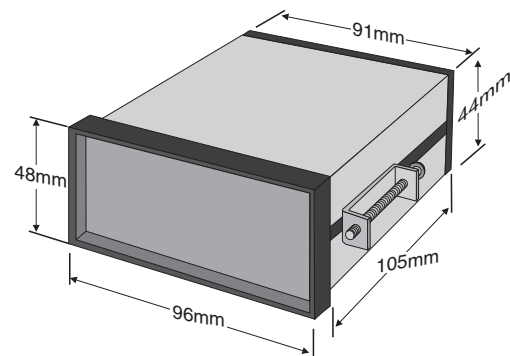
PM4-PH panel mounting details



PM4-PH 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-PH case dimensions



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

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PM4-PH order codes

The last section is for optional outputs, if required. (Note: only one of the optional outputs below can be fitted).

PM4-PH-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>
	↑		↑		↑
	240	-----	240VAC		
	110	-----	110VAC		
	32	-----	32VAC		
	24	-----	24VAC		
	DC	-----	12-48VDC isolated		
	DCH	-----	50-110VDC isolated		
	4E	-----	4 Digit 20mm red led		
	5E	-----	5 digit 14mm red led with front pushbuttons & annunciators		
	6E	-----	6 digit 14mm red led with front pushbuttons		
	5BP	-----	Bargraph with 7.6mm red led and front pushbuttons		
	5GP	-----	Circular bargraph with 7.6mm red led and front pushbuttons		
	4C	-----	4 digit 12.7mm lcd		
	4CG	-----	4 digit 12.7mm lcd with backlight		
	6C	-----	6 digit 12.7mm lcd		
	R	-----	2nd setpoint relay		
	R12	-----	2nd setpoint relay and 24V (+/- 12V) isolated transmitter supply		
	RRR	-----	2nd, 3rd and 4th setpoint relays		
	R6	-----	2nd to 7th setpoint relays (i.e. 6 extra relays)		
	12	-----	24V (+/- 12V) isolated transmitter supply		
	A	-----	Analog retransmission (isolated)		
	AR	-----	Analog retransmission (isolated) and 2nd setpoint relay		
	ARRR	-----	Analog retransmission (isolated) and 2nd, 3rd and 4th setpoint relays		
	AR12	-----	Analog retransmission (isolated), 2nd relay and 24V (+/- 12V) isolated transmitter supply		
	A12	-----	Analog retransmission (isolated) and 24V (+/- 12V) isolated transmitter supply		
	AR6	-----	Analog retransmission (isolated) and 2nd to 7th setpoint relays		
	AA	-----	Dual analog retransmission (isolated)		
	AAR	-----	Dual analog retransmission (isolated) and 2nd setpoint relay		
	A2	-----	Analog retransmission, 4-20mA only (isolated) and RS232 communications (isolated)		
	A2R	-----	Analog retransmission, 4-20mA only (isolated), RS232 communications (isolated) and second relay		
	A4	-----	Analog retransmission, 4-20mA only (isolated) and RS485 communications (isolated)		
	A4R	-----	Analog retransmission, 4-20mA only (isolated), RS485 communications (isolated) and second relay		
	2	-----	RS232 communications (isolated)		
	2R	-----	RS232 communications (isolated) and 2nd setpoint relay		
	2R12	-----	RS232 communications (isolated), 2nd setpoint relay and 24V (+/- 12V) isolated transmitter supply		
	4	-----	RS485 communications (isolated)		
	4R	-----	RS485 communications (isolated) and 2nd setpoint relay		
	4R12	-----	RS485 communications (isolated), 2nd setpoint relay and 24V (+/- 12V) isolated transmitter supply		
	DN	-----	Digital NPN 16 bit Binary/BCD retransmission		
	DNR	-----	Digital NPN 16 bit Binary/BCD retransmission and 2nd relay		
	DN12	-----	Digital NPN 16 bit Binary/BCD retransmission and 24V (+/- 12V) isolated transmitter supply		
	DNR12	-----	Digital NPN 16 bit Binary/BCD retransmission, 2nd relay and 24V (+/- 12V) isolated transmitter supply		
	DP	-----	Digital PNP 16 bit Binary/BCD retransmission		
	DPR	-----	Digital PNP 16 bit Binary/BCD retransmission and 2nd relay		
	DP12	-----	Digital PNP 16 bit Binary/BCD retransmission and 24V (+/- 12V) isolated transmitter supply		
	DPR12	-----	Digital PNP 16 bit Binary/BCD retransmission, 2nd relay and 24V (+/- 12V) isolated transmitter supply		
	ABP	-----	Analog retransmission bipolar output (-10V to +10VDC only)		

Applications/input types available with panel mount display models

- Analog input, process transmitters etc. $\pm 20\text{mA}$, 4-20mA or $\pm 2.5\text{VDC}$ or $\pm 25\text{VDC}$
- Pulse input, rate, total, count, grand total (encoders, switches, proximity sensors etc.)
- Rate, total from quadrature pulse input
- Liquid conductivity/resistivity/ppm
- pH/Redox (ORP)
- Loop powered displays
- AC current or AC voltage input
- Temperature - RTD, thermocouple, 4-20mA
- Weighing - 4 or 6 wire mV/V output loadcells
- Pressure measurement - 4 or 6 wire mV/V pressure sensors or 4-20mA analog transducers
- Liquid level measurement - 4 or 6 wire mV/V pressure sensors or 4-20mA analog transducers
- Serial input - RS232, RS485, Serial current loop for slave displays etc.
- Synchronous Serial Interface (SSI) for high accuracy position etc. measurement
- Binary, BCD or Gray Code input
- Real time clock with alarms
- Timer, elapsed time, stopwatch, run time etc.
- Auto/Manual station

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