

Intelligent PM4 monitors

Model PM4-WT



High Speed/High Precision load cell/pressure sensor monitor



4 digit LED 20mm digit height



4 digit LCD 12.7mm digit height



5 digit LED 14.2mm digit height



6 digit LED 14.2mm digit height



6 digit LCD 12.7mm digit height



Circular graph and 5 digit display



20 segment bargraph and 5 digit display

Features

- Accepts 4-arm or 6-arm mV/V output load cells/strain bridges or pressure sensors
- High Speed selectable 5 to 100 samples per second
- Selectable input range in steps 0.5mV/V to 100mV/V
- 5VDC or 10VDC excitation
- High precision up to 22 bits resolution
- Up to 0.005% of full scale
- Pushbutton calibration and setup
- Wide range of display options available
- Display reads in engineering units
- Stores calibration information for up to 2 load cells
- Auto zero facility
- Batching functions standard
- Electrical isolation between input signal/output/power supply
- 240V, 110V, 32V, 24VAC, 12 to 48VDC or 50 to 110VDC operation (factory configured)
- Programmable digital filter - improves stability by smoothing out short term interference
- Your choice of front panel measuring unit legend on the front panel e.g. "Tonnes", "kg" etc.
- 2 year manufacturing warranty
- Wide range of output options available including:
 - Single or dual analog retransmission
 - Additional setpoint relays
 - RS232 or RS485 serial communications (ASCII or Modbus RTU)
- Remote input for special functions including
 - display hold
 - peak hold
 - max/min memory
 - tare or zero
 - display brightness control

PM4-WT -4.2-0

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Specifications - subject to change without notice

Technical Specifications

Input types:	Ratiometric 4 or 6 arm strain bridge (6-arm not available on models with LCD or 4 digit LED displays)
Input sensitivity:	0.5mV/V to 100mV/V selectable
Excitation voltage:	5V or 10V link selectable
Bridge resistance:	80Ω to >2000Ω . If bridge resistance is less than 350Ω (nominal) use 5V excitation
ADC resolution:	1 in 20,000
ADC conversion:	Sigma Delta, up to 22 bits resolution
Accuracy:	Up to 0.005% of full scale (alarms & display) dependant on mV/V range and sample rate
Sample rate:	5 to 100 per second (selectable)
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, status LEDs, keypad. 6 digit 14.2mm, keypad. 20 segment LED bargraph, 5 digit display + 4 way keypad 16 segment circular "bargraph", 5 digit display + 4 way keypad LCD models: 4 digit or 6 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: LED displays 35mA at 24VDC, LCD displays 20mA at 24VDC Plus sensor current Figures are for instruments with no options fitted.
Output (standard):	1 x relay, form A, rated 5A resistive
Relay action:	Programmable N.O. or N.C.
Output Options - see order code for full list	
Extra relays:	1, 3 or 6 extra relays available
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

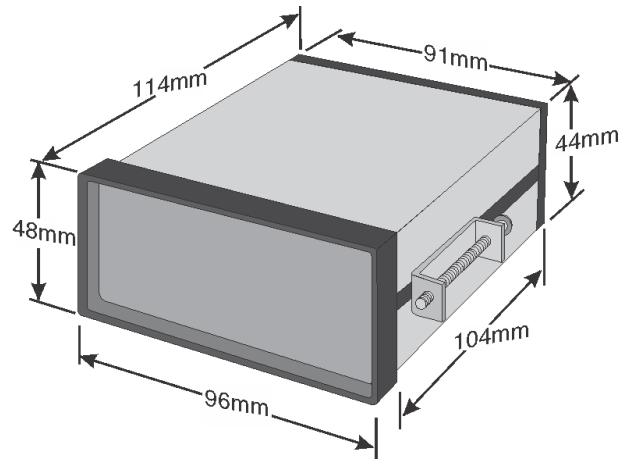
Physical Characteristics

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

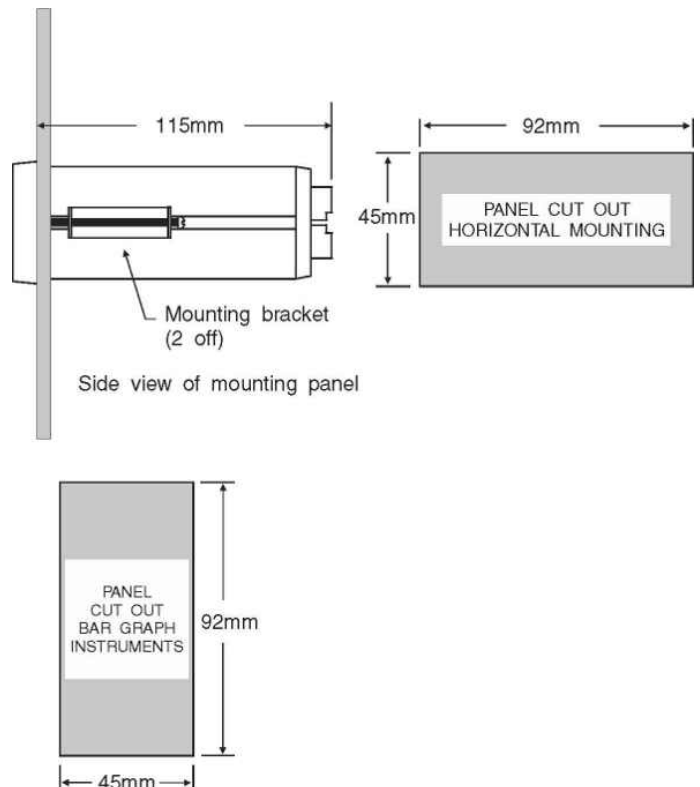
PM4-WT Accessories

Description	Model No.
IP67 access cover	COVER-PM-IP67
Wall mount enclosure	ENC-PM1-02
IP65 wall mount encl. with IP67 cover	ENC-PM1-02-IPCOV
Surface mount kit	PM4-OPT-SMKIT
Portable/bench enclosure AC	ENC-PM-AC
Portable/bench enclosure DC	ENC-PM-DC

Case dimensions



Panel mounting details



Wiring diagrams and full operations manual are available from www.aicpl.com.au/pdf/pm4wtman.pdf.

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PM4-WT order codes

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

PM4-WT-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>
	↑		↑		↑
	Power supply				
240	-----		-----		240VAC
110	-----		-----		110VAC
32	-----		-----		32VAC
24	-----		-----		24VAC
DC	-----		-----		12-48VDC isolated
DCH	-----		-----		50-110VDC isolated
	Display type				
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
	Optional outputs				
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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