

Panel Mount Instruments

PM4-IV for Analog Input



Scalable indication of $\pm 2\text{mA}$, $\pm 20\text{mA}$, $4\text{-}20\text{mA}$, $\pm 100\text{mV}$, $\pm 1\text{VDC}$, $\pm 10\text{VDC}$, $\pm 100\text{VDC}$ or Slidewire



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

- Can function as an indicator/controller/transmitter/computer or PLC interface
- Accepts $\pm 2\text{mA}$, $\pm 20\text{mA}$, $4\text{-}20\text{mA}$, $\pm 100\text{mV}$, $\pm 1\text{V}$, $\pm 10\text{V}$, $\pm 100\text{V}$ or slidewire (single input)
- Pushbutton calibration and setup
- Displays in engineering units
- Electrical isolation between input signal/output/power supply
- 240V, 110V, 24VAC, 12-48VDC supply voltage (factory configured) - for other variations see specifications (over)
- 18VDC regulated transmitter supply
- Square root extractor selectable
- Alarm/control relay output (5A) configurable as alarm or PI control
- 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. "Litres", "kg" etc.
- 2 year manufacturing warranty
- Wide range of options available including:
 - Single or dual analog retransmission
 - Additional setpoint relays
 - RS232 or RS485 serial communications (ASCII or Modbus RTU)
 - Isolated transmitter supply 24VDC ($\pm 12\text{VDC}$) 25mA max.
- Remote input for special functions including
 - display hold
 - peak hold
 - max/min memory
 - tare or zero
 - display brightness control

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Specifications

Technical Specifications

Input types:	Link selectable $\pm 2\text{mA}$, $\pm 20\text{mA}$, $4\text{-}20\text{mA}$ or DC Volts $\pm 100\text{mV}$, $\pm 1\text{V}$, $\pm 10\text{V}$, $\pm 100\text{V}$ or $0\text{-}1\text{k}\Omega$ to $0\text{-}1\text{M}\Omega$ 3 wire slidewire
Impedance:	135Ω nominal (mA ranges) $1\text{M}\Omega$ on DC voltage
ADC resolution:	1 in 20,000
Accuracy:	0.1% of FS when calibrated 0.3% on $\pm 100\text{mV}$ and $\pm 2\text{mA}$ ranges
Sample rate:	4 per sec
ADC conversion:	Dual slope ADC
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 and 4 way keypad. 6 digit 14mm and 4 way keypad 20 segment LED bar graph, 5 digit display and 4 way keypad 16 segment circular "bargraph", 5 digit display and 4 way keypad LCD models: 4 digit or 6 digit 12.7mm 240, 110, 32, 24VAC 50/60Hz, 12-48VDC or 50-110VDC (factory configured)
Power supply:	AC supply 4 VA max, DC supply: LED displays 35mA at 24VDC, LCD displays 20mA at 24VDC Plus transmitter supply current Figures are for instruments with no options fitted.
Power usage:	AC supply 4 VA max, DC supply: LED displays 35mA at 24VDC, LCD displays 20mA at 24VDC Plus transmitter supply current Figures are for instruments with no options fitted.
Output (standard):	1 x relay, form A, rated 5A resistive
Transmitter supply:	18VDC (25mA maximum) - standard
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 $4\text{-}20\text{mA}$, $0\text{-}1\text{V}$ or $0\text{-}10\text{V}$ 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 ($\pm 12\text{V}$), 25mA

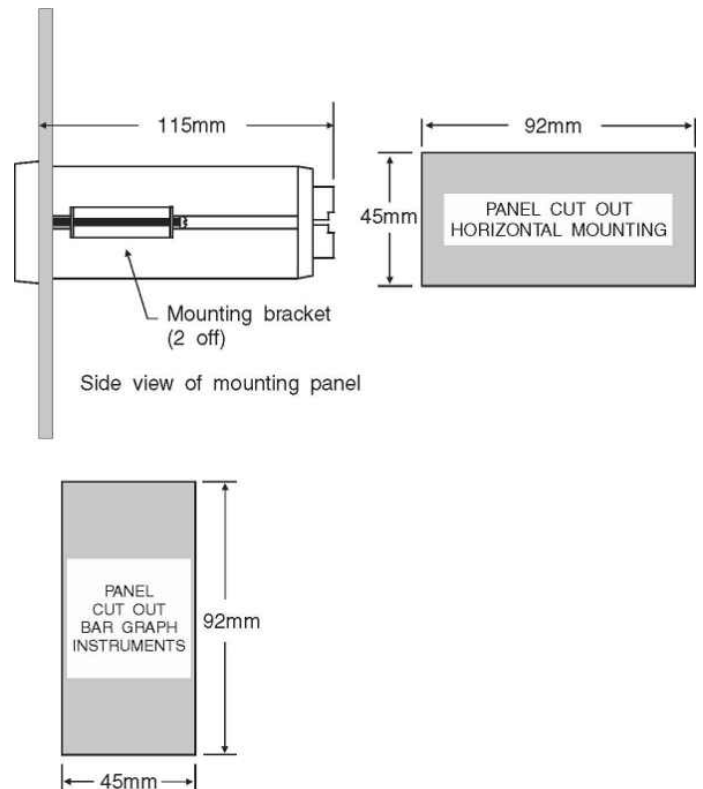
Physical Characteristics

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

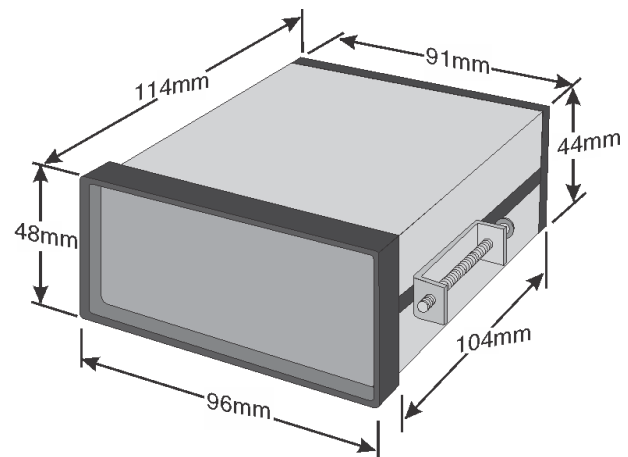
PM4-IV Accessories

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

PM4-IV panel mounting details



PM4-IV case dimensions



Wiring diagrams and full operations manual are available from www.aicpl.com.au/pdf/pm4ivman.pdf.

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PM4-IV order codes

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

PM4-IV-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>
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	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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