

# Intelligent PM4 monitors

## Model PM4-TR

Rate, Total, Grand Total, Batching. Measures pulses from flowmeters, proximity switches, encoders



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

- Rate/Total/Grand Total selectable via pushbuttons
- Accepts a wide range of input sensor types
- Pushbutton calibration and setup
- Wide range of display options available
- Displays in engineering units
- Electrical isolation between input signal/output/power supply
- 240V, 110V, 32V, 24VAC, 12 to 48VDC or 50 to 110VDC operation (factory configured)
- Transmitter supply - selectable 5V, 9V or 18VDC (25mA max.). The 9 and 18V supplies are available on AC powered PM4s only
- Up/down count selectable by an external input
- Alarm/control relay output (5A) setpoint or trailing alarm, programmable for rate or total or total "pass" mode operation
- 2 year manufacturing warranty
- Remote input for special functions including
  - Peak hold or Display hold
  - Fast setpoint access
  - Display brightness control
  - Zero (or reset to a preset value)

### Output Options

- Single or dual analog retransmission
- Additional setpoint relays (1, 3 or 6)
- RS232 or RS485 serial communications
- 16 bit digital output (PNP or NPN, factory configured)
- Inbuilt or external datalogger
- Isolated transmitter supply 24VDC ( $\pm 12$ VDC)



PM4TR-4.0-0

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## Specifications - subject to change without notice

### Technical Specifications

Input types:	Selectable types include: PNP, NPN, switch contact, magnetic pickup, output from TTL or CMOS, etc
Impedance:	10kΩ
Maximum Count Rate:	100kHz
Memory Retention:	Battery backed totaliser memory
Total display reset:	Remote total reset via "RESET" terminal, "EXT-IN" terminal or <b>P</b> button
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:	<b>LED models:</b> 4 digit 20mm, 5 digit 14.2mm, status LEDs, keypad, 6 digit 14.2mm, keypad, 8 digit 10mm, keypad, 20 segment LED bargraph, 5 digit display + 4 way keypad, 16 segment circular "bargraph", 5 digit display + 4 way keypad <b>LCD models:</b> 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, consult supplier
Output (standard):	1 x relay, form A, rated 5A resistive
Relay action:	Programmable N.O. or N.C.
Transmitter supply:	5V, 9V or 18VDC (25mA maximum), note 9 and 18V supplies available on AC powered displays only

### Output Options

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) Serial RS232 or RS485, choice of ASCII or Modbus RTU protocols Digital Binary or BCD
DC voltage out:	Isolated 24V (±12V), 25mA
Data logger:	2MByte internally mounted or external

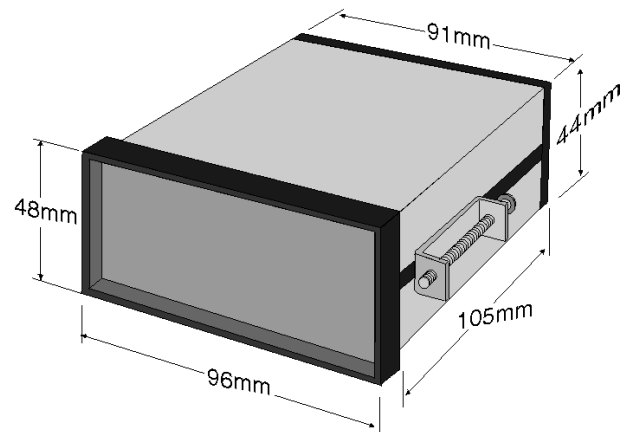
### Physical Characteristics

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 <sup>2</sup> wire)
Weight:	400g basic model, 450g with option card

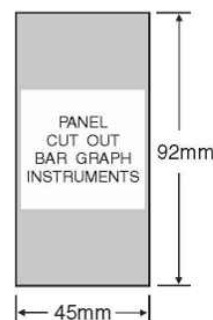
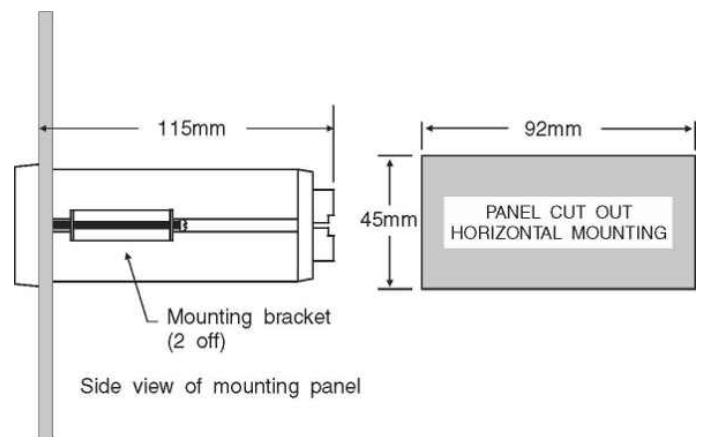
## PM4-TR Accessories

Description	Model No.
IP65 access cover	COVER-IP65
IP67 access cover	COVER-PM-IP67
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

### Case dimensions



### Panel mounting details



Wiring diagrams and full operations manual are available from [www.aicpl.com.au/pdf/pm4trman.pdf](http://www.aicpl.com.au/pdf/pm4trman.pdf).

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## PM4-TR order codes

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

PM4-TR-	<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		
					<b>Power supply</b>
	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		
					<b>Display type</b>
	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)		
					<b>Optional outputs</b>

## 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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