

# 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



Circular graph and 5 digit display



20 segment bargraph and 5 digit display



6 digit LED 14.2mm digit height



8 digit LED 10mm digit height



6 digit LCD 12.7mm digit height

### Description

The PM4-TR accepts pulse input from proximity sensors, encoders, flowmeters and many other types of inputs.

The instruments feature flexible pushbutton scaling and programming. The Rate/Total display may be scaled to read directly in terms of the units being measured (engineering units). Applications could include - flow rate and total in litres/sec or litres/hr (+ total litres), RPM, bottles/min (+ total bottles), wind speed etc. Either rate or total may be viewed as the default display, the front or rear panel or button can then be used to toggle to the alternate display (rate/total/grand total).

A grand total memory and display is also provided to allow an accumulated total memory. For example batches of a product can be totalised and reset during the day and, at the end of the day, the accumulated total can be viewed and reset if required.

The programmable digital filter improves stability by smoothing out short term interference.

The PM4-TR is supplied with one control/alarm relay (standard). Extra relays and other outputs are available as options.

A remote input is configurable to perform one of various functions e.g. toggle between rate and total, setpoint only access, keypad security lockout, zero, brightness level switching, high/low memory, peak hold and display hold. A separate input allows the total to be reset to zero.

### 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.)
- 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
- 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
- Isolated transmitter supply 24VDC ( $\pm 12$ VDC)

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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
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) <b>Please see note in Order Code section</b>

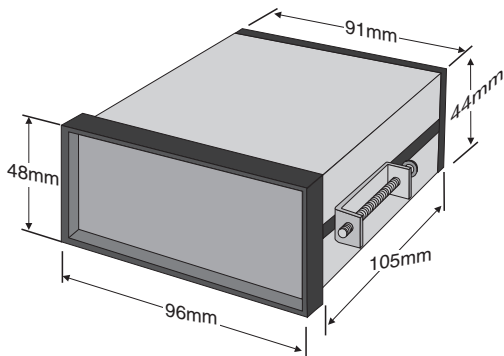
## Output Options

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

## 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 case dimensions



# PM4-TR Order Codes

<b>PM4-TR</b> - [ ] - [ ] - [ ]	
<b>Power Supplies</b>	
<b>PM4-TR</b> - [XXX] - [ ] - [ ]	
240VAC .....	240
110VAC .....	110
32VAC .....	32
24VAC .....	24
12 to 48VDC .....	DC
50 to 110VDC .....	DCH
<b>Display Types</b>	
<b>PM4-TR</b> - [ ] - [XXX] - [ ]	
4 DIGIT LED .....	4E
5 DIGIT LED + KEYPAD & ALARM LEDs .....	5E
6 DIGIT LED + KEYPAD .....	6E
8 DIGIT + KEYPAD .....	8E
BARGRAPH + 5 DIGIT DISPLAY + KEYPAD .....	5BP
CIRCULAR BARGRAPH + 5 DIGIT DISPLAY + KEYPAD .....	5GP
4 DIGIT LCD .....	4C
6 DIGIT LCD .....	6C
<b>Output Options - combinations available</b>	
<b>PM4-TR</b> - [ ] - [ ] - [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 (±12V) .....	12
<b>Note: The standard 18VDC transmitter supply output MUST NOT be used if the optional 24VDC (±12VDC) voltage output is used</b>	
1 EXTRA RELAY .....	R
3 EXTRA RELAYS .....	RRR
6 EXTRA RELAYS .....	R6

The valid option combinations for PM4-TR are:  
-R12, -AR, -AAR, -A12, -AR12, -AR6, -A2, -A2R, -A4, -A4R, -2R, -2R12, -4R, -4R12,

## PM4-TR 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-TR panel mounting details

