

Intelligent PM4 monitors Model PM4-WT



High Speed/High Precision load cell monitor



4 digit LED 20mm digit height



4 digit LCD 12.7mm digit height



5 digit LED 14.2mm digit height



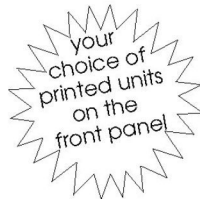
Circular graph and 5 digit display



20 segment bargraph and 5 digit display



6 digit LED 14.2mm digit height



6 digit LCD 12.7mm digit height

Description

Model PM4-WT accepts its input from any conventional 4 or 6 arm (5 or 6 digit LED models only) loadcell, pressure transducer etc.

Programmable input sensitivity ranges are from 0.5mV/V to 100mV/V. Two levels of bridge excitation are provided (5V and 10V).

The instrument features flexible pushbutton calibration and programming and may be scaled to read directly in engineering units. An auto zero function may be set as required. The programmable digital filter improves stability by smoothing out short term interference.

Instruments are supplied with a control/alarm relay (standard). Optional outputs include additional relays, isolated analog retransmission (single or dual channel), BCD/binary or serial RS232/RS485 - with choice of ASCII or MODBUS RTU protocols. Retransmission and relay operation can be configured for batching operation.

External voltage free contact inputs are configurable to perform various functions e.g. tare, zero, peak hold, peak or valley memory, setpoint only access, batch and security lock out.

Electrical isolation between power supply, load cell signal and retransmission eliminates grounding and common mode voltage problems. This isolation feature makes the PM4 ideal for interfacing to PLCs, computers and other data acquisition equipment.

Features

- Accepts 4-arm or 6-arm load cells/strain bridges
- High Speed selectable 5 to 100 samples per second
- 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)
- Remote input for special functions including
 - Peak/Display hold
 - Calibration switching
 - Fast setpoint access
 - Display brightness control
 - Tare or Zero

Output Options

- Single or dual analog retransmission
- Additional setpoint relays (1, 3 or 6)
- RS232 or RS485 serial communications
- Isolated transmitter supply 24VDC (± 12 VDC)

PM4-WT-3.3-0

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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 + 4 way keypad. 6 digit 14.2mm + 4 way 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, consult supplier
Output (standard):	1 x relay, form A, rated 5A resistive
Relay action:	Programmable N.O. or N.C.
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 versions) 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 ² wire)
Weight:	400g basic model, 450g with option card

PM4-WT Order Codes

PM4-WT- [] - [] - []

Power Supplies

PM4-WT - [XXX] - [] - []

240VAC	240
110VAC	110
32VAC	32
24VAC	24
12 to 48VDC	DC
50 to 110VDC	DCH

Display Types

PM4-WT - [] - [XXX] - []

4 DIGIT LED	4E
5 DIGIT LED + KEYPAD & ALARM LEDs	5E
6 DIGIT LED + KEYPAD	6E
BARGRAPH + 5 DIGIT DISPLAY + KEYPAD	5BP
CIRCULAR BARGRAPH + 5 DIGIT DISPLAY + KEYPAD	5GP
4 DIGIT LCD	4C
6 DIGIT LCD	6C

Output Options - combinations available see below

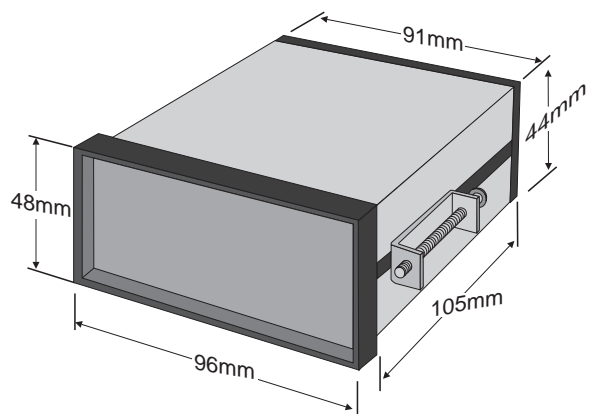
PM4-WT - [] - [] - [XXX]

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
1 EXTRA RELAY	R
3 EXTRA RELAYS	RRR
6 EXTRA RELAYS	R6

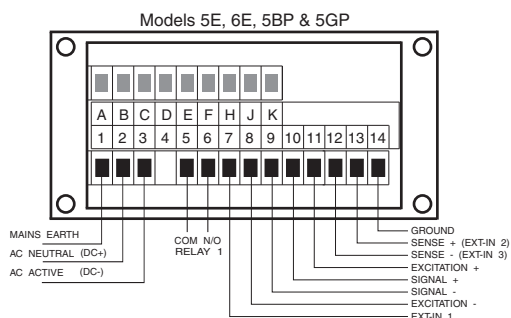
Output Combinations

Various output combinations are available e.g.
-A2 (Analog & RS232) and -4R12 (RS485, 1 extra relay & 24V (±12VDC))
The valid option combinations for PM4-WT are:
-R12, -AR, -AAR, -A12, -AR12, -AR6, -A2, -A2R, -A4, -A4R, -2R, -2R12, -4R, -4R12, -DNR, -DN12, -DNR12, -DPR, -DP12 and -DPR12

PM4-WT case dimensions



PM4-WT electrical connections – typical



PM4-WT panel mounting details

