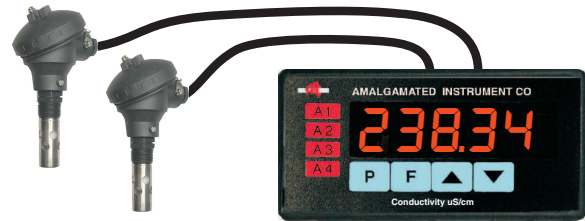# Intelligent PM4 monitors
Model PM4-2CO
Conductivity measurements from dual inputs

Description

The microprocessor based PM4-2CO dual input Conductivity/Resistivity instrument features the latest design and microprocessor technology.

Flexible calibration and programming functions allow easy setup and calibration. Calibration, setpoint and other programmable functions are accessible through the instrument's keypads/ pushbuttons.

Cell constants are programmable, allowing the instrument to be used with a wide range of cells. The display may be programmed to indicate conductivity in μS/cm, μS/m mS/cm or mS/m, or resistivity in MΩ. Channel two conductivity, % rejection or temperature may also be viewed by pressing a front panel pushbutton.

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

Each instrument is supplied with a single control/alarm relay as standard.

The PM4 series instruments are suitable for a variety of applications including waste and water treatment, chemical processing, electronics, manufacturing, pulp and paper, pharmaceutical and food processing. The instruments are ideally suited for use with reverse osmosis and ion exchange demineralisers, cooling towers and boiler analysers.

Features

- Two conductivity/resistivity channels.
- Temperature sensor input for automatic compensation
- Displays in μS/cm, μS/m, mS/cm, mS/m or can also display % rejection and temperature.
- Programmable digital filter.
- Versatile alarm/control relay can operate from either conductivity/resistivity/% rejection or temperature.
- Pushbutton calibration and programming.
- Programmable cell constants.
- 2 year guarantee.
- Typical application - displays permeate feed, rejection & temperature. Display is alternated between these via the front panel pushbuttons.

- Wide range of options available:

  - Single analog retransmission
  - Additional setpoint relays - 2nd relay or 2nd, 3rd & 4th relays
  - RS232 or RS485 serial communications
  - Isolated transmitter supply 24VDC ($\pm$12VDC)

PM42CO-2.7-0

Specifications

Technical Specifications

Inputs:	Two conductivity/resistivity cells (K=0.01, 0.05, 0.1, 0.5, 1.0, 2.0, 5.0, 10, 50 or 100 selectable
Temperature input:	Pt100 or Pt1000 RTD, LM335 sensor or manual compensation
Measuring range:	0.00 to full range display μS/cm, μS/m, mS/cm, mS/m or 0-18MΩ & -40 to 120°C
Accuracy:	1% of full scale
Sample rate:	1 sample every 2 seconds
ADC resolution:	1 in 20,000
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 14.2mm, status LEDs, keypad. 6 digit 14.2mm, keypad 20 segment LED bar graph, 5 digit display and 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 extra or 3 extra relays available
Retransmission:	Analog 4 to 20mA, 0 to 1V or 0 to 10V (link selectable) Serial RS232 or RS485, choice of ASCII or Modbus RTU protocols Digital Binary or BCD
DC voltage out:	Isolated 24V ($\pm$12V), 20mA

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

PM4-2CO Order Codes

PM4-2CO – ☐ – ☐ – ☐

Power Supplies
PM4-2CO – XXX – ☐ – ☐

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

Display Type
PM4-2CO – ☐ – XXX – ☐

4 DIGIT LED	4E
5 DIGIT LED + KEYPAD & ALARM LEDs	5E
6 DIGIT LED + KEYPAD	6E
8 DIGIT + KEYPAD	8E
4 DIGIT LCD	4C
6 DIGIT LCD	6C

Options
PM4-2CO – ☐ – ☐ – XXX

ANALOG (4-20mA, 0-1V or 0-10V selectable)	A
RS232	2
RS485	4
1 EXTRA RELAY	R
3 EXTRA RELAYS	RRR

PM4-2CO 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

PM4-2CO case dimensions
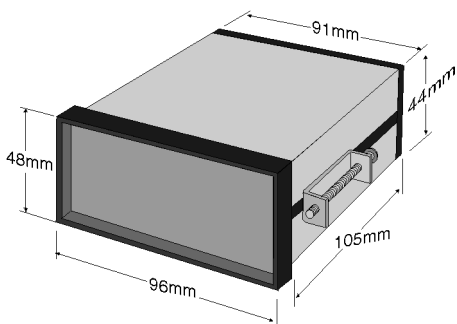
PM4-2CO panel mounting details
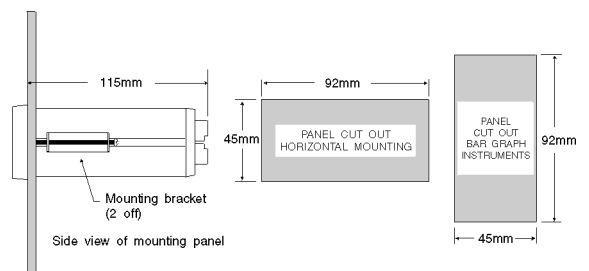
Wiring diagrams and full operations manual are available from www.aicpl.com.au/pdf/pm42coma.pdf.