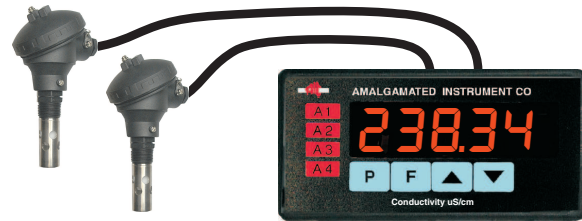


# Intelligent PM4 monitors

## 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 keypad/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  $\mu\text{S}/\text{cm}$ ,  $\mu\text{S}/\text{m}$ ,  $\text{mS}/\text{cm}$  or  $\text{mS}/\text{m}$ , or resistivity in  $\text{M}\Omega$ . 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  $\mu\text{S}/\text{cm}$ ,  $\mu\text{S}/\text{m}$ ,  $\text{mS}/\text{cm}$ ,  $\text{mS}/\text{m}$  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 ( $\pm 12\text{VDC}$ )

PM42CO-2.7-0

**AMALGAMATED INSTRUMENT CO PTY LTD**

ACN: 001 589 439

Unit 5, 28 Leighton Place Hornsby  
NSW 2077 Australia

Telephone: +61 2 9476 2244  
Facsimile: +61 2 9476 2902

e-mail: sales@aicpl.com.au  
Internet: www.aicpl.com.au

# 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  $\mu\text{S}/\text{cm}$ ,  $\mu\text{S}/\text{m}$ ,  $\text{mS}/\text{cm}$ ,  $\text{mS}/\text{m}$  or 0-18M $\Omega$  & -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 ( $\pm 12\text{V}$ ), 20mA

## Physical Characteristics

Bezel size: DIN 48mm x 96mm x 10mm

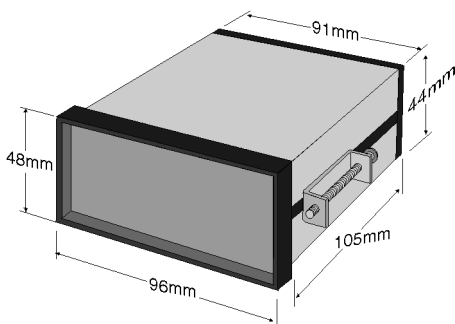
Case size: 44mm x 91mm x 115mm behind face of panel

Panel cut out: 45mm x 92mm (+1mm & -0mm)

Connections: Plug in screw terminals (max 2.5mm<sup>2</sup> wire)

Weight: 400g basic model, 450g with option card

## PM4-2CO case dimensions



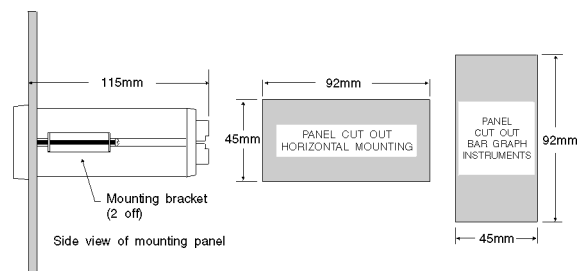
# PM4-2CO Order Codes

<b>PM4-2CO</b> - [ ] - [ ] - [ ]	
<b>Power Supplies</b>	
<b>PM4-2CO</b> - [XXX] - [ ] - [ ]	
240VAC .....	240
110VAC .....	110
32VAC .....	32
24VAC .....	24
12 to 48VDC .....	DC
50 to 110VDC .....	DCH
<b>Display Type</b>	
<b>PM4-2CO</b> - [ ] - [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
<b>Options</b>	
<b>PM4-2CO</b> - [ ] - [ ] - [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
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 panel mounting details



Wiring diagrams and full operations manual are available from [www.aicpl.com.au/pdf/pm42coma.pdf](http://www.aicpl.com.au/pdf/pm42coma.pdf).