

# Panel Mount Instruments

## PM4-BC - displays from Binary/BCD/Gray code inputs



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

- Rugged construction
- 240V, 110V, 32V, 24V AC, 12 to 48VDC or 50 to 110VDC supply operation (factory configured)
- Electrical isolation between signal input and power supply
- Decimal point - programmable or externally selectable (external operation uses 3 of the available 20 input bits)
- Data input high or low - selectable
- Strobe polarity high or low - selectable
- Special weighted input display/retransmission mode for up to 8 inputs
- Programmable digital filter - improves stability by smoothing out short term interference
- Your choice of front panel measuring unit legend on the front panel e.g. "Litres", "kg" etc.
- 2 year manufacturing warranty

### BCD selectable inputs

- Parallel - up to 5 digits
- Strobed - up to 8 digits
- Addressed - up to 8 digits
- Various character displays for non BCD codes

### Binary/Gray inputs

- Parallel - up to 20 bits
- Strobed - 4 bits plus up to 8 strobe lines

### Wide range of options available including:

- Alarm relays, 1, 3 or 6 relays (5A at 240VAC)
- Optically isolated analog output 4-20mA, 0-1V or 0-10V (link selectable) - single or dual outputs
- RS232 or RS485 serial communications
- Isolated binary or BCD retransmission

PM4BC-2.3-0

**AMALGAMATED INSTRUMENT CO**

ABN: 80 619 963 692

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

Input types: BCD parallel, addressed or strobed or Binary or Gray code parallel or strobed

Signal voltage: Factory configured. Voltage free contact, 5V, 12 to 24V or 48V

Decimal point: User programmable placement or externally selectable

Data level: Selectable high or low

Wiring: Screw terminals for supply and options (max 2.5mm<sup>2</sup>)  
Push in terminals for signal wires (max 1mm<sup>2</sup>)

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 14mm, status LEDs and 4 way keypad.  
6 digit 14mm and 4 way keypad  
8 digit 10mm and 4 way keypad  
20 segment LED bar graph,  
5 digit display and 4 way keypad  
16 segment circular " bargraph",  
5 digit display and 4 way keypad  
**LCD models:**  
4 digit or 6 digit 12.7mm

Power supply: 240, 110, 32, 24VAC 50/60Hz,  
12-48VDC or 50-110VDC  
(factory configured)

Power usage: AC supply 4 VA max,  
DC supply: LED displays 35mA at 24VDC,  
LCD displays 20mA at 24VDC  
Figures are for instruments with no options fitted.

## Output Options - see order code for full list

Extra relays: 1, 3 or 6 relays available (only useable in certain modes)

Retransmission: Analog 4-20mA, 0-1V or 0-10V link selectable (single or dual channel versions) (only useable in certain modes)  
Serial RS232 or RS485, choice of ASCII or Modbus RTU protocols  
Digital Binary or BCD

## 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)

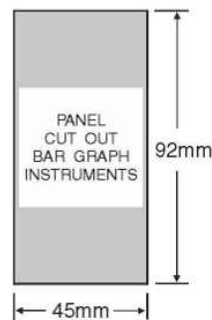
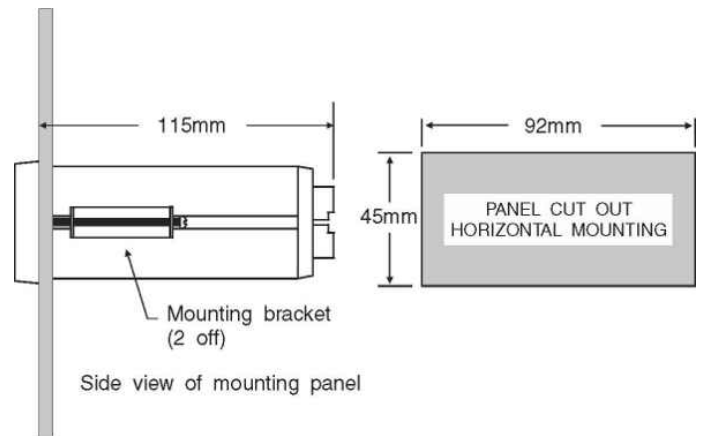
Connections: Plug in screw terminals (max 2.5mm<sup>2</sup> wire)

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

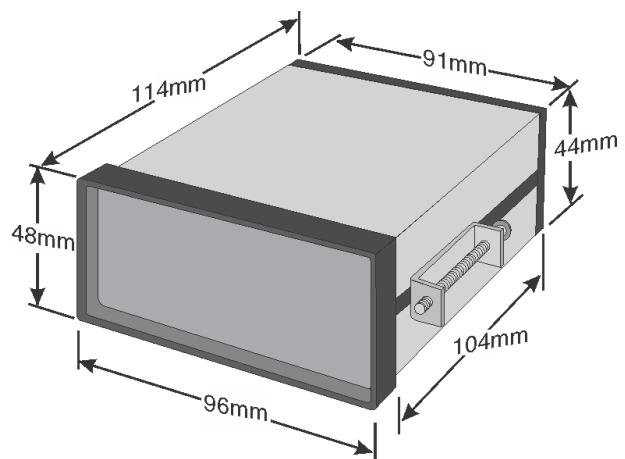
## PM4-BC Accessories

Description	Model No.
IP67 access cover	COVER-PM-IP67
Wall mount enclosure	ENC-PM1-02
IP65 wall mount encl. with IP67 cover	ENC-PM1-02-IPCOV
Surface mount kit	PM4-OPT-SMKIT
Portable/bench enclosure AC	ENC-PM-AC
Portable/bench enclosure DC	ENC-PM-DC

## PM4-BC panel mounting details



## PM4-BC case dimensions



Wiring diagrams and full operations manual are available from [www.aicpl.com.au/pdf/pm4bcman.pdf](http://www.aicpl.com.au/pdf/pm4bcman.pdf).

PM4BC-2.3-0

**AMALGAMATED INSTRUMENT CO**

ABN: 80 619 963 692

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](mailto:sales@aicpl.com.au)  
Internet: [www.aicpl.com.au](http://www.aicpl.com.au)

## PM4-BC order codes

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

PM4-BC-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>
	↑		↑		↑
	<b>Power supply</b>				
240	-----		-----		240VAC
110	-----		-----		110VAC
32	-----		-----		32VAC
24	-----		-----		24VAC
DC	-----		-----		12-48VDC isolated
DCH	-----		-----		50-110VDC isolated
	<b>Display type</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
8E	-----		-----		8 digit 10mm 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>Optional outputs</b>				
R	-----		-----		1st setpoint relay
R12	-----		-----		1st setpoint relay and 24V (+/- 12V) isolated transmitter supply
RRR	-----		-----		1st, 2nd and 3rd setpoint relays
R6	-----		-----		1st to 6th setpoint relays
12	-----		-----		24V (+/- 12V) isolated transmitter supply
A	-----		-----		Analog retransmission (isolated)
AR	-----		-----		Analog retransmission (isolated) and 1st setpoint relay
ARRR	-----		-----		Analog retransmission (isolated) and 1st, 2nd and 3rd setpoint relays
AR12	-----		-----		Analog retransmission (isolated), 1st relay and 24V (+/- 12V) isolated transmitter supply
A12	-----		-----		Analog retransmission (isolated) and 24V (+/- 12V) isolated transmitter supply
AR6	-----		-----		Analog retransmission (isolated) and 1st to 6th setpoint relays
AA	-----		-----		Dual analog retransmission (isolated)
AAR	-----		-----		Dual analog retransmission (isolated) and 1st setpoint relay
A2	-----		-----		Analog retransmission, 4-20mA only (isolated) and RS232 communications (isolated)
A2R	-----		-----		Analog retransmission, 4-20mA only (isolated), RS232 communications (isolated) and 1st relay
A4	-----		-----		Analog retransmission, 4-20mA only (isolated) and RS485 communications (isolated)
A4R	-----		-----		Analog retransmission, 4-20mA only (isolated), RS485 communications (isolated) and 1st relay
2	-----		-----		RS232 communications (isolated)
2R	-----		-----		RS232 communications (isolated) and 1st setpoint relay
2R12	-----		-----		RS232 communications (isolated), 1st setpoint relay and 24V (+/- 12V) isolated transmitter supply
4	-----		-----		RS485 communications (isolated)
4R	-----		-----		RS485 communications (isolated) and 1st setpoint relay
4R12	-----		-----		RS485 communications (isolated), 1st 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 1st relay
DN12	-----		-----		Digital NPN 16 bit Binary/BCD retransmission and 24V (+/- 12V) isolated transmitter supply
DNR12	-----		-----		Digital NPN 16 bit Binary/BCD retransmission, 1st relay and 24V (+/- 12V) isolated transmitter supply
DP	-----		-----		Digital PNP 16 bit Binary/BCD retransmission
DPR	-----		-----		Digital PNP 16 bit Binary/BCD retransmission and 1st relay
DP12	-----		-----		Digital PNP 16 bit Binary/BCD retransmission and 24V (+/- 12V) isolated transmitter supply
DPR12	-----		-----		Digital PNP 16 bit Binary/BCD retransmission, 1st relay and 24V (+/- 12V) isolated transmitter supply
ABP	-----		-----		Analog retransmission bipolar output (-10V to +10VDC only)

## 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

PM4BC-2.3-0

**AMALGAMATED INSTRUMENT CO**

ABN: 80 619 963 692

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