Panel Mount PM4-LN
50 point lineariser

Scalable indication of ±2mA, ±20mA ±100mV, ±1VDC, ±10VDC or ±100VDC or 3-wire Slidewire

5 digit LED 14.2mm digit height

6 digit LED 14.2mm digit height

Circular graph and 5 digit display

20 segment bargraph and 5 digit display

Description

Model PM4-LN is a lineariser display which accepts DC inputs of ±2mA, ±20mA, ±100mV to ±100V or 3-wire slidewire, with the resultant display reading directly in engineering units.

The linearising function is used for non linear inputs. A good example is the indication of the contents of a cylindrical tank lying on its side. There is a non-linear relationship between the depth of liquid in the tank and the actual volume. The lineariser allows accurate figures to be entered and stored to reflect the actual contents. Up to 50 linearising points may be entered.

An external input is configurable to perform one of various functions e.g. zero, tare, peak hold, display hold, display toggle (from live to linearised display), setpoint only access or security lockout amongst others. This input can also be used to allow fast and easy access to the alarm setpoints. The front panel **P** button can also perform some of these functions.

Each instrument is supplied with a single setpoint relay and an 18VDC (max 25mA) transmitter supply as standard.

Optional outputs include additional relays and isolated analog retransmission, (4-20mA, 0-1VDC, 0-10VDC) or serial RS232/RS485 communications. Electrical isolation between power supply, input signal and retransmission eliminates grounding and common mode voltage problems.

Features

- 50 point lineariser
- EEPROM storage of lineariser table values
- Pushbutton calibration and setup
- Displays in engineering units
- Isolation between input signal/supply and retransmission
- Rugged enclosure
- 240V, 110V, 32V, 24V AC, 12 to 48V DC or 50 to 110 V DC operation (factory configured)
- Alarm/control relay output (5A)
- 18VDC transmitter supply
- Remote input to perform a special function e.g. brightness level, fast setpoint access, zero, tare, display toggle, peak/display hold, setpoint only access or security lockout
- 2 year guarantee
- Wide range of options available including:
  - Isolated analog retransmission
  - Additional setpoint relays
  - RS232 or RS485 serial communications (ASCII or Modubus RTU)
  - Isolated transmitter supply 24VDC (±12VDC) 25mA max.

Certified System Quality ISO 9001 SAI GLOBAL — AUSTRALIAN MADE AIC AUSTRALIAN OWNED — EMC COMPLIANT

PM4LN-3.9-0

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Specifications

Technical Specifications

Input types:	Link selectable ±20mA, 4 to 20mA or ±100mV, ±1V, ±10V, ±100V DC or 0-1kΩ to 0-1MΩ 3-wire slidewire
Impedance:	135Ω nominal (4 to 20mA) 1MΩ on DC voltage
ADC resolution:	1 in 20,000
Accuracy:	0.1% of FS when calibrated 0.3% on ±100mV and ±2mA ranges
Sample rate:	4 per sec
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 LED bar graph 20 segment bar, 5 digit display, keypad 16 segment circular "bargraph", 5 digit display, keypad **LCD models:** 4 digit 12.7mm 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
Transmitter supply:	18VDC (25mA maximum)- standard
Relay action:	Programmable N.O. or N.C.

Output Options

Extra relays:	Same specs as relay 1 (form C optional)
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 Outputs follow linearised display
DC voltage out:	Isolated 24V (±12V), 20mA

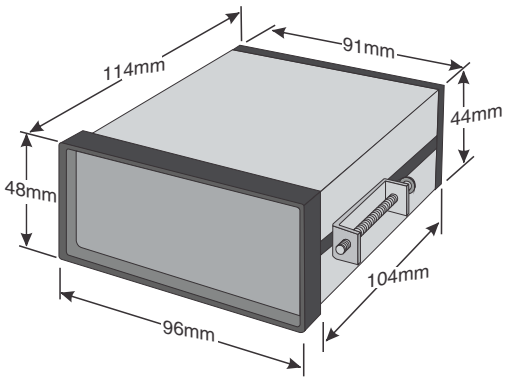
Physical Characteristics

Bezel size:	DIN 48mm x 96mm x 10mm
Case size:	44mm x 91mm x 115mm
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

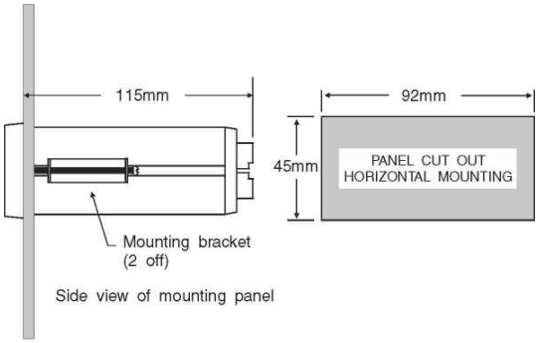
PM4-LN Accessories

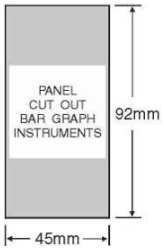
Description	Model No.
IP67 access cover	COVER-PM-IP67
Wall mount enclosure	ENC-PM1-02
IP65 wall mount encl. with IP67 cover	ENC-PM1-02-IPCOV
Surface mount kit	PM4-OPT-SMKIT
Portable/bench enclosure AC	ENC-PM-AC
Portable/bench enclosure DC	ENC-PM-DC

PM4-LN case dimensions



PM4-LN panel mounting details





Wiring diagrams and full operations manual are available from www.aicpl.com.au/pdf/pm4lnman.pdf

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PM4-LN order codes

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

PM4-LN- [ ] - [ ] - [ ]

Power supply

240	240VAC
110	110VAC
32	32VAC
24	24VAC
DC	12-48VDC isolated
DCH	50-110VDC isolated

Display type

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
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

Optional outputs

R	2nd setpoint relay
R12	2nd setpoint relay and 24V (+/- 12V) isolated transmitter supply
RRR	2nd, 3rd and 4th setpoint relays
12	24V (+/- 12V) isolated transmitter supply
A	Analog retransmission (isolated)
AR	Analog retransmission (isolated) and 2nd setpoint relay
ARRR	Analog retransmission (isolated) and 2nd, 3rd and 4th setpoint relays
AR12	Analog retransmission (isolated), 2nd relay and 24V (+/- 12V) isolated transmitter supply
A12	Analog retransmission (isolated) and 24V (+/- 12V) isolated transmitter supply
AR6	Analog retransmission (isolated) and 2nd to 7th setpoint relays
A2	Analog retransmission, 4-20mA only (isolated) and RS232 communications (isolated)
A2R	Analog retransmission, 4-20mA only (isolated), RS232 communications (isolated) and second relay
A4	Analog retransmission, 4-20mA only (isolated) and RS485 communications (isolated)
A4R	Analog retransmission, 4-20mA only (isolated), RS485 communications (isolated) and second relay
2	RS232 communications (isolated)
2R	RS232 communications (isolated) and 2nd setpoint relay
2R12	RS232 communications (isolated), 2nd setpoint relay and 24V (+/- 12V) isolated transmitter supply
4	RS485 communications (isolated)
4R	RS485 communications (isolated) and 2nd setpoint relay
4R12	RS485 communications (isolated), 2nd 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 2nd relay
DN12	Digital NPN 16 bit Binary/BCD retransmission and 24V (+/- 12V) isolated transmitter supply
DNR12	Digital NPN 16 bit Binary/BCD retransmission, 2nd relay and 24V (+/- 12V) isolated transmitter supply
DP	Digital PNP 16 bit Binary/BCD retransmission
DPR	Digital PNP 16 bit Binary/BCD retransmission and 2nd relay
DP12	Digital PNP 16 bit Binary/BCD retransmission and 24V (+/- 12V) isolated transmitter supply
DPR12	Digital PNP 16 bit Binary/BCD retransmission, 2nd 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. ±20mA, 4-20mA or ±2.5VDC or ±25VDC**
- **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**

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