

# Panel Mount Instruments

## PM4-LNT 50 point lineariser/totaliser

Scalable indication of  $\pm 2\text{mA}$ ,  $\pm 20\text{mA}$ ,  $\pm 20\text{mV}$ ,  $\pm 100\text{mV}$ ,  $\pm 1\text{VDC}$ ,  $\pm 10\text{VDC}$  or  $\pm 100\text{VDC}$  or 3-wire Slidewire



### PM4 displays



4 digit LED 20mm digit height



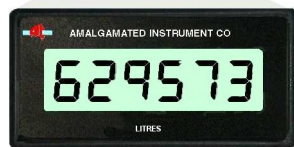
4 digit LCD 12.7mm digit height



5 digit LED 14.2mm digit height



6 digit LED 14.2mm digit height



6 digit LCD 12.7mm digit height



8 digit LED 10mm digit height

### Description

Model PM4-LNT is a lineariser/totaliser display which accepts DC inputs of  $\pm 2\text{mA}$ ,  $\pm 20\text{mA}$ ,  $\pm 100\text{mV}$  to  $\pm 100\text{V}$  or 3-wire slidewire, with the resultant display reading directly in engineering units.

The linearising function is used for non linear inputs and up to 50 linearising points may be entered (X and Y values).

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 (when fitted) 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 - standard
- 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



Circular graph and 5 digit display



20 segment bargraph and 5 digit display

# Specifications

## Technical Specifications

Input types: Link selectable  
 $\pm 2\text{mA}$ ,  $\pm 20\text{mA}$ , 4 to 20mA  
 or DC  $\pm 100\text{mV}$ ,  $\pm 1\text{V}$ ,  $\pm 10\text{V}$ ,  $\pm 100\text{V}$   
 or 0-1k $\Omega$  to 0-1M $\Omega$  3 wire slidewire

Impedance: 80 $\Omega$  nominal (4 to 20mA)  
 1M $\Omega$  on DC voltage

ADC resolution: 1 in 20,000

ADC conversion: Dual slope ADC

Accuracy: 0.1% of FS when calibrated  
 0.3% on  $\pm 100\text{mV}$  and  $\pm 2\text{mA}$  ranges

Sample rate: 4 samples per second

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 + 4 way keypad  
 LED bar graph 20 segment bar  
 + 5 digit display + 4 way keypad  
 16 segment circular "bargraph" + 5  
 digit display + 4 way 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

DC voltage out: Isolated 24V ( $\pm 12\text{V}$ ), 20mA

## Physical Characteristics

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

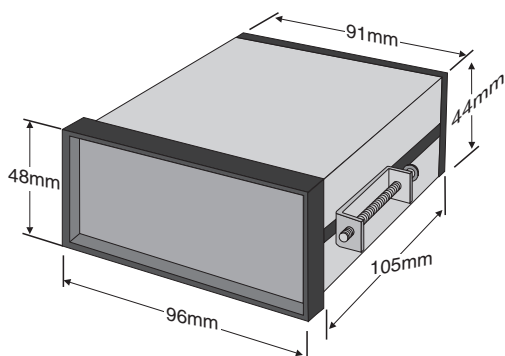
Case size: 44mm x 91mm x 115mm  
 behind face of panel

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-LNT case dimensions



# PM4-LNT Order Codes

<b>PM4-LNT</b> - [ ] - [ ] - [ ]	
<b>Power Supplies</b>	
<b>PM4-LNT</b> - [XXX] - [ ] - [ ]	
240VAC .....	[240]
110VAC .....	[110]
32VAC .....	[32]
24VAC .....	[24]
12 to 48VDC .....	[DC]
50 to 110VDC .....	[DCH]
<b>Display Type</b>	
<b>PM4-LNT</b> - [ ] - [XXX] - [ ]	
4 DIGIT LED .....	[4E]
5 DIGIT LED + KEYPAD & ALARM LEDs .....	[5E]
6 DIGIT LED + KEYPAD .....	[6E]
8 DIGIT + KEYPAD .....	[8E]
BARGRAPH + 5 DIGIT DISPLAY + KEYPAD .....	[5BP]
CIRCULAR BARGRAPH + 5 DIGIT DISPLAY + KEYPAD .....	[5GP]
4 DIGIT LCD .....	[4C]
6 DIGIT LCD .....	[6C]
<b>Options</b>	
<b>PM4-LNT</b> - [ ] - [ ] - [XXX]	
ANALOG (4-20mA, 0-1V or 0-10V selectable) .....	[A]
RS232 .....	[2]
RS485 .....	[4]
BCD/Binary NPN .....	[DN]
BCD/Binary PNP .....	[DP]
DC VOLTAGE OUTPUT 24V ( $\pm 12\text{V}$ ) .....	[12]
1 EXTRA RELAY .....	[R]
3 EXTRA RELAYS .....	[RRR]
6 EXTRA RELAYS .....	[R6]

The valid optional output combinations for PM4-LNT models are:

-R12, -AR, -ARRR, -A12, -AR12,  
 -AR6, -A2, -A2R, -A4, -A4R, -2R, -212, -2R12, -4R, -412,  
 -4R12, -DNR, -DN12, -DNR12, -DPR, -DP12, -DPR12

## PM4-LNT 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-LNT panel mounting details

