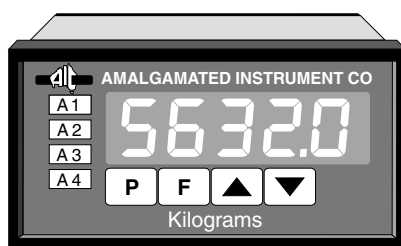
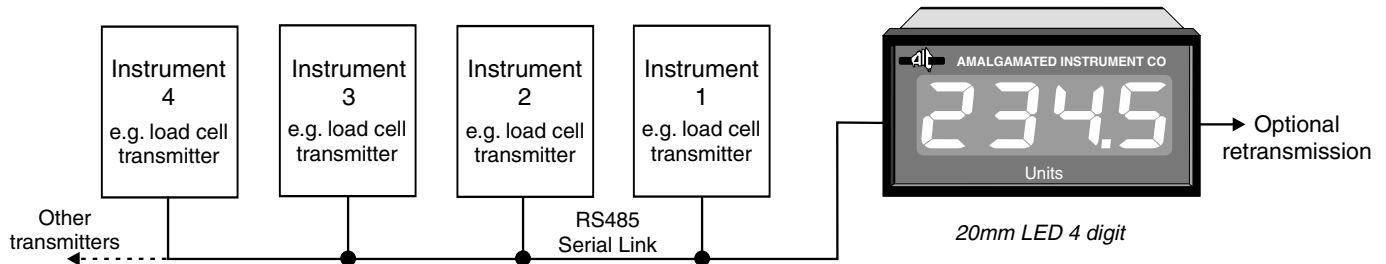
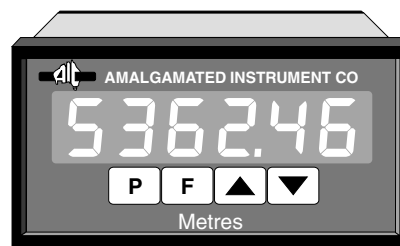


# Intelligent PM4 Monitors Model PM4-RSA

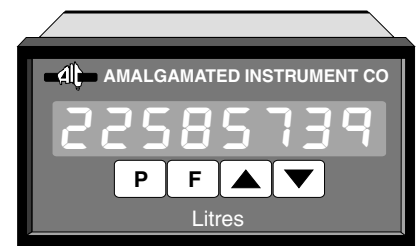
Arithmetic Operations from RS485 or RS422 input



14.2mm LED 5 digit plus keypad and alarm LEDs



14.2mm LED 6 digit plus keypad



10mm LED 8 digit plus keypad

Also available with 20 segment LED bargraph + 7.6mm LED display & 4 or 6 digit 12.7mm LCD display.

## Description

Model PM4-RSA is a RS485 or RS422 input display with arithmetic capability. Multiple sources can be polled and their inputs combined arithmetically. Each source can be individually scaled and then combined arithmetically with other sources. Arithmetic operations between sources include: add, subtract, multiply, divide, highest, lowest, sine and cosine.

The instrument is ideal for applications requiring multi-input calculations such as: load cell combining (or subtraction or averaging etc.), power measurement, density correction, flow combining, temperature correction, ratios etc. For example, in the block diagram shown above, the PM4-RSA could be programmed to accurately combine load cells i.e. display:

load cell 1 + load cell 2 + load cell 3 + load cell 4

Baud rate, parity, data bits, arithmetic operations and other parameters are easily set up by the user using "on display" easy to follow messages. A remote switch or control voltage input can be used to operate any one of a choice of special functions.

Isolated retransmission options allow the instruments to retransmit as either a serial (RS232 or RS485 with choice of ASCII or Modbus RTU protocols), binary/BCD or analog (4-20mA, 0-1V or 0-10VDC) signal.

## Features

- Addresses multiple sources via RS485 or RS4222 (factory configured)
- Versatile arithmetic formula
- Pushbutton programming
- Serial data reduces the risk of electrical noise causing corruption of the signal
- Alarm/control relay output (5A at 240VAC)
- 240V, 110V, 32V, 24V AC, 12 to 48 V DC or 50 to 110 V DC operation (factory configured)
- Remote input to perform one of the following special functions: - peak/display hold, max/min, tare, zero, setpoint only access or security lockout or two level brightness switching
- 2 year guarantee

## Output Options

- Extra setpoint relays
- Optional retransmission for analog output (4-20, 0-1V or 0-10V) or serial output RS232/RS485 (choice of ASCII or Modbus RTU protocols) or BCD/binary

# SPECIFICATIONS

Specifications are subject to change without notice

## TECHNICAL SPECIFICATIONS

- Input type: RS485 ASCII serial data  
7 or 8 bit data (user selectable)
- Baud rate: Programmable 300, 600, 1200, 2400, 4800, 9600 or 19.2k
- Microprocessor: MC68HC11 CMOS
- Ambient temp: LED models -10 to 60°C,  
LCD models -10 to 50°C
- Humidity: 5 to 95% non condensing
- Display types: **LED models:**  
4 digit 20mm,  
5 digit 14.2mm + status LEDs +  
4 way keypad.  
6 digit 14.2mm + 4 way keypad  
8 digit 10mm + 4 way keypad  
LED bargraph 20 segment bar  
+ 5 digit 7.6mm + 4 way keypad  
**LCD models:**  
4 digit 12.7mm,  
6 digit 12.7mm
- Power supply: AC 240V, 110V, 32V, 24V AC  
12 to 48 V DC or 50 to 110 V DC  
(factory configured)
- Power usage: AC supply 4VA max,  
DC supply, consult supplier  
(depends on display type &  
options)

- Output (standard): 1 x relay, form A, rated 5A  
resistive
- Relay action: Programmable N.O. or N.C.

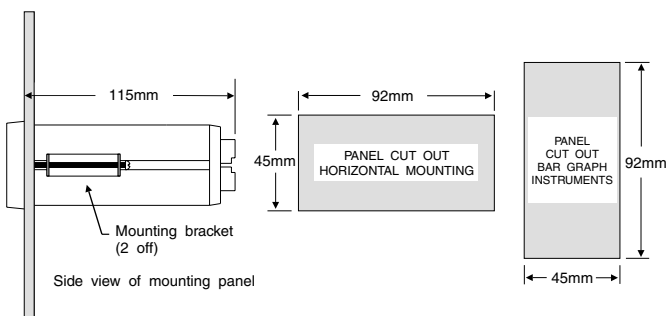
## OUTPUT OPTIONS

- Extra relays: Same specs as relay 1  
(form C optional)
- Retransmission: **Analog** 4 to 20mA, 0 to 1V  
and 0 to 10V link selectable  
**Serial** RS232 or RS485 (with  
choice of ASCII or MODBUS  
RTU protocols)  
**Digital** Binary or BCD

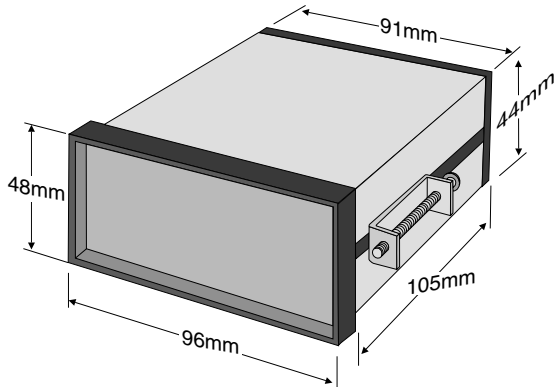
## PHYSICAL CHARACTERISTICS

- 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: 400 gms basic model,  
450 gms with option card

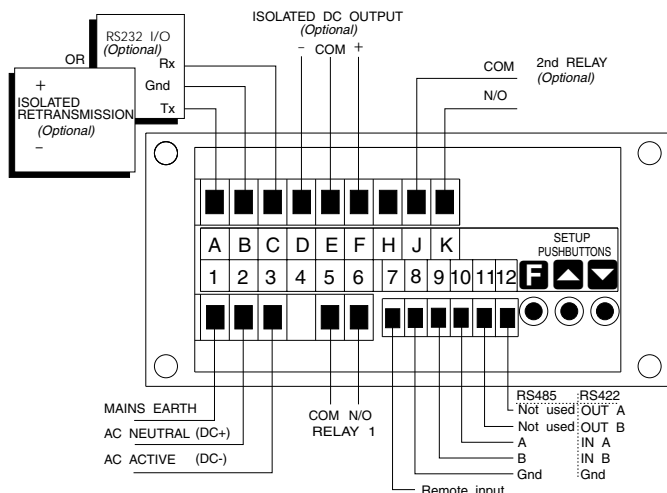
## PANEL MOUNT INSTALLATION



## INSTRUMENT DIMENSIONS



## ELECTRICAL CONNECTIONS



## ORDER CODE

**PM4-RSA-** □ □ □ - □ □ □ - □ □ □ □ □

**POWER SUPPLY**

**PM4-RSA-** □ □ □ - □ □ □ - □ □ □ □ □

240 VAC . . . . .	2	4	0
110 VAC . . . . .	1	1	0
32 VAC . . . . .	3	2	
24 VAC . . . . .	2	4	
12 to 48 VDC . . . . .	D	C	
50 to 110 VDC . . . . .	D	C	H

**DISPLAY TYPE**

**PM4-RSA-** □ □ □ - □ □ □ - □ □ □ □ □

4 DIGIT LED . . . . .	4	E	
5 DIGIT LED + KEYPAD & ALARM LEDs . . . . .	5	E	
6 DIGIT LED + KEYPAD . . . . .	6	E	
8 DIGIT LED + KEYPAD . . . . .	8	E	
BARGRAPH + 5 DIGIT DISPLAY + KEYPAD . . . . .	5	B	P
4 DIGIT LCD . . . . .	4	C	
6 DIGIT LCD . . . . .	6	C	

**RETRANSMISSION OUTPUT**

**PM4-RSA-** □ □ □ - □ □ □ - □ □ □ □ □

ANALOG (4-20mA, 0-1V, 0-10V selectable) . . . . .	A	
DUAL ANALOG . . . . .	A	A
RS232 . . . . .	2	
RS485 . . . . .	4	
BCD/Binary NPN . . . . .	D	N
BCD/Binary PNP . . . . .	D	P

**EXTRA RELAY OUTPUTS**

**PM4-RSA-** □ □ □ - □ □ □ - □ □ □ □ □

1 EXTRA RELAY . . . . .	R		
3 EXTRA RELAYS . . . . .	R	R	R
6 EXTRA RELAYS . . . . .	R	6	