

# Wind Speed and Direction Monitor

**Wind speed & direction display from sensors with analog output or NMEA serial output.**

## Description

The panel mount wind speed and direction monitors have been designed to provide compact, accurate and easily understood displays for wind speed and direction.

The wind speed is displayed on a 5 digit LED display and the wind direction is represented on a 16 position circular LED display. Four annunciator LEDs are available to display alarm conditions.

The circular display gives a quick visual representation of the wind direction. The wind direction is averaged over a configured time to prevent the display "jumping" from point to point.

For sensors with 2 x 4-20 mA outputs the model number is PM4-IV3-XXX-5GP where the "XXX" is the code for the monitor power supply.

A special model is available for the model WS-MMW-005 solid state wind sensor that has a NMEA standard coded serial output. The model number for use with the solid state wind sensor is PM4-RS-XXX-5GP where, again, the "XXX" is the code for the monitor power supply.

The monitor display includes 4 alarm annunciator LEDs. The wind speed & direction monitors have one setpoint relay as standard and up to another 3 can be fitted.

Dual analog retransmission can be fitted to either model to allow the wind speed and the wind direction to be separately transmitted to a PLC or other control device.



## Features

- Versatile, scalable circular display for wind direction.
- 5 digit numerical display for wind speed can be scaled to required units
- Available for analog output sensors (4-20 mA) or input from the WS-MMW-005 solid state sensor
- 240V, 110V, 32V, 24V AC, 12 to 48 V DC or 50 to 110 V DC (factory configured)
- Alarm/control relay output (1 is standard)
- 2 year guarantee

## Options

- Extra relay outputs (5A) - Add 1 or 3 extra relays.
- Optically isolated analog retransmission (4-20mA, 0-1V, 0-10V) single or dual output versions available
- RS232 or RS485 serial communications, choice of ASCII or Modbus RTU protocols.



# SPECIFICATIONS

Specifications are subject to change without notice

## TECHNICAL SPECIFICATIONS

### - PM4-IV3-XXX-5GP

Input types: 4 to 20mA  
 Impedance: 80Ω  
 ADC resolution: 1 in 20,000

### - PM4-RS-XXX-5GP

Input RS232 NMEA coded data stream.

## COMMON SPECIFICATIONS

Microprocessor: MC68HC11 CMOS  
 Ambient temp: -10 to 60°C  
 Humidity: 5 to 95% non condensing  
 Display types: 16 segment circular LED display + 5 digit numerical display + 4 way keypad and annunciator LEDs  
 Power supply: AC 240v, 110V, 48V, 32V, 24V 12 to 48V DC or 50 to 110 V DC (factory configured)  
 Power usage: AC supply 4 VA max, DC supply, depends on display type & options  
 Output (standard): 1 x relay, form A, rated 5A resistive  
 Relay action: Programmable N.O. or N.C.

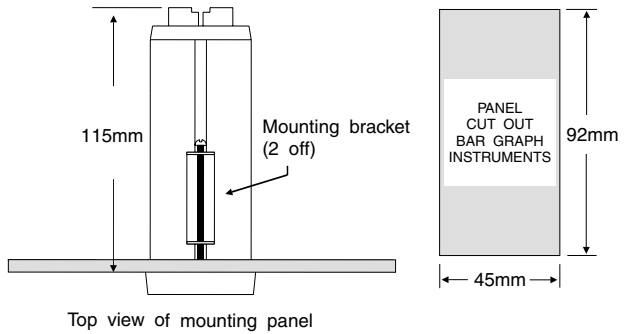
## OUTPUT OPTIONS

Extra relays: Same specs as relay 1 (form C optional)  
 Retransmission: **Analog:** 4 to 20mA, 0 to 1V and 0 to 10V link selectable (single or dual output versions)  
**Serial:** RS232 or RS485, choice of ASCII or Modbus RTU protocols

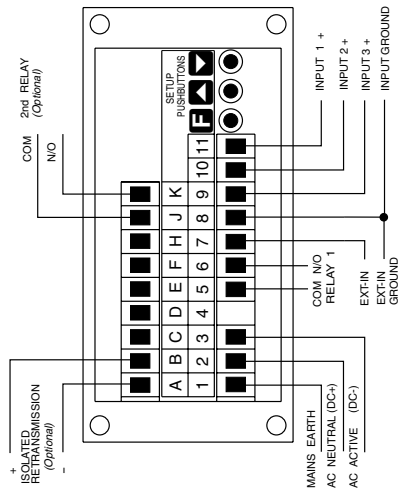
## PHYSICAL CHARACTERISTICS

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

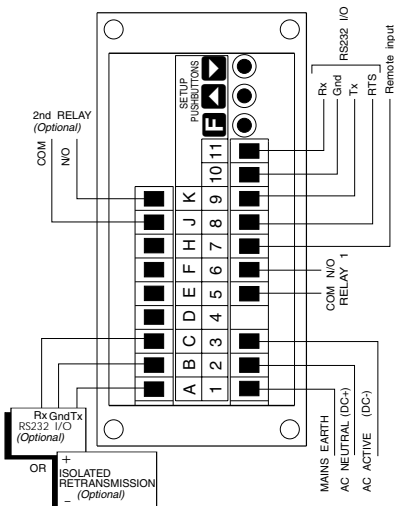
## PANEL MOUNT INSTALLATION



## ELECTRICAL CONNECTIONS



### PM4-IV3-XXX-5GP



### PM4-RS-XXX-5GP

## ORDER CODE

PM4-IV3-  - 5 G P -   
 PM4-RS-  - 5 G P -

### POWER SUPPLY

PM4-IV3-  - 5 G P -   
 PM4-RS-  - 5 G P -   
 240 VAC . . . . .        
 110 VAC . . . . .        
 48VAC . . . . .        
 32 VAC . . . . .        
 24 VAC . . . . .        
 12 to 48 VDC . . . . .        
 50 to 110 VDC . . . . .

### DISPLAY TYPE - Circular graph & 5 digit display is standard

PM4-IV3-  - 5 G P -   
 PM4-RS-  - 5 G P -   
 CIRCULAR BARGRAPH + 5 DIGIT DISPLAY  
 + KEYPAD + ALARM ANNUNCIATOR LEDs . . . . . 5 G P

### RETRANSMISSION OUTPUT

PM4-IV3-  - 5 G P -   
 PM4-RS-  - 5 G P -   
 ANALOG (4-20mA, 0-1V, 0-10V selectable) . . . . .  A  
 DUAL ANALOG . . . . .  A  A  
 RS232 . . . . .  2  
 RS485 . . . . .  4

### 2ND RELAY OUTPUT for PM4-IV3-XXX-5GP

PM4-IV3-  - 5 G P -  R

### EXTRA RELAY OUTPUTS FOR PM4-RS-XXX-5GP

2ND RELAY OUTPUT  
 PM4-RS-  - 5 G P -  R   
 2nd, 3RD & 4TH RELAYS OUTPUTS  
 PM4-RS-  - 5 G P -  R  R  R