

DUAL-LINE SIX-DIGIT DUAL-INPUT PROCESS METER DPM SERIES



- Dual Process Inputs with Math Functions
- Addition, Difference, Average, Multiplication, Division, Min, Max, Weighted Average, Ratio, Concentration, & More
- 0-20mA, 4-20mA, 0-5V, 1-5V, and $\pm 10V$ Inputs
- Nema 4X, IP65 Front
- Large Dual-Line 6-Digit display, 0.60" & 0.46"
- 32-Point, Square Root, or Exponential Linearization
- Modbus RTU Communication Protocol Standard

The DPM is a multipurpose, easy to use digital dual-input process meter ideal for level, flow rate, temperature transmitter, or pressure transmitter applications. It accepts current and voltage signals (e.g. 4-20mA, 0-10V). Various math functions may be applied to the inputs including addition, difference, absolute difference, average, weighted average, multiplication, division, minimum, maximum, draw, ratio, and concentration. This is in addition to the signal input conditioning functions (linear, square root, programmable exponent, or round horizontal tank calculations).

The displays, relays, and the analog output may be assigned to input channels A or B, or math result channel C. Three of the front panel buttons can be custom-programmed for a specific operation.

The basic model includes an isolated 24VDC transmitter power supply that can be used to power the input transmitters or other devices. An additional isolated 24VDC power supply is included with the 4-20mA output option. A fully loaded DPM meter has the following: four SPDT relays, 4 20mA output, and two 24VDC power supplies. DPM's capabilities may be enhanced by adding the following external expansion modules: four SPST relays - creating an eight-relay dual-input process meter, two digital I/O modules with four inputs and four outputs each, and serial communication adapters for use with PMC Process Meter Interface.

Process Measure Control

Features

- Dual Process Inputs with Math Functions
- NEMA 4X, IP65 Front
- 0-20mA, 4-20mA
- 0-5V, 1-5V, & $\pm 10V$
- 32-Point, Square Root

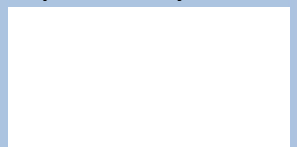
Applications

- Bore Holes
- Water Level
- Waste Water
- Oceanography
- Ground Water

Contact

PMC Engineering LLC
11 Old Sugar Hollow Rd
Danbury, CT 06810
USA
sales@pmc1.com
Tel: 203-792-8686
Fax: 203-743-2051
www.pmc1.com

Represented by:



PMC Engineering adopts a continuous development program which sometimes necessitates specification changes without notice

Your depth and level specialists for Ground, Surface, Sea and Waste Water

STANDARD SPECIFICATIONS

- General**

Display: Upper display:0.60" (15mm) high.

Lower display: 0.46" (12 mm) high. Displays are 6 digits, red LEDs

Display Intensity: Eight intensity levels

Display Update Rate: 5/second(200ms)

Display Assignment: The Upper and Lower displays may be assigned to process values for Channels A, B, or C, toggle between (Ch-A & Ch-B, Ch-A & Ch-C, Ch-B & Ch-C, and Ch-A, Ch-B, & Ch-C), toggle between Channel & units, show channel gross value (no tare) or toggle net (tare) and gross values, show relay set points, max & min values, or Modbus input.

Front Panel: NEMA 4X, IP65

Noise filter: Programmable from 2 to 199 (0 will disable filter)

Filter Bypass: Programmable from 0.1 to 99.9% of calibrated span

Recalibration: Recommended at least every 12 months.

Max/Min Display: Max (Peak) / min (Valley) readings reached by the process are stored until reset by the user or until power to the meter is cycled.

Power Options: 85-265VAC 50/60Hz, 90-265VDC, 20 W max, or jumper selectable 12/24VDC $\pm 10\%$, 15 W max. Weight: 9.5 oz (269 g)

- Environmental**

Operating temperature range: -40 to 65°C.

Storage temperature range: -40 to 85°C. Relative humidity: 0 to 90% non-condensing.

- Connections & Mounting**

Connections: Removable screw terminal blocks accept 12 to 22 AWG wire, RJ45 for external relays, digital I/O, and serial communication adapters.

Mounting: 1/8 DIN panel cutout required: 3.622" x 1.772" (92 mm x 45 mm).

Overall Dimensions: 4.68" x 2.45" x 5.64"

(119 mm x 62 mm x 143 mm) (W x H x D)

- Dual Process Input**

Inputs: 2 Field selectable: 0-20, 4-20 mA, ± 10 VDC (0-5, 1-5, 0-10V) Channels:

Channel A, Channel B, Channel C (Math channel)

Accuracy: $\pm 0.03\%$ of calibrated span ± 1 count, square root & programmable exponent accuracy range: 10-100% of calibrated span

Temperature Drift: 0.005% of calibrated span/ $^{\circ}$ C max from 0 to 65°C ambient,

0.01% of calibrated span/ $^{\circ}$ C max from -40 to 0°C ambient

- Relays**

Rating: 2 or 4 SPDT (Form C) internal and/or 4 SPST (Form A) external; rated 3 A @ 30VDC and 125/250VAC resistive load; 1/14 HP @ 125/250VAC for inductive loads.

- Isolated 4-20mA Transmitter Output**

Output Source: Process variable (PV), max, min, set points 1-8, or manual control mode

Scaling Range: 1.000 to 23.000mA for any display range

Accuracy: $\pm 0.1\%$ of span ± 0.004 mA

- Expansion Modules**

Digital I/O module: 4 digital inputs & 4 digital outputs per module.

4-relay module: Four Form A (SPST) rated 3 A @ 30VDC and 125/250VAC resistive load; 1/14 HP (≈ 50 watts) @ 125/250VAC for inductive loads.

ORDERING INFORMATION

Model DPM - Standard Displays		
85-265VAC Model	12/24VDC Model	options Installed
DPM-AC	DPM-DC	None
DPM-AC-2R	DPM-DC-2R	2 Relays
DPM-AC-420	DPM-DC-420	4-20 mA Output
DPM-AC-4R	DPM-DC-4R	4 Relays
DPM-AC-2R-420	DPM-DC-2R-420	2 Relays & 4-20mA Output
DPM-AC-4R-420	DPM-DC-4R-420	4 Relays & 4-20mA Output

Note: 24V Transmitter power supply standard on all models.

Model DPM - Sunlight readable Displays		
85-265VAC Model	12/24VDC Model	options Installed
DPM-HV-AC	DPM-HV-DC	None
DPM-HV-AC-2R	DPM-HV-DC-2R	2 Relays
DPM-HV-AC-420	DPM-HV-DC-420	4-20 mA Output
DPM-HV-AC-4R	DPM-HV-DC-4R	4 Relays
DPM-HV-AC-2R-420	DPM-HV-DC-2R-420	2 Relays & 4-20 mA Output
DPM-HV-AC-4R-420	DPM-HV-DC-4R-420	4 Relays & 4-20 mA Output

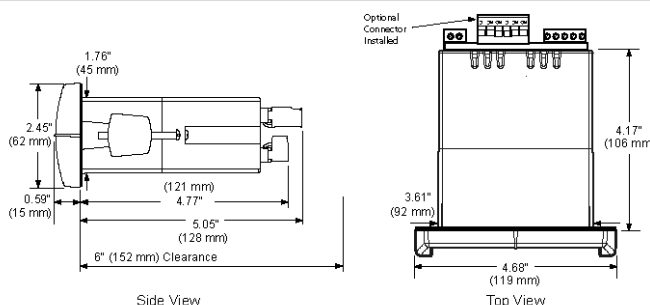
Note: 24V Transmitter power supply standard on all models.

ACCESSORIES

PM accessories	
Model	Description
DIN-MTG	DIN-Rail Mounting Kit
4R-EM	4 Relays Expansion Module
4D-IOM	4 Digital I/O Module
MCC	Meter Copy Cable
RS232-ADP	RS-232 Serial Adapter
RS485-ADP	RS-422/485 Serial Adapter
USB-ADP	USB Serial Adapter
SNUB	Snubber

MECHANICAL DETAILS

Dimensions in inches



Your depth and level specialists for Ground, Surface, Sea and Waste Water