proSense® Digital Panel Meters - DPM3-E Series 1/8 DIN

The ProSense DPM3-E series offers a simple, feature packed digital display of True RMS AC or DC voltage or amperage electrical parameters. The 5-digit tri-color red, green or amber LED display is easily scaled into any engineering units from -19999 to 19999 with a selectable decimal point location. Two point direct or reverse acting linear scaling values can be entered manually or by introducing actual sensed values in Teach mode. Models are available with two SPDT relay outputs that can be set to activate on an increasing or decreasing input signal with hysteresis or time delay operation. Additionally the display color can be set to change on relay operation. Models are also available with a 4-20mA analog output. The meter is powered from an external AC or DC power supply. The 1/8 DIN housing is easy to install in a panel and the meter face has an IP65 rating. Configuration parameters can be totally or selectively locked out to prevent unauthorized or accidental changes to the meter's operation. Other features include memory and reset of minimum (valley) and maximum (peak) display values, display hold function, filtering to minimize display bounce, and display brightness adjustment. ProSense digital panel meters are backed by a 3 year warranty.

Features:

- 96 x 48mm 1/8 DIN
- Simple menu driven pushbutton configuration
- 14mm 5-digit (-19999 to 19999) tri-color (red, green, amber) LED display
- Selectable decimal point
- True RMS for AC voltage and current inputs
- AC/DC voltage input 600V, 200V, 20V, 2V
- AC/DC current input 200mA, 1A, 5A, shunt 50mV, shunt 60mV, shunt 100 mV
- AC or DC powered
- Display scaling or teaching modes
- 4-20mA analog output on select models

- (2) Form C SPDT relays on select models
  - Activation on increasing or decreasing input signal
  - Hysteresis or time delay operation
  - Display color change on relay operation
- Configuration for direct or reverse acting linear readings
- Total or selective configuration lock out
- Programmable functions include:
  - Minimum (valley) and maximum (peak) value memory
  - Minimum (valley) and maximum (peak) value reset
  - Hold
- Adjustable filtering to minimize display bounce
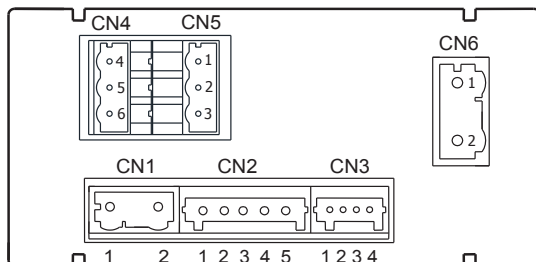- Display brightness adjustment
- 3 year warranty

DPM3-E Series Panel Meters			
Model	**Description**	**Weight (lbs)**	**Price**
DPM3-E-H	ProSense digital panel meter, panel mount, 1/8 DIN, 14mm 5-digit tri-color (red, green, amber) LED, True RMS AC/DC current or voltage input, 85-265 VAC/100-300 VDC operating voltage.	0.61	$202.00
DPM3-E-A2R-H	ProSense digital panel meter, panel mount, 1/8 DIN, 14mm 5-digit tri-color (red, green, amber) LED, True RMS AC/DC current or voltage input, 4-20 mA, (2) 8A SPDT relays output, 85-265 VAC/100-300 VDC operating voltage.	0.72	$239.00
DPM3-E-L	ProSense digital panel meter, panel mount, 1/8 DIN, 14mm 5-digit tri-color (red, green, amber) LED, True RMS AC/DC current or voltage input, 22-53 VAC/10.5-70 VDC operating voltage.	0.6	$202.00
DPM3-E-A2R-L	ProSense digital panel meter, panel mount, 1/8 DIN, 14mm 5-digit tri-color (red, green, amber) LED, True RMS AC/DC current or voltage input, 4-20 mA, (2) 8A SPDT relays output, 22-53 VAC/10.5-70 VDC operating voltage.	0.71	$239.00

ProSense® Digital Panel Meters - DPM3-E Series 1/8 DIN

Technical Specifications				
Input	*DC Voltage*	*AC Voltage*	*DC Current*	*AC Current*
Range....Input Impedance	2V....100kΩ 20V....1MΩ 200V....1MΩ 600V....1MΩ	2V....75kΩ 20V....850kΩ 200V....850kΩ 600V....850kΩ	200mA....0.75 Ω 1A....0.014 Ω 5A....0.014 Ω 50mV.... 1.8 MΩ 60mV....1.8 MΩ 100mV....1.8 MΩ	200mA.... 0.75 Ω 1A....0.014 Ω 5A....0.014 Ω 50mV.... 1.5 MΩ 60mV....1.5 MΩ 100mV....1.5 MΩ
Input Frequency Range	–	40Hz to 10kHz True RMS Measurement	–	40Hz to 10kHz True RMS Measurement
Resolution	2V....0.1 mV ±20V....1mV ±200V....10mV ±600V....0.1 V	2V....0.1 mV 20V....1mV 200V....10mV 600V....0.1 mV	200mA....0.01 mA 1A....1mA 5A....1mA 50mV....0.01 mV 60mV....0.01 mV 100mV....0.01 mV	200mA....0.01 mA 1A....1mA 5A....1mA 50mV....0.01 mV 60mV....0.01 mV 100mV....0.01 mV
Accuracy	2V.... 0.05% rdg ± 0.3 mV ±20V....0.05% rdg ± 3mV ±200V....0.05% rdg ± 30mV ±600V....0.05% rdg ± 0.3 V	2V.... 0.3% rdg ± 0.3 mV 20V....0.3% rdg ± 3mV 200V....0.3% rdg ± 30mV 600V...0.3% rdg ± 0.3 V	200mA.... 0.1 % rdg ± 0.05 mA 1A....0.1 % rdg ± 5mA 5A...0.1 % rdg ± 5mA 50mV.... 0.1 % rdg ± 0.1 mV 60mV...0.1 % rdg ± 0.1 mV 100mV....0.1 % rdg ± 0.1 mV	200mA.... 0.3 % rdg ± 0.05 mA 1A...0.3 % rdg ± 5mA 5A...0.3 % rdg ± 5mA 50mV.... 0.3 % rdg ± 0.1 mV 60mV...0.3 % rdg ± 0.1 mV 100mV....0.3 % rdg ± 0.1 mV
Accuracy Conditions	AC or DC Input: 15 minutes warmup 25°C ± 5°C ambient temperature 100 ppm/°C temperature coefficient 10-75% RH non-condensing		AC Input: 3% to 100% of input range 45 Hz to 400 Hz sine wave 40 Hz to 10 kHz Accuracy +/-(1% + 20 digits) Crest Factor: 3, Accuracy +/-(0.2% + 10 digits); 5, Accuracy +/-(1% + 20 digits)	

Conversion	Technique	Sigma-Delta
	Resolution	±15 bits
	Conversion rate	20 times per second
Display	Range	-19999 / +19999, 5 LED digits 14mm (Programmable color Red, Green, Amber)
	LEDs	8, functions and outputs status
	Display refresh rate	20 times per second
	Display / Input overrange indication	"-oUEr" , "oUEr"
Relays -A2R Only	(2) Relays, Form C SPDT	Nominal contact rating....................8A at 250VAC / 24VDC Maximum switching current (resistive load)...................8A Maximum switching power........................2000VA / 192W Maximum switching voltage..................400VAC / 125VDC Contact resistance...........................≤100mΩ at 6VDC at 1A Operate time...≤10ms
Analog Output -A2R Only	Type	4-20 mA Sourcing
	Maximum load	≤500Ω
	Resolution	13 bits
	Accuracy	0.1%FS ±1 bit
	Response time	10ms
	Thermal drift	0.5μA / °C
Power Supply and Fuses	-H High Voltage: -L Low Voltage:	85-265 VAC 50/60 Hz (100-300 VDC), (recommended fusing 0.5A/250V, DIN 41661) 22-53 VAC 50/60 Hz (10.5 - 70 VDC), (recommended fusing 2A/250V, DIN 41661)
Power Consumption		5W without options, 8W max.
Filter	Cutoff frequency	4Hz to 0.05Hz
	Slope	20dB/Dec.
Environmental Conditions	Operating temperature	-10ºC to +60ºC (14ºF to 140ºF)
	Storage temperature	-25ºC to +85ºC (-13ºF to 185ºF)
	Relative humidity (non-condensing)	<95% @ 40ºC (104ºF)
	Maximum altitude	2000m
	Frontal protection degree	IP65
Environmental Air		No corrosive gases permitted
Agency Approvals		CE

prosense® Digital Panel Meters - DPM3-E Series 1/8 DIN

Wiring

CN1			
AC Supply		DC Supply	
1	Line	1	VDC
2	Neutral	2	VDC

Polarity insensitive for DC power

CN2	
Electrical Inputs	
1	Common
2	Shunt / 2V
3	200mA
4	1A / 5A
5	20 / 200 / 600V

Terminals					
Connector	**CN1**	**CN2**	**CN3**	**CN4 & CN5**	**CN6**
Wire cross section	0.08 to 2.5mm² (28 to 12 AWG)	0.08 to 1.5mm² (28 to 14 AWG)	0.08 to 0.5mm² (28 to 20 AWG)	0.08 to 2.5mm² (28 to 12 AWG)	0.08 to 2.5mm² (28 to 12 AWG)
Strip length	8 to 9mm	5 to 6mm	5 to 6mm	8 to 9mm	8 to 9mm
Manufacturer	Wago 231-202/026-000	Wago 734-105	Wago 733-104	Wago 231-303/026-000	Wago 231-302/026-000
Cage clamp connection	Insertion tool or screwdriver with 0.5 mm x 3.0 mm blade	Insertion tool or screwdriver with 0.3 mm x 1.8 mm blade	Insertion tool or screwdriver with 0.3 mm x 1.8 mm blade	Insertion tool or screwdriver with 0.5 mm x 3.0 mm blade	Insertion tool or screwdriver with 0.5 mm x 3.0 mm blade

CN3	
1	Common
2	Peak
3	Valley
4	Hold

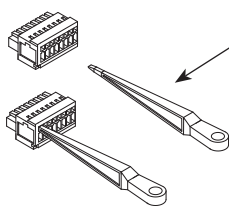*2 SPDT Relays (-A2R)*

CN4 (Relay 2)	
4	NO2
5	CM2
6	NC2

CN5 (Relay 1)	
1	NO1
2	CM1
3	NC1

NO: Normally Open, CM: Common, NC: Normally Closed
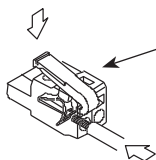
CN6	
Analog Output	
1	(-) 4-20mA
2	(+) 4-20mA

CN2 and CN3 Terminals

Insertion Tool (included with meter) Insert wires into the proper terminal while using the insertion tool to open the clip inside the connector. Release the insertion tool to fix wire to the terminal.

CN1, CN4, CN5 and CN6 Terminals

Insertion Tool (included with meter) Insert wires into the proper terminal while using the insertion tool to open the clip inside the connector. Release the insertion tool to fix wire to the terminal.

Insert

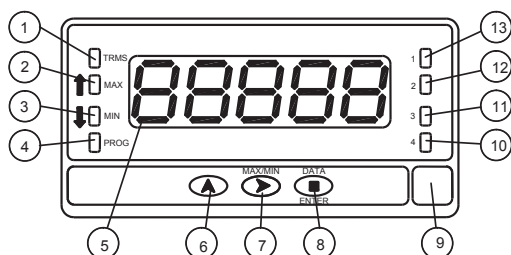*Scan or click the above QR code to be taken to the DPM3-E Series Quick Start Guide*

Manual

Scan or click the above QR code to be taken to the DPM3-E Series Manual

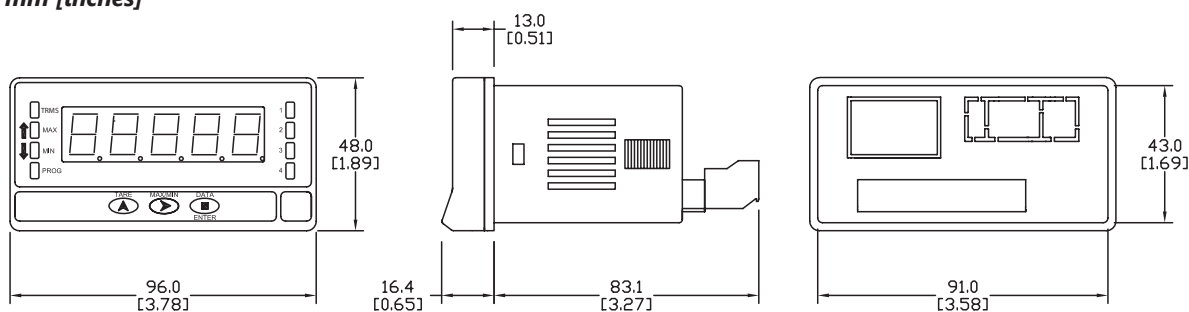# prosense® Digital Panel Meters - DPM3-E Series 1/8 DIN

Programming Panel

Programming Panel			
#	**Description**	**Run Mode**	**Programming Mode**
1	True RMS	Indicates reading AC using true RMS	---
2	MAX	Indicates peak displayed	---
3	MIN	Indicates valley displayed	---
4	PROG	---	Indicates programming mode
5	DISPLAY	Displays the input variable	Displays programming parameters
6	UP	Direct access to setpoints	Increments the value of the flashing digit
7	SHIFT/MAX/MIN KEY	Recalls Max/Min values	Moves to the right
8	ENTER KEY	Enters in PROG mode. Displays data	Accepts data. Advances program
9	Free space for units label	---	
10	LED Output 4	---	---
11	LED Output 3	---	---
12	LED Output 2	Activaton Output 2	Programming output 2
13	LED Output 1	Activation Output 1	Programming output 1

Dimensions

mm [inches]

Installation	
Dimensions	96 x 48 x 83.1 mm (1/8 DIN)
Panel Cutout	92 x 45mm (Max. panel thickness 10mm)
Case Material	Polycarbonate UL 94 V-0

See our website www.AutomationDirect.com for complete Engineering drawings.

prosense® Digital Panel Meters DPM Series

Type DPM1-A-LP

Type DPM1-A-T

Type DPM1-A-2R

Type DPM2

Type DPM2L

Type DPM3

Description

The ProSense DPM family of digital panel meters includes both 1/32 DIN and 1/8 DIN meter sizes with simple menu-driven pushbutton configuration. A wide variety of input signals can be accepted for process, temperature, load cell, voltage, current, pulse, frequency, and other applications. Available output options include alarm relays, analog signal retransmission, and sensor excitation voltage. Backed by a 3-year warranty, ProSense digital panel meters offer outstanding features and performance at an incredible price point.

Click on the thumbnail or go to https://www.automationdirect.com/VID-PS-0007 for a short video on Digital Panel Meters

DPM Series Digital Panel Meters Process Input Selection Guide

Model	Size	Display	Inputs	Outputs	Power	Price
DPM1-A-LP	1/32 DIN	10mm, Red LED*, -1999 to 9999 Selectable decimal point	4-20mA	None	Loop Powered	$104.00
DPM1-A-H			±20mA, ±100mV ±10V, ±20V ±200V		85-265 VAC, 50/60 Hz 100-300 VDC	$119.00
DPM1-A-L					21-53 VAC, 50/60 Hz 10.5-70 VDC	$119.00
DPM1-T-H		10mm, Red LED, -1999 to 9999	RTD Pt100 (3-wire) TC Type J, K, T or N		85-265 VAC, 50/60 Hz 100-300 VDC	$119.00
DPM1-T-L					21-53 VAC, 50/60 Hz 10.5-70 VDC	$119.00
DPM1-A-2R-H		8mm, Red LED, -1999 to 9999 Selectable decimal point	±20mA, ±100mV ±10V, ±60V	2 Relays Form A SPST Normally Open	85-265 VAC, 50/60 Hz 100-300 VDC	$132.00
DPM1-A-2R-L					21-53VAC 50/60 Hz 10.5-70VDC	$132.00
DPM1-A-A2R-H				2 Relays Form A SPST Normally Open 4-20mA	85-265 VAC, 50/60 Hz 100-300 VDC	$145.00
DPM1-A-A2R-L					21-53 VAC, 50/60 Hz 13.5-70 VDC	$145.00
DPM2-AT-HL	1/8 DIN	DPM2: 14mm, Red LED, -9999 to 9999 DPM2L: 20mm, Red LED, -1999 to 9999 Selectable decimal point	±20mA, ±10V ±200V, 100-100k Ohm potentiometer, 1k-50k Ohm resistance, RTD Pt100 (3-wire) RTD Pt1000 (4-wire) TC Type J, K, T or N	None	20-265 VAC, 50/60 Hz 11-265 VDC	$139.00
DPM2L-AT-HL						$149.00
DPM2-AT-2R-HL				2 Relays Form C SPDT		$152.00
DPM2L-AT-2R-HL						$164.00
DPM3-AT-H	1/8 DIN	14mm, Red, Green, Amber LED -19999 to 39999 Selectable decimal point	±20mA, ±10V RTD Pt100 (3-wire) TC Type J, K, T or N Load Cell ±15mV, ±30mV, ±150mV Potentiometer	None	85-265 VAC, 50/60Hz 100-300 VDC	$173.00
DPM3-AT-2R-H				2 Relays Form C SPDT		$195.00
DPM3-AT-4R-H				4 Relays Form A Normally Open with shared common		$210.00
DPM3-AT-A-H				4-20mA		$195.00
DPM3-AT-A2R-H				2 Relays Form C SPDT 4-20mA		$217.00
DPM3-AT-L				None	22-53 VAC, 50/60 Hz 10.5-70 VDC	$173.00
DPM3-AT-2R-L				2 Relays Form C SPDT		$195.00
DPM3-AT-4R-L				4 Relays Form A Normally Open with shared common		$210.00
DPM3-AT-A-L				4-20mA		$195.00
DPM3-AT-A2R-L				2 Relays Form C SPDT 4-20mA		$217.00

* Illumination based on available loop current and will not be as bright as the powered Digital Panel Meters
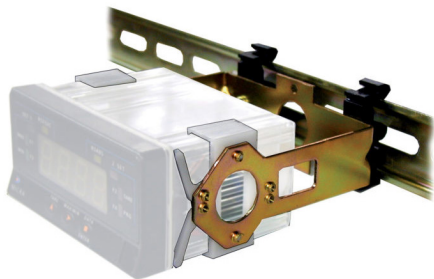
prosense® Digital Panel Meters DPM Series

DPM Series Digital Panel Meters Electrical Input Selection Guide

Model	Size	Display	Inputs	Outputs	Power	Price
DPM1-E-H	1/32 DIN	10mm, Red LED, -1999 to 9999 Selectable decimal point	100 / 600 VAC or VDC 1A / 5A AC or DC	None	85-265 VAC, 50/60 Hz 100-300 VDC	$119.00
DPM1-E-L					21-53 VAC, 50/60Hz 10.5-70 VDC	$119.00
DPM2-E-HL	1/8 DIN	14mm, Red LED, -9999 to 9999	600 / 200 / 20 VAC or VDC 1A / 5A / shunt 60mV / shunt 100mV AC or DC	None	20-265 VAC, 50/60 Hz 11-265 VDC	$139.00
DPM2-E-2R-HL				2 Relays Form C SPDT		$152.00
DPM3-E-H		14mm, Red, Green, Amber LED -19999 to 19999 Selectable decimal point	600 / 200 / 20 / 2 VAC True RMS or VDC 1A / 5A / shunt 50mV / shunt 60mV / shunt 100mV AC True RMS or DC	None	85-265 VAC 100-300 VDC	$202.00
DPM3-E-A2R-H				2 Relays Form C SPDT 4-20mA		$239.00
DPM3-E-L				None	22-53 VAC 10.5-70 VDC	$202.00
DPM3-E-A2R-L				2 Relays Form C SPDT 4-20mA		$239.00

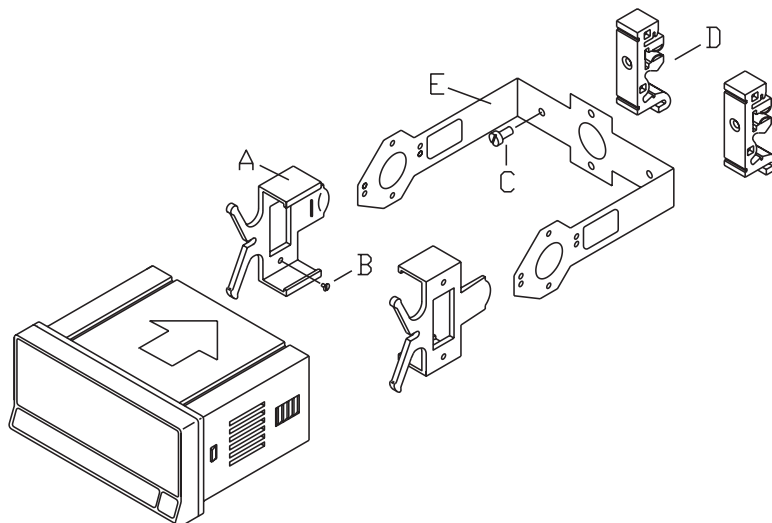## DPM Series Digital Panel Meters Pulse, Frequency Input Selection Guide

Model	Size	Display	Inputs	Outputs	Power	Price
DPM1-P-H	1/32 DIN	10mm, Red LED, 0 to 9999 Selectable decimal point	7kHz (tachometer rpm or rate modes) 9999Hz (frequency meter mode)	None	85-265 VAC 100-300 VDC	$119.00
DPM1-P-L					1-53 VAC 10.5-70 VDC	$119.00
DPM1-P-A2R-H		8mm, Red LED, 0 to 9999 Selectable decimal point	12kHz (tachometer rpm or rate modes) 9999Hz (frequency mode) 100Hz (duty/PWM mode)	2 Relays Form A SPST Normally Open 4-20mA	85-265 VAC 100-300 VDC	$145.00
DPM1-P-A2R-L					21-53 VAC 13.5-70 VDC	$145.00
DPM2-P-HL	1/8 DIN	14mm, Red LED, 0 to 9999, 0 to 999999 Totalizer Selectable decimal point	7.5 kHz (counter mode) 25kHz (tachometer rpm or rate modes)	None	20-265 VAC 11-265 VDC	$139.00
DPM2-P-2R-HL				2 Relays Form C SPDT		$152.00
DPM3-P-H		14mm Red, Green, Amber LED -99999 to 99999, -9999999 to 99999999 Totalizer Programmable decimal point	19kHz (without totalizer) 9.9 kHz (with totalizer)	None	85-265 VAC 100-300 VDC	$173.00
DPM3-P-A2R-H				2 Relays Form C SPDT 4-20mA		$217.00
DPM3-P-L				None	22-53 VAC 10.5-70 VDC	$173.00
DPM3-P-A2R-L				2 Relays Form C SPDT 4-20mA		$217.00

prosense® Digital Panel Meter Accessories

Panel Meter Accessories			
Model	Description	Weight (lbs)	Price
DPM-BKT1	ProSense panel mount bracket, for use with DPM2 and DPM3 series 1/8 DIN digital panel meters. Hardware included.	0.3	$22.50

The DPM-BKT1 kit includes:

A. 2 mounting clips.

B. 4 screws M3 x 6 DIN 963 to attach the clips to the inside of the arms of part E.

C. 2 screws M4 x 8 DIN 84 to attach DIN rail clips to part E.

D. 2 DIN rail clips (DIN rail EN50022 or EN50035).

E. 1 metal bracket.

(Panel Meter not included)

Insert

Scan or click the above QR code to be taken to the DPM-BKT1 Insert

See our website www.AutomationDirect.com for complete Engineering drawings.