

# proense Digital Panel Meter

## DPM1-E Series

### Instructions

AUTOMATIONDIRECT.com

3505 HUTCHINSON ROAD  
CUMMING, GA 30040-5860

#### Models:

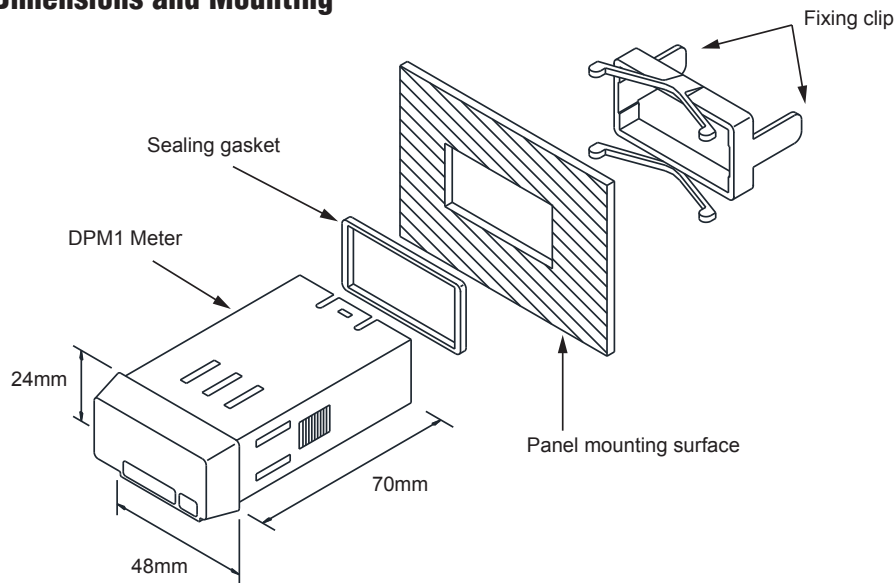
DPM1-E-H  
DPM1-E-L



#### Features

- 48 x 24mm 1/32 DIN
- 4 digit (-1999 to 9999 DC/0 to 9999 AC) red LED display
- AC/DC Voltage Input (100/600V)
- AC/DC Amperage (1A/5A)
- Selectable decimal point
- AC or DC powered
- Display scaling or teaching modes
- Configuration for direct or reverse acting
- Total configuration lock out

### Dimensions and Mounting



To install the instrument, prepare a 45mm x 22mm panel cut-out and slide the unit inwards making sure to place the sealing gasket between the front side panel and the front bezel.

While holding the unit in place, put the fixing clip around the case and slide it until it reaches the panel at the rear side.

Press slightly to fasten the clip to the latching slots on the case and get the unit fully assembled and close fitted to achieve a good seal.

To remove the instrument from the panel, pull the rear fixing clip latching tabs outwards until they are disengaged, then slide the fixing clip back over the case.

Installation	
Dimensions	48 x 24 x 70mm (1/32 DIN)
Panel Cutout	45 x 22mm (Max. panel thickness 7mm)
Case Material	Polycarbonate UL 94 V-0

### Additional Help and Support

• For additional technical support and questions, call our Technical Support team @ 1-800-633-0405 or 770-844-4200



**WARNING:** To minimize the risk of potential safety problems, you should follow all applicable local and national codes that regulate the installation and operation of your equipment. These codes vary from area to area and it is your responsibility to determine which codes should be followed, and to verify that the equipment, installation, and operation are in compliance with the latest revision of these codes.

Equipment damage or serious injury to personnel can result from the failure to follow all applicable codes and standards. We do not guarantee the products described in this publication are suitable for your particular application, nor do we assume any responsibility for your product design, installation, or operation.

If you have any questions concerning the installation or operation of this equipment, or if you need additional information, please call us at 1-800-633-0405 or 770-844-4200.

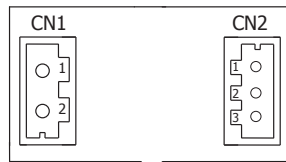
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#### WARNING! Electric shock danger

1. Keep away from high-voltage and high-frequency environment during the installation to prevent interference. Avoid using the device in environments which contain: (a) dust or corrosive gas; (b) high humidity or high radiation; (c) shock or vibration
2. Make sure the input power is switched off when installing or uninstalling the DPM1 to prevent harm to personnel or equipment.
3. Before switching on the input power, check the signal connection, e.g. the input voltage and polarity. Voltage that is too high may cause damage to the DPM1.
4. Front cover should be cleaned only with a soft cloth soaked in neutral soap product. DO NOT USE SOLVENTS.

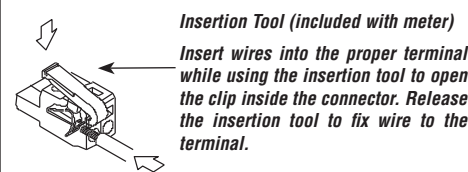
### Wiring Terminals



CN1		CN2	
AC Supply	DC Supply		
1 Neutral	1 -VDC	1 IN (common)	
2 Line	2 +VDC	2 100V / 600V (AC/DC)	
		3 1A / 5A (AC/DC)	

Terminals		
Connector	CN1	CN2
Wire cross section	0.08 to 2.5mm <sup>2</sup> (28 to 12 AWG)	0.08 to 2.5mm <sup>2</sup> (28 to 12 AWG)
Strip length	8 to 9mm	8 to 9mm
Manufacturer	Wago 231-202/026-000	Wago 231-303/026-000
Cage clamp connection	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

### CN1 and CN2 Terminals



**Warning:** If this instrument is not installed and used in accordance with these instructions, the protection provided by it against hazards may be impaired. To meet the requirements of EN 610101-1 standard, where the unit is permanently connected to main supply, it is obligatory to install a circuit breaking device that is easily reachable by the operator and clearly marked as the disconnecting device.

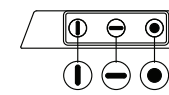
To guarantee electromagnetic compatibility, the following guidelines should be followed:

- Power supply wires should be separately routed from signal wires and never ran in the same conduit.
- Use shielded cable for signal wiring.
- Cable cross-section must be  $\geq 0.25\text{mm}^2$

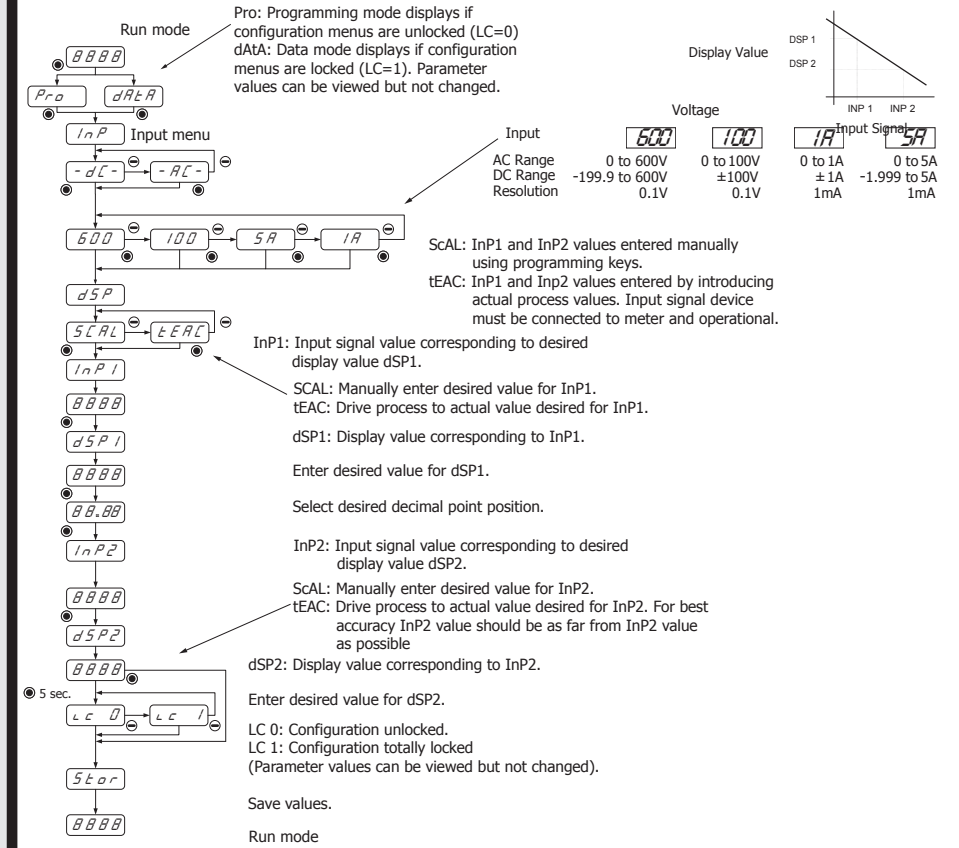
Before connecting wires, input range should be verified to be within the proper limits. Do not connect more than one input signal to the meter simultaneously.

### Configuration

#### Programming Keys (Bottom View)



- **ENTER:** Enters configuration and validates data and parameters.
- **SHIFT:** Selects mode or shifts blinking digit in configuration.
- **UP:** Increases value of blinking digit in configuration.



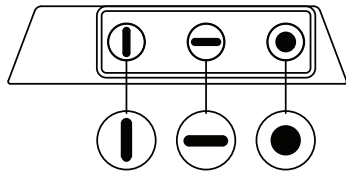
### Technical Specifications

Input	Voltage		Current	
	AC Range	0 to 600V	0 to 100V	0 to 1A
AC Frequency Range	45Hz to 1kHz sine wave			
DC Range	-199.9 to 600V	±100V	±1A	-1.999 to 5A
Resolution	0.1V	0.1V	1mA	1mA
Input Impedance	Volts	3MΩ		
	Amps	14mΩ		
Accuracy (@ 23°C ±5°C)	DC, 600V AC, 5A AC	±(0.2% of reading +3 digits)		
	100V AC, 1A AC	±(0.4% of reading +4 digits)		
	Temperature coefficient	100 ppm/°C		
	Warm-Up time	5 minutes		
Power Supply and Fuses	DPM1-E-H	85-265VAC 50/60Hz or 100-300VDC (Recommended fusing, 0.1A/250V, DIN 41661)		
	DPM1-E-L	21-53VAC 50/60Hz or 10.5-70VDC (Recommended fusing, 0.5A/250V, DIN 41661)		
Power Consumption	1.8W			
Conversion	Technique	Sigma-Delta		
	Resolution	±15 bits		
	Conversion rate	20 times per second		
Display	Range	-1999 to 9999 DC, 0 to 9999 AC, selectable decimal point position		
	Type	4 digit 10mm (0.4"), red		
	Display refresh rate	4 times per second		
	Display/input overrange indication	OL/E		
Environmental Conditions	Operating temperature	-10°C to +60°C (14°F to 140°F)		
	Storage temperature	-25°C to +85°C (-13°F to 185°F)		
	Relative humidity (non-condensing)	<95% @ 40°C (104°F)		
	Maximum altitude	2000m		
Frontal protection degree	IP65			
Environmental Air	No corrosive gases permitted			
Agency Approvals	CE			

### Model DPM1-E-H Example Application:

0 to 100VDC input, 0.0 to 100.0 display (direct acting using Scale Mode)

#### Programming Keys (Bottom View)



- **ENTER:** Enters configuration and validates data and parameters.
- ▬ **SHIFT:** Selects mode or shifts blinking digit in configuration.
- ⏏ **UP:** Increases value of blinking digit in configuration.

BBBB Run mode

●  
Prd Programming mode

●  
InP Input menu

AC → dC

600 → 100 → 5A → 1A

●  
dSP

●  
5CAL

InP1 and InP2 values entered manually using programming keys.

●  
InP1

Input signal value corresponding to desired display value dSP1.

●  
0000

Manually enter desired value for InP1. 0 for this example

●  
dSP1

Display value corresponding to InP1.

●  
0000

Enter desired value for dSP1. 0 for this example

●  
000.0

Select desired decimal point position. xxx.x for this example

●  
InP2

Input signal value corresponding to desired display value dSP2.

●  
100.0

Manually enter desired value for InP2. 100.0 for this example

●  
dSP2

Display value corresponding to InP2.

●  
100.0

Enter desired value for dSP2. 100.0 for this example

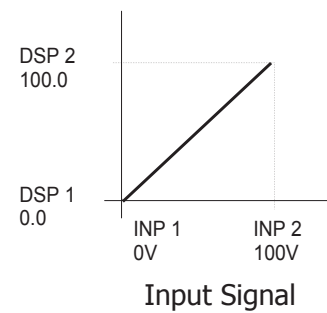
●  
Star

Save values.

●  
BBBB

Run mode

Direct Acting



### Notes