Digital Panel Meter
DPM1 Series

Instructions

AUTOMATIONDIRECT.com
3505 HUTCHINSON ROAD
CUMMING, GA 30040-5860

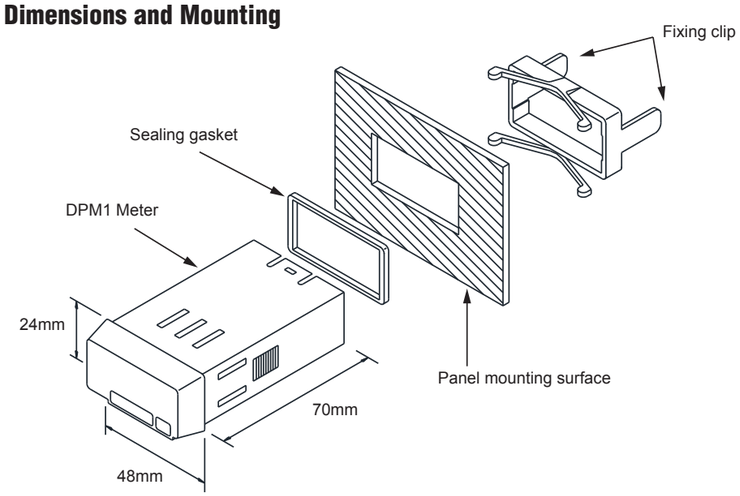
Models:
DPM1-A-H
DPM1-A-L

CE

Features

- 48 x 24mm 1/32 DIN
- 4 digit (-1999 to 9999) red LED display
- Selectable decimal point
- Process (±10V, ±20mA, ±100mV)
- DC Voltage (±200V, ±20V)
- AC or DC powered
- Display scaling or process teaching modes
- Configuration for direct or reverse acting linear processes
- 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 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
- A QR link to configuration and programming videos is located on the back of this document.

Instructions: DPM1-A-H, DPM1-A-L

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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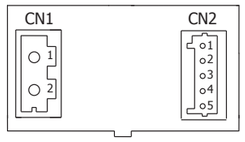
WARNING! Electric shock danger

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

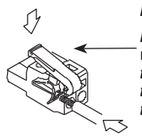


CN1			
AC Supply		**DC Supply**	
1	Neutral	1	-VDC
2	Line	2	+VDC

CN2	
1	- IN (common)
2	+100mV DC
3	+20mA
4	+10/20VDC
5	+200VDC

Terminals		
Connector	**CN1**	**CN2**
Wire cross section	0.08 to 2.5mm² (28 to 12 AWG)	0.08 to 0.5mm² (28 to 20 AWG)
Strip length	8 to 9mm	5 to 6mm
Manufacturer	Wago 231-202/026-000	Wago 733-105
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

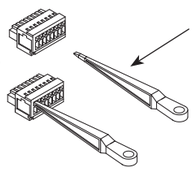
CN1 Terminals



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.

CN2 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.

This instrument conforms with the following community directives: EMC 2004/108/CE and LVD 2006/95/CE. Refer to the instructions in this insert to preserve safety protections

Warning: If this instrument is not installed and used in accordance with these instructions, the protection provided by it against hazards may be impared. 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.

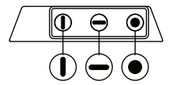
To guarantee electromagnetic compatibility, the following guidelines should followed:

- 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 ≥0.25mm²

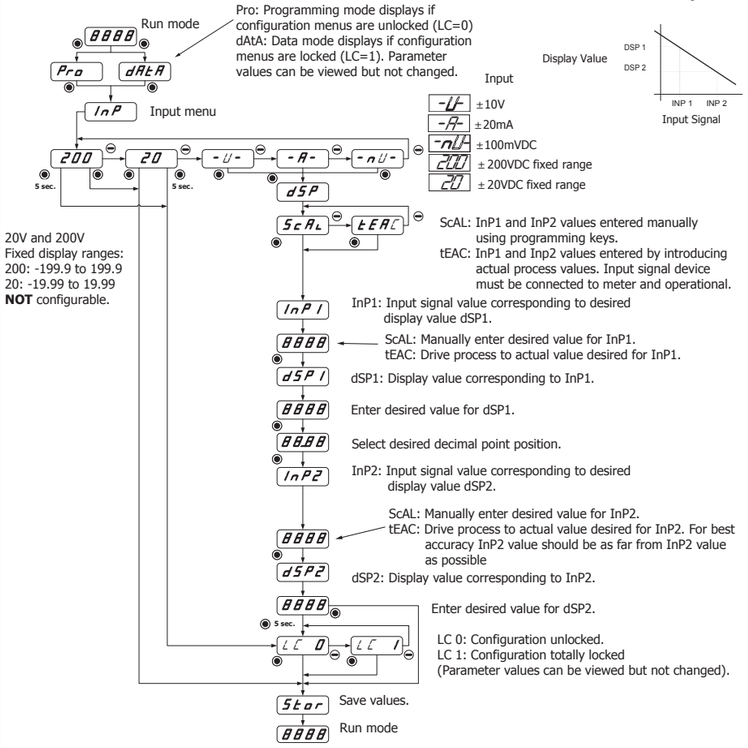
Before connecting signal wires, signal type and input range should be verified to be within the proper limits. Do not connect more than one input signal to the meter simultaneously.

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.

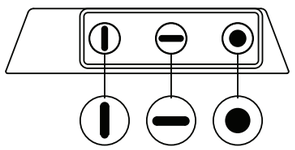


Technical Specifications					
Input	***Voltage***				***Current***
Range	±200V (fixed)	±20V (fixed)	±10V	±100mV	±20mA
Resolution	0.1V	0.01V	1mV	0.1mV	0.01mA
Input Impedance	Volts	1MΩ			
	mV	100MΩ			
	mA	20Ω			
Accuracy (@ 23°C ±5°C)	Maximum error	±(0.1% of reading +3 digits)			
	Temperature coefficient	100 ppm/°C			
	Warm-Up time	5 minutes			
Power Supply and Fuses	DPM1-A-H	85-265VAC 50/60Hz or 100-300VDC (Recommended fusing, 0.1A/250V, DIN 41661)			
	DPM1-A-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, selectable decimal point position			
	Type	4 digit 10mm (0.4"), red			
	Display refresh rate	4 times per second			
	Display/input overrange indication	OuE			
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-A-H Example Application:

4-20mA input, 0.0 to 100.0 display (direct acting process using Scale Mode)

Programming Keys (Bottom View)



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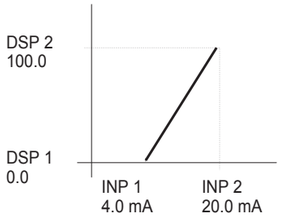
Direct Acting Process



Input Signal

8888 Run mode

PrO Programming mode

InP Input menu

200 → 20 → -U- → -A-

dSP

SCAL — InP1 and InP2 values entered manually using programming keys.

InP1 — Input signal value corresponding to desired display value dSP1.

0004 — Manually enter desired value for InP1. 4mA 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.

020.0 — Manually enter desired value for InP2. 20mA for this example

dSP2 — Display value corresponding to InP2.

100.0 — Enter desired value for dSP2. 100.0 for this example

Stor — Save values.

8888 — Run mode

Notes

Video Link

Scan or click the QR code for a series of Configuration and Programming videos for the ProSense DMP Series Panel Meters