Digital Panel Meter DPM3 Series

Quick Start Guide

This Quick Start Guide provides basic information for configuring the ProSense DPM3 series digital panel meters. For more specific information and advanced configuration instructions please visit www.AutomationDirect.com and download the free instruction manual for the DPM3 series.

Features:
- 96 x 48mm 1/8 DIN
- 5 digit (-10000 to 10000) (In-color: red, green, amber)
- LCD display
- Selectable decimal point
- Process (10V, ±20mA)
- Temperature (RTD: PT100, TC, I, J, K, T, N, Resolution 1°C, 0.1°C, 0.2°C, 0.5°C, ±0.5°C, ±1°C, ±2°C)
- Polycarbonate
- Total or selectable configuration lock out
- Load cell (±15mV, ±30mV, ±150mV)
- AC or DC powered
- Sensor excitation voltage 24V and 10V
- Potentiometer
- 96 x 48 x 60mm (1/8 DIN)
- 5 to 6mm
- Display brightness adjustment
- Filtering to minimize display bounce
- Display scaling or process teaching modes
- Minimum and maximum value reset
- Activation on increasing or decreasing input
- Optional (2) Form C SPDT or (4) Form A SPST relays
- Tare reset
- Display scaling or process teaching modes
- Display brightness adjustment
- Filtering to minimize display bounce
- Display scaling or process teaching modes
- Minimum and maximum value reset
- Tare
- Activation on increasing or decreasing input

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 this 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 those 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 DPM3 to prevent harm to personnel or equipment.

3. Below 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 DPM3.

4. Front cover should be cleaned only with a soft cloth soaked in neutral soap product. DO NOT USE SOLVENTS.

5. Outputs remain active in Programming Mode.

Wiring Terminals:

Note: For additional wiring information download complete manual from www.AutomationDirect.com

This instrument conforms with the following community directives: EMC 2004/108/EC and LVD 2006/95/EC. Refer to the instructions in the 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 impaired. To meet the requirements of EN 61010-1 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 ensure electromagnetic compatibility, the following guidelines should be followed:

- Power supply wires should be separately routed from signal wires and never run in the same conduit.
- Use shielded cable for signal wiring.
- Cable cross-section must be ≥0.25mm²

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

Dimensions and Mounting:

Sealing gasket
DPDU Mount

58mm
40mm
60mm
Panel mounting surface
(2) Fixing clips

To install the unit, prepare a 92mm x 49mm panel cut-out and slide the unit towards 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 clips on both sides of the case and slide them through the guide tracks until they reach the panel at the rear side.

Press slightly to fasten the clips to the latching slots on the unit. While holding the unit in place, put the fixing clips on both sides of the case and slide them through the guide tracks until they reach the panel at the rear side.
**Model DPM3-AT-AH Example Application:**

Type: Theremocouple input with 0.1% resolution, fixed display range of -238.0°F to 2012.0°F and 4-20mA output over temperature range of 100.0°F to 1000.0°F.

Note: For additional configuration information, download the complete manual from www.AutomationDirect.com

**Input Impedance:**

±(0.1% rdg + 1 digit) 10 times per second

**4-20 mA Sourcing:**

0.5µA / ºC 1µA 10V @ 60mA

**CE:**

±(0.1% rdg + 1 digit) Enter delay time of 5 seconds for this example

100 ppm/°C 20 times per second

**Pt100 (3-Wire):**

2000m

**Load Cell:**

Cutoff frequency 1M

-19.9° / +99.9°

-10°C to 60°C (14°F to 140°F)

23°C±5°C

**Alarm:**

-10°C to 60°C (14°F to 140°F)

23°C±5°C

99.9°. Enter 0.0 for this example.

**Offset: Time and Temperature:**

Offset provides compensation for a known difference between the temperature measured by the sensor and the actual temperature. Available offset value of -19.9° to +99.9°. Enter 0.0 for this example.

0.1°F Resolution for this example. Note: display range is automatically set for -238.0°F to 2012.0°F when Type J and 0.1°F resolution is selected.

**Model DPM3-AT-2R Example Application:**

0-10VDC input, 0 to 100.00 display, relay set 1 for N.O. operation activates on an increase to a display value of 80.00 after a 5 sec. delay. Display to turn amber when relay activates.

Note: For additional configuration information, download the complete manual from www.AutomationDirect.com

**Technical Specifications:**

- Process Input: ±150mV, ±30mV, ±150mV
- Thermocouple: ±(0.2% rdg+0.6°C) / 0.1°C
- Thermocouple: ±(0.2% rdg+1°F) / 0.1°F
- Thermocouple: ±(0.2% rdg+2°F) / 1°F
- PT100 RTD: ±0.4% rdg+0.6°C / 0.1°C
- PT100 RTD: ±0.4% rdg+1°F / 0.1°F
- PT100 RTD: ±0.4% rdg+2°F / 1°F
- RTD: ±0.4% rdg+0.6°C / 0.1°C
- RTD: ±0.4% rdg+1°F / 0.1°F
- RTD: ±0.4% rdg+2°F / 1°F

**Display / Input overrange:**

- Display / Input overrange

**Conversion Rate:**

- Conversion rate: 300 samples per second

**Accuracy:**

- Temperature Accuracy: ±0.5°C / ±0.9°F

**Assembly:**

- Up to 200.00°C / 0.1°C
- Up to 100.00°F / 0.1°F

**Resolution:**

- ±18.888

**Relay Output:**

- Relay output indicator

**Input:**

- 4-20mA Load
- 2000m
- 0.5µA / ºC
- 1µA
- 10V @ 60mA

**Output:**

- 0-10VDC
- ±20mA DC

**Conversion Technique:**

- 0.1%FS ±1 bit

**Relative Humidity:**

- ≤85% @ 40ºC (104ºF)

**Power Supply:**

- In high Voltage: 4-20mA (85-265 VAC 50/60 Hz, 300 VDC, recommended fuse: 0.5A, DIN 41661)
- In high Voltage: 4-20mA (22-53 VAC 50/60 Hz, 60 VDC, recommended fuse: 2A, DIN 41661)

**Power Consumption:**

- 0.5A at 250VAC / 30VDC

**Filter:**

- 24VAC

**Supply and Fuses:**

- 24VAC: 0.5A
- 24VDC: 0.5A
- 24VDC: 100mA
- 24VAC: 100mA

**Protection:**

- Indoor

**Agency Approval:**

- CE

**Video Link:**

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