

1/8 DIN Digital Panel Meters For DC Voltage and Current Inputs

DP63600



DP63600-DC
shown smaller
than actual size.



- Universal DC Input
- Green Display or Red Sunlight-Readable Display
- 5-Digit, 14.2 mm (0.56") LED
- 4 V (300 Vdc Max) and 5 Current (2A dc Max) Ranges
- 3 Resistance Ranges—10 KΩ Max
- Field-Upgradeable Option Cards
- AC and DC Powered Versions
- NEMA 4X (IP65)

The DP63600 Series panel meters offer many features and performance capabilities suitable for a wide range of industrial applications. These meters accept universal DC voltage/current inputs. The optional plug-in output cards allow the opportunity to configure the meter for present applications, while providing easy upgrades for future needs.

The meters employ a bright, 14.2 mm (0.56") LED display. The unit is available with a red sunlight readable or a standard green LED. The intensity of display can be adjusted from dark room to sunlight readable, making it ideal for viewing in variable light applications.

The meters provide a max and min reading memory with programmable capture time. The capture time is used to prevent detection of false max or min readings which may occur during start-up or unusual process events.

The meters have 4 setpoint outputs, implemented on plug-in option cards. The plug-in cards provide dual form "C" relays (5A), quad form "A" (3A), or either quad-sinking or quad-sourcing open collector logic outputs. The setpoint alarms can be configured to suit a variety of control and alarm requirements. Communication and bus capabilities are also available as option cards; these include RS232, RS485, and MODBUS®.

Specifications

Display: 5-digit, 14.2 mm (0.56") red sunlight readable or standard green LEDs, (-19999 to 99999)

Power:

AC Versions:

AC Power: 85 to 250 Vac, 50/60 Hz, 15 VA

Isolation: 2300 Vrms for 1 minute to all inputs and outputs

DC Power: 11 to 36 Vdc, 11 W (derate operating temperature to 40°C if operating <15 Vdc and 3 plug-in option cards are installed)

AC Power: 24 Vac, ± 10%, 50/60 Hz, 15 VA

Isolation: 500 Vrms for 1 minute to all inputs and outputs (50V working)

Keypad: 3 programmable function keys, 5 keys total

A/D Converter: 16-bit resolution

Update Rates:

A/D Conversion Rate: 20 readings/s

Step Response: 200 ms max to within 99% of final readout value (digital filter and internal zero correction disabled), 700 ms max (digital filter disabled, internal zero correction enabled)

Display Update Rate: 1 to 20 updates/s

Setpoint Output On/Off Delay Time: 0 to 3275 seconds

Analog Output Update Rate: 0 to 10s

Max/Min Capture Delay Time: 0 to 3275 s

Memory: Non-volatile EEPROM retains all programmable parameters and display values

Environmental Conditions:

Operating Temperature Range: 0 to 50°C (32 to 122°F) [0 to 45°C (32 to 113°F) with all 3 plug-in cards installed]

Storage Temperature Range: -40 to 60°C (-40 to 140°F)

Operating and Storage Humidity: 0 to 85% max RH non-condensing

Altitude: Up to 2000 m (6562')

Connections: High-compression, cage-clamp terminal block

Construction: This unit is rated for NEMA 4X (IP65) outdoor use, IP20 touch-safe, Installation Category II, Pollution Degree 2, 1-piece bezel/case, flame-resistant, synthetic rubber keypad—panel gasket and mounting clip included

Weight: 295 g (10.4 oz)

Excitation Power

Transmitter Power: 24 Vdc, ±5%, regulated, 50 mA max

Reference Voltage: 2 Vdc, ±2%

Compliance: 1 kΩ load min (2 mA max)

Temperature Coefficient: 40 ppm/°C max

Reference Current: 1.75 mAdc, ±2%

Compliance: 10 kΩ load max

Temperature Coefficient: 40 ppm/°C max

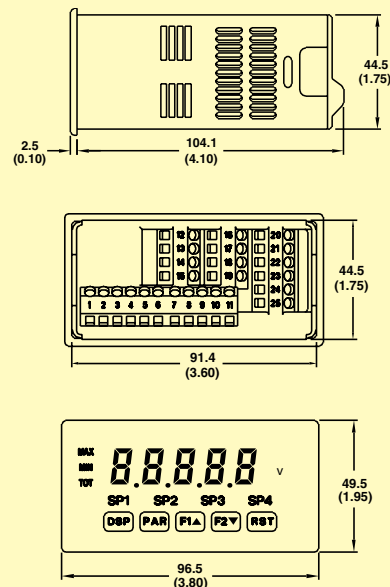
Output Modules: For complete specifications, see LDP63100 Series online

DC Inputs

Input Range	Accuracy (18 to 28°C)	Accuracy (0 to 50°C)	Impedance/ Compliance	Max Continuous Overload	Resolution
±200 µA _{dc}	0.03% of rdg + 0.03 µA	0.12% of rdg + 0.04 µA	1.11 kΩ	15 mA	10 nA
±2 mA _{dc}	0.03% of rdg + 0.3 µA	0.12% of rdg + 0.4 µA	111 Ω	50 mA	0.1 µA
±20 mA _{dc}	0.03% of rdg + 3 µA	0.12% of rdg + 4 µA	11.1 Ω	150 mA	1 µA
±200 mA _{dc}	0.05% of rdg + 30 µA	0.15% of rdg + 40 µA	1.1 Ω	500 mA	10 µA
±2 A _{dc}	0.5% of rdg + 0.3 mA	0.7% of rdg + 0.4 mA	0.1 Ω	3 A	0.1 mA
±200 mV _{dc}	0.03% of rdg + 30 mV	0.12% of rdg + 40 mV	1.066 MΩ	100V	10 µV
±2 V _{dc}	0.03% of rdg + 0.3 mV	0.12% of rdg + 0.4 mV	1.066 MΩ	300V	0.1 mV
±20 V _{dc}	0.03% of rdg + 3 mV	0.12% of rdg + 4 mV	1.066 MΩ	300V	1 mV
±300 V _{dc}	0.05% of rdg + 30 mV	0.15% of rdg + 40 mV	1.066 MΩ	300V	10 mV
100 Ω	0.05% of rdg + 30 MΩ	0.2% of rdg + 40 MΩ	0.175V	30V	0.01 Ω
1000 Ω	0.05% of rdg + 0.3 Ω	0.2% of rdg + 0.4 Ω	1.75V	30V	0.1 Ω
10 kΩ	0.05% of rdg + 1 Ω	0.2% of rdg + 1.5 Ω	17.5V	30V	1 Ω

* After 20 minute warm-up. Accuracy is specified in two ways: Accuracy over an 18 to 28°C and 10 to 75% RH environment; and accuracy over a 0 to 50°C and 0 to 85% RH (non-condensing environment). Accuracy over the 0 to 50°C range includes the temperature coefficient effect of the meter.

Note: Recommended minimum clearance (behind the panel) for mounting clip installation is 53.4 (2.1) H x 127 (5) W.



Dimensions: mm (inch)

To Order

Model No.	Description (Display Meter Only, No Outputs)
DP63600-DC	Universal DC inputs, red display, 85 to 250 Vac, 50/60 Hz
DP63600-DC-LV	Universal DC inputs, red display, 11 to 36 V _{dc} , 24 Vac
DP63600-DC-GN	Universal DC inputs, green display, 85 to 250 Vac, 50/60 Hz
DP63600-DC-GN-LV	Universal DC inputs, green display, 11 to 36 V _{dc} , 24 Vac

Optional Plug-in Output Cards (Field Installable)

Model No.	Description
Setpoint Alarms (Only 1 Alarm Card Can Be Installed Into Base Meter)	
LDP6-CDS10	Dual setpoint relay output card
LDP6-CDS20	Quad setpoint relay output card
LDP6-CDS30	Quad setpoint sinking open collector output card
LDP6-CDS40	Quad setpoint sourcing open collector output card
Analog Output	
LDP6-CDL10	Analog output card
Communications (Only 1 Communications Card Can Be Installed Into Base Meter)*	
LDP6-CDC10	RS485 serial communications output card with terminal block
LDP6-CDC1C	Extended RS485 serial communications output card with dual RJ11 connector
LDP6-CDC20	RS232 serial communications output card with terminal block
LDP6-CDC2C	Extended RS232 serial communications output card with 9-Pin D connector
LDP6-CDC40	MODBUS communications card
LDP6-CDC4C	Extended MODBUS communications card with dual RJ11 connector

Accessory

Model No.	Description
DPP-5	1/8 DIN panel punch

* Free software available online

Comes complete with operator's manual.

Note: Adding option cards—meters can be fitted with up to 3 optional plug-in cards, however, only 1 card from each function type can be installed at a time. The function types include setpoint alarms, analog output and communications. The cards can be installed initially or at a later date. Each optional plug-in card is shipped with installation and programming instructions.

Ordering Examples: DP63600-DC-GN, universal DC inputs, green display, 85 to 250 Vac, 50/60 Hz, and LDP6-CDL10 analog output card. DP63600-DC, universal DC inputs, red display, 85 to 250 Vac, 50/60 Hz.