



EXTRA LARGE DISPLAY METER FOR PROCESS OR STRAIN GAGE BRIDGE INPUT

LDP63100 Series



LDP63100-E, \$700, shown smaller than actual size.

Starts at
\$700



The LDP63100 is a versatile display that can increase productivity by offering the plant floor or production area a large visual display of their current status. Whether your measurement is voltage, current, process, or weight the LDP63100 can satisfy your requirement. The LDP63100 accepts various analog inputs which allow the unit to adapt to most any application. Additional plug-in option cards can add alarms, analog output, and communication/bus capabilities, making the LDP63100 a truly intelligent panel meter.

The unit is a large display, designed to be remotely mounted and therefore does not have a programming keypad. Unit programming can be accomplished by the use of external switches that can be wired via the terminal block to allow unit programming. A minimum of 3 switches would be required. A remote programming option provides a 3 m (10') interconnecting cable and programming box allowing easy programming of the display

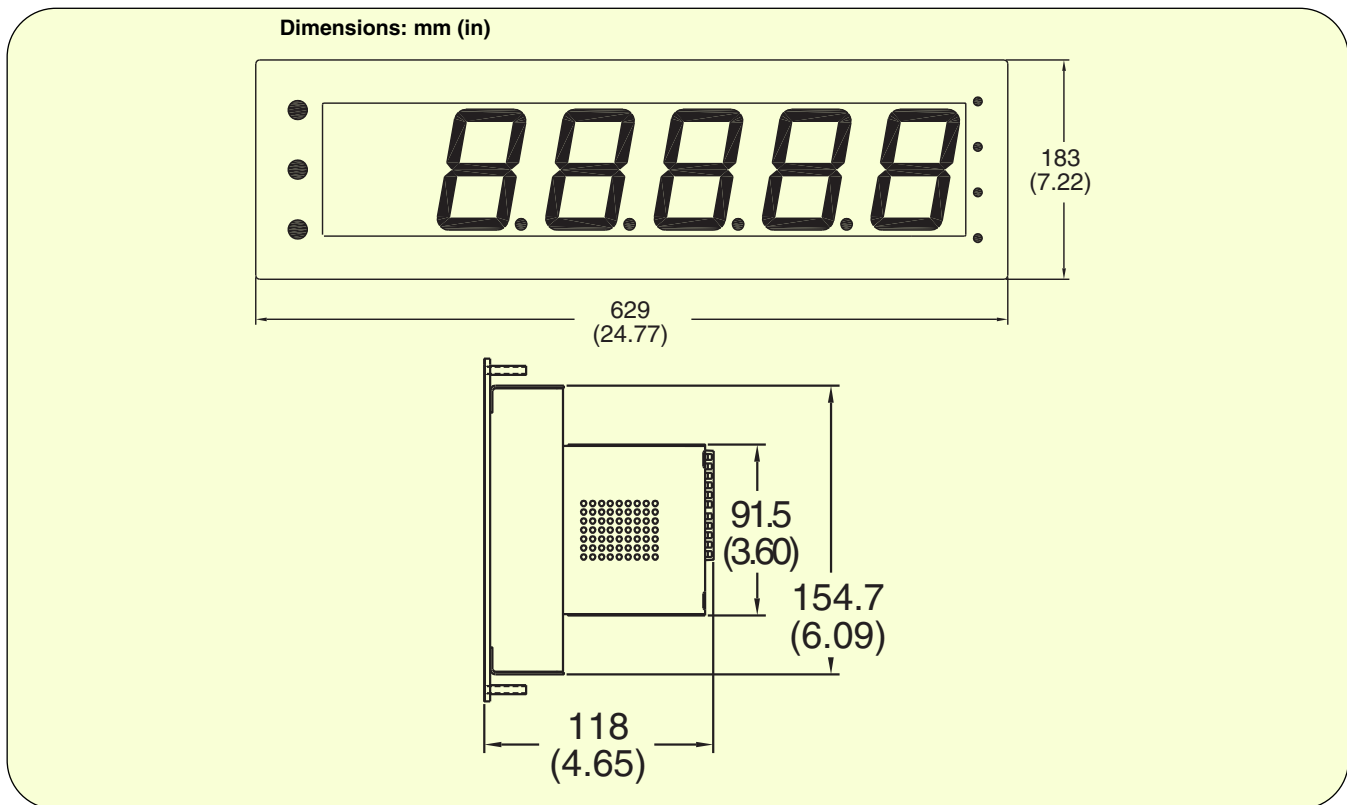
- ✓ Large 101 mm (4") LED Display Readable to 54 m (180')
- ✓ Various Input Types Available
- ✓ Field Installable Alarms, Analog Outputs, and Communication
- ✓ Programmable User Inputs
- ✓ Universal 85 to 250 Vac Powered
- ✓ NEMA 4X (IP65) Face

PROCESS INPUTS

INPUT RANGE	ACCURACY (18 TO 28°C)	ACCURACY (0 TO 50°C)	IMPEDANCE/ COMPLIANCE	MAX CONTINUOUS OVERLOAD	DISPLAY RESOLUTION
20 mA (-2 to 26 mA)	0.03% of rdg +2 μ A	0.12% of rdg +3 μ A	20 Ω	150 mA	1 μ A
10 Vdc (-1 to 13 Vdc)	0.03% of rdg +2 mV	0.12% of rdg +3 mV	500 k Ω	300V	1 mV

STRAIN GAGE BRIDGE INPUTS

INPUT RANGE	ACCURACY (18 TO 28°C)	ACCURACY (0 TO 50°C)	IMPEDANCE/ COMPLIANCE	MAX CONTINUOUS OVERLOAD	DISPLAY RESOLUTION
\pm 24 mVdc	0.02% of rdg +3 μ V	0.07% of rdg +4 μ V	100 M Ω	30V	1 μ V
\pm 240 mVdc	0.02% of rdg +30 μ V	0.07% of rdg +40 μ V	100 M Ω	30V	10 μ V



SPECIFICATIONS

Display: 101 mm (4") Red LED, 5-Digit, (-19999 to 99999)

Power Requirements: 85 to 250 Vac, 50/60 Hz, 18 VA

Excitation:

Process: 24 Vdc @ 50 mA, ± 5% regulated

Strain: selectable 5 Vdc @ 65 mA or 10 Vdc @ 125 mA (± 2%)

Operating Temperature Range: 0 to 50°C (32 to 122°F)

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 (6561')

Enclosure Rating: IP65 Face only

Connections: High compression cage-clamp terminal blocks (30-12 AWG wire)

Construction: Aluminum with textured black polyurethane paint; gasket and mounting nuts included

Dimensions: 629 x 183 x 118 mm (24.77 x 7.22 x 4.65")

Panel Cutout: 604.3 x 158.2 mm (23.79 x 6.23")

Panel Thickness: 1.57 to 9.5 mm (0.060 to 0.375")

Weight: 2.25 kg (5 lbs)

OPTION BOARD COMMUNICATIONS CARDS RS232/RS485

Isolation to Sensor and User Input Commons: 500 Vrms for 1 min

Working Voltage: 50V (not isolated from all other commons)

Baud Rate: 300 to 19.2k

Data Format: 7/8 bits; odd, even, or no parity working Voltage: 50V

RS232 Communication Card

Type: RS232 half duplex

RS485 Communication Card

Type: RS485 multi-point balanced interface

Bus Address: 0 to 99, max 32 meters per line

Transmit Delay: Selectable; 2 to 50 msec or 50 to 100 msec

MODBUS®

Type: RS485; RTU and ASCII MODBUS modes

Isolation To Sensor and User Input Commons: 500 Vrms for 1 minute

Working Voltage: 50V (not isolated from all other commons)

Baud Rates: 300 to 38400

Data: 7/8 bits

Parity: No, Odd, or Even

Addresses: 1 to 247

Transmit Delay: Programmable

ANALOG OUTPUT CARD

Types (User Selectable): 0 to 20 mA, 4 to 20 mA and 0 to 10 Vdc

Isolation to Sensor and User Input Commons: 500 Vrms for 1 min

Working Voltage: 50V (not isolated from all other commons)

Accuracy: 0.17% of FS (18 to 28°C); 0.4% of FS (0 to 50°C)

Resolution: 1/3500

Compliance:

10 Vdc: 10 kΩ load min

20 mA: 500 Ω load max

Update Time: 200 msec max to within 99% of final readout value (digital filter and internal zero correction disabled) 700 msec max (digital filter disabled, internal zero correction enabled)

SETPOINT OUTPUT CARDS (Four Types of Field Installable Cards)

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

Dual Relay Card (LDP6-CDS10):

Type: Two FORM-C relays

Isolation to Sensor and User Input Commons: 2000 Vrms for 1 min



EXTRA LARGE DISPLAY METER FOR PROCESS OR STRAIN GAGE BRIDGE INPUT

**LARGE
DISPLAY!**

**Digit Shown
Actual Size!**

Working Voltage: 250V

Contact Rating: One Relay

Energized: 5 amps @ 120/240 Vac or 28 Vdc (resistive load), 1/2 HP @ 120 Vac, inductive load. Total current with both relays energized not to exceed 5 amps

Life Expectancy: 100 k cycles min at full load rating. External RC snubber extends relay life for operation with inductive loads

Quad Relay Card (LDP6-CDS20):

Type: Four FORM-A relays

Isolation to Sensor and User Input

Commons: 2300 Vrms for 1 min

Working Voltage: 250V

Contact Rating: One Relay

Energized: 3 amps @ 250 Vac or 30 Vdc (resistive load), 1/2 HP @ 120 Vac, inductive load. Total current with all four relays energized not to exceed 4 amps

Life Expectancy: 100 k cycles min at full load rating. External RC snubber extends relay life for operation with inductive loads

Quad Sinking Open Collector (LDP6-CDS30):

Type: Four isolated sinking NPN transistors

Isolation To Sensor and User

Input Commons: 500 Vrms for 1 min

Working Voltage: 50V (not isolated from all other commons)

Rating:

100 mA max @ $V_{sat} = 0.7V$ max
 $V_{max} = 30V$

Quad Sourcing Open Collector (LDP6-CDS40):

Type: Four isolated sourcing PNP transistors

Isolation to Sensor and User Input

Commons: 500 Vrms for 1 min

Working Voltage: 50V (not isolated from all other commons)

Rating: Internal supply 24 Vdc $\pm 10\%$, 30 mA max total all four

External supply: 30 Vdc max, 100 mA max each output





LDP63100-E, \$700, shown smaller than actual size.



AVAILABLE FOR FAST DELIVERY!

To Order (Specify Model Number)

MODEL NO.	PRICE	DESCRIPTION
LDP63100-S	\$835	4" digit large display meter, strain gage bridge inputs, 85 to 250 Vac power
LDP63100-E	700	4" digit large display meter, process inputs, 85 to 250 Vac power

OPTIONAL PLUG-IN OUTPUT CARDS (FIELD INSTALLABLE)

MODEL NO.	PRICE	DESCRIPTION
SETPOINT ALARMS (ONLY 1 ALARM CARD CAN BE INSTALLED INTO BASE METER)		
LDP6-CDS10	\$37	Dual setpoint relay output card
LDP6-CDS20	37	Quad setpoint relay output card
LDP6-CDS30	37	Quad setpoint sinking open collector output card
LDP6-CDS40	37	Quad setpoint sourcing open collector output card
ANALOG OUTPUT		
LDP6-CDL10	\$74	Analog output card
COMMUNICATIONS (ONLY 1 COMMUNICATIONS CARD CAN BE INSTALLED INTO BASE METER)		
LDP6-CDC10	\$48	RS485 Serial communications output card with terminal block
LDP6-CDC1C	48	Extended RS485 Serial communications output card with dual RJ11 connector
LDP6-CDC20	48	RS232 Serial communications output card with terminal block
LDP6-CDC2C	48	Extended RS232 Serial communications output card with 9-Pin D connector
LDP6-CDC40	58	MODBUS communications card
LDP6-CDC4C	58	Extended MODBUS communications card with dual RJ11 connector

Comes complete with mounting hardware and operator's manual.

Free software download available at omega.com/ldp63100.

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, Communications, and Analog Output. The cards can be installed initially or at a later date. Each optional plug-in card is shipped with installation and programming instructions.

Ordering Example: LDP63100-S, large display meter for strain gage bridge inputs, 85 to 250 Vac and LDP6-CDL10 analog output card, \$835 + 74 = \$909.

Accessories

MODEL NO.	PRICE	DESCRIPTION
LDP6-PGM	\$61	Remote programming module with 3 m (10') cable
LDP6-ENC12	168	NEMA 4 (IP65) enclosure
LDP631-SHR	52	Shroud
LDP6-EN/SH	209	NEMA 4 (IP65) enclosure with shroud

Recommended Reference Book:
Electricians Testing and Troubleshooting
Pocket Guide,
EE-2401, \$30.
See Section Y
For Additional Books





UNITED STATES

www.omega.com
1-800-TC-OMEGA
Stamford, CT.

CANADA

www.omega.ca
Laval(Quebec)
1-800-TC-OMEGA

GERMANY

www.omega.de
Deckenpfronn, Germany
0800-8266342

UNITED KINGDOM

www.omega.co.uk
Manchester, England
0800-488-488

FRANCE

www.omega.fr
Guyancourt, France
088-466-342

CZECH REPUBLIC

www.omegaeng.cz
Karviná, Czech Republic
596-311-899

BENELUX

www.omega.nl
Amstelveen, NL
0800-099-33-44



More than 100,000 Products Available!

• Temperature

Calibrators, Connectors, General Test and Measurement Instruments, Glass Bulb Thermometers, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders Relative Humidity Measurement Instruments, RTD Probes, Elements and Assemblies, Temperature & Process Meters, Timers and Counters, Temperature and Process Controllers and Power Switching Devices, Thermistor Elements, Probes and Assemblies, Thermocouples Thermowells and Head and Well Assemblies, Transmitters, Wire

• Flow and Level

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

• pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

• Data Acquisition

Auto-Dialers and Alarm Monitoring Systems, Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485 and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

• Pressure, Strain and Force

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Strain Gages, Torque Transducers, Valves

• Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters