EXTRA LARGE DISPLAY METER
FOR DIGITAL INPUT

LDPF63100 shown smaller than actual size.

LDPF63100 Series

2 YEAR WARRANTY c (UL) us C€

✔ **Large LED Display Readable to 54 m (180')**
✔ **Digital Input; Count and Rate Input Serial Slave**
✔ **Alarms, Analog Output, and Communication**
✔ **Programmable User Inputs**
✔ **Universal AC Powered (85 to 250 Vac)**
✔ **PC Software for Meter Configuration**
✔ **NEMA 4X (IP65)**

The LDPF63100 display 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 rate, count, or time. The LDPF63100 can satisfy your requirement. The displays accept various digital inputs through the use of input modules that 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 it a truly intelligent panel meter.

SPECIFICATIONS
Display: 101 mm (4") red LED 6-Digit (-99999 to 999999)
Power Requirements: 85 to 250 Vac, 50/60 hz, 10 VA
Inputs A and B
DIP switch selectable to accept pulses from a variety of sources including switch contacts, TTL outputs, magnetic pickups and all standard sensors.
Logic: Input trigger levels
V_{IL} = 1.5V max; V_{IH} = 3.75V minimum
Current Sinking: Internal 7.8 KΩ pull-up to +12 Vdc, I_{MAX} = 1.9 mA
Current Sourcing: Internal 3.9 KΩ pull-down, 7.3 mA maximum @ 28 Vdc, V_{MAX} = 30 Vdc
Filter: Damping capacitor provided for switch contact bounce. Limits input frequency to 50 hz and input pulse widths to 10 msec minimum
Magnetic Pickup
Sensitivity: 200 mV peak
Hysteresis: 100 mV
Input Impedance: 3.9 KΩ @ 60 hz
Maximum Input Voltage: ±40V peak, 30 Vrms
Dual Count Modes:
When any dual count mode is used, then user inputs 1 and/or 2 will accept the second signal of each signal pair. The user inputs do not have the Logic/ Mag, High/Low Freq, and Sink/Source input setup switches. The user inputs are inherently a logic input with no low frequency filtering. Any mechanical contacts used for these inputs in a dual count mode must be debounced externally. The user input may only be selected for sink/source by the user jumper placement.
Prescaler Output
NPN Open Collector: I_{SNK} = 100 mA maximum @ V_{OL} = 1 Vdc maximum, V_{OH} = 30 Vdc maximum with duty cycle of 25% minimum and 50% maximum

Display Indication: Three vertical dots on the left side of the unit identify the displays for the following modules
Setpoint Indication: Four vertical dots on the right side of the unit identify the setpoint "ON" condition, with SP 1 being the top position through SP 4 at the bottom
Programming: The unit is a large display, designed to be remotely mounted. Therefore, the unit does not have a programming keypad. Unit programming should be accomplished by one of the following methods:

Rear Terminal Block: External switches can be wired via the terminal block to allow unit programming. A minimum of 3 switches would be required.
Optional Programming Remote (LD6-PGM): This option provides a 10' interconnecting cable and programming box. The programming remote contains buttons allowing easy programming of the display.
Optional Serial Programming: You can purchase an RS232 or RS485 Comms card and program the unit via Windows® based software programs. See available Comm cards shown on ordering page

Environmental Conditions
Operating Temperature Range: Determined by the input module
Storage Temperature Range: -40 to 60°C (-40 to 15°F)
Operating and Storage Humidity: 0 to 85% max RH (non-condensing)
Altitude: Up to 2000 m (6562')
Mounting Requirements: Maximum panel thickness is 9.5 mm (0.375") Minimum panel thickness for NEMA 4 (IP65) sealing is 1.52 mm (0.060")

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Connections: Wiring connections are made to the terminal block and input module via high compression cage-clamp terminal blocks

Terminal Block Wiring
Wire Strip Length: 7.5 mm (0.3")
Wire Gage: 30-12 AWG copper wire
Maximum Torque: 5-7 inch-lbs (0.58-0.81 N-m)
Construction: Aluminum front panel, enclosure, and rear cover with textured black polyurethane paint for scratch and corrosion resistance protection. Sealed front panel meets NEMA 4X (IP65) specifications for indoor use when properly installed. Installation Category II, Pollution Degree 2. Panel gasket and keps nuts included.
Weight: 2.25 kg (5 lbs) (less module)

183 (7.22)

629 (24.77)

Dimensions: mm (inch)

OPTION BOARDS SPECIFICATIONS

RS485 Communication Card (LDP6-CDC10 or LDP6-CDC1C)
Type: RS485 multi-point balanced interface
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
Bus Address: 0 to 99, maximum 32 meters per line
Transmit Delay: Selectable; 2 to 50 msec or 50 to 100 msec

RS232 Communication Card (LDP6-CDC20 or LDP6-CDC2C)
Type: RS232 half duplex
Isolation to Sensor and User Input Commons: 500 Vrms for 1 minimum
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

Modbus Communications Card (LDP6-CDC40 or LDP6-CDC4C)
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
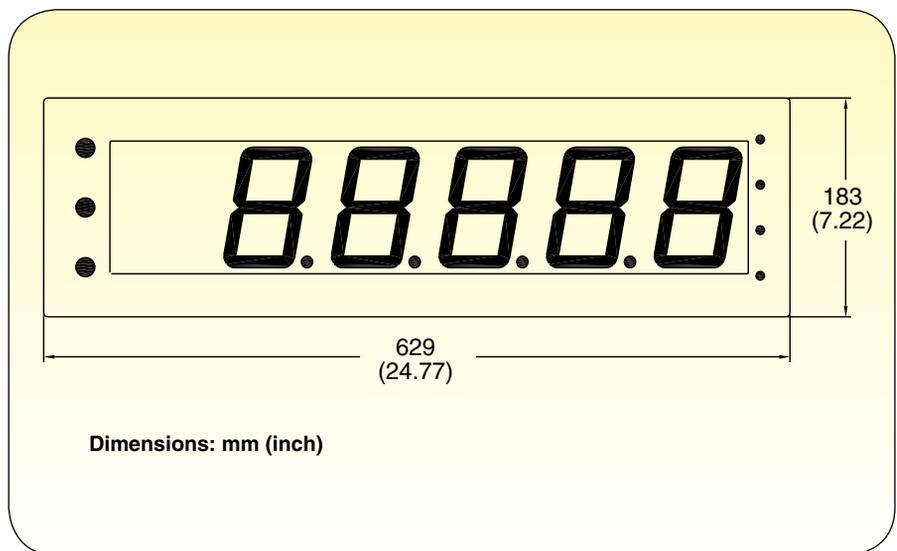**Baud Rates:** 300 to 38400
Data: 7/8 bits
Parity: No, Odd, or Even
Addresses: 1 to 247
Transmit Delay: Programmable; See Transmit Delay explanation.

Analog Output Card (LDP6-CDL)
Types: 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 minimum
20 mA: 500 Ω load maximum
Update Time: 200 msec maximum to within 99% of final readout value (digital filter and internal zero correction disabled) 700 msec maximum (digital filter disabled, internal zero correction enabled)
LDP63000-AC: 1 sec maximum to within 99% of final readout value (digital filter disabled)

Setpoint Output Cards (Four Types of Field Installable Cards)
Response Time: 200 msec maximum to within 99% of final readout value (digital filter and internal zero correction disabled) 700 msec maximum (digital filter disabled, internal zero correction enabled)
LDP63000-AC Only: 1 sec maximum to within 99% of final readout value (digital filter disabled)
LDP63000-T Only: 200 msec typ; 700 msec max (digital filter disabled)

Dual Relay Card (LDP6-CDS10)
Type: Two FORM-C relays
Isolation to Sensor and User Input Commons: 2000 Vrms for 1 minimum
Working Voltage: 250V
Contact Rating:
 One Relay Energized: 5 Amps @ 120/240 Vac or 28 Vdc (resistive load), 1/8 HP @120 Vac, inductive load (total current with both relays energized not to exceed 5 Amps)
 Life Expectancy: 100 K cycles minimum 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: 250 Vrms
Contact Rating:
 One Relay Energized: 3 amps @ 250 Vac or 30 Vdc (resistive load), 1/10 HP @120 Vac, inductive load (total current with all four relays energized not to exceed 4 Amps)
 Life Expectancy: 100 K cycles minimum 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 ± 10%, 30 mA maximum total all four
 External Supply: 30 Vdc maximum, 100 mA maximum each output

Programming Software (Free download at omega.com)
Allows configuration of the LDPF63100 meter from a PC. This software offers standard drop-down menu commands, that make it easy to program the meter. The unit program can then be saved in a PC file for future use. A serial plug-in card is required to program the meter using the software.

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LDPF63100 shown smaller than actual size.

To Order	
Model No.	**Description**
LDPF63100	Large display meter, digital inputs, 85 to 250 Vac power

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

*Software is free—Download from **omega.com***
Comes with complete 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 Example: LDPF63100**, large display meter for digital input, 85 to 250 Vac power, **LDP6-CDL10** analog output card.*

Accessories

Model No.	Description
LDP6-PGM	Remote programming module with 3 m (10') cable
LDP6-ENC12	NEMA 4 (IP65) enclosure
LDP631-SHR	Shroud
LDP6-EN/SH	NEMA 4 (IP65) enclosure with shroud

To Order, Call 1-800-82-6 6342
1-800-TC-OMEGA® or Shop Online at *omega.com*

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