WORLDS FIRST

LCD LOOP POWERED METER WITH SERIAL & USB I/O FOR I.S. - MIL-SPEC - NUCLEAR & HI-REL INDUSTRIAL

MODEL LPM

4 1/2 DIGITS BACKLIT

Span Zero

SIDE VIEW

← 1.75 →

FEATURES:

- Full 4 1/2 Digits (.1.9.9.9.9) 1/2" High
- Loop Powered, Low Burden
- 100% Metal Housing Nickel Plated
- Captive Screw Terminal Connector
- Wide Zero & Span Adjustments
- Loop Powered Backlight
- NEMA 4X, EMI/RFI Gaskets
- RS232, 485 or USB I/O
- Remote Display With Serial Input
- No Input Reflected Noise
- Stand Alone/SCADA/DCS Use
- 28VDC Power For Transmitter
- Lifetime Warranty

4 1/2 DIGIT REFLECTIVE

REAR VIEW

2.80" X 1.310" PANEL CUTOUT
BEZEL: 2.91 X 1.52"

DESCRIPTION

OTEK's New **LPM** Series brings the latest technology to your process! The single I.C. A/D can perform all the functions by itself or when the Serial I/O option is included, it can become a microprocessor based DPM with Serial I/O, Scaling, Zero Offset, Peak & Hold, Decimal Point and more. And all **Loop Powered**!

You can also use the **LPM** as serial input **Remote Display**.

The **LPM** is available in several configurations:

1. **Loop Powered Stand Alone** with or without backlight. Only 2 wires to connect!
2. **Externally Powered** (VDC) mA/V DPM
3. **U.S.B. Powered** Your PC provides the power (5VDC). The compact metal case is Seismic Tested. The "EURO" screw connector is screwed to the case.

ADJUSTMENTS: Front panel adjustments; **Span** is on the left, **Zero** on the right.

BURDEN on your 4-20mA Loop is as low as 0.1V for externally powered models and as high as 5.5V for Loop Powered with backlight.

POWER FOR TRANSMITTER: 28VDC @ 20mA available on externally powered models (Options 1-8). See Note 7. Consumes 200mA @ 5VDC (1 Watt).

INTRINSICALLY SAFE Approval: Pending for CLI, Div. 1 & 2 GPS. A-G. See Note #5.

MIL-SPEC & NUCLEAR Qualified versions are built to your requirements. Contact **OTEK**.

The **HOUSING** is plastic or machined aluminum, nickel plated. **Sanitary & Explosion Proof** can be pipe, panel, wall or conduit mounted.

SPECIFICATIONS @ 25°C
(Industrial Grade)

Loop Powered Models:

- Burden: 4.5V Max. With Red Backlight (7V for "S" Grade)
- 5.5V With Green Backlight
- Max. Input Current: 36mA, Max. Volts: 30V
- Min. Input Current: 3.6mA without µ Processor
- Accuracy & Linearity: ±0.01% of F.S. ± 1 Digit
- Span Adjustment: ±3000 Counts of F.S. (10,000)
- Zero Adjustment: ±3000 Counts of Zero (00000)
- Standard Calibration: 4-20 = 0-10000, Others On Request
- Serial I/O: RS232E (Parasitic)

Powered Models:

- Loop Burden:1.0V@20mA; 50 Ohms (w/o microcontroller)
- Loop Burden:0.1V@20mA; 5 Ohms (with microcontroller)
- Current Requirement @ 5V: 1mA + Backlight (20mA) (w/o microcontroller)
- Current Requirement @ 5V: 10mA + Backlight (20mA) (with microcontroller)
- Power Input: USB, 5VDC, 5-48VDC & 90-265AC On Request

OTHER SPECIFICATIONS

- Display: LCD, 4 1/2 Digits 0.5", 6 O'Clock Viewing Angle
- Input Type: Differential & Single Ended. 10M For VDC
- Common Mode R.R.: 100dB @ 50/60 Hz
- Conversion Rate: 2 1/2/Second
- Step Response: 0.8 Sec. (0-90% of F.S)
- Common Mode Voltage: ±2VDC
- Op./Storage Temp: -10 + 60/ -20 + 70°C
- MTBF: >100,000 Hours
- Serial I/O: RS232/485/USB, 300-19, 2KBB (8N1)
- RS232 Power: Parasitic From RS232, when loop powered
- RH: 5-95% RH Non-Condensing
- Temperature Coefficient: 50PPM/°C
- Sanitary Case: To 250°F Steam Cleaning Compatible
- Explosion Proof For Class I, Div. 1 & 2 Certified
- Decimal Points Only Available in µ Processor Versions (Serial I/O)

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MADE IN USA

LPM SERIES

ORDERING INFORMATION 07-23-07

Model: LPM- 1 2 3 4 5 6 7

GRADE (1)
- I ..... Industrial
- M ..... Mil-Spec
- N ..... Nuclear
- S ..... Intrinsically Safe
- 9 ..... Custom

INPUT TYPE (2)
- 0 ..... 4-20mA Loop Power
- 1 ..... External Power 4-20mA
- 2 ..... External Power 2mA F.S.
- 3 ..... External Power 20mA F.S.
- 4 ..... External Power 200mA F.S.
- 5 ..... External Power 2V F.S.
- 6 ..... External Power 20V F.S.
- 7 ..... External Power 200V F.S.
- 8 ..... External Power 2V Ratiometric
- 9 ..... Custom
- R ..... Serial Remote Display Only

POWER INPUT (2) (7)
- 0 ..... Non-Isolated Loop Powered
- 1 ..... Non-Isolated 5VDC
- 2 ..... Non-Isolated 6-14VDC
- 3 ..... Non-Isolated USB Powered
- 4 ..... Isolated 5VDC +/- 10%
- 5 ..... Isolated 12VDC +/- 10%
- 6 ..... Isolated 24VDC +/- 10%
- 7 ..... Isolated 48VDC +/- 10%
- 8 ..... Isolated 90-265VAC
- 9 ..... Custom

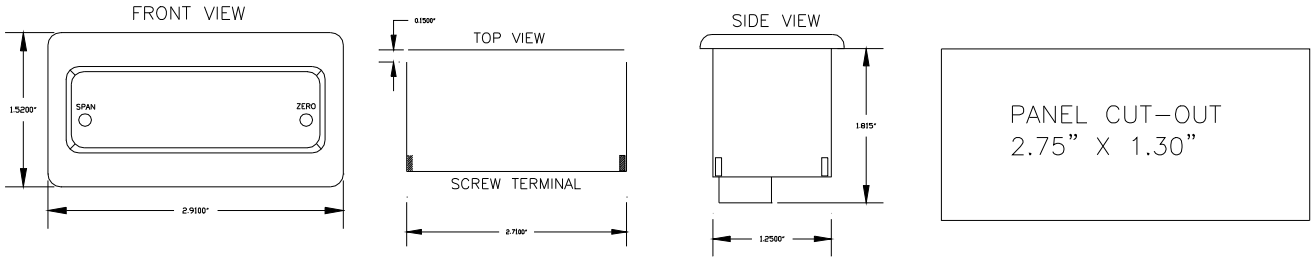
CASE STYLE (6)
- 0 ..... Standard Metal
- 1 ..... Standard Metal NEMA 4X
- 2 ..... Sanitary
- 3 ..... Explosion Proof
- 4 ..... Plastic
- 9 ..... Custom

POWER FOR TRANSMITTER (7)
- 0 ..... None
- 1 ..... Included

SERIAL I/O (4)
- 0 ..... None
- 1 .... Parasitic (Loop Powered) RS232E
- 2 ..... Non-Isolated Powered RS232D
- 3 ..... Non-Isolated Powered RS485
- 4 ..... Non-Isolated Powered USB
- 9 ..... Custom (Specify)

BACKLIGHT (3)
- 0 ..... None
- 1 ..... Positive Image Red
- 2 ..... Positive Image Green
- 3 ..... Negative Image Red
- 4 ..... Negative Image Green
- 9 ..... Custom

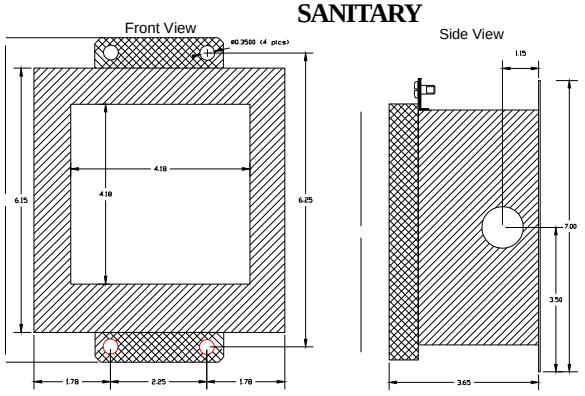
NOTES:
1. Contact OTEK for M, N & S Grades
2. Inputs for VAC, RTD, TC, Hz Available on Request
3. Backlight Dimmest @ 4mA, Brightest @ 20mA. If Ext. Power Requires 10 - 40mA.
4. Only RS232E is available with **Loop Powered**, others powered. Serial I/O not isolated from signal.
5. **"Intrinsically Safe"** by design. No Certificate Available Until Further Notice. Contact OTEK.
6. Maximum of 3 Units Inside Sanitary Case. Specify Option 9 and Describe.
7. Power for transmitter (28VDC@20mA) **NOT** available with power input option 2 (6-14VDC).



NOTES:
1. Do Not Connect To Pins 1, 2 & 3 (For Special Functions Only)
2. Standard Serial I/O Settings are 8N1. 9600Kb Baud Rate, Address and Decimal Point are serially programmable.

For Loop Powered Just Connect "+ Loop" to Pin 6, "-Loop" to Pin 7. All Others See User's Manual at www.otekcorp.com/otekdwnld/lpm-ledpmmanual.pdf

SANITARY



EXPLOSION PROOF