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INTERMEDIATE RANGE LASER LEVEL & POSITIONING TRANSMITTER

LASERMETER Model LM80

FEATURES

- Range up to 100 ft. / 30m (level applications) and up to 500 ft. / 150 m (positioning applications)
- No Beam Divergence = No False Echoes
- Measures any Surface at Any Angle
- Rugged and Robust Aluminum Enclosure
- Built-in Purge Port (1/8" FNPT)
- No Calibration Required
- No Special Configuration Software Required
- Last Pulse Detection for Measurement with Light Dust

SPECIFICATIONS

Measurement Range

| | |
|--------------------|---|
| Level | Dark color surface 1.5ft/0.5m to 60ft/18m - black plastic pellets |
| Level | Light color surface 1.5ft/0.5m to 100ft/30m - plastic pellets, grain |
| Positioning | Reflective targets 1.5ft/0.5m to 500ft/150m - tripper car, overhead crane |
| Resolution | 0.4 in. / 10 mm. |
| Accuracy | ± 1.5 in. / 30 mm. |
| Update Rate | 3 readings / second to 1 reading / 60 seconds |

Output

| | |
|-----------------------|--|
| Analog | 4-20 mA, NAMUR Compliant Active, Self Powered |
| Serial | RS232 for Testing, Troubleshooting, and Configuration |
| Switching | 2 SPST Relays (not available with built-in heated glass) |
| AC Rating | Max 1A resistive @ 120 VAC and 0.5A @ 250VAC |
| DC Rating | Max 1A @ 60VDC, 60W |
| Inductive Load | Max 1A @ 120 VAC |
| Electric Power | 24 VDC (16-32 VDC) |

Power Consumption

| | |
|-----------------|--|
| Start Up | 6 Watts |
| Running | 0.4 Amp Peak ; 0.2 Amp Continuous 0.35 Amp with built-in heated glass |

Lasers

| | |
|---------------------|---|
| Laser Safety | Infrared 905nm; Visible Pointer 635nm |
| | LM80/SC and LM80/Pxxx Pointer Continuous Class 3R (IEC 60825)(Avoid direct eye exposure) |
| | LM80/SL and LM80/HL Pointer used for service only Class 1M (IEC 60825)(Do Not View Directly With Optical Instruments) |
| | LM80/SX No Pointer Class 1M (IEC 60825) (Do Not View Directly With Optical Instruments) |

Approvals



Factory Mutual Research Corporation
NI / I / 2 / ABCD / T4A Ta= 65°C (149°F)
DIP / II, III / 1 / EFG / T4A Ta= 65°C (149°F)
Type 4X

OPTIONS

- Stainless Steel Mounting Plate (MP)
- ANSI / DIN Flanges
- Laser Communication Device (LCD2)
- Laser Pointer
- Built-in Heated Glass
- Portable Power Pack (PPK)



LM80 Shown with Cable Gland



LM80 Shown with Standard Dust Tube

Optical

| | |
|-------------------------------|------------------|
| Optical Aperture | 3 in. / 80 mm |
| Laser Beam Diameter | 1.5 in. / 30 mm |
| Receiver Beam Diameter | 1.97 in. / 50 mm |
| Beam Divergence | <0.2° |

Environmental

| | |
|------------------------------|------------------------------|
| Operating Temperature | -40° to 150°F / -40° to 65°C |
| Pressure | Atmospheric |

Electrical Connection

| |
|-------------------------|
| 1/2" FNPT |
| 1x cable gland supplied |

Dimensions

| | |
|-----------------|---------------------|
| Diameter | 4.3 in. / 110 mm |
| Length | 6.9 in. / 175 mm |
| Weight | 3.25 lbs. / 1.5 kg. |

Enclosure

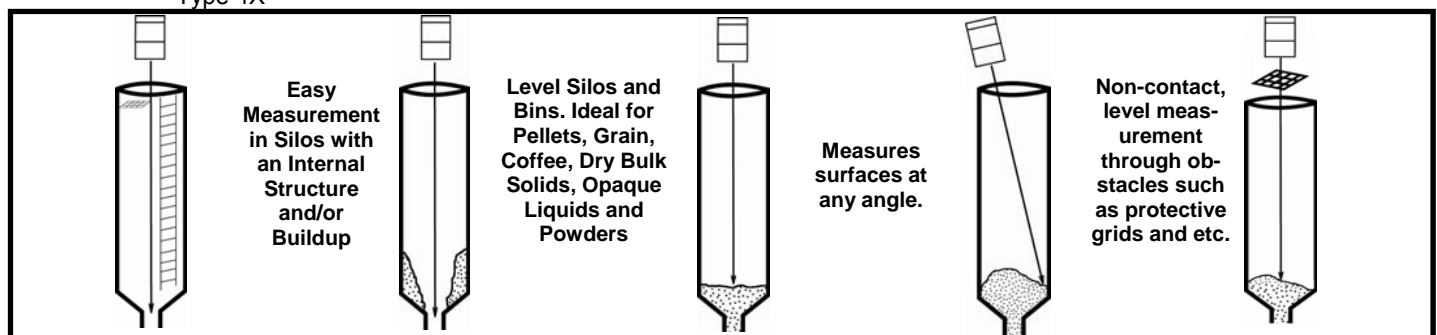
Dual Compartment Powder Coated Aluminum

Enclosure Rating

IP65

Process Connection

Requires minimum opening of 3 in / 80 mm and is adaptable to ANSI Flanges 4" / DIN100 Flanges and Higher



ORDERING INFORMATION:

LM80/a/b:

/a Unit Options

- SX** Standard Unit without Laser Pointer (Level Applications Only)
SL Standard Unit with Laser Pointer (Level Applications Only - Pointer used for service only)
SC Standard Unit with Laser pointer (Used Continuously)
HL Laser Unit with built-in heated glass & Laser Pointer (level applications only with possible condensation on the optic) **(See note below.)** - Pointer used for service only

Note: The required standard dust tube with this option is **MP1LM80HL**. Switching relays are not available with this option.

Pxxx Positioning Unit with Laser Pointer (Positioning Applications Only). Specify the application maximum positioning range in feet. For example: 75 feet = P075 **(See note below.)** (Pointer Used Continuously)



Note: For **positioning applications only**, the following accessories are **mandatory** for optimal performance and will be supplied with the positioning laser transmitter: **MP1LM80** Standard Dust Tube, **REFM** Reflector and **ADJ4** Adjustable Mounting Bracket.

/b Approvals

FM Factory Mutual



AVAILABLE OPTIONAL ITEMS:

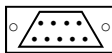
| | | |
|-------------|--|---|
| LCD2 | Laser Communication Device for programming and demo purposes Note: Programming also can be implemented with Desktop PC, Laptop or PDA |  |
| ADJ4 | Adjustable Mounting Bracket - For Flexible Aiming |  |
| REFM | Reflector 20" x 20" / 50cm x 50cm - for Positioning Applications | |
| PPK | Battery powered pack - For Demo Purposes and Mobility | |

TERMINAL CONNECTIONS



Earth

| ISOLATED RELAYS | | | 4-20 OUT | 0v COM | 24v + |
|-----------------|---|---|----------|--------|-------|
| COM | A | B | | | |
| Ø | Ø | Ø | Ø | Ø | Ø |



REQUIRED MOUNTING ACCESSORIES

Select Only One :

| | |
|-----------------|---|
| MP1 LM80 | Standard 304 SS Dust tube and mounting plate bolt pattern identical to LM80 flanged face plate. (See Dimensions below) Add suffix HL for Heated Glass option. Example: MP1LM80HL |
| MP4 LM80 | 304 Stainless steel mounting plate with 4" 150# ANSI and DIN100 PN10 bolt pattern and integral dust tube |
| MP6 LM80 | 304 Stainless steel mounting plate with 6" 150# ANSI and DIN125 PN10 bolt pattern and integral dust tube |

ANSI

DIN

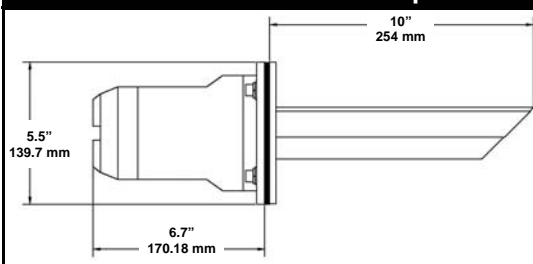
ANSI/DIN Flanges are supplied with Integral Dust Tube

| | |
|--|---|
| FLGLM80S44 4" 150# 304SS RF Flange | FLGLM80S4DN100 DIN 100 PN10 304SS RF Flange |
| FLGLM80S46 6" 150# 304SS RF Flange | FLGLM80S4DN125 DIN 125 PN10 304SS RF Flange |
| FLGLM80XXXX Consult factory for availability | For any custom option requiring a different material, flange size, and/or mounting configuration. |

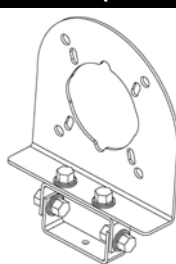
No Flange is available for the Heated Lens (HL) option.

DIMENSIONS

Standard Tube MP1LM80 Option

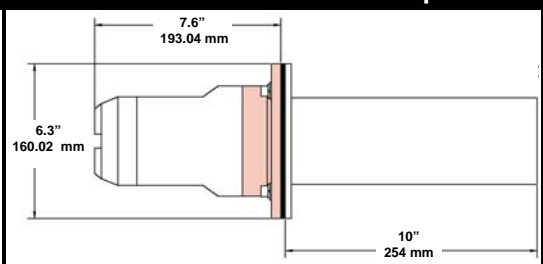


Adjustable Mounting Bracket (ADJ4)



DIMENSIONS

Heated Glass MP1LM80HL Option



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