

GE Sensing

Features

- Ranges: ± 0.1 inH₂O to ± 1 psid
- Accuracy to ± 0.25 % Full Scale (FS)
- Wet/wet differential pressure
- User-accessible damping (10 ms to 2 s)
- Excellent stability
- LCD display models available
- Red/green status LEDs

The LP 1000 Series wet/wet differential pressure transmitter is ideally suited for use in clean room HVAC monitoring and control. The device offers several improvements over traditional sensors such as user-accessible damping, excellent long-term stability, and wet/wet differential operation where conductive fluids may be exposed to the measurement diaphragm.

The LP 1000 Series offers a dramatic improvement in reliability with improved stability and the ability to tolerate condensing media. The design has been field proven with more than 10 years in applications where high humidity and condensing media are a daily occurrence. The damping adjustment feature allows the user to slow the response time to eliminate nuisance trips of alarms when doors are opened and closed.

The DC version adds the ability to switch the pressure ports to the front of the device, thus permitting calibration to be performed from the front of the panel, eliminating the need for additional personnel behind the panel. Optional adjustable set-point Red and Green Status LEDs are available.

LP 1000 Series

Druck Ultra Low Pressure Sensor

LP 1000 Series is a Druck product. Druck has joined other GE high-technology sensing business under a new name—GE Industrial, Sensing.



LP 1000 Series Specifications

Pressure Measurement

Operating Ranges

0.1, 0.2, 0.25, 0.5, 0.75, 1, 2, 2.5, 3, 4, 5, 6, 8, 10, 16, 20 inH₂O and 1 psi unidirectional and bidirectional (other pressure units available, see ordering information).

Overpressure

- 3.5 psi for ranges 0.1 to 1 inH₂O
- 10 psi for ranges 2 to 6 inH₂O
- 17 psi for ranges 8 inH₂O to 1 psi

Maximum Static (Line) Pressure

30 psi for all ranges

Electrical Supply Voltage

Power Supply (Vs) (at the terminals)

| | |
|--|--------------|
| Current output without display | 10 to 30 VDC |
| Current output with display | 15 to 30 VDC |
| Current output with display and LED indicators | 20 to 30 VDC |
| Voltage output | 10 to 30 VDC |
| Voltage output (0 to 10 VDC) | 15 to 30 VDC |

Power Supply Intrinsically Safe Units

| | |
|--|--------------|
| LPX sensor without display | 11 to 30 VDC |
| LPX sensor with display | 17 to 30 VDC |
| LPX sensor with display and LED indicators | 17 to 30 VDC |

Output Signal Option

| | | |
|----------------|---------|--------------|
| Unidirectional | Voltage | 0 to 2.5 VDC |
| | | 0 to 5 VDC |
| | | 0 to 10 VDC |
| | | 1 to 6 VDC |
| | | 4 to 20 mA |
| Bidirectional | Voltage | 2.5 ±2.5 VDC |
| | | 5 ±5 VDC |
| | | 12 ±8 mA |

Note: voltage outputs are three wire, current outputs are two wire.

Zero Offset Adjustment

±5% FS

Span Adjustment

±5% FS

Response Time

User-adjustable 10 ms to 2 s
(factory default setting 10 ms)

Load Impedance

Voltage output 5 k Ω minimum
Current output R_L (k Ω) < ($V_{supply} - V_o$) 20

Performance

Combined Effects of Non-linearity, Hysteresis and Repeatability

±0.5% FS Best Straight Line (BSL)
±0.25% FS BSL (optional)

Static Pressure Effects

Effects may be zeroed out at operating line pressure

Stability

At standard conditions will not change by more than 1% FS averaged over one year

Supply Sensitivity

<0.05% FS per volt

Compensated Temperature Range

32 to 122° F (0 to 50° C)

Temperature Effects

Over the range 32 to 122 °F (0 to 50° C)

- | | |
|--|--------------------------|
| • Ranges from 0.1 inH ₂ O to 0.5 inH ₂ O | ±0.01 inH ₂ O |
| • Ranges from 0.8 inH ₂ O to 1 inH ₂ O | ±0.02 inH ₂ O |
| • Ranges from 2 inH ₂ O to 3 inH ₂ O | ±0.05 inH ₂ O |
| • Ranges from 4 inH ₂ O to 6 inH ₂ O | ±0.10 inH ₂ O |
| • Ranges from 8 inH ₂ O to 14 inH ₂ O | ±0.20 inH ₂ O |
| • Ranges from 16 inH ₂ O to 28 inH ₂ O | ±0.40 inH ₂ O |



Environmental

Protection

Type 3 IP 64
(Except with C2 screw terminals)

Temperature Range

Operating 32 to 122 °F (0 to 50 °C)

Humidity

0 to 100% RH, non condensing.

Mounting Position Effect

No effect on span, possible zero shift correctable by potentiometer adjustment.

Note: Factory calibrated with diaphragm in the vertical plane.

Physical

Housing

Aluminum

GE Sensing

Wetted Parts

Gases and liquids compatible with aluminum, stainless steel 316L, beryllium copper, brass, Inconel X750, adhesives and plastics.

Electrical Connection

- DIN 43650A plug with free mating socket
- Screw terminals outside body
- DIN C plug with free mating socket

Pressure Connection

10-32 UNF female to 0.125 in (3.175 mm) barbed fitting

Weight:

1 to 2 lb (0.45 to 0.91 kg) approx depending upon configuration

Certifications

CE marked
ATEX Intrinsically Safe (optional)
LCIE05ATEX6081X

Associated Products

Ruska 7250LP

- Dual range, select from 10/30 in H₂O or 20/60 in H₂O or 35/100 in H₂O range combinations
- Precision: 0.005% of reading from 10% to 100% FS
- Control stability: 0.004% of each range
- Resolution: to 0.0001 in H₂O
- Time to set point: 30 seconds with no overshoot
- One year calibration interval
- Languages: English, French, Chinese, German,



Japanese and Italian

DPI 515LP Precision Low Pressure Controller/Calibrator

- ±10 inH₂O lowest FS range
- Control stability 0.001% of span
- High speed digital control system
- RS 232 and IEEE 488 communications



- Precision ±0.01% FS

DPI 610/615 Portable Low Pressure Calibrator

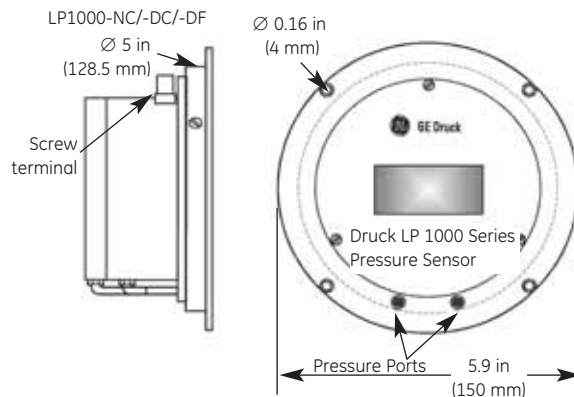
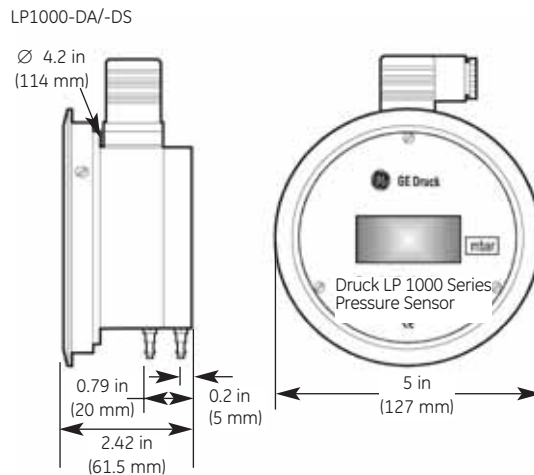
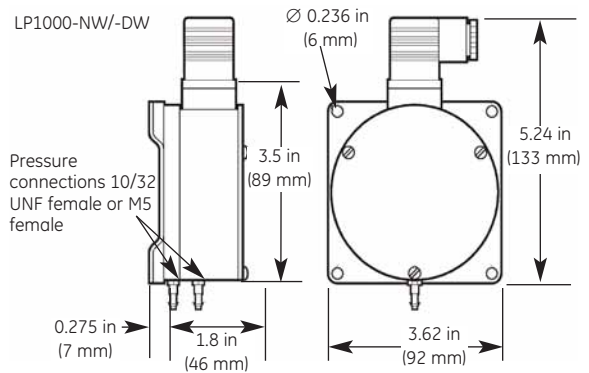
- Based on the unique LP sensor technology
- FS ranges from ±1.0 to ±60 inH₂O differential
- Accuracy 0.05% of span
- Generates pressure and vacuum via variable volume
- Automatic zero equalisation



- RS 232 interface and documenting versions
- Leak test and switch test capability

UPS III Loop Calibrator

- Measure or source 0 to 24 mA
- Accuracy 0.01% of reading
- Dual mA and % readout, linear or flow
- Step, Span Check, Value Check, Ramp
- 60 VDC measurement and continuity
- HART® compatible



Dimension Drawings

Ordering Information

1) Select Model Number

LP Low Pressure

| | | | | | | | | | | | | | |
|----|-------------------------------|---------------------------------|---|----------------|---|-----------------------|----------------|--------------------|---|----------------|---|-----------------------|-----------------|
| | Code Series Identifier | | | | | | | | | | | | |
| | 1 | Base Model | | | | | | | | | | | |
| | | Code Accuracy | | | | | | | | | | | |
| | | 0 | ±0.5% FS | | | | | | | | | | |
| | | 1 | ±0.25% FS | | | | | | | | | | |
| | | Code Pressure Reference | | | | | | | | | | | |
| | | 1 | Wet/wet Differential | | | | | | | | | | |
| | | Code Pressure Connection | | | | | | | | | | | |
| | | 0 | 10 to 32 UNF to 1/8 in Barbed Fittings | | | | | | | | | | |
| | | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code |
| | | U = Unidirectional | Pressure Range | Pressure Range | U = Unidirectional | Pressure Range | Pressure Range | U = Unidirectional | Pressure Range | Pressure Range | Pressure Range | Pressure Range | Pressure Range |
| | | B = Bidirectional | W | M | B = Bidirectional | W | M | B = Bidirectional | W | M | B = Bidirectional | W | M |
| | | U10 or B10 | 0.1 inH ₂ O | 0.25 mbar | U60 or B60 | 4 inH ₂ O | 10 mbar | U10 or B10 | 0.1 inH ₂ O | 0.25 mbar | U60 or B60 | 4 inH ₂ O | 10 mbar |
| | | U20 or B20 | 0.2 inH ₂ O | 0.5 mbar | U65 or B65 | 5 inH ₂ O | 12.5 mbar | U20 or B20 | 0.2 inH ₂ O | 0.5 mbar | U65 or B65 | 5 inH ₂ O | 12.5 mbar |
| | | U25 or B25 | 0.25 inH ₂ O | 1.0 mbar | U70 or B70 | 6 inH ₂ O | 15 mbar | U25 or B25 | 0.25 inH ₂ O | 1.0 mbar | U70 or B70 | 6 inH ₂ O | 15 mbar |
| | | U30 or B30 | 0.5 inH ₂ O | 1.25 mbar | U75 or B75 | 8 inH ₂ O | 20 mbar | U30 or B30 | 0.5 inH ₂ O | 1.25 mbar | U75 or B75 | 8 inH ₂ O | 20 mbar |
| | | U35 or B35 | 0.75 inH ₂ O | 2.0 mbar | U80 or B80 | 10 inH ₂ O | 25 mbar | U35 or B35 | 0.75 inH ₂ O | 2.0 mbar | U80 or B80 | 10 inH ₂ O | 25 mbar |
| | | U40 or B40 | 1 inH ₂ O | 2.5 mbar | U85 or B85 | 16 inH ₂ O | 40 mbar | U40 or B40 | 1 inH ₂ O | 2.5 mbar | U85 or B85 | 16 inH ₂ O | 40 mbar |
| | | U45 or B45 | 2 inH ₂ O | 5.0 mbar | U90 or B90 | 20 inH ₂ O | 50 mbar | U45 or B45 | 2 inH ₂ O | 5.0 mbar | U90 or B90 | 20 inH ₂ O | 50 mbar |
| | | U50 or B50 | 2.5 inH ₂ O | 6.25 mbar | U95 or B95 | 1 psi | 70 mbar | U50 or B50 | 2.5 inH ₂ O | 6.25 mbar | U95 or B95 | 1 psi | 70 mbar |
| | | U55 or B55 | 3 inH ₂ O | 7.5 mbar | U99 or B99 | Other | Other | U55 or B55 | 3 inH ₂ O | 7.5 mbar | U99 or B99 | Other | Other |
| | | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code | Code |
| | | V1 | 0 to 2.5 VDC | three-wire | N/A | three-wire | | V1 | 0 to 2.5 VDC | three-wire | N/A | three-wire | |
| | | V2 | 0 to 5 VDC | three-wire | 2.5 ±2.5 VDC | three-wire | | V2 | 0 to 5 VDC | three-wire | 2.5 ±2.5 VDC | three-wire | |
| | | V3 | 0 to 10 VDC | three-wire | 5 ± 5 VDC | three-wire | | V3 | 0 to 10 VDC | three-wire | 5 ± 5 VDC | three-wire | |
| | | V4 | 1 to 6 VDC | three-wire | N/A | two-wire | | V4 | 1 to 6 VDC | three-wire | N/A | two-wire | |
| | | X4 | 4 to 20 mA | three-wire | 12 ±8 mA | two-wire | | X4 | 4 to 20 mA | three-wire | 12 ±8 mA | two-wire | |
| | | Code | Output (U10 - U99) | Code | Output (B10 - B99) | Code | Code | Code | Output (U10 - U99) | Code | Output (B10 - B99) | Code | Code |
| | | C1 | DIN A Plug | | | | | C1 | DIN A Plug | | | | |
| | | C2 | Screw Terminal | | | | | C2 | Screw Terminal | | | | |
| | | C3 | DIN C Plug | | | | | C3 | DIN C Plug | | | | |
| | | Code | Electrical Connection | Code | Special Features | Code | Code | Code | Electrical Connection | Code | Special Features | Code | Code |
| | | S | | | Standard (no special features) | | | S | | | Standard (no special features) | | |
| | | L | | | Red/Green Status LEDs | | | L | | | Red/Green Status LEDs | | |
| | | Code | Display Option | Code | Display Option | Code | Code | Code | Display Option | Code | Display Option | Code | Code |
| | | D | With Local Display | | | | | D | With Local Display | | | | |
| | | N | No Local D | | | | | N | No Local D | | | | |
| | | Code | Mounting and Display Configuration | Code | Mounting and Display Configuration | Code | Code | Code | Mounting and Display Configuration | Code | Mounting and Display Configuration | Code | Code |
| | | A | Panel Mount w/Aluminum Bezel | | | | | A | Panel Mount w/Aluminum Bezel | | | | |
| | | S | Panel Mount w/Stainless Steel Bezel | | | | | S | Panel Mount w/Stainless Steel Bezel | | | | |
| | | C | Panel Mount w/Frontal Cal (Select C2 Electrical Connection) | | | | | C | Panel Mount w/Frontal Cal (Select C2 Electrical Connection) | | | | |
| | | W | Wall Mount | | | | | W | Wall Mount | | | | |
| | | Code | Calibration Certificate | Code | Calibration Certificate | Code | Code | Code | Calibration Certificate | Code | Calibration Certificate | Code | Code |
| | | Y | Yes | | | | | Y | Yes | | | | |
| | | N | No | | | | | N | No | | | | |
| | | Code | ATEX IS | Code | ATEX IS | Code | Code | Code | ATEX IS | Code | ATEX IS | Code | Code |
| | | 1 | Safe area | | | | | 1 | Safe area | | | | |
| | | 2 | Hazardous area | | | | | 2 | Hazardous area | | | | |
| LP | 1 | - | 1 | 0 | - | - | - | - | - | - | - | - | Ordering format |

