

## Features

- Ranges: 0.25 mbar to 70 mbar
- ATEX Intrinsically safe certification
- Accuracy to  $\pm 0.25$  % Full Scale (FS)
- Wet/wet differential pressure
- User-accessible damping (10 ms to 2 s)
- Excellent stability
- LCD display
- Red/green status LEDs
- Wall or panel mounting

The LP 1000 Series wet/wet differential pressure transmitter is designed for use in clean room, HVAC and similar applications where the accurate and reliable monitoring of very low pressure is required. 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.

A range of display, electrical connections, mounting, and in-situ calibration options have been developed to match many varied applications with ATEX and CE certification to ensure confidence in the safety of operation.



# 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

0.25, 0.5, 1.0, 1.25, 2.0, 2.5, 5.0, 6.25, 7.5, 10, 12.5, 15, 20, 25, 40, 50, 70 mbar Unidirectional and bidirectional (other pressure units available, see ordering information).

### Overpressure

- 250 mbar for ranges 0.25 to 2.5 mbar
- 700 mbar for ranges 5 to 15 mbar
- 1200 mbar for ranges 20 to 70 mbar

### Maximum Static (Line) Pressure

2 bar 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
		Current 12 ±8 mA

Note: voltage outputs are 3 wire, current outputs are 2 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 kΩ minimum  
Current output  $R_L (k\Omega) < (V_{supply} - V_S) 20$

## Performance

### Combined effects of Non-linearity, Hysteresis and Repeatability

±0.5% FS Best Straight Line (BSL)  
±0.25% FS BSL (option A)

### 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 1 year

### Supply Sensitivity

<0.05% FS per volt

### Compensated Temperature Range

0 to 50 °C

### Temperature Effects

#### Over the range 0 to 50 °C

- |                                      |            |
|--------------------------------------|------------|
| • Ranges from 0.25 mbar to 1.25 mbar | ±0.02 mbar |
| • Ranges from 2 mbar to 2.5 mbar     | ±0.04 mbar |
| • Ranges from 5 mbar to 7.5 mbar     | ±0.12 mbar |
| • Ranges from 10 mbar to 15 mbar     | ±0.25 mbar |
| • Ranges from 20 mbar to 35 mbar     | ±0.5 mbar  |
| • Ranges from 40 mbar to 70 mbar     | ±1.0 mbar  |



## Environmental

### Protection

Type 3 IP 64  
(Except with C2 screw terminals)

### Temperature range

Operating 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. For calibration in the horizontal please select option F

## Physical

### Housing

Aluminium

# GE Sensing

## Wetted parts

Gases and liquids compatible with aluminium, 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

M5 female to 4 mm barbed fitting  
10-32 UNF female to 1/8" barbed fitting

## Weight:

450 to 900 g approx depending upon configuration

## Certifications

CE marked  
ATEX Intrinsically safe (optional)  
LCIE05ATEX6081X

## Associated Products

### Ruska 7250LP

- Dual range, select from 25/75 mbar or 50/150 mbar or 80/250 mbar range combinations
- Precision: 0.005% of reading from 10% to 100% FS
- Control stability: 0.004% of each range
- Resolution to 0.0002 mbar
- 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

- ±25 mbar lowest FS range
- Control stability: 0.001% of span
- High speed digital control system
- RS 232 and IEEE 488 Communications
- Precision: ±0.01% FS



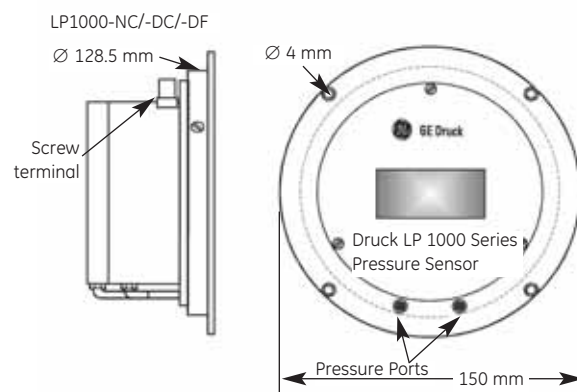
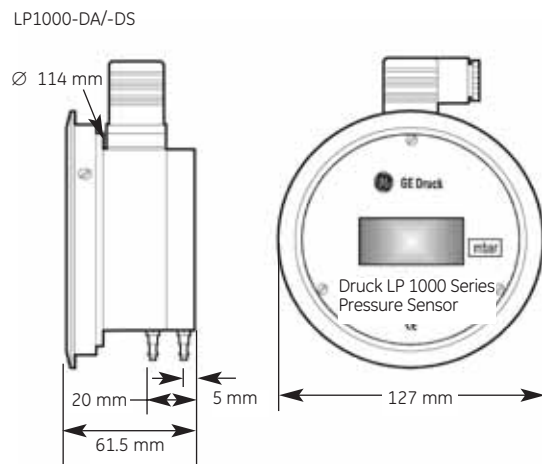
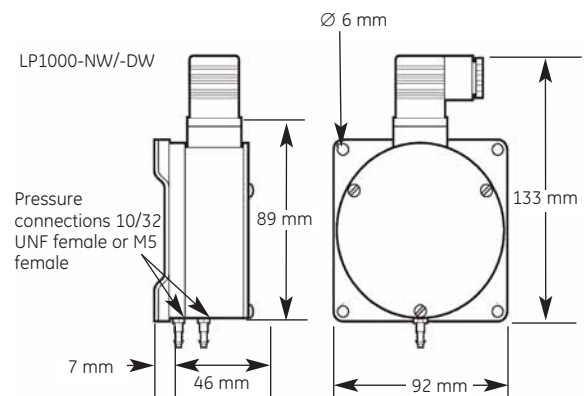
### DPI 610/615 Portable Low Pressure Calibrator

- Based on the unique LP sensor technology
- FS ranges from ±2.5 to 150 mbar 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

<b>Code</b>	<b>Series identifier</b>										
LP											
	<b>Code</b>	<b>Output type</b>									
	M	Voltage									
	X	Current									
		<b>Code</b>	<b>Pressure Range</b>								
		10	Ranges from 0.25 to 2.5 mbar								
		15	Ranges from 5 to 15 mbar								
		18	Ranges from 20 to 20 mbar								
			<b>Code</b>	<b>Configuration</b>							
			1	Differential							
				<b>Code</b>	<b>Pressure connection</b>						
				0	10-32 UNF Female to 1/8" Barb						
				2	5 mm Female to 4mm Barb						
					<b>Code</b>	<b>Area Certification</b>					
					1	Safe Area					
					2	Intrinsically Safe Certification					
						<b>Code</b>	<b>Pressure Configuration</b>				
						U	Unidirectional				
						B	Bi Directional				
							<b>Code</b>	<b>Electrical Connection</b>			
							C1	DIN A			
							C2	Screw Terminal			
							C3	DIN C			
								<b>Code</b>	<b>Status Lights</b>		
								S	Standard		
								L	Green/Red StatusLEDs		
									<b>Code</b>	<b>Display/Mounting</b>	
									DA	LCD with Aluminium Bezel	
									DC	LCD Front Panel Mount/in-situ calibration (select C2 Electrical Connection)	
									DF	LCD with Front Panel Mount	
									DS	LCD with Stainless Steel Bezel	
									DW	LCD with Wall Mount Bracket	
									NC	No LCD Front Panel Mount/in-situ calibration (select C2 Electrical Connection)	
									NW	No LCD with Wall Mount Bracket	
										<b>Code</b>	<b>Options</b>
										A	Improved Accuracy to 0.25%
										C	3 Point Calibration Certificate
										D	5 Point Nist Certificate
										E	Calibration Keys (2 Supplied FOC with DC and NC option)
										F	Horizontal Calibration
LP	-	-	-	-	-	-	-	-	-	-	

### 2) State pressure range

