# LD400 series

## HART® & 4 to 20 mA and *Wireless*HART™

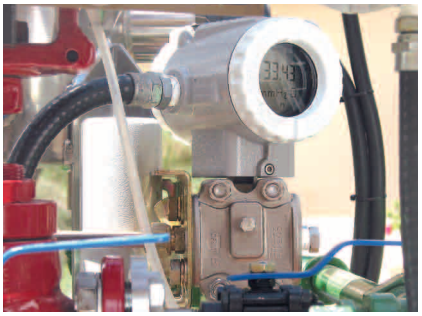
## PRESSURE TRANSMITTERS

FOR PRESSURE, LEVEL AND FLOW APPLICATIONS

- ± 0.045% Accuracy
- ± 0.2% of URL Stability Guarantee For 12 Years
- 200:1 Rangeability
- 35 ms Total Response Time
- Non-volatile Flow Totalizer (not available for *Wireless*HART™)
- Tank Linearization
- PID Control Capability (not available for *Wireless*HART™)
- Advanced Diagnostics
- Bi-directional Flow Measurement
- Supports DD, EDDL, and FDT/DTM
- Non-polarity Power Input
- Built-in Transient Suppression
- SIL 2 - Safety Certified to IEC 61508 by TÜV

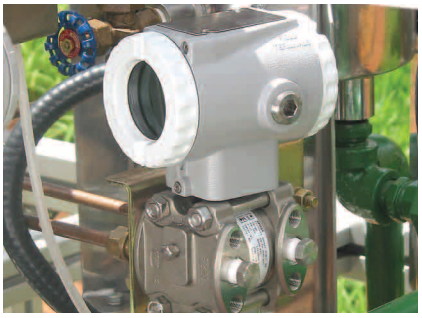
smar

- Low Total Probable Error (TPE);
- User-friendly rotative display;
- Local Span/Zero calibration and easy on-site configuration;
- Easy installation, quick commissioning and setup;
- Online continuous sensor and electronic diagnostics reduce troubleshooting time and eliminate unnecessary trips to the field;
- Modularity for all models;
- Persistent Flow Totalizer (not available for *Wireless*HART™);
- Transfer functions: linear, linearization table, $\sqrt{x}$, $\sqrt{x^3}$, $\sqrt{x^5}$;
- Configurable user unit;
- Span as small as 50 Pa (0.2 in$H_2O$) up to a range limit of 40 MPa (5800 psi);
- Up to 32 MPa static pressure (4600 psi);
- 10,000 psi Burst Pressure Limit;
- Easy specification simplifying customers' Total Cost of Ownership (TCO);



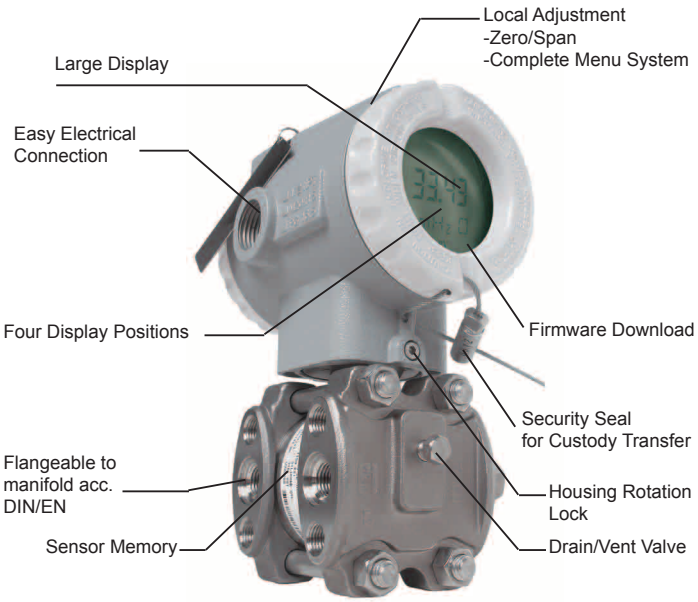
## HART®

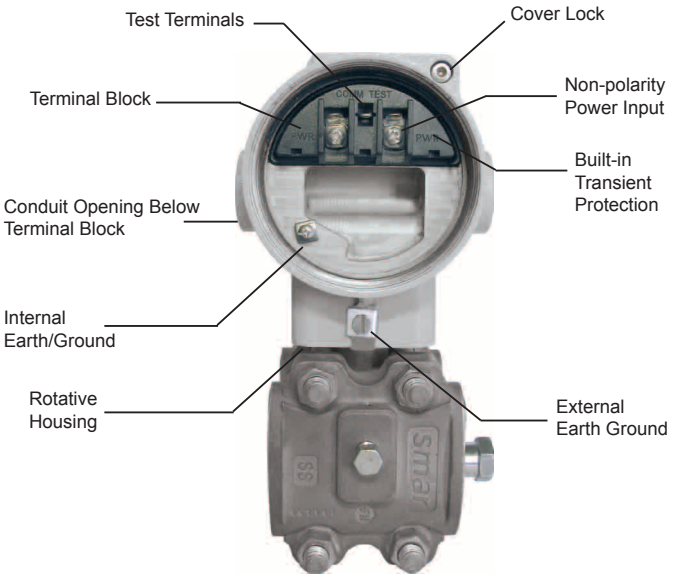
- Output current with 0.75 µA resolution;
- Output Limits according to NAMUR NE43;
- Software Management according to NAMUR NE53;
- Direct digital capacitance sensing (No A/D conversion);
- Based on technology proven in use since the early '80s;
- HART® configurable;
- Built-in surge protection;
- Fully selectable constant mA output (Loop Test capability);
- Single electronics board covers complete range;
- It is certified to IEC61508 for SIL 1 and SIL 2 (non-redundant) and SIL 3 (redundant) applications.



## *Wireless*HART™

- Repeaters/Routers function in the mesh network;
- "Burst Mode" for periodical sending of commands;
- Powered by long life battery (up to 5 years);
- HART® 7 / *Wireless*HART™ protocol;
- Status diagnostics;
- Distance up to 250 m from other network equipment;
- Configuration by magnetic tool (local adjustment), HPC401, CONF401, DDCON100, FDT/DTM and DD tools;
- Mesh, Star and combination of both network topology;
- Hardware and software write protection;
- Wireless standard IEEE 802.15.4-2006 @ 250 kbps;
- Frequency band 2.4 GHz.




## LD400 HART® Functional Description

**LD400** consists of differential, absolute and gauge pressure transmitters as well as models for both level and remote seal applications. The **LD400** offers the best solution for all field applications and those demanding the highest performance.

**LD400** offers:

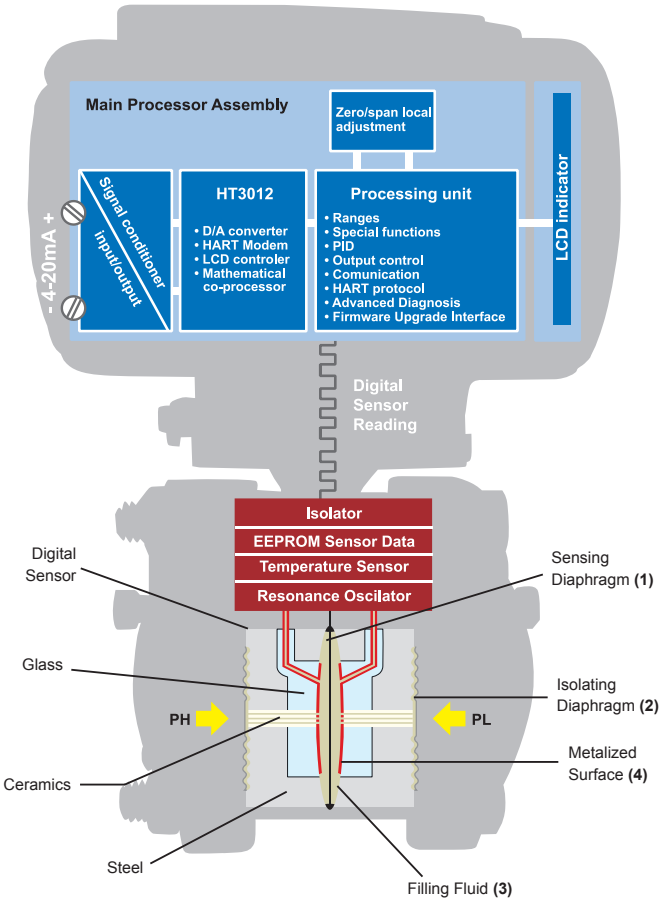
- ± 0.045% accuracy for High Performance option;
- ± 0.2 % of URL stability guarantee for 12 years;
- 200:1 rangeability;
- Compactness and lightweight;
- Safe and reliable operation.

**LD400** uses the field-proven technique of capacitance cell sensor measurement.

The sensor is shown in the- picture on side. The sensing diaphragm **(1)** is at the cell center. The diaphragm deflects as a result of the difference between the pressures applied to the left and right sides of the sensor (PH and PL). Pressure is directly applied to the isolating diaphragms **(2)**, which provide resistance against process fluid corrosion. The pressure is transmitted to the sensing diaphragm through the filling fluid **(3)**.

The sensing diaphragm is a moving capacitor plate while the two metallized surfaces **(4)** are fixed plates. The sensing diaphragm deflection results in capacitance variations between the moving and fixed plates.

The electronic resonance circuit reads capacitance variation between the moving and fixed plates. The CPU conditions the measurement and communicates according to protocol. As there is no A/D conversion, errors and drifts during conversions are eliminated. A temperature

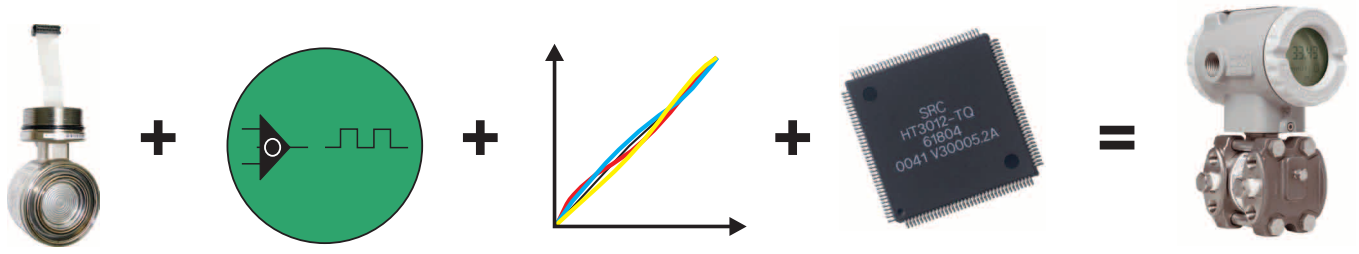



sensor provides temperature compensations, which combined with the sensor precision, results in high accuracy and rangeability for the **LD400**.

The process variable, as well as monitoring and diagnostics information, is provided by digital communication protocol.

# Conclusion

Smar **LD400** is designed to be rugged and a highly reliable solution in pressure measurement. It delivers great application flexibility using the direct digital capacitance sensing that keeps the signal digital all the way from sensor to the output, resulting in a higher effective resolution. All the processing is made by HT3012, the powerful mathematical co-processor that ensure fast response time and high performance for the transmitter. **LD400** is the best choice for pressure measurement.




Capacitance Sensor | No A/D Conversion | Temperature Compensation | HT3012 | LD400 Performance, Reliability and Much More…

# LD400 *Wireless*HART™ Functional Description

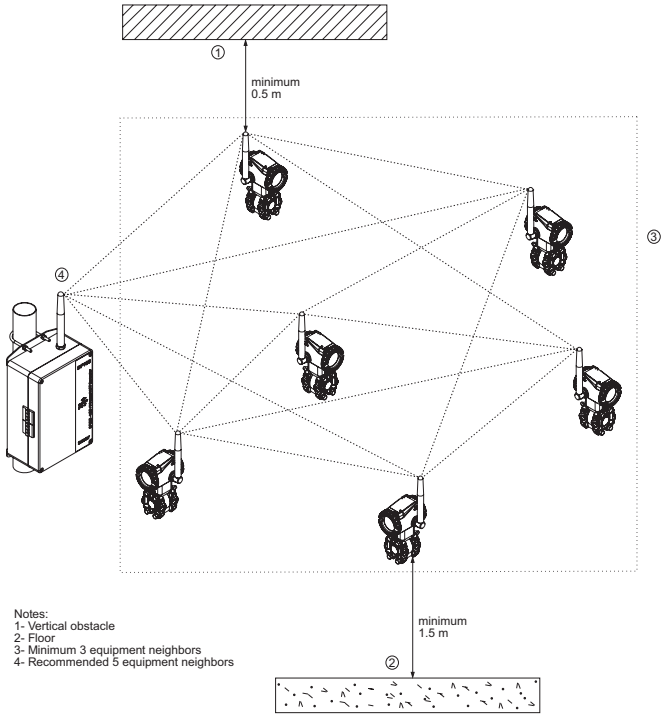
## *Wireless*HART™ Technology

The world dedicated HART® technology now offers a robust protocol designed for numerous applications, with the advantage of the wireless feature. Economy installation and efficient management of energy, quick access to information from the field, strength in communication and information integrity, network security: this and so many other advantages that make *Wireless*HART™ technology (more on www.hartcomm.org) who came to the world of automation to innovate and revolutionize.

Based on a communication protocol for wireless mesh network, the *Wireless*HART™ protocol ensures compatibility between instruments, commands and existing HART® tools. Basically, a *Wireless*HART™ network is composed of elements like the figure beside.

The picture elements in the network, constitute the so-called mesh network. They are:

- Host - workstation that allows interaction with the process. Through the *Wireless*HART™ Gateway, the host gathers data from instruments connected to the network in question. Uses protocols such as Profibus, High Speed Ethernet (HSE), among others;
- *Wireless*HART™ Gateway - converts data between host and devices connected to the network. Together with wireless transmitters Smar, uses the DF100 Gateway. It incorporates the features of Network Manager and Access Point.
- Network Manager - distributes, among other responsibilities, the identity of the network, publishing its existence; distributes individual security keys to the instruments; assigns a communication band to them; manages the communication routes between them, etc.. It is an application that can be incorporated into the *Wireless*HART™ Gateway.
- Access Point - in a simple way, can be understood as the radio installed in *Wireless*HART™ Gateway.




- *Wireless*HART™ field devices - the DT400, TT400 and LD400 are Smar *Wireless*HART™ field devices for this type of network. They act, in addition to its functionality as transmitters, such as routers (repeaters), being able to relay messages to / from other instruments on the network.
- *Wireless*HART™ Adapter - is a tool "bridge", capable of delivering data from a field instrument 4-20 mA HART® (wired) to the host via *Wireless*HART™, then allowing that a conventional HART field device be part of a *Wireless*HART™ network.

The *Wireless*HART™ instruments should be field installed and configured the same way as conventional HART® instruments. This is possible with the DD (device Description) files updated and uploaded to your Hart configurator, that can be used normally. The *Wireless*HART™ instruments can be either configured previouly in bench or at the time of installation.

### Differential Pressure - LD400D and LD400H

Pressure is applied to high and low side and differential pressure is measured. High static pressure is supported for **LD400H** models.

### Flow - LD400D and LD400H

The differential pressure is generated by a primary flow element and the square root function computes the flow measurement.

### Gage Pressure - LD400M and LD400G

The pressure is measured at the high side of the transmitter and the low side is open to the atmosphere, providing true local atmospheric reference.

### Absolute Pressure - LD400A

The pressure is measured at the high side of the transmitter and the low side is at zero absolute pressure to a sealed chamber with vacuum.

### Level - LD400L and LD400I

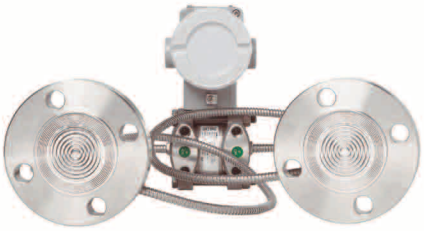
The transmitter has a flange-mounted unit for direct installation on vessels. Extended diaphragms are also available. The closed tank low side can compensate for ullage pressure.

### Sanitary - LD400S

**LD400S** is especially designed for food and other applications where sanitary connections are required. With threaded or "tri-clamp" connections, it allows quick and easy cleaning and maintenance.
The flush connection enables deposit removal without disconnecting the seal.
Tri-clamp and other connections are compliant to 3A-7403 standard for food grade applications.
For further information, see the Smar SR301 Series Catalog.

## Remote Seals

SR301 is a remote seal designed for chemical and thermal isolation. **LD400** can be assembled with separate diaphragm seals in either one or both sides of the sensor. SR301 options include: “T” Type Flanged (SR301T), Threaded (SR301R), Pancake (SR301P) where those three models with an optional flush connection, Sanitary (SR301S), Flanged with Extension (SR301E) and Pancake with Extension (SR301Q).
Typical applications for **LD400** with remote seals:



- Corrosive process fluid;
- Suspended solids or viscous process fluid;
- Process fluids that may freeze or solidify;
- Process temperatures higher than supported by transmitters;
- Replaces impulse lines and condensate legs;
- Bubble system.

See the SR301 Series Catalog for further information regarding application and specification.

## Manifold Valves

Smar manifold valves provide all of the necessary safety for field maintenance of **LD400** transmitters. Working at pressures of up to 6,000 psi, they are easy to handle and lighter than others in the market. Pressure and leakage tests are present in 100% of the valves, also for models mounted on the transmitter. For further information, please see the Smar Manifold Valves Catalog.

## Parameterization and Diagnostics

The **LD400 SIS** is certified by TÜV and meets IEC 61508 standard recommendations for SIS (Safety Instrumented Systems) applications. For more informations about SIS, please consult the **LD400** Operation and Maintenace Instruction Manual.

# Certificate for Use is SIS Applications

**LD400 HART SIS** is certified by TUV and meet the recomendations IEC 61508 standard for SIS (Safety Instrumented Systems) applications. For more information about SIS, please consult LD400 Operations, Maintenance and Instructions Manual.

**Note:**

**LD400 HART® SIS** has the housing cover in red to distinguish them from the standard model.

## Parameterization and Diagnostics

**LD400** is available in HART® technology. These instruments can be configured with Smar software and other manufacturer configuration tools. Local adjustment is available in all **LD400**. It is possible to configure zero and span, totalization, setpoint and other control functions using the magnetic screwdriver.

Smar has developed AssetView, which is a user-friendly Web Tool that can be accessed anywhere and anytime using an internet browser. It is designed for management and diagnostics of field devices, to ensure reactive, preventive, predictive and proactive maintenance.


Local Adjustment

**LD400** with HART® protocol can be configured by:

- Smar CONF401 for Windows;
- Smar DDCON 100 for Windows;
- Smar HPC401 for most recent models of Palms;
- Other manufacturers' configuration tools based on DD (Device Description), Simatic PDM, and FDT/DTM, such as AMSTM, FieldCareTM, PACTwareTM, HHT275 and HHT375, PRM Device Viewer.

For **LD400** management and diagnostics, AssetView ensures continuous information monitoring.


Universal HART® Configuration Software


HPC401

## Advanced Diagnostics

Smar **LD400** provides diagnostics on several levels allowing quick maintenance and in a safe way:

- Sensor Level
- Electronics Level
- Loop integrity Level

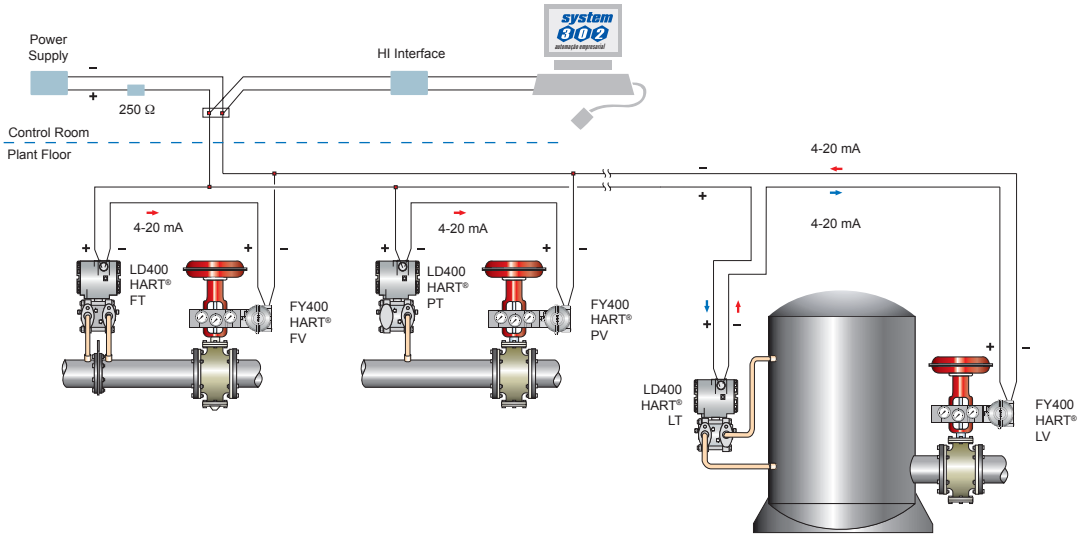
The **LD400** performs advanced diagnostics upon powering up the instrument. It verifies the integrity of important data in order for the device to work properly: the characterization data, the customer entered data, the calibration data and the RAM memory.

During the operation, the validity of the measured pressure is continuously checked. Using advanced algorithms, the transmitter can identify when there is a failure and if it is due to a hardware failure or a process overload condition. It also checks over and under temperature conditions. The user can configure the safe condition according to NAMUR NE43. When the result is failure it can cause an incorrect output, the transmitter will immediately switch the output current allowing actions by the user to identify and correct the problem.

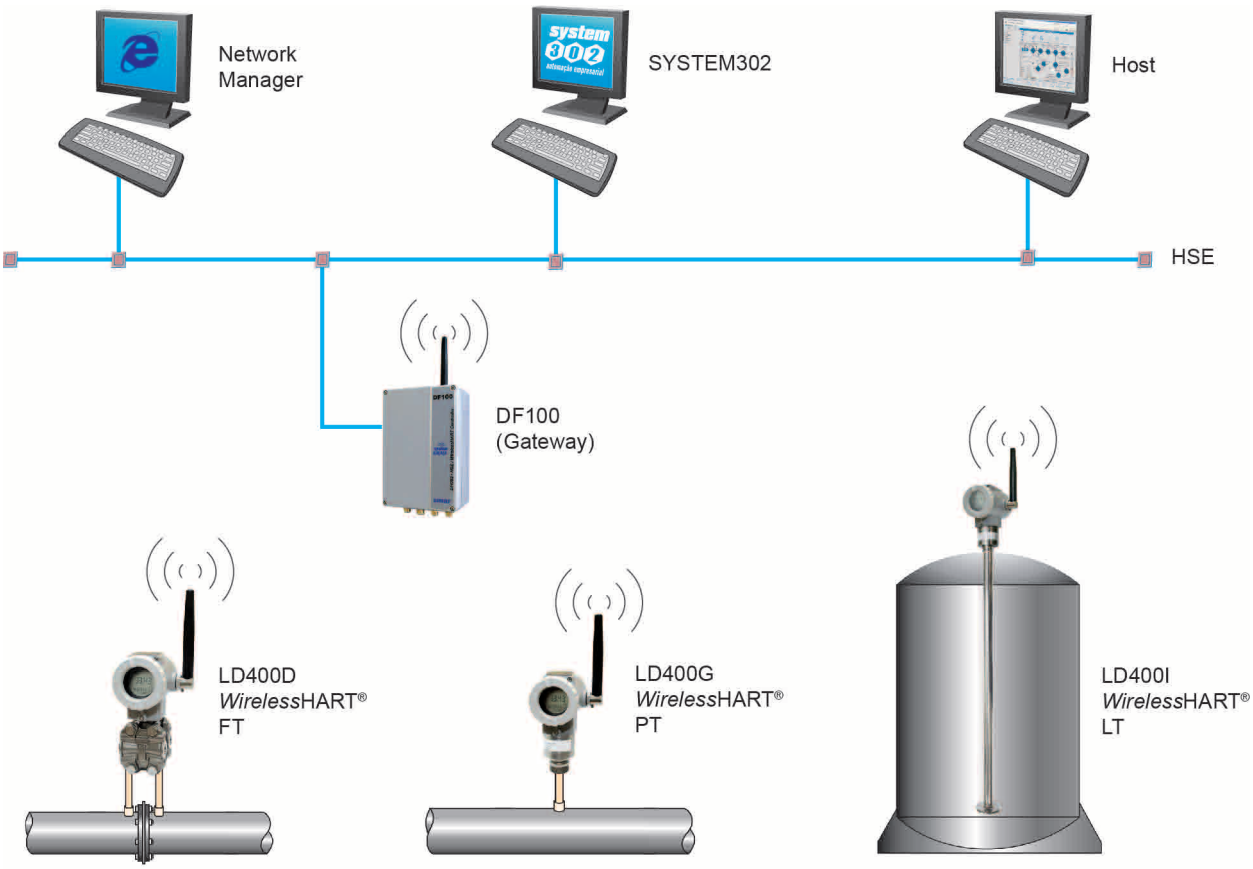
The **LD400 SIS** model not only includes all the previously mentioned diagnostics but also some extra ones to reach the required safety level. They are:

- 4-20 mA Current Output Monitoring;
- Memory and CPU Integrity Checking;
- Crystal Monitoring;
- Firmware Execution Sequence Monitoring.

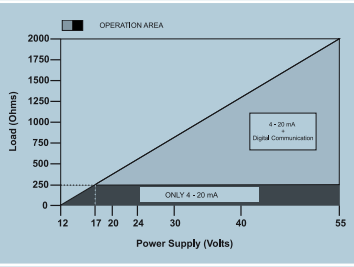
## HART®




## *Wireless*HART™



## Functional Specifications

| | |
|---|---|
| **Process Fluid** | Liquid, gas or steam. |
| **Output and Communication Protocol** | **HART®:**<br>Two-wire, 4-20 mA controlled according to NAMUR NE43 specification, with super-imposed digital HART® Protocol.<br>***Wireless*HART™:**<br>HART® Version 7 protocol, with LD400 *Wireless*HART™ command set.<br>A HART® transmitter specific review must be managed according to the LD400 *Wireless*HART™ transmitter. |
| **Power Supply** | **HART®:**<br>12 to 55 Vdc. Input without polarization, with protection for transient suppressor and complemented by a Lightning Arrester.<br>Transient Suppressor:<br>Vmax = 65 Vp; Differential Mode - bi-directional; Low current leak and capacitance;<br>Meets the standards: IEEE61000-4-4 and IEEE61000-4-5;<br>Less than 5 ns response time.<br>Lightning Arrester:<br>V = 1000 Vdc; Discharge current peak = 10 kA; Nominal current = 10 A for 1 s;<br>Commom mode - low leak current and capacitance<br>***Wireless*HART™:**<br>The battery pack consists of two primary lithium batteries of 3.6 V, totaling 7.2 V.<br>Battery duration:<br>- Update every 8s: 4 years. |
| **Indicator** | Rotative LCD, with 4½-numerical digit and 5-character alphanumerical. Function and status icons. |
| **Hazardous Area Certifications** | **HART®:**<br>Explosion Proof, intrinsically safe and increased safety (CEPEL)<br>***Wireless*HART™:**<br>Explosion proof and intrinsic safe (pending) |
| **Zero and Span Adjustments** | **HART®:**<br>Non-interactive, via local adjustment and digital communication.<br>Local adjustment jumper with 3 positions: Simple, Disabled and Complete.<br>***Wireless*HART™:**<br>Jumper of local adjustment with two positions: Able and Disable. |
| **Load Limitation** | The equation to determine the maximum load resistance this described below:<br>Maximum Load Resistence<br>= [46.07*(Supply Voltage - 10.5)] Ohms<br>  |
| **Failure Alarm (Diagnostics)** | **HART®:**<br>Detailed diagnostics through communication.<br>Sensor failure indication and overpressure indication.<br>In case of sensor or circuit failure, the self-diagnostics drives the output to 3.6 or 21.0 mA, according to the user's choice and NAMUR NE43 specification.<br>***Wireless*HART™:**<br>Detailed diagnostics via HART® communicator and via the display.<br>Indication of sensor failure and overpressure. |

**Temperature Limits**

| | | | | |
|---|---|---|---|---|
| Ambient: | -40 to 85 °C | (-40 to 185 °F) | |
| Process: | -40 to 100 °C | (-40 to 212 °F) | (Silicone Oil) |
| | -40 to 85 °C | (-40 to 185 °F) | (Inert Halocarbon Oil) |
| | 0 to 85 °C | ( 32 to 185 °F) | (Fluorolube Oil) |
| | -20 to 85 °C | ( -4 to 185 °F) | (Inert Krytox Oil and Fomblim Oil) |
| | -25 to 100 °C | (-13 to 212 °F) | (Viton O'Ring) |
| | -40 to 150 °C | (-40 to 302 °F) | (Level Model) |
| Storage: | -40 to 100 °C | (-40 to 212 °F) | |
| Digital Display: | -20 to 80 °C | ( -4 to 176 °F) | |
| | -40 to 85 °C | (-40 to 185 °F) | (Withou Damage) |

**Configuration**

By digital communication using the configuration software CONF401, DDCON 100 (for Windows) or HPC401 (for Palms), and can be partially configured through local adjustment. **LD400** and **LD400 *Wireless*HART**™ can be configured using third-party configuration tools.
Firmware downloading via BDM.
Writing-protection jumper.

**Overpressure and Static Pressure Limits (MWP– Maximum Working Pressure)**

From 3.45 kPa abs. (0.5 psia) to:
0.5 MPa (72.52 psi) for range 0
8 MPa (1150 psi) for range 1
16 MPa (2300 psi) for range 2, 3 e 4
32 MPa (4600 psi) for models H e A5
40 MPa (5800 psi) for model M5
52 MPa (7500 psi) for models M6 e A6

Flange Test Pressure: 68.95 MPa (10000 psi)

Overpressures above will not damage the transmitter, but a new calibration may be necessary.

**WARNING**

It is described here only the maximum pressures of the materials referenced in each rule, it can not be manufactured on request.

Temperatures above 150 °C are not available in standard models.

**PRESSURES TABLE FOR SEAL AND LEVEL FLANGES DIN EN 1092-1 2008 STANDARD**

| Material Group | Pressure Class | Maximum Temperature Allowed | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | RT | 100 | 150 | 200 | 250 | 300 | 350 |
| | | Maximum Pressure Allowed (bar) | | | | | | |
| 10E0 AISI 304/304L | PN 16 | 16 | 13.7 | 12.3 | 11.2 | 10.4 | 9,6 | 9.2 |
| | PN 25 | 25 | 21.5 | 19.2 | 17.5 | 16.3 | 15.1 | 14.4 |
| | PN 40 | 40 | 34.4 | 30.8 | 28 | 26 | 24.1 | 23 |
| | PN 63 | 63 | 63 | 57.3 | 53.1 | 50.1 | 46.8 | 45 |
| | PN 100 | 100 | 86.1 | 77.1 | 70 | 65.2 | 60.4 | 57.6 |
| | PN 160 | 160 | 137.9 | 123.4 | 112 | 104.3 | 96.7 | 92.1 |
| | PN 250 | 250 | 215.4 | 192.8 | 175 | 163 | 151.1 | 144 |

**Overpressure and Static Pressure Limits (MWP– Maximum Working Pressure) (continuation)**

| Material Group | Pressure Class | Maximum Temperature Allowed | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | RT | 100 | 150 | 200 | 250 | 300 | 350 |
| | | Maximum Pressure Allowed (bar) | | | | | | |
| 14E0 AISI 316/316L | PN 16 | 16 | 16 | 14.5 | 13.4 | 12.7 | 11.8 | 11.4 |
| | PN 25 | 25 | 25 | 22.7 | 21 | 19.8 | 18.5 | 17.8 |
| | PN 40 | 40 | 40 | 36.3 | 33.7 | 31.8 | 29.7 | 28.5 |
| | PN 63 | 63 | 63 | 57.3 | 53.1 | 50.1 | 46.8 | 45 |
| | PN 100 | 100 | 100 | 90.9 | 84.2 | 79.5 | 74.2 | 71.4 |
| | PN 160 | 160 | 160 | 145.5 | 134.8 | 127.2 | 118.8 | 114.2 |
| | PN 250 | 250 | 250 | 227.3 | 210.7 | 198.8 | 185.7 | 178.5 |

| Material Group | Pressure Class | Maximum Temperature Allowed | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | RT | 100 | 150 | 200 | 250 | 300 | 350 |
| | | Maximum Pressure Allowed (bar) | | | | | | |
| 16E0 1.4410 Super Duplex 1.4462 Duplex | PN 16 | 16 | 16 | 16 | 16 | 16 | - | - |
| | PN 25 | 25 | 25 | 25 | 25 | 25 | - | - |
| | PN 40 | 40 | 40 | 40 | 40 | 40 | - | - |
| | PN 63 | 63 | 63 | 63 | 63 | 63 | - | - |
| | PN 100 | 100 | 100 | 100 | 100 | 100 | - | - |
| | PN 160 | 160 | 160 | 160 | 160 | 160 | - | - |
| | PN 250 | 250 | 250 | 250 | 250 | 250 | - | - |

**PRESSURES TABLE FOR SEAL AND LEVEL FLANGES ASME B16.5 2009 STANDARD**

| Material Group | Pressure Class | Maximum Temperature Allowed | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | -29 to 38 | 50 | 100 | 150 | 200 | 250 | 300 | 325 | 350 |
| | | Maximum Pressure Allowed (bar) | | | | | | | | |
| Hastelloy C276 | 150 | 20 | 19.5 | 17.7 | 15.8 | 13.8 | 12.1 | 10.2 | 9.3 | 8.4 |
| | 300 | 51.7 | 51.7 | 51.5 | 50.3 | 48.3 | 46.3 | 42.9 | 41.4 | 40.3 |
| | 400 | 68.9 | 68.9 | 68.7 | 66.8 | 64.5 | 61.7 | 57 | 55 | 53.6 |
| | 600 | 103.4 | 103.4 | 103 | 100.3 | 96.7 | 92.7 | 85.7 | 82.6 | 80.4 |
| | 900 | 155.1 | 155.1 | 154.6 | 150.6 | 145 | 139 | 128.6 | 124 | 120.7 |
| | 1500 | 258.6 | 258.6 | 257.6 | 250.8 | 241.7 | 231.8 | 214.4 | 206.6 | 201.1 |
| | 2500 | 430.9 | 430.9 | 429.4 | 418.2 | 402.8 | 386.2 | 357.1 | 344.3 | 335.3 |

| Material Group | Pressure Class | Maximum Temperature Allowed | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | -29 to 38 | 50 | 100 | 150 | 200 | 250 | 300 | 325 | 350 |
| | | Maximum Pressure Allowed (bar) | | | | | | | | |
| S31803 Duplex S32750 Super Duplex | 150 | 20 | 19.5 | 17.7 | 15.8 | 13.8 | 12.1 | 10.2 | 9.3 | 8.4 |
| | 300 | 51.7 | 51.7 | 50.7 | 45.9 | 42.7 | 40.5 | 38.9 | 38.2 | 37.6 |
| | 400 | 68.9 | 68.9 | 67.5 | 61.2 | 56.9 | 53.9 | 51.8 | 50.9 | 50.2 |
| | 600 | 103.4 | 103.4 | 101.3 | 91.9 | 85.3 | 80.9 | 77.7 | 76.3 | 75.3 |
| | 900 | 155.1 | 155.1 | 152 | 137.8 | 128 | 121.4 | 116.6 | 114.5 | 112.9 |
| | 1500 | 258.6 | 258.6 | 253.3 | 229.6 | 213.3 | 202.3 | 194.3 | 190.8 | 188.2 |
| | 2500 | 430.9 | 430.9 | 422.2 | 382.7 | 355.4 | 337.2 | 323.8 | 318 | 313.7 |

**Overpressure and Static Pressure Limits (MWP– Maximum Working Pressure) (continuation)**

| Material Group | Pressure Class | Maximum Temperature Allowed | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | -29 to 38 | 50 | 100 | 150 | 200 | 250 | 300 | 325 | 350 |
| | | Maximum Pressure Allowed (bar) | | | | | | | | |
| AISI316L | 150 | 15.9 | 15.3 | 13.3 | 12 | 11.2 | 10.5 | 10 | 9.3 | 8.4 |
| | 300 | 41.4 | 40 | 34.8 | 31.4 | 29.2 | 27.5 | 26.1 | 25.5 | 25.1 |
| | 400 | 55.2 | 53.4 | 46.4 | 41.9 | 38.9 | 36.6 | 34.8 | 34 | 33.4 |
| | 600 | 82.7 | 80 | 69.6 | 62.8 | 58.3 | 54.9 | 52.1 | 51 | 50.1 |
| | 900 | 124.1 | 120.1 | 104.4 | 94.2 | 87.5 | 82.4 | 78.2 | 76.4 | 75.2 |
| | 1500 | 206.8 | 200.1 | 173.9 | 157 | 145.8 | 137.3 | 130.3 | 127.4 | 125.4 |
| | 2500 | 344.7 | 333.5 | 289.9 | 261.6 | 243 | 228.9 | 217.2 | 212.3 | 208.9 |

| Material Group | Pressure Class | Maximum Temperature Allowed | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | -29 to 38 | 50 | 100 | 150 | 200 | 250 | 300 | 325 | 350 |
| | | Maximum Pressure Allowed (bar) | | | | | | | | |
| AISI316 | 150 | 19 | 18.4 | 16.2 | 14.8 | 13.7 | 12.1 | 10.2 | 9.3 | 8.4 |
| | 300 | 49.6 | 48.1 | 42.2 | 38.5 | 35.7 | 33.4 | 31.6 | 30.9 | 30.3 |
| | 400 | 66.2 | 64.2 | 56.3 | 51.3 | 47.6 | 44.5 | 42.2 | 41.2 | 40.4 |
| | 600 | 99.3 | 96.2 | 84.4 | 77 | 71.3 | 66.8 | 63.2 | 61.8 | 60.7 |
| | 900 | 148.9 | 144.3 | 126.6 | 115.5 | 107 | 100.1 | 94.9 | 92.7 | 91 |
| | 1500 | 248.2 | 240.6 | 211 | 192.5 | 178.3 | 166.9 | 158.1 | 154.4 | 151.6 |
| | 2500 | 413.7 | 400.9 | 351.6 | 320.8 | 297.2 | 278.1 | 263.5 | 257.4 | 252.7 |

| Material Group | Pressure Class | Maximum Temperature Allowed | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | -29 to 38 | 50 | 100 | 150 | 200 | 250 | 300 | 325 | 350 |
| | | Maximum Pressure Allowed (bar) | | | | | | | | |
| AISI304 | 150 | 19 | 18.3 | 15.7 | 14.2 | 13.2 | 12.1 | 10.2 | 9.3 | 8.4 |
| | 300 | 49.6 | 47.8 | 40.9 | 37 | 34.5 | 32.5 | 30.9 | 30.2 | 29.6 |
| | 600 | 99.3 | 95.6 | 81.7 | 74 | 69 | 65 | 61.8 | 60.4 | 59.3 |
| | 1500 | 248.2 | 239.1 | 204.3 | 185 | 172.4 | 162.4 | 154.6 | 151.1 | 148.1 |
| | 2500 | 413.7 | 398.5 | 340.4 | 308.4 | 287.3 | 270.7 | 257.6 | 251.9 | 246.9 |

**Turn-on Time**

**HART®:**
Performs within specifications in less than 3 seconds after power is applied to the transmitter.

***Wireless*HART™:**
Performs within specifications in less than 10 seconds after power is applied to the transmitter.

**Humidity Limits**

0 to 100% RH (Relative Humidity).

**Volumetric Displacement**

Less than 0.15 $cm^3$ (0.01 $in^3$).

**Damping Adjustment**

User configurable from 0 to 128 seconds (via digital communication or local adjustment).

## Performance Specifications

| | |
|---|---|
| **Reference Conditions** | Span starting at zero, temperature of 25 °C (77 °F), atmospheric pressure, power supply of 24 Vdc, Halocarbon or Silicone oil fill fluid, isolating diaphragms in 316L SST and digital trim equal to lower and upper range values. |
| **Stability** | **For ranges 2, 3, 4, 5 or 6:**<br>High Performance: ± 0.2% of URL for 12 years<br>Standard: ± 0.15% of URL for 7 years<br>For ± 20 ºC temperature changes, 0-100% relative humidity, up to 7 MPa (70 bar) line pressure, installation according to the best practices and adequate assembling for processes in which atoms of hydrogen can be generated (hydrogen migration).<br>**For range 1:**<br>High Performance: ± 0.3% of URL for 12 years<br>Standard: ± 0.3% of URL for 7 years<br>For ± 20 °C temperature changes, 0-100% relative humidity, up to 3.5 kPa (35 mbar) line pressure, installation according to the best practices and adequate assembling for processes in which atoms of hydrogen can be generated (hydrogen migration).<br>**For range 0:**<br>High Performance: ± 0.4% of URL for 12 years<br>Standard: ± 0.4% of URL for 7 years<br>For ± 20 °C temperature changes, 0-100% relative humidity, up to 100 kPa (1 bar) line pressure, installation according to the best practices and adequate assembling for processes in which atoms of hydrogen can be generated (hydrogen migration). |
| **Accuracy** | ***STANDARD:***<br>**Ranges D0 or M0:**<br>**0.16 URL ≤ span ≤ URL:** ± 0.1 % of span<br>**0.05 URL ≤ span < 0.16 URL:** ± [0.0545 + 0.0073 URL/span ] % of span<br>**Ranges D1 or M1:**<br>**0.16 URL span URL:** ± 0.06% of span<br>**0.025 URL span < 0.16 URL:** ± [0.0364 + 0.0038 URL/span] % of span<br>**Ranges D2, D3, D4, M2, M3, M4, H2, H3 or H4:**<br>**0.16 URL span URL:** ± 0.06% of span<br>**0.025 URL span < 0.16 URL:** ± [0.0364 + 0.0038 URL/span] % of span<br>**0.005 URL span < 0.025 URL:** ± [0.0015 + 0.0047 URL/span] % of span<br>**Ranges M5, H5, S2, S3, S4 or S5:**<br>**0.16 URL span URL:** ± 0.065 % of span<br>**0.025 URL span < 0.16 URL:** ± [0.0326 + 0.0052 URL/span] % of span<br>**0.0083 URL span < 0.025 URL:** ± [0.01 + 0.0058 URL/span] % of span<br>**Range M6:**<br>**0.16 URL span URL: ± 0.08 % of span**<br>**0.025 URL span < 0.16 URL:** ± [0.0504 + 0.0047 URL/span] % of span<br>**0.0083 URL span < 0.025 URL:** ± [0.005 + 0.0059 URL/span] % of span<br>**Range A0:**<br>**0.16 URL span URL:** ± 0.2 % do span<br>**0.05 URL span 0.16 URL:** ± (0.158 + 0,006 URL/span) % do span<br>**Range A1:**<br>**0.16 URL span URL:** ± 0.1 % do span<br>**0.05 URL span < 0.16 URL:** ± [0.065 + 0,0054 URL/span] % do span<br>**Range A2:**<br>**0.16 URL span URL:** ± 0.08 % of span<br>**0.05 URL span < 0.16 URL:** ± [0.0482 + 0.0051 URL/span] % of span |

| | |
|---|---|
| **Accuracy (continuation)** | **Ranges A3 or A4:**<br>**0.16 URL span URL:** ± 0.065 % of span<br>**0.025 URL span < 0.16 URL:** ± [0.0326 + 0.0052 URL/span] % of span<br>**0.0083 URL span < 0.025 URL:** ± [0.005 + 0.0059 URL/span] % of span<br>**Range A5:**<br>**0.16 URL span URL:** ± 0.075 % of span<br>**0.025 URL span < 0.16 URL:** ± [0.0443 + 0.0049 URL/span] % of span<br>**0.0083 URL span < 0.025 URL:** ± [0.001 + 0.006 URL/span] % of span<br>**Ranges A6, L2, L3, L4 or L5:**<br>**0.16 URL span URL:** ± 0.08 % of span<br>**0.025 URL span < 0.16 URL:** ± [0.0504 + 0.0047 URL/span] % of span<br>**0.0083 URL span < 0.025 URL:** ± [0.005 + 0.0059 URL/span] % of span<br>***HIGH PERFORMANCE:***<br>**Ranges D0 or M0:**<br>**0.16 URL span URL:** ± 0.06% of span<br>**0.05 URL span < 0.16 URL:** ± [0.0009 + 0.0095 URL/span ] % of span<br>**Range D1 or M1:**<br>**0.16 URL span URL:** ± 0.05 % of span<br>**0.025 URL span < 0.16 URL:** ± [0.0262 + 0.0038 URL/span] % of span<br>**Ranges D2, D3, D4, M2, M3 or M4:**<br>**0.16 URL span URL:** ± 0.045 % of span<br>**0.025 URL span < 0.16 URL:** ± [0.0209 + 0.0039 URL/span] % of span<br>**0.005 URL span < 0.025 URL:** ± [0.0025 + 0.0043 URL/span] % of span<br>**Range M5:**<br>**0.16 URL span URL:** ± 0.055 % of span<br>**0.025 URL span < 0.16 URL:** ± [0.0263 + 0.0046 URL/span] % of span<br>**0.0083 URL span < 0.025 URL:** ± [0.015 + 0.0049 URL/span] % of span<br>**Range M6:**<br>**0.16 URL span URL:** ± 0.075 % of span<br>**0.025 URL span < 0.16 URL:** ± [0.0463 + 0.0046 URL/span] % of span<br>**0.0083 URL span < 0.025 URL:** ± [0.005 + 0.0056 URL/span] % of span<br>*Note: For SIS devices, please consider the standard model specifications.* |
| **Power Supply Effect** | ± 0.005% of calibrated span per Volt. |
| **Vibration Effect** | ± 0.1% URL for field with high vibration level or pipeline with high vibration, according to IEC 60770-1 specification: 10-60 Hz, 0.21 mm peak displacement / 60-2000 Hz, 29.4 m/s$^2$ acceleration amplitude. |
| **Temperature Effect** | **For ranges 2, 3, 4, 5 or 6, except level and sanitary transmitters:**<br>**0.1 URL span URL:** ± [0.0205% URL + 0.0795% span] per 20 °C (68 °F)<br>**span < 0.1 URL:** ± [0.021% URL + 0.075% span] per 20 °C (68 °F)<br>**For range 1:**<br>**0.1 URL span URL:** ± [0.05% URL + 0.08% span] per 20 °C (68 °F)<br>**span < 0.1 URL:** ± [0.055% URL + 0.03% span] per 20 °C (68 °F)<br>**For range 0:**<br>**0.1 URL span URL:** ± [0.1% URL + 0.1% span] per 20 °C (68 °F)<br>**span < 0.1 URL:** ± [0.105% URL + 0.05% span] per 20 °C (68 °F)<br>**For Level or Sanitary Transmitters:**<br>6 mm$H_2O$ per 20 °C for flange 4” and DN100<br>17 mm$H_2O$ per 20 °C for flange 3” and DN80<br>Consult for other flange dimensions and fill fluid. |

| | |
|---|---|
| **Static Pressure Effect** | **Zero Error:**<br>**For range 5*:** ± 0.05% URL (± 0.1% for Tantalum diaphragm) per 7 MPa (1000 psi)<br>**For range 2, 3 or 4*:** ±0.025% URL (± 0.1% for Tantalum diaphragm) per 7 MPa (1000 psi)<br>**For range 1:** 0.05 % URL per 1.7 MPa (250 psi)<br>**For range 0:** ± 0.1% URL per 0.5 MPa (5 bar)<br>**For Level or Sanitary Transmitters:** ± 0.1% URL per 3.5 MPa (500 psi)<br>The zero error is a systematic error that can be eliminated by calibrating at the operating static pressure.<br><br>**Span Error:**<br>**For ranges 2, 3, 4 or 5*:** Correctable to ± 0.1% of reading per 7 MPa (1000 psi)<br>**For range 1:** Correctable to ± 0.1% of reading per 1.7 MPa (250 psi)<br>**For range 0:** Correctable to ± 0.2% of reading per 0.5 MPa (5 bar)<br>**For Level or Sanitary Transmitters:** Correctable to ± 0.1% URL per 3.5 MPa (500 psi)<br><br>*Except for level or sanitary transmitters |
| **Mounting Position Effect** | Zero shift of up to 250 Pa (1 in$H_2O$) which can be calibrated out.<br>No span effect. |
| **Electromagnetic Interference Effect** | According to IEC61326-1:2006, IEC61326-2-3:2006, IEC61000-6-4:2006, IEC61000-6-2:2005 |

**Rangeability**

| MODEL | RANGEABILITY FOR **LD400** | RANGEABILITY FOR **LD400 SIS** |
|---|---|---|
| D0 | 20:1 | 10:1 |
| D1 | 40:1 | 10:1 |
| D2 | 200:1 | 20:1 |
| D3 | 200:1 | 20:1 |
| D4 | 200:1 | 20:1 |
| M0 | 20:1 | 10:1 |
| M1 | 40:1 | 10:1 |
| M2 | 200:1 | 20:1 |
| M3 | 200:1 | 20:1 |
| M4 | 200:1 | 20:1 |
| M5 | 120:1 | 20:1 |
| M6 | 120:1 | 20:1 |
| A0 | 20:1 | - |
| A1 | 20:1 | 4:1 |
| A2 | 20:1 | 10:1 |
| A3 | 120:1 | 20:1 |
| A4 | 120:1 | 20:1 |
| A5 | 120:1 | 20:1 |
| A6 | 120:1 | - |
| H2 | 120:1 | 20:1 |
| H3 | 120:1 | 20:1 |
| H4 | 120:1 | 20:1 |
| H5 | 120:1 | 20:1 |
| L2 | 120:1 | 20:1 |
| L3 | 120:1 | 20:1 |
| L4 | 120:1 | 20:1 |
| L5 | 120:1 | 20:1 |
| S2 | 120:1 | 20:1 |
| S3 | 120:1 | 20:1 |
| S4 | 120:1 | 20:1 |
| S5 | 120:1 | 20:1 |

## Physical Specifications

| | |
|---|---|
| **Electrical Connection** | **HART®**<br>½ - 14 NPT ¾ - 14 NPT (with 316 SST adapter for ½ - 14 NPT)<br>M20 X 1.5 ¾ - 14 BSP (with 316 SST adapter for ½ - 14 NPT)<br>PG 13.5 DIN ½ - 14 BSP (with 316 SST adapter for ½ - 14 NPT)<br>***Wireless*HART™:**<br>Only M20 X 1.5 |
| **Process Connection** | Process Connection: ¼ - 18 NPT or ½ -14 NPT (with adapter).<br>See ordering code for more options.<br>For level transmitters, please see ordering code. |
| **Wetted Parts** | **Isolating Diaphragms:**<br>316L SST, Hastelloy C276, Monel 400 or Tantalum.<br>**Drain/Vent Valves and Plug:**<br>Plated Carbon Steel, 316 SST, Hastelloy C276 or Monel 400.<br>**Flanges:**<br>Plated Carbon Steel, 316 SST CF8M (ASTM - A351), Hastelloy C276 - CW-12MW, (ASTM - A494) or Monel 400.<br>**Wetted O'Ring (For Flanges and Adapters):**<br>Buna-N, Viton™, PTFE or Ethylene-Propylene.<br>The **LD400** is available in NACE MR-01-75/ISO 15156 compliant materials. |
| **Nonwetted Parts** | **Electronic Housing:**<br>Injected aluminum with epoxy painting or 316 SST - CF8M (ASTM - A351) housing.<br>Complies with NEMA 4X/6P, IP66 or IP66W* and IP68 or IP68W*.<br>*The IP66/68W sealing test (immersion) was performed at 1 bar for 24 hours. For any other situation, please consult Smar. IP66/68W tested for 200h according to NBR 8094 / ASTM B 117 standard.<br>**Blank Flange:**<br>When flange adapter and Drain/Vent material are in Carbon Steel, blank flange is in Carbon Steel, otherwise blank flange is in 316 SST CF8M (ASTM - A351).<br>**Level Flange (LD400L):**<br>316 L.<br>**Fill Fluid:**<br>Silicone, Fluorolube, Krytox, Halocarbon 4.2 or Fomblim oils.<br>**Cover O'Ring:**<br>Buna-N.<br>**Mounting Bracket:**<br>Plated Carbon Steel or 316 SST.<br>Accessories (bolts, nuts, washers and U-clamps) in Carbon Steel or 316 SST.<br>**Flange Bolts and Nuts:**<br>Plated Carbon Steel, Grade 8 or 316 SST.<br>For NACE applications: Carbon Steel ASTM A193 B7M.<br>**Identification Plate:**<br>316 SST. |
| **Mounting** | a) Flange mounted for Level models.<br>b) Optional universal mounting bracket for surface or vertical/horizontal 2"-pipe (DN 50).<br>c) Manifold Valve integrated to the transmitter.<br>d) Directly on piping for closely coupled transmitter/orifice flange combinations. |
| **Approximate Weights** | 3.15 kg (7 lb): all models, except level transmitters.<br>5.85 to 9.0 kg (13 lb to 20 lb): level transmitters depending on the flanges, extension and materials. |
| **Control Functions Characteristics (Optional)** | Control Block (PID) and Totalization (TOT) (not available for *Wireless*HART™).<br>*Note: The PID block isn´t available for use in SIS mode.* |

# Ordering Code

| MODEL | DIFFERENTIAL, FLOW, GAGE, ABSOLUTE AND HIGH STATIC PRESSURE TRANSMITTER |
|---|---|
| LD400 | Smart Pressure Transmitter |

| COD. | Type | Range Limits Min | Range Limits Max | Range Limits Unit | Range Limits Min | Range Limits Max | Range Limits Unit | Turn Down Max |
|---|---|---|---|---|---|---|---|---|
| D0 | Differential **(23)** | -1 | 1 | kPa | -10 | 10 | mbar | 20 |
| D1 | Differential and Flow | -5 | 5 | kPa | -50 | 50 | mbar | 40 |
| D2 | Differential and Flow | -50 | 50 | kPa | -500 | 500 | mbar | 200 |
| D3 | Differential and Flow | -250 | 250 | kPa | -2500 | 2500 | mbar | 200 |
| D4 | Differential and Flow | -2500 | 2500 | kPa | -25 | 25 | bar | 200 |
| M0 | Gage | -1 | 1 | kPa | -10 | 10 | mbar | 20 |
| M1 | Gage | -5 | 5 | kPa | -50 | 50 | mbar | 40 |
| M2 | Gage | -50 | 50 | kPa | -500 | 500 | mbar | 200 |
| M3 | Gage | -100 | 250 | kPa | -1000 | 2500 | mbar | 200 |
| M4 | Gage | -100 | 2500 | kPa | -1 | 25 | bar | 200 |
| M5 | Gage | -0.1 | 25 | MPa | -1 | 250 | bar | 120 |
| M6 | Gage | -0.1 | 40 | MPa | -1 | 400 | bar | 120 |
| A0 | Absolute | 0 | 1 | kPa | 0 | 7,5 | mmHg | 20 |
| A1 | Absolute | 0 | 5 | kPa | 0 | 37 | mmHga | 20 |
| A2 | Absolute | 0 | 50 | kPa | 0 | 500 | mbar | 20 |
| A3 | Absolute | 0 | 250 | kPa | 0 | 2500 | mbar | 120 |
| A4 | Absolute | 0 | 2500 | kPa | 0 | 25 | bar | 120 |
| A5 | Absolute | 0 | 25 | MPa | 0 | 250 | bar | 120 |
| A6 | Absolute | 0 | 40 | MPa | 0 | 400 | bar | 120 |
| H2 | Differential Pressure for High Static Pressure | -50 | 50 | kPa | -500 | 500 | mbar | 120 |
| H3 | Differential Pressure for High Static Pressure | -250 | 250 | kPa | -2500 | 2500 | mbar | 120 |
| H4 | Differential Pressure for High Static Pressure | -2500 | 2500 | kPa | -25 | 25 | bar | 120 |
| H5 | Differential Pressure for High Static Pressure | -25 | 25 | MPa | -250 | 250 | bar | 120 |

**Note:** The range can be extended up to 0.75 LRL* and 1.2 URL** with small degradation of accuracy.
*LRL = Lower range limit
**URL = Upper range limit

| COD. | Diaphragm Material and Fill Fluid | | COD. | | | COD. | | |
|---|---|---|---|---|---|---|---|---|
| 1 | 316L SST | Silicone Oil **(9)** | E | Hastelloy C276 | Inert (Krytox Oil) **(1) (12) (19)** | S | Tantalum | Inert (Halocarbon 4.2 Oil) **(3) (19)** |
| 2 | 316L SST | Inert (Fluorolube Oil) **(2) (19)** | G | Tantalum | Inert (Krytox Oil) **(3) (19)** | T | GP 316L SST - OP | Inert (Halocarbon Oil) **(3) (18) (19)** |
| 3 | Hastelloy C276 | Silicone Oil **(1) (9)** | I | GP 316L SST - OP | Silicone Oil **(3) (9) (18)** | U | 316L SST - OP | Silicone Oil **(3) (9) (18)** |
| 4 | Hastelloy C276 | Inert (Fluorolube Oil) **(1) (19)** | J | GP 316L SST - OP | Inert (Fluorolube Oil) **(3) (4) (18) (19)** | V | 316L SST - OP | Inert (Fluorolube Oil) **(3) (4) (18) (19)** |
| 5 | Monel 400 | Silicone Oil **(1) (3) (9)** | K | Monel 400 | Inert (Krytox Oil) **(1) (3) (19)** | W | 316L SST - OP | Inert (Krytox Oil) **(3) (18) (19)** |
| 7 | Tantalum | Silicone Oil **(3) (9)** | L | GP 316L SST - OP | Inert (Krytox Oil ) **(3) (18) (19)** | X | 316L SST - OP | Inert (Halocarbon Oil) **(3) (18) (19)** |
| 8 | Tantalum | Inert (Fluorolube Oil) **(2) (3) (19)** | M | GP Monel 400 | Silicone Oil **(1) (3) (9)** | | | |
| 9 | 316L SST | Fomblim Oil **(12)** | P | GP Monel 400 | Inert (Krytox Oil) **(1) (3) (19)** | | | |
| A | Monel 400 | Fomblim Oil **(1) (3)** | Q | 316L SST | Inert (Halocarbon 4.2 Oil) **(19)** | | | |
| D | 316L SST | Inert (Krytox Oil) **(12) (19)** | R | Hastelloy C276 | Inert (Halocarbon 4.2 Oil) **(19)** | | | |

**Note:** GP= Gold Plated OP= Over-Lay Pot

| COD. | Performance Class |
|---|---|
| 0 | Standard |
| 1 | High Performance **(15)** |

| COD. | Communication Protocol | | |
|---|---|---|---|
| H | HART® & 4 to 20 mA | W | *Wireless*HART™ |

| COD. | Safety Options |
|---|---|
| 0 | Standard - For use in measurement and control |
| 1 | SIS (Safety Instrumented Systems) **(24) (27)** |

| COD. | Flange(s), Adapter(s) and Drain/Vent Valves Material |
|---|---|
| P | Plated CS (Drain/Vent In) **(20)** |
| H | Hastelloy C276 (CW-12MW, ASTM - A494) **(1)** |
| I | 316 SST - CF8M (ASTM A351) |
| F | Monel 400 Plated Bar (For HF Applications) **(1)** |
| M | Monel 400 Microcasting **(1)** |
| 1 | 316 SST - CF8M (ASTM A351) (Drain/Vent In Hastelloy C276) **(1)** |
| 2 | 316 SST - CF8M (ASTM A351) Flange with PVDF (Kynar) Insert **(5) (7) (11)** |
| 3 | 316 SST - CF8M (Drain/Vent and plug in Monel) Nace Standard |

| COD. | Wetted O'Ring Materials |
|---|---|
| 0 | Without O'Rings |
| B | Buna-N |
| E | Ethylene - Propylene **(12)** |
| K | Kalrez **(3)** |
| T | Teflon |
| V | Viton |

**Note:** O'Rings are not available on the sides with Remote Seals.

| COD. | Drain/Vent Position |
|---|---|
| 0 | Without Drain/Vent |
| A | Drain/Vent (Opposite to Process Connection) |
| D | Bottom |
| U | Top |

**Note:** For better drain/vent operation, vent valves are strongly recommended.
Drain/vent valve not available on the sides with remote seals.

| COD. | Process Connection |
|---|---|
| 0 | 1/4 - 18 NPT (Without Adapter) |
| 1 | 1/2 - 14 NPT (With Adapter) |
| 3 | Flange Seal with welded plug for Remote Seal **(3) (8)** |
| 5 | 1/2 - 14 NPT Axial with PVDF Insert **(5) (7) (16)** |
| 9 | Low Volume Flange for Remote Seal **(3) (4) (8)** |
| B | High Side: 1/2 - 14 NPT and Low Side: Flange with plug for Remote Seal **(10) (3)** |
| D | High Side: Flange with plug for Remote Seal and Low Side: 1/2 - 14 NPT **(10) (3)** |
| F | High Side: 1/2 - 14 NPT and Low Side: Low Volume Flange for Remote Seal **(10) (3)** |
| H | High Side: Low Volume Flange for Remote Seal and Low Side: 1/2 - 14 NPT **(10) (3)** |
| Q | 8 mm hole without thread (According to DIN 19213) **(13)** |
| T | 1/2 - 14 BSP (With Adapter) |
| V | Manifold Valve integrated to the transmitter |
| Z | User's Specification |

| COD. | Special Applications |
|---|---|
| 0 | Without Special Cleaning |
| 1 | Degrease Cleaning (Oxygen, Hydrogen Peroxide or Chroline Service) **(14)** |

| LD400 | - | D2 | 1 | 0 | - | H | 0 | - | I | B | D | 1 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

TYPICAL MODEL

| LD400-D210-H0-IBD11 | DIFFERENTIAL, FLOW, GAGE, ABSOLUTE AND HIGH STATIC PRESSURE TRANSMITTER |
|---|---|

**Flanges Bolts and Nuts Material**

| COD. | |
|---|---|
| P | Plated Carbon Steel (Default) **(20)** |
| I | 316 SST |
| C | Carbon Steel (ASTM A193 B7M) **(1) (20)** |
| H | Hastelloy C276 |
| A | Super Duplex Stainless Steel Nace MR0175 / MR0103 Compliant |

**Flange Thread for Fixing Accessories (Adapters, Manifolds, Mounting Brackets, etc)**

| COD. | | COD. | | COD. | |
|---|---|---|---|---|---|
| 0 | 7/16 UNF | 1 | M10 X 1.5 | 2 | M12 X 1.75 |

**Local Indicator**

| COD. | |
|---|---|
| 0 | Without Indicator |
| 1 | With Digital Indicator |

**Electrical Connection**

| COD. | |
|---|---|
| 0 | 1/2 - 14 NPT **(22) (27)** |
| 1 | 3/4 - 14 NPT (with 316 SST adapter for 1/2 - 14 NPT) **(22) (27)** |
| 2 | 3/4 - 14 BSP (with 316 SST adapter for 1/2 - 14 NPT) **(6) (27)** |
| 3 | 1/2 - 14 BSP (with 316 SST adapter for 1/2 - 14 NPT) **(6) (27)** |
| A | M20 X 1.5 **(22)** |
| B | PG 13.5 DIN **(22) (27)** |
| Z | User's Specification |

**Blind Plug**

| COD. | |
|---|---|
| I | 316 SST |
| C | Carbon Steel (Only available for ½" process connection) **(20)** |

**Mounting Bracket for 2" Pipe or Surface Mounting**

| COD. | |
|---|---|
| 0 | Without bracket |
| 1 | Carbon Steel bracket and accessories **(20)** |
| 2 | 316 SST bracket and accessories |
| 5 | L type, Carbon Steel bracket and accessories **(20)** |
| 6 | L type, 316 SST bracket and accessories |
| 7 | Carbon Steel bracket. Accessories: 316 SST **(20)** |
| 9 | L type, Carbon Steel bracket. Accessories: 316 SST **(20)** |
| A | Flat, 304 SST bracket and 316 SST accessories |
| Z | User's Specification |

**Housing Material (25) (26)**

| COD. | |
|---|---|
| A | Aluminum (Default) (IP/TYPE) |
| I | 316 SST - CF8M (ASTM - A351) (IP/TYPE) |
| J | 316 SST for Salines Atmospheres (IPW/TYPEX) **(21)** |
| B | Aluminium for Salines Atmospheres (IPW/TYPEX) **(21)** |

**Painting**

| COD. | |
|---|---|
| 0 | Gray Munsell N 6,5 Polyester |
| 8 | Without Painting **(17)** |
| 9 | Safety Blue Epoxy - Electrostatic Painting |
| C | Safety Blue Polyester - Electrostatic Painting |
| Z | User´s Specification |

**Certification Type for Hazardous Locations**

| COD. | |
|---|---|
| N | No Certification |
| I | Intrinsec Safety |
| E | Increased Safety |
| D | Explosion Proof |
| F | Non-incendive + Intrinsec Safety |
| G | Explosion Proof + Increased Safety |
| H | Intrinsec Safety + Explosion Proof + Increased Safety |
| J | Non-incendive + Intrinsec Safety + Dust (Dust ignition) |

**Certifying Body for Hazardous Locations**

| COD. | |
|---|---|
| 0 | None |
| 1 | FM (Pending) |
| 5 | CEPEL |

**Tag Plate**

| COD. | |
|---|---|
| 0 | With tag, when specified (Default) |
| 1 | Blank |
| 2 | User´s Specification |

**HART® Configuration**

| COD. | |
|---|---|
| ** | |

| LD400-D210-H0-IBD11 | - | P | 0 | 1 | - | 0 | I | 1 | - | A | 0 | N | 0 | 0 | / | ** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

TYPICAL MODEL

** Fill in with HART® optional configuration (see page 18)

**Notes:**

**(1)** Meets NACE MR-01-75/ISO 15156 recommendations.
**(2)** Not available for absolute models nor for vacuum applications.
**(3)** Not available for range 0 and 1.
**(4)** Not recommended for vacuum service.
**(5)** Maximum pressure 24 bar.
**(6)** Options not certified for use in hazardous locations.
**(7)** Drain/Vent not applicable.
**(8)** For remote seal only 316 SST - CF8M (ASTM A351) flange is available (7/16 UNF).
**(9)** Silicone Oil is not recommended for oxygen ($O_2$) or Chlorine service.
**(10)** Only available for differential pressure transmitters.
**(11)** O'Ring should be Viton or Kalrez.
**(12)** Not available for range 0.
**(13)** Only available for pressure transmitters D4 or H4 and 7/16 UNF or M10 x 1.5 flang thread for fixing accessories.
**(14)** Degrease cleaning not available for carbon steel flanges.
**(15)** Only available for differential and gage models.
**(16)** Only available for flange with PVDF (Kynar) insert.
**(17)** Not available for aluminum housing.
**(18)** Effective for hydrogen migration process.
**(19)** Not applicable for saline atmosphere.
**(20)** Not applicable for saline atmosphere.
**(21)** IPW/TYPEX tested for 200h to according NBR 8094 / ASTM B 117 standard.
**(22)** Certificate for use in Explosion Proof (CEPEL).
**(23)** The D0 range should not be used for flow measurement.
**(24)** SIL 1 and SIL 2 (non-redundant) and SIL 3 (redundant) applications.
**(25)** IPX8 tested in 10 meters of water column for 24 hours.
**(26)** Ingress Protection:

| Products | CEPEL | NEMKO / EXAM | FM |
|---|---|---|---|
| LD400 | IP66/68W | IP66/68W | Type 4X/6P |

**(27)** Not available for *Wireless*HART™ protocol.

# Ordering Code

| MODEL | FLANGED PRESSURE TRANSMITTER |
|---|---|
| LD400 | Smart Pressure Transmitter |

| COD. | Type | Range Limits Min | Range Limits Max | Range Limits Unit | Range Limits Min | Range Limits Max | Range Limits Unit | Turn Down Max |
|---|---|---|---|---|---|---|---|---|
| L2 | Level | -50 | 50 | kPa | 500 | 500 | mbar | 120 |
| L3 | Level | -250 | 250 | kPa | -2500 | 2500 | mbar | 120 |
| L4 | Level | -2500 | 2500 | kPa | -25 | 25 | bar | 120 |
| L5 | Level | -25 | 25 | MPa | -250 | 250 | bar | 120 |

**Note:** The range can be extended up to 0.75 LRL and 1.2 URL with small degradation of accuracy. The upper range value must be limited to the flange rating.

**Diaphragm Material and Fill Fluid**

| COD. | | | COD. | | | COD. | | |
|---|---|---|---|---|---|---|---|---|
| 1 | 316L SST | Silicone Oil **(2)** | E | Hastelloy C276 | Inert (Krytox Oil) **(1) (18)** | S | Tantalum | Inert (Krytox 4.2 Oil) **(18)** |
| 2 | 316L SST | Inert (Fluorolube Oil) **(3) (18)** | G | Tantalum | Inert (Krytox Oil) **(18)** | T | GP 316L SST - OP | Inert (Krytox Oil) **(16) (18)** |
| 3 | Hastelloy C276 | Silicone Oil **(1) (2)** | I | GP 316L SST - OP | Silicone Oil **(9) (16)** | U | 316L SST - OP | Silicone Oil **(9) (16)** |
| 4 | Hastelloy C276 | Inert (Fluorolube Oil) **(1) (3) (18)** | J | GP 316L SST - OP | Inert (Fluorolube Oil) **(3) (16) (18)** | V | 316L SST - OP | Inert (Fluorolube Oil) **(3) (16) (18)** |
| 5 | Monel 400 | Silicone Oil **(1) (2)** | K | Monel 400 | Inert (Krytox Oil) **(1) (18)** | W | 316L SST - OP | Inert (Krytox Oil) **(16) (18)** |
| 7 | Tantalum | Silicone Oil **(2)** | L | GP 316L SST - OP | Inert (Krytox Oil) **(16) (18)** | X | 316L SST - OP | Inert (Krytox Oil) **(16)** |
| 8 | Tantalum | Inert (Fluorolube Oil) **(3) (18)** | M | GP Monel 400 | Silicone Oil **(1) (2)** | | | |
| 9 | 316L SST | Fomblim Oil | P | GP Monel 400 | Inert (Krytox Oil) **(1) (18)** | | | |
| A | Monel 400 | Fomblim Oil **(1)** | Q | 316L SST | Inert (Krytox 4.2 Oil) **(18)** | | | |
| D | 316L SST | Inert (Krytox Oil) **(18)** | R | Hastelloy C276 | Inert (Krytox 4.2 Oil) **(1) (18)** | | | |

**Note:** GP= Gold Plated OP= Over-Lay Pot

**Performance Class**

| COD. | |
|---|---|
| 0 | Standard |

**Communication Protocol**

| COD. | | COD. | |
|---|---|---|---|
| H | HART® & 4 to 20 mA | W | *Wireless*HART™ |

**Safety Options**

| COD. | | COD. | |
|---|---|---|---|
| 0 | Standard – For use in measurement and control | 1 | SIS (Safety Instrumented Systems) **(25) (29)** |

**Flange(s), Adapter(s) and Drain/Vent Valves Material**

| COD. | | COD. | |
|---|---|---|---|
| A | 304L SST | F | Monel 400 Plated Bar (For HF Applications) **(1)** |
| P | Plated CS (Drain/Vent In Stainless Steel) **(19)** | M | Monel 400 Microcasting **(1)** |
| H | Hastelloy C276 (CW-12MW, ASTM - A494) | 1 | 316 SST - CF8M (ASTM A351) (Drain/Vent In Hastelloy C276) **(1)** |
| I | 316 SST - CF8M (ASTM A351) **(1)** | 2 | 316 SST - CF8M (ASTM A351) Flange with PVDF (Kynar) Insert **(3) (4) (5)** |

**Wetted O'Ring Materials**

| COD. | | COD. | |
|---|---|---|---|
| 0 | Without O'Rings | K | Kalrez |
| B | Buna-N | T | Teflon |
| E | Ethylene - Propylene | V | Viton |

**Note:** O'Rings are not available on the sides with Remote Seals.

**Drain/Vent Position (Low Side)**

| COD. | |
|---|---|
| 0 | Without Drain/Vent |
| A | Drain/Vent (Opposite to Process Connection) |
| D | Bottom |
| U | Top |

**Note:** For better drain/vent operation, vent valves are strongly recommended. Drain/vent valve not available on the sides with remote seals

**Process Connection (Low Side)**

| COD. | | COD. | |
|---|---|---|---|
| 0 | 1/4 - 18 NPT (Without Adapter) | T | 1/2 - 14 BSP (With Adapter) |
| 1 | 1/2 - 14 NPT (With Adapter) | U | Flange for Level with Welded Plug |
| 3 | Remote Seal (With Plug) **(7)** | V | Without Connection (Mounted with Gage Flange) |
| 5 | 1/2 - 14 NPT Axial with PVDF Insert **(3) (4) (6)** | Z | User's Specification |
| 9 | Remote Seal (Low Volume Flange) **(3) (7)** | | |

**Special Applications**

| COD. | |
|---|---|
| 0 | No Special Cleaning |
| 1 | Degrease Cleaning (Oxygen or Chlorine Service) **(11)** |
| 2 | Vacuum Applications |

**Flanges Bolts and Nuts Material (Low Side)**

| COD. | | COD. | |
|---|---|---|---|
| P | Plated Carbon Steel (Default) **(19)** | H | Hastelloy C276 |
| I | 316 SST | | |
| C | Carbon Steel (ASTM A193 B7M) **(1) (19)** | | |

**Flange Thread for Fixing Accessories (Adapters, Manifolds, Mounting Brackets, etc)**

| COD. | |
|---|---|
| 0 | 7/16 UNF (Default) |
| 1 | M10 X 1.5 |
| 2 | M12 X 1.75 |

**Process Connection (High Side)**

| COD. | | COD. | |
|---|---|---|---|
| U | 1" 150 # (ANSI B16.5) **(28)** | D | 4" 600 # (ANSI B16.5) |
| V | 1" 300 # (ANSI B16.5) **(28)** | 5 | DN 25 PN10/40 (DIN EN 1092-1) **(28)** |
| W | 1" 600 # (ANSI B16.5) **(28)** | R | DN 40 PN10/40 (DIN EN 1092-1) **(22)** |
| O | 1 1/2" 150 # (ANSI B16.5) **(22)** | E | DN 50 PN 10/40 (DIN EN 1092-1) **(22)** |
| P | 1 1/2" 300 # (ANSI B16.5) **(22)** | 6 | DN 80 PN 10/40 (DIN EN 1092-1) **(22)** |
| Q | 1 1/2" 600 # (ANSI B16.5) **(22)** | 7 | DN 100 PN 10/16 (DIN EN 1092-1) **(22)** |
| 9 | 2" 150 # (ANSI B16.5) | 8 | DN 100 PN 25/40 (DIN EN 1092-1) **(22)** |
| A | 2" 300 # (ANSI B16.5) | H | 10K 100A (JIS 2202) **(22)** |
| B | 2" 600 # (ANSI B16.5) | F | 10K 50A (JIS 2202) **(22)** |
| 1 | 3" 150 # (ANSI B16.5) | G | 10K 80A (JIS 2202) **(22)** |
| 2 | 3" 300 # (ANSI B16.5) | M | 20K 100 (JIS 2202) **(22)** |
| C | 3" 600 # (ANSI B16.5) | S | 20K 40A (JIS 2202) **(22)** |
| N | 3" 600 # (ANSI B16.5 RTJ) | K | 20K 50A (JIS 2202) **(22)** |
| 3 | 4" 150 # (ANSI B16.5) | L | 20K 80A (JIS 2202) **(22)** |
| 4 | 4" 300 # (ANSI B16.5) | Z | User's Specification **(22)** |

**Type and Flange Material (High Side)**

| COD. | | COD. | |
|---|---|---|---|
| I | 316L SST (Integral Flange) | K | 316 SST (Slip-on Flange) |
| H | Hastelloy C276 (Integral Flange) | L | Carbon Steel (Slip-on Flange) |
| J | 304 SST (Slip-on Flange) | Z | User´s Specification |

**Flange Facing Finish**

| COD. | | COD. | |
|---|---|---|---|
| 0 | Raised Face - RF | 4 | Small Grooved Face **(14) (15)** |
| 1 | Flat Face - FF **(14)** | 5 | Large Tongue Face **(14) (15)** |
| 2 | Ring Joint Face - RTJ **(13)** | 6 | Large Grooved Face **(14) (15)** |
| 3 | Small Tongue Face **(14) (15)** | | |

| LD400 | - | L2 | 1 | 0 | - | H | 0 | - | P | B | D | 0 | 0 | - | P | 0 | 1 | - | I | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

TYPICAL MODEL

**LD400-L210-H0-PBD00-P01-10 — FLANGED PRESSURE TRANSMITTER**

**COD. Extension Length**

| COD. | |
|---|---|
| 0 | 0 mm (0") |
| 1 | 50 mm (2") |
| 2 | 100 mm (4") |
| 3 | 150 mm (6") |
| 4 | 200 mm (8") |
| Z | User's Specification |

**Note:** Extension Material: 316 SST

**COD. Diaphragm Material (Level Tap)**

| COD. | | COD. | | COD. | |
|---|---|---|---|---|---|
| A | 304L SST | T | Tantalum **(10)** | 3 | Tantalum with Teflon Lining |
| L | 316L SST | X | Titanium **(10)** | | |
| H | Hastelloy C276 | 1 | 316L SST with Teflon Lining (For 2" and 3") | | |
| M | Monel 400 | 2 | 316L SST Gold Plated | | |

**COD. Fill Fluid (Level Tap)**

| COD. | | COD. | |
|---|---|---|---|
| 1 | DC-200/20 Silicone Oil | N | Neobee M20 Propylene Glycol Oil |
| 2 | Inert (Fluorolube MO-10 Oil) **(8)** | T | Syltherm 800 Oil |
| 3 | DC704 Silicone Oil | Z | User's Specification |
| 4 | Inert (Krytox Oil) | | |

**COD. Local Indicator**

| COD. | |
|---|---|
| 0 | Without Local Indicator |
| 1 | With Digital Indicator |

**COD. Electrical Connection**

| COD. | | COD. | |
|---|---|---|---|
| 0 | 1/2 - 14 NPT **(21) (29)** | A | M20 X 1.5 **(21)** |
| 1 | 3/4 - 14 NPT (with 316 SST adapter for 1/2 - 14 NPT) **(21) (29)** | B | PG 13.5 DIN **(21) (29)** |
| 2 | 3/4 - 14 BSP (with 316 SST adapter for 1/2 - 14 NPT) **(9) (29)** | Z | User's Specification |
| 3 | 1/2 - 14 BSP (with 316 SST adapter for 1/2 - 14 NPT) **(9) (29)** | | |

**COD. Blind Plug**

| COD. | | COD. | |
|---|---|---|---|
| I | 316 SST | C | Carbon Steel **(12) (19)** |

**COD. Housing Material (26) (27)**

| COD. | |
|---|---|
| A | Aluminum (IP/TYPE) |
| I | 316 SST - CF8M (ASTM - A351) (IP/TYPE) |
| J | 316 SST for Salines Atmospheres (IPW/TYPEX) **(20)** |
| B | Aluminium for Salines Atmospheres (IPW/TYPEX) **(20)** |

**COD. Painting**

| COD. | |
|---|---|
| 0 | Gray Munsell N 6,5 Polyester |
| 8 | Without Painting **(16)** |
| 9 | Safety Blue Epoxy - Electrostatic Painting |
| C | Safety Blue Polyester - Electrostatic Painting |
| Z | User's Specification |

**COD. Certification Type for Hazardous Locations**

| COD. | | COD. | |
|---|---|---|---|
| N | No Certification | F | Non-incendive + Intrinsec Safety |
| I | Intrinsec Safety | G | Explosion Proof + Increased Safety |
| E | Increased Safety | H | Intrinsec Safety + Explosion Proof + Increased Safety |
| D | Explosion Proof | J | Non-incendive + Intrinsec Safety + Dust (Dust ignition) |

**COD. Certifying Body for Hazardous Locations**

| COD. | | COD. | | COD. | |
|---|---|---|---|---|---|
| 0 | None | 1 | FM (Pending) | 5 | CEPEL |

**COD. Tag Plate**

| COD. | |
|---|---|
| 0 | With tag, when specified (Default) |
| 1 | Blank |
| 2 | User's Specification |

**COD. Lower Housing Connection**

| COD. | | COD. | |
|---|---|---|---|
| 0 | Without Lower Housing Connection (24) | 3 | Super Duplex (UNS 32750) **(23)** |
| 1 | Stanless Steel 316 | 4 | Duplex (UNS 31803) **(23)** |
| 2 | Hasteloy C276 | 5 | Stanless Steel 304L **(23)** |

**COD. Gasket Material**

| COD. | | COD. | |
|---|---|---|---|
| 0 | Without gasket | C | Copper |
| T | Teflon (Ptfe) | I | Stanless 316 SST |
| G | Grafoil (Flexble lead) | | |

**COD. HART® Configuration**

| COD. | |
|---|---|
| ** | |

**LD400-L210-H0-PBD00-P01-I0 - 1 | L | 1 | 1 | 0 | I - A | 0 | N | 0 | 0 | 2 | T / ****

← TYPICAL MODEL

** Fill in with HART® optional configuration (see page 18)

**Notes:**

**(1)** Meets NACE MR-01-75/ISO 15156 recommendations.
**(2)** Silicone Oil is not recommended for Oxygen ($O_2$) or Chlorine service.
**(3)** Not applicable for vacuum service.
**(4)** Drain/Vent not applicable.
**(5)** O'Ring should be Viton or Kalrez.
**(6)** Maximum pressure 24 bar.
**(7)** For Remote Seal only 316 SST CF8M (ASTM A351) flange is available (7/16 UNF).
**(8)** Fluorolube fill fluid is not available for Monel diaphragm.
**(9)** Options not certified for use in hazardous locations.
**(10)** Attention, check corrosion rate for the process, tantalum plate 0.1 mm, AISI 316L extension 3 to 6mm.
**(11)** Degrease cleaning not available for carbon steel flanges.
**(12)** Only available for ½" electrical connection.
**(13)** Only available for flange ANSI B16.5.
**(14)** Not available for flange JIS 2202.
**(15)** For this option consult Smar.
**(16)** Not available for Aluminum housing.
**(17)** Effective for hydrogen migration process.
**(18)** Inert Fluid: safe for oxygen service.
**(19)** Not applicable for saline atmosphere.
**(20)** IPW/TYPEX tested for 200h to according with standard NBR 8094 / ASTM B 117.
**(21)** Certificate for use in Explosion Proof (CEPEL).
**(22)** Not available for slip-on flange.
**(23)** Item by inquiry.
**(24)** Supplied without gasket.
**(25)** SIL 1 and SIL 2 (non-redundant) and SIL 3 (redundant) applications.
**(26)** IPX8 tested in 10 meters of water column for 24 hours.
**(27)** Ingress Protection:

| Products | CEPEL | NEMKO / EXAM | FM |
|---|---|---|---|
| LD400 | IP66/68W | IP66/68W | Type 4X/6P |

**(28)** Not available for integral flange.
**(29)** Not available for *Wireless*HAR™ protocol.

| MODEL | PRESSURE TRANSMITTER WITH EXTENDED PROBE |
|---|---|
| LD400 | Pressure Transmitter With Extended Probe |

| COD. | TYPE | Range Limits Min | Max | Unit |
|---|---|---|---|---|
| I2 | Level | 12,5 | 500 | mbar |

**COD. Diaphragm material and Fill Fluid (Low Side)**

| COD. | | |
|---|---|---|
| 1 | 316L SST | Silicon Oil **(9)** |

**COD. Performance Class**

| COD. | |
|---|---|
| 0 | Default |

**COD. Communication Protocol**

| COD. | | COD. | |
|---|---|---|---|
| H | HART® and 4 to 20 mA | W | *Wireless*HART™ |

**COD. Security Option**

| COD. | | COD. | |
|---|---|---|---|
| 0 | Default- For use in measurement and control | 1 | SIS - Safety Instrumented Systems **(26)** |

**COD. Probe Material**

| COD. | |
|---|---|
| A | 304L SST / 316L SST |
| H | Hastelloy C276 / Hastelloy C276 |
| I | 316L SST / 316L SST |
| U | 316L SST / Hastelloy C276 |
| Z | User's Specification |

**COD. Probe Lenght**

| COD. | | COD. | |
|---|---|---|---|
| 1 | 500 mm | 6 | 1600 mm |
| 2 | 630 mm | 7 | 2000 mm |
| 3 | 800 mm | 8 | 2500 mm |
| 4 | 1000 mm | 9 | 3200 mm |
| 5 | 1250 mm | Z | User's Specification |

**COD. Probe Fill Fluid**

| COD. | |
|---|---|
| N | Propilen Glicol Oil (Neobee M20) |

**COD. Fixing Transmitter**

| COD. | | COD. | |
|---|---|---|---|
| 1 | Support in L | 4 | Fixed Flanged Support |
| 2 | Adjustable Flanged Support | Z | User's Specification |
| 3 | Triclamp diameter 3" | | |

**COD. Special Applications**

| COD. | |
|---|---|
| 0 | Without Special Aplications |
| 1 | Degrease Cleaning (Oxygen or Chlorine Service) **(15)** |

**COD. Local Indicator**

| COD. | |
|---|---|
| 0 | Without Local Indicator |
| 1 | With Local Indicator |

**COD. Electrical Connection**

| COD. | |
|---|---|
| 0 | 1/2 - 14 NPT **(22)** |
| 1 | 3/4- 14 NPT (With Adapter 316 SST para 1/2 - 14 NPT) **(22)** |
| 2 | 3/4- 14 BSP (With Adapter 316 SST para 1/2 - 14 NPT) **(6)** |
| 3 | 1/2 - 14 BSP (With Adapter 316 SST para 1/2 - 14 NPT) **(6)** |
| A | M20 X 1.5 **(22)** |
| B | PG 13.5 DIN **(22)** |
| Z | User's Specification |

**COD. Blanket Plug**

| COD. | |
|---|---|
| I | 316 SST |
| C | Carbon Steel (Only available for process connection with 1/2") **(20)** |

**COD. Housing Material**

| COD. | |
|---|---|
| A | Aluminium |
| I | 316 SST - CF8M (ASTM - A351) |
| J | 316 SST - saline atmosphere **(21)** |
| B | Aluminium - saline atmosphere **(21)** |

**COD. Painting**

| COD. | |
|---|---|
| 0 | Gray Munsell N6,5 Polyesters |
| 8 | Without painting **(17)** |
| 9 | Safety Blue Epoxy - Electrostatic Painting |
| C | Safety Blue Polyesters - Electrostatic Painting |
| Z | Special Painting |

**COD. Certification Type for Hazardous Locations**

| COD. | |
|---|---|
| N | Without certification |
| I | Intrinsic Safety |
| E | Increased Safety |
| D | Explosion Proof |
| F | Non-incendive + Intrinsic Safety |
| G | Explosion Proof + Increased Safety |
| H | Intrinsic Safety + Explosion Proof + Increased Safety |
| J | Non-incendive + Intrinsic Safety + Dust |

**COD. Identification Plate for Hazardous Locations**

| COD. | | COD. | |
|---|---|---|---|
| 0 | Without Certified Organ | 5 | CEPEL |
| 1 | FM (Pendente) | 6 | Without certification |
| 2 | NEMKO | 7 | EXAM (DTM) |
| 3 | CSA | | |
| 4 | EXAM (DTM), NEMKO | | |

**COD. Tag Plate**

| COD. | |
|---|---|
| 0 | With tag, when specified |
| 1 | Blanket |
| 2 | User's Specification |

| LD400 | - | I2 | 1 | 0 | - | H | 0 | - | I | 9 | N | 2 | 0 | - | I | 0 | 1 | - | A | 0 | N | 0 | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

CONTINUE IN THE NEXT PAGE

**Notes:**

**(1)** Meets NACE MR - 01 - 75/ISO 15156 recommendations.
**(2)** Not available for absolute models nor vacuum applications.
**(3)** Not aplicable for ranges 0 and 1.
**(4)** Not applicable for vacuum service.
**(5)** Pressure maximum: 24 bar.
**(6)** Options not certified for use in hazardous locations.
**(7)** Drain/Vent not applicable.
**(8)** For Remote Seal only 316 SST CF8M (ASTM A351) flange is available (thread 7/16 UNF).
**(9)** Silicone Oil is not recommended for Oxygen (O2) or Chlorine service.
**(10)** Only available for diferential pressure transmitter.
**(11)** O´Ring material must be of Viton or Kalrez.
**(12)** Not aplicable for ranges 0.
**(13)** Only available for pressure transmitters D4 or H4 and 7/16 UNF or M10 x 1.5 flange thread for fixing accessories.
**(14)** Only available for LD400D and LD400M.
**(15)** Degrease cleaning not available for carbon steel flanges.
**(16)** Only available for Flange with PVDF (Kynar) Insert.
**(17)** Not available for alumunium housing.
**(18)** Efective for hydogen migration processes.
**(19)** Inert Fluid: Oxygen Compatibility, safe for oxygen service.
**(20)** Not applicable for saline atmosphere.
**(21)** IPW/TYPEX tested for 200h to according NBR 8094 / ASTM B 117 standard.
**(22)** Certificate for use in Explosion Proof (CEPEL).
**(23)** The D0 range should not be used for flow measurement.
**(24)** IPX8 tested in 10 meters of water column for 24 hours.
**(25)** Ingress Protection:

| Product | CEPEL | NEMKO / EXAM | FM |
|---|---|---|---|
| LD400 | IP66/68W | IP66/68W | Type 4X/6P |

**(26)** Not available for *Wireless*HART™ protocol.

| MODEL | SANITARY PRESSURE TRANSMITTER |
|---|---|
| LD400 | Smart Pressure Transmitter |

| COD. | Type | Range Limits Min | Range Limits Max | Range Limits Unit | Range Limits Min | Range Limits Max | Range Limits Unit | Turn Down Max |
|---|---|---|---|---|---|---|---|---|
| S2 | Sanitary | -50 | 50 | kPa | -500 | 500 | mbar | 120 |
| S3 | Sanitary | -250 | 250 | kPa | -2500 | 2500 | mbar | 120 |
| S4 | Sanitary | -2500 | 2500 | kPa | -25 | 25 | bar | 120 |
| S5 | Sanitary | -25 | 25 | MPa | -250 | 250 | bar | 120 |

**Note:** The range can be extended up to 0.75 LRL and 1.2 URL with small degradation of accuracy. The upper range value must be limited to the flange rating.

**COD. Diaphragm Material and Fill Fluid**

| COD. | | |
|---|---|---|
| 1 | 316L SST | Silicone Oil **(2)** |
| 2 | 316L SST | Inert (Fluorolube Oil) **(3) (16)** |
| 3 | Hastelloy C276 | Silicone Oil **(1) (2)** |
| 4 | Hastelloy C276 | Inert (Fluorolube Oil) **(1) (3) (16)** |
| 5 | Monel 400 | Silicone Oil **(1) (2)** |
| 7 | Tantalum | Silicone Oil **(2)** |
| 8 | Tantalum | Inert (Fluorolube Oil) **(3) (16)** |
| 9 | 316L SST | Fomblim Oil |
| A | Monel 400 | Fomblim Oil **(1)** |
| D | 316L SST | Inert (Krytox Oil) **(16)** |
| E | Hastelloy C276 | Inert (Krytox Oil) **(1) (16)** |
| G | Tantalum | Inert (Krytox Oil) **(16)** |
| I | GP 316L SST - OP | Silicone Oil **(9) (14)** |
| J | GP 316L SST - OP | Inert (Fluorolube Oil) **(3) (14) (16)** |
| K | Monel 400 | Inert (Krytox Oil) **(1) (16)** |
| L | GP 316L SST - OP | Inert (Krytox Oil ) **(14) (16)** |
| M | GP Monel 400 | Silicone Oil **(1) (2)** |
| P | GP Monel 400 | Inert (Krytox Oil) **(1) (16)** |
| Q | 316L SST | Inert (Halocarbon 4.2 Oil) **(16)** |
| R | Hastelloy C276 | Inert (Halocarbon 4.2 Oil) **(1) (16)** |
| S | Tantalum | Inert (Halocarbon 4.2 Oil) **(16)** |
| T | GP 316L SST - OP | Inert (Halocarbon Oil) **(14) (16)** |
| U | 316L SST - OP | Silicone Oil **(9) (14)** |
| V | 316L SST - OP | Inert (Fluorolube Oil) **(3) (14) (16)** |
| W | 316L SST - OP | Inert (Krytox Oil ) **(14) (16)** |
| X | 316L SST - OP | Inert (Halocarbon Oil) **(14) (16)** |

**Note:** GP= Gold Plated
OP= Over-Lay Pot

**COD. Performance Class**

| COD. | |
|---|---|
| 0 | Standard |

**COD. Communication Protocol**

| COD. | | COD. | |
|---|---|---|---|
| H | HART® & 4 to 20 mA | W | *Wireless*HART™ |

**COD. Safety Options**

| COD. | |
|---|---|
| 0 | Standard– For use in measurement and control |
| 1 | SIS (Safety Instrumented Systems) **(20) (24)** |

**COD. Flange(s), Adapter(s) and Drain/Vent Valves Material**

| COD. | | COD. | |
|---|---|---|---|
| H | Hastelloy C276 (CW-12MW, ASTM - A494) | I | CF8M / 316 SST |

**COD. Wetted O'Ring Materials (Low Side)**

| COD. | | COD. | |
|---|---|---|---|
| 0 | Without O'Rings | K | Kalrez |
| B | Buna-N | T | Teflon |
| E | Ethylene - Propylene | V | Viton |

**Note:** O'Rings are not available on the sides with Remote Seals.

**COD. Drain/Vent Position (Low Side)**

| COD. | |
|---|---|
| 0 | Without Drain/Vent |
| A | Drain/Vent (Opposite to Process Connection) |
| D | Bottom |
| U | Top |

**Note:** For better drain/vent operation, vent valves are strongly recommended. Drain/vent valve not available on the sides with remote seals.

**COD. Process Connection (Low Side)**

| COD. | | COD. | |
|---|---|---|---|
| 0 | 1/4 - 18 NPT (Without Adapter) | T | 1/2 - 14 BSP (With Adapter) |
| 1 | 1/2 - 14 NPT (With Adapter) | U | Flange for Level with Welded Plug |
| 3 | Remote Seal (With Plug) **(7)** | V | Without Connection (Mounted with Gage) |
| 5 | 1/2 - 14 NPT Axial with PVDF Insert **(3) (4) (6)** | Z | User's Specification |
| 9 | Remote Seal (Low Volume Flange) **(3) (7)** | | |

**COD. Special Applications**

| COD. | |
|---|---|
| 0 | No Special Cleaning |
| 1 | Degrease Cleaning (Oxygen or Chlorine Service) **(11)** |
| 2 | For Vacuum Application |

**COD. Flanges Bolts and Nuts Material (Low Side)**

| COD. | | COD. | |
|---|---|---|---|
| P | Plated Carbon Steel **(19)** | H | Hastelloy C276 |
| I | 316 SST | | |
| C | Carbon Steel (ASTM A193 B7M) **(1) (19)** | | |

**COD. Flange Thread for Fixing Accessories (Adapters, Manifolds, Mounting Brackets, etc)**

| COD. | |
|---|---|
| 0 | 7/16 UNF |
| 1 | M10 X 1.5 |
| 2 | M12 X 1.75 |

| LD400 | - | S2 | 1 | 0 | H | 0 | - | H | B | D | U | 0 | - | P | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

TYPICAL MODEL

# Ordering Code

| LD400-S210-H0-HBDU0-P0 | SANITARY PRESSURE TRANSMITTER |
|---|---|

**COD. Process Connection (High Side)**

| COD. | | COD. | |
|---|---|---|---|
| 8 | DN25 DIN 11851 - With Extension / 316 L SST **(21)** | 7 | Thread SMS 2" - With Extension / 316 L SST **(21)** |
| 9 | DN40 DIN 11851 - With Extension / 316 L SST **(21)** | E | Thread SMS 2" - 316 L SST **(21)** |
| H | DN40 DIN 11851 - 316 L SST | M | Thread SMS 3" - With Extension / 316 L SST **(21)** |
| V | Thread DN50 DIN 11851 - With Extension / 316 L SST **(21)** | 1 | Thread SMS 3" - Without Extension / 316 L SST **(21)** |
| U | Thread DN50 DIN 11851 - Without Extension / 316 L SST | F | Tri-Clamp 1 1/2" - 316 L SST **(21)** |
| X | Thread DN80 DIN 11851 - With Extension / 316 L SST **(21)** | Q | Tri-Clamp 1 1/2" HP (High Pressure) - 316 L SST **(21)** |
| W | Thread DN80 DIN 11851 - Without Extension / 316 L SST | 6 | Tri-Clamp 2" - With Extension / 316 L SST **(21)** |
| 4 | Thread IDF 2" - With Extension / 316 L SST **(21)** | D | Tri-Clamp 2" - 316 L SST **(21)** |
| B | Thread IDF 2" - 316 L SST **(21)** | N | Tri-Clamp 2" HP (High Pressure) - With Extension / 316 L SST **(21)** |
| K | Thread IDF 3" - With Extension / 316 L SST **(21)** | P | Tri-Clamp 2" HP (High Pressure) - 316 L SST **(21)** |
| 3 | Thread IDF 3" - Without Extension / 316 L SST **(21)** | I | Tri-Clamp 3" - With Extension / 316 L SST **(21)** |
| 5 | Thread RJT 2" - With Extension / 316 L SST **(21)** | G | Tri-Clamp 3" - 316 L SST **(21)** |
| C | Thread RJT 2" - 316 L SST | J | Tri-Clamp 3" HP (High Pressure) - With Extension / 316 L SST **(21)** |
| L | Thread RJT 3" - With Extension / 316 L SST **(21)** | R | Tri-Clamp 3" HP (High Pressure) - 316 L SST **(21)** |
| 2 | Thread RJT 3" - Without Extension / 316 L SST | Y | According to the Special Option |
| S | Thread SMS 1 1/2" - 316 L SST **(21)** | Z | User's Specification |

**COD. O-Ring Material (High Side)**

| COD. | | COD. | | COD. | | COD. | |
|---|---|---|---|---|---|---|---|
| 0 | Without O-Ring (Supplied by customer) | B | Buna-N **(21)** | T | Teflon **(21)** | V | Viton **(21)** | Z | User's Specification |

**COD. Tank Adapter**

| COD. | | COD. | | COD. | |
|---|---|---|---|---|---|
| 0 | Without Tank Adapter (Supplied by customer) | 1 | With tank, adapter in 316 SST | Z | User's Specification |

**COD. TRI-CLAMP**

| COD. | | COD. | | COD. | |
|---|---|---|---|---|---|
| 0 | Without TRI-CLAMP (Supplied by customer) | 2 | With TRI-CLAMP in 304 SST **(13)** | Z | User's Specification |

**COD. Diaphragm Material (High Side)**

| COD. | | COD. | |
|---|---|---|---|
| I | 316L SST | H | Hastelloy C276 |

**COD. Fill Fluid (High Side)**

| COD. | | COD. | | COD. | |
|---|---|---|---|---|---|
| 1 | DC-200/20 Silicone Oil | 4 | Inert (Krytox Oil) | Z | User's Specification |
| 2 | Inert (Fluorolube MO-10 Oil) **(8)** | N | Neobee M20 Propylene Glycol Oil **(21)** | | |
| 3 | DC704 Silicone Oil | T | Sylthern 800 Oil | | |

**COD. Local Indicator**

| COD. | | COD. | |
|---|---|---|---|
| 0 | Without Indicator | 1 | With Digital Indicator |

**COD. Electrical Connection**

| COD. | | COD. | |
|---|---|---|---|
| 0 | 1/2 - 14 NPT **(19)** | A | M20 X 1.5 **(19)** |
| 1 | 3/4 - 14 NPT (with 316 SST adapter for 1/2 - 14 NPT) **(19)** **(24)** | B | PG 13.5 DIN **(19)** **(24)** |
| 2 | 3/4 - 14 BSP (with 316 SST adapter for 1/2 - 14 NPT) **(9)** **(24)** | Z | User's Specification |
| 3 | 1/2 - 14 BSP (with 316 SST adapter for 1/2 - 14 NPT) **(9)** **(24)** | | |

**COD. Blind Plug**

| COD. | | COD. | |
|---|---|---|---|
| I | 316 SST | C | Carbon Steel **(12)** **(17)** |

**COD. Housing Material (22) (23)**

| COD. | | COD. | |
|---|---|---|---|
| A | Aluminum (IP/TYPE) | J | 316 SST for Saline Atmospheres (IPW/TYPEX) **(18)** |
| I | 316 SST - CF8M (ASTM - A351) (IP/TYPE) | B | Aluminium for Saline Atmospheres (IPW/TYPEX) **(18)** |

**COD. Painting**

| COD. | | COD. | |
|---|---|---|---|
| 0 | Gray Munsell N 6,5 Polyester | C | Safety Blue Polyester - Electrostatic Painting |
| 8 | Without Painting **(14)** | Z | User's Specification |
| 9 | Safety Blue Epoxy - Electrostatic Painting | | |

**COD. Certification Type for Hazardous Locations**

| COD. | | COD. | |
|---|---|---|---|
| N | No Certification | F | Non-incendive + Intrinsec Safety |
| I | Intrinsec Safety | G | Explosion Proof + Increased Safety |
| E | Increased Safety | H | Intrinsec Safety + Explosion Proof + Increased Safety |
| D | Explosion Proof | I | Non-incendive + Intrinsec Safety + Dust (Dust ignition) |

**COD. Certifying Body for Hazardous Locations**

| COD. | | COD. | | COD. | |
|---|---|---|---|---|---|
| 0 | None | 1 | FM (Pending) | 5 | CEPEL |

**COD. Tag Plate**

| COD. | | COD. | |
|---|---|---|---|
| 0 | With tag, when specified (Default) | 2 | User's Specification |
| 1 | Blank | | |

**COD. HART® Configuration (Continues Next Page)**

| COD. | |
|---|---|
| ** | |

| LD400-S210-H0-HBDU0-P0 | - | 4 | B | 1 | 0 | - | I | 1 | 1 | 0 | I | - | A | 0 | N | 0 | 0 | / | ** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

TYPICAL MODEL

** Fill in with HART® optional configuration (see page 18)

# Optional Items

| Special Procedures | C4 - Polishing of the wet parts according to 3A Certification **(21)** |
|---|---|

**Notes:**

**(1)** Meets NACE MR-01-75/ISO 15156 recommendations.
**(2)** Silicone Oil is not recommended for Oxygen ($O_2$) or Chlorine service.
**(3)** Not applicable for vacuum service.
**(4)** Drain/Vent not applicable.
**(5)** O-ring should be Viton or Kalrez.
**(6)** Maximum pressure 24 bar.
**(7)** For Remote Seal only 316 SST CF8M (ASTM A351) flange is available (7/16 UNF).
**(8)** Fluorolube fill fluid is not available for Monel diaphragm.
**(9)** Options not certified for use in hazardous locations.
**(10)** Not recommended with extension.
**(11)** Degrease cleaning not available for carbon steel flanges.
**(12)** Only available for ½" electrical connection.
**(13)** Only available for TRI-CLAMP connection.
**(14)** Not available for Aluminum housing.
**(15)** Effective for hydrogen migration process.
**(16)** Inert Fluid: safe for oxygen service.
**(17)** Not applicable for saline atmosphere.
**(18)** IPW/TYPEX tested for 200h to according with standard NBR 8094 / ASTM B 117.
**(19)** Certificate for use in Explosion Proof (CEPEL).
**(20)** SIL1 and SIL2 (non-redundant) and SIL3 (redundant)
**(21)** Compliant with 3A-7403 standard for food and other applications where sanitary connections are required:
- Neobee M2O Fill Fluid
- Finishing wet Face: 0,8 µm Ra (32 µ" AA)
- Wet O-Ring: Viton, Buna-N and Teflon

**(22)** IPX8 tested in 10 meters of water column for 24 hours.
**(23)** Ingress Protection:

| Products | CEPEL | NEMKO / EXAM | FM |
|---|---|---|---|
| LD400 | IP66/68W | IP66/68W | Type 4X/6P |

**(24)** Not available for *Wireless*HART™ protocol.

| MODEL | GAGE INLINE PRESSURE TRANSMITTER |
|---|---|
| LD400 | Smart Pressure Transmitter |

| COD. | Type | Range Limits Min | Max | Unit | Min | Max | Unit |
|---|---|---|---|---|---|---|---|
| G2 | Gage Inline | -50 | 50 | KPa | -500 | 500 | mbar |
| G3 | Gage Inline | -100 | 250 | KPa | -1000 | 2500 | mbar |
| G4 | Gage Inline | -100 | 2500 | KPa | -1 | 25 | bar |
| G5 | Gage Inline | -0,1 | 25 | MPa | -1 | 2500 | bar |

**Diaphragm material and Fill Fluid**

| COD. | | | COD. | | |
|---|---|---|---|---|---|
| 1 | 316L SST | Silicon Oil **(9)** | D | 316 SST L | Inert (Krytox Oil) **(12) (19)** |
| 2 | 316L SST | Inert (Fluorolube Oil) **(2) (19)** | E | Hastelloy C276 | Inert (Krytox Oil) **(1) (12) (19)** |
| 3 | Hastelloy C276 | Silicon Oil **(1) (9)** | Q | 316 SST L | Inert (Halocarbon 4.2 Oil) **(19)** |
| 4 | Hastelloy C276 | Inert (Fluorolube Oil) **(1) (2) (19)** | R | Hastelloy C276 | Inert (Halocarbon 4.2 Oil) **(19)** |

**Performance Class**

| | | | |
|---|---|---|---|
| 0 | Default | 1 | High Performance **(14)** |

**Communication Protocol**

| | | | |
|---|---|---|---|
| H | HART® and 4 to 20 mA | W | *Wireless*HART™ |

**Security Option**

| | | | |
|---|---|---|---|
| 0 | Default - For use in measurement and control | 1 | SIS - Safety Instrumented Systems **(26)** |

**Process Connection**

| | |
|---|---|
| 1 | 1/2- 14 NPT (With Adapter) |
| A | High Side: 1/4 NPT/ and Low Side: Seal with Plug |
| G | High Side: 1/4 NPT and Low Side: Low Volume Flange |
| H | High Side: Low Volume Flange for Remote Seal and Low Side: 1/2 - 14 NPT **(10) (3)** |
| M | 1/2- 14 NPT Male |
| R | Remote Seal |
| U | ½ BSP Male |
| V | Valve Manifold Integrated with Transmitter |
| X | 1" NPT Sealed (Diaphragm in 316L SST, Silicon Fluid DC200/20) |
| Z | User's Specification |

**Process Connection Material**

| | | | | | |
|---|---|---|---|---|---|
| H | Hastelloy C276 | I | 316L SST | Z | User's Specification |

**Special Applications**

| | |
|---|---|
| 0 | Without Special Aplications |
| 1 | Degrease Cleaning (Oxygen or Chlorine Service) **(15)** |

**Local Indicator**

| | | | |
|---|---|---|---|
| 0 | Without Local Indicator | 1 | With Local Indicator |

**Electrical Connection**

| | |
|---|---|
| 0 | 1/2 - 14 NPT **(22)** |
| 1 | 3/4- 14 NPT (With Adapter 316 SST para 1/2 - 14 NPT) **(22)** |
| 2 | 3/4- 14 BSP (With Adapter 316 SST para 1/2 - 14 NPT) **(6)** |
| 3 | 1/2 - 14 BSP (With Adapter 316 SST para 1/2 - 14 NPT) **(6)** |
| A | M20 X 1.5 **(22)** |
| B | PG 13.5 DIN **(22)** |
| Z | User's Specification |

**Blanket Plug**

| | |
|---|---|
| I | 316 SST |
| C | Aço Carbono (Somente disponível para Process Connection de 1/2") **(20)** |

**Mouting Bracket**

| | |
|---|---|
| 0 | Without Bracket |
| 1 | Carbon steel bracket and accessories **(20)** |
| 2 | 316 SST bracket and accessories |
| 7 | Carbon steel bracket. Accessories: 316 SST **(20)** |
| A | Flat, 304 SST bracket and 316 SST accessories |

**Housing Material**

| | |
|---|---|
| A | Aluminium (Default) |
| I | 316 SST - CF8M (ASTM - A351) |
| J | 316 SST - saline atmospheres **(21)** |
| B | Aluminium - saline atmospheres **(21)** |

**Painting**

| | |
|---|---|
| 0 | Gray Munsell N 6.5 Polyester |
| 8 | Without Painting **(17)** |
| 9 | Safety Blue Epoxy - Electrostatic Painting |
| C | Safety Blue Polyesters - Electrostatic Painting |
| Z | Special Painting |

**Certification Type for Hazardous Locations**

| | |
|---|---|
| N | Without Certification |
| I | Intrinsic Safety |
| E | Increased Safety |
| D | Explosion Proof |
| F | Non-incendive + Intrinsic Safety |
| G | Explosion Proof + Increased Safety |
| H | Intrinsic Safety + Explosion Proof + Increased Safety |
| J | Non-incendive + Intrinsic Safety + Dust |

**Identification Plate for Hazardous Locations**

| | | | |
|---|---|---|---|
| 0 | Without Identification Plate | 5 | CEPEL |
| 1 | FM (Pendente) | 6 | Sem Certificação |
| 2 | NEMKO | 7 | EXAM (DTM) |
| 3 | CSA | | |
| 4 | EXAM (DTM), NEMKO | | |

**Tag Plate**

| | |
|---|---|
| 0 | With tag, when specified |
| 1 | Blank |
| 2 | User's Specification |

| LD400 | - | G3 | 1 | 0 | - | H | 0 | - | 1 | I | 0 | 1 | - | 0 | I | 1 | - | A | 0 | N | 0 | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

CONTINUE IN THE NEXT PAGE

# Ordering Code (Continued)

**Notes:**

**(1)** Meets NACE MR - 01 - 75/ISO 15156 recommendations.
**(2)** Not available for absolute models nor vacuum applications.
**(3)** Not aplicable for ranges 0 and 1.
**(4)** Not applicable for vacuum service.
**(5)** Pressure maximum: 24 bar.
**(6)** Options not certified for use in hazardous locations.
**(7)** Drain/Vent not applicable.
**(8)** For Remote Seal only 316 SST CF8M (ASTM A351) flange is available (thread 7/16 UNF).
**(9)** Silicone Oil is not recommended for Oxygen (O2) or Chlorine service.
**(10)** Only available for diferential pressure transmitter.
**(11)** O´Ring material must be of Viton or Kalrez.
**(12)** Not aplicable for ranges 0.
**(13)** Only available for pressure transmitters D4 or H4 and 7/16 UNF or M10 x 1.5 flange thread for fixing accessories.
**(14)** Only available for LD400D and LD400M.
**(15)** Degrease cleaning not available for carbon steel flanges.
**(16)** Only available for Flange with PVDF (Kynar) Insert.
**(17)** Not available for alumunium housing.
**(18)** Efective for hydogen migration processes.
**(19)** Inert Fluid: Oxygen Compatibility, safe for oxygen service.
**(20)** Not applicable for saline atmosphere.
**(21)** IPW/TYPEX tested for 200h to according NBR 8094 / ASTM B 117 standard.
**(22)** Certificate for use in Explosion Proof (CEPEL).
**(23)** The D0 range should not be used for flow measurement.
**(24)** IPX8 tested in 10 meters of water column for 24 hours.
**(25)** Ingress Protection:

| Product | CEPEL | NEMKO / EXAM | FM |
|---|---|---|---|
| LD400 | IP66/68W | IP66/68W | Type 4X/6P |

**(26)** Not available for *Wireless*HART™ protocol.

## **Optional HART® Configuration [1]

**MODEL** / **MAIN CODE CONTINUED (FOR HART® TRANSMITTERS)**

**COD. Burn-out**

| COD. | |
|---|---|
| BD | Down Scale (According to NAMUR NE43 specification) (Default) |
| BU | Up Scale (According to NAMUR NE43 specification) |

**COD. LCD1 Indication**

| COD. | |
|---|---|
| Y0 | LCD1: Percentage (Default) |
| Y1 | LCD1: Current - I (mA) |
| Y2 | LCD1: Pressure (Engineering Unit) |
| Y3 | LCD1: Temperature (Engineering Unit) |
| YU | LCD1: User's Specification **(2)** |

**COD. LCD2 Indication**

| COD. | |
|---|---|
| Y0 | LCD1: Percentage (Default) |
| Y1 | LCD2: Current - I (mA) |
| Y2 | LCD2: Pressure (Engineering Unit) |
| Y3 | LCD2: Temperature (Engineering Unit) |
| YU | LCD2: User's Specification **(2)** |

**COD. LCD3 Indication**

| COD. | |
|---|---|
| Y0 | LCD1: Percentage (Default) |
| Y1 | LCD3: Current - I (mA) |
| Y2 | LCD3: Pressure (Engineering Unit) |
| Y3 | LCD3: Temperature (Engineering Unit) |
| YU | LCD3: User's Specification **(2)** |

**COD. PID Availability**

| COD. | | COD. | | COD. | |
|---|---|---|---|---|---|
| P0 | PID not available | P1 | Available and disabled (Default) | P2 | Available and enabled |

**COD. Transfer Function for Flow Measurement**

| COD. | |
|---|---|
| F0 | **Linear (Default)** |
| F1 | **SQRT** - Square Root. Considering the pressure input X varying between 0 and 100%, the output will be $10\sqrt{x}$. This function is used in flow measurement with, e.g., orifice or Venturi tube etc. **(3)** |
| F2 | **SQRT**3** - Square Root of the Third Power. The output will be $0.1\sqrt{x^3}$. This function is used in open channel Flow measurement with weirs or flumes. **(3)** |
| F3 | **SQRT**5** - Square Root of the Fifth Power. The output will be $0.001\sqrt{x^5}$. This function is used in open channel Flow measurement with V-notch weirs. **(3)** |
| F4 | **TABLE** - The output is a curve formed by 16 points. These points may be edited directly on the XY Table of the **LD400**. For example, it may be used as a camber table for tanks in applications where the tank volume is not linear in relation to the measured pressure. |
| F5 | **SQRT & TABLE** - Square root and Table. Same application as square roots, but also allows additional compensation of, e.g., varying Reynolds number. **(3)** |
| F6 | **SQRT**3 & TABLE** - Square Root of the Third Power and Table. **(3)** |
| F7 | **SQRT**5 & TABLE** - Square Root of the Fifth Power and Table. **(3)** |
| F8 | **TABLE & SQRT** - Table and Square root. Same application as square roots, but also allows bi-directional flow measurement by correcting the inverse flow, transforming the negative flow in positive flow, via table. **(3)** |

**COD. Special Features**

| COD. | |
|---|---|
| M0 | No Special Features (Default) |
| M4 | Calibration by increasing and decreasing the pressure (Hysteresis) |
| M5 | 10-point calibration |
| M6 | Special acquisition disabled |

**COD. Insulation Kit**

| COD. | |
|---|---|
| K0 | Without Insulation Kit |
| K1 | With Insulation Kit **(4)** |

**COD. Special Features**

| COD. | |
|---|---|
| ZZ | User's Specification |

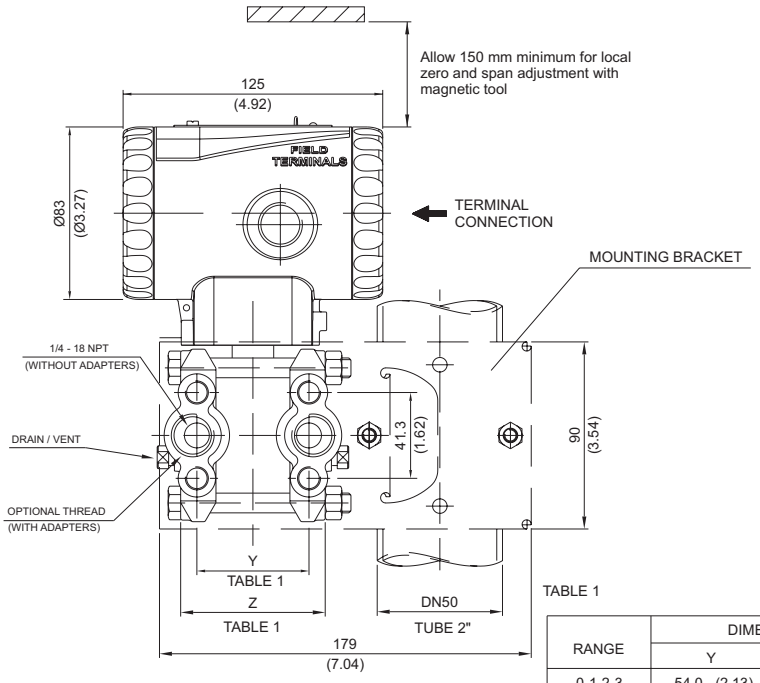
| MODEL | / | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| LD400-D210-H0-IBD11-P01-0I1-A010 | / | BU | Y2 | Y3 | Y1 | P2 | F1 | M0 | ZZ |
| LD400-L210-H0-PBD00-P01-I01-L110I-A010 | / | BD | Y2 | Y3 | Y1 | P2 | | M0 | K1 | ZZ |
| LD400-S210-H0-HBDU0-P04-B10-I110I-A060 | / | BD | Y2 | Y3 | Y1 | P2 | | M0 | | ZZ |

TYPICAL MODEL

**Notes:**

**(1)** Fill in only if selected option is different from the default value.
**(2)** Values limited to 4 1/2 digits; unit limited to 12 characters.
**(3)** Only available for differential, gage, absolute and high static pressure models.
**(4)** Only available for level models.

# LD400 - Differential Pressure, Flow, Gage, Absolute and High Static Pressure Transmitter



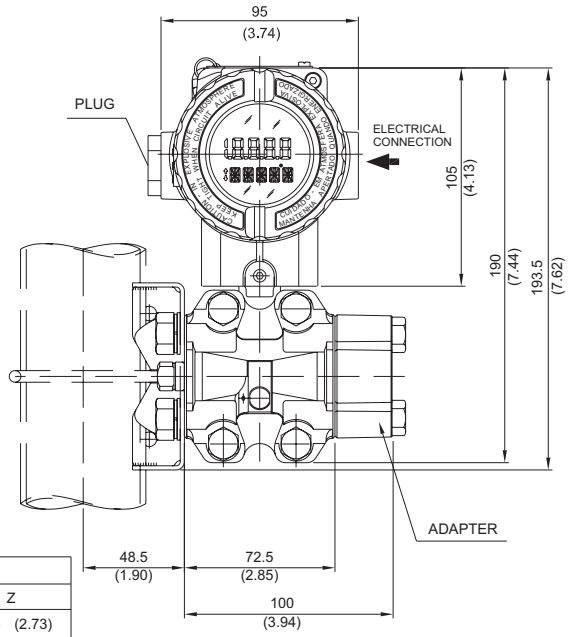




TABLE 1

| RANGE | DIMENSIONS | |
|---|---|---|
| | Y | Z |
| 0-1-2-3 | 54.0 (2.13) | 69.5 (2.73) |
| 4 | 56.0 (2.20) | 71.5 (2.81) |
| 5 | 58.3 (2.30) | 73.8 (2.90) |
| 6 | 58.7 (2.31) | 74.2 (2.92) |

# LD400 - Wireless Differential Pressure, Flow, Gage, Absolute and High Static Pressure Transmitter Wireless

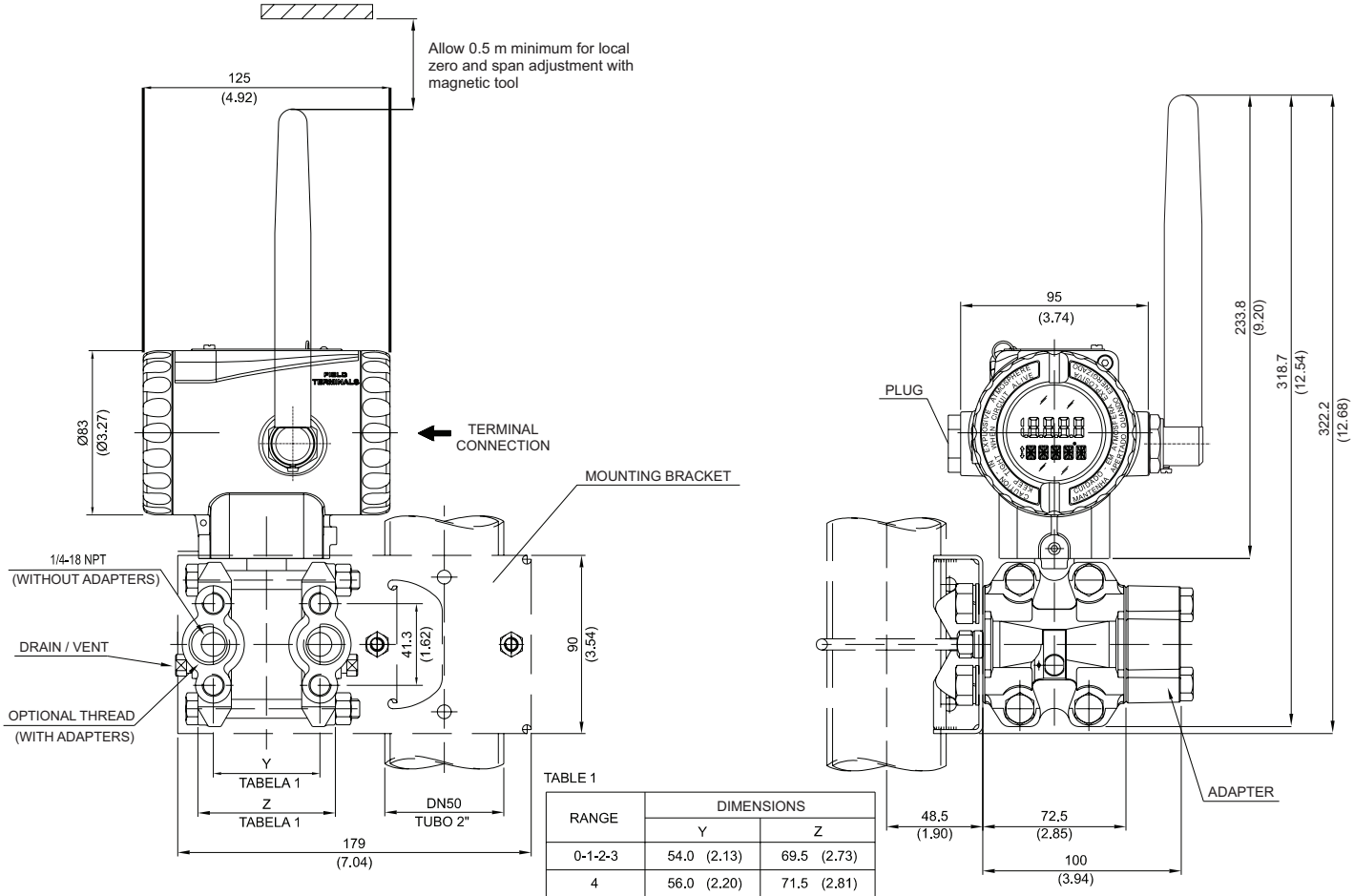
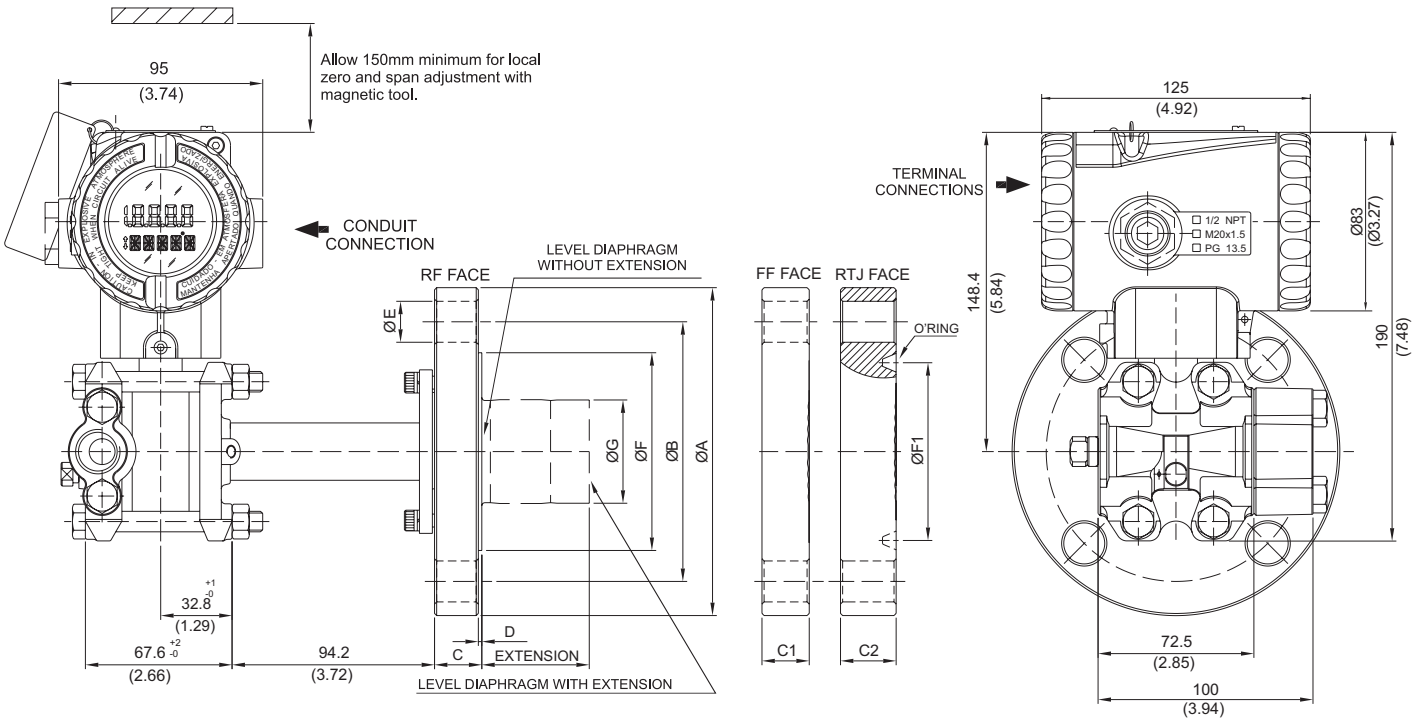



TABLE 1

| RANGE | DIMENSIONS | |
|---|---|---|
| | Y | Z |
| 0-1-2-3 | 54.0 (2.13) | 69.5 (2.73) |
| 4 | 56.0 (2.20) | 71.5 (2.81) |
| 5 | 58.3 (2.30) | 73.8 (2.90) |
| 6 | 58.7 (2.31) | 74.2 (2.92) |

# LD400L - Flanged Pressure Transmitter with Integral Flange



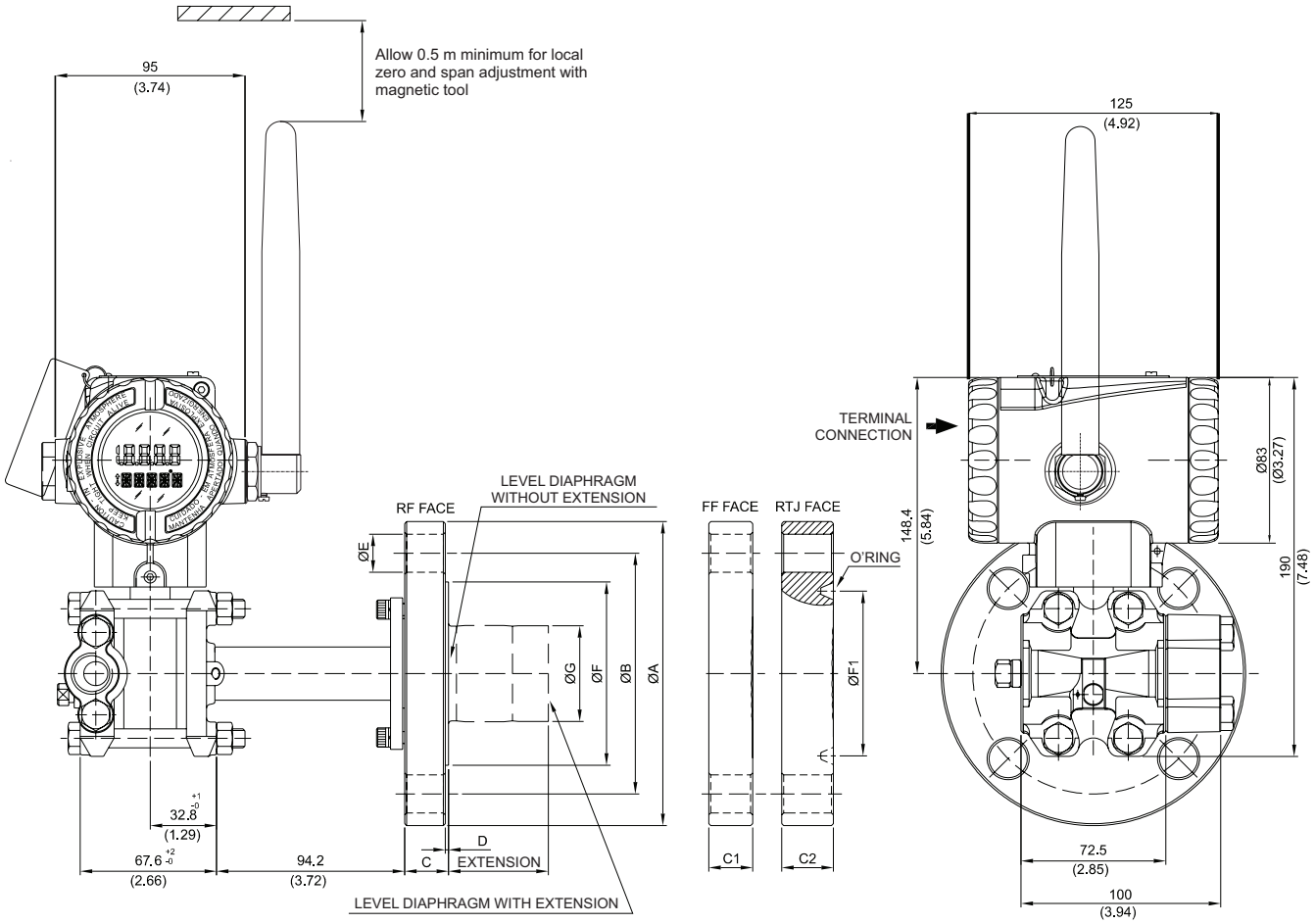

Notes:
- Extension lenght (mm): 0, 50, 100, 150 or 200
- Dimensions are mm (in)

| ANSI-B 16.5 DIMENSIONS | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | CLASS | A | B | C (RF) | C1 (FF) | C2 (RTJ) | D (RF) | E | F (RF) | F1 (RTJ) | RTJ O`RING | G | HOLES |
| 1.1/2" | 150 | 127 (5) | 98.6 (3.88) | 20 (0.78) | 19 (0.75) | 24.4 (0.96) | 1.6 (0.06) | 16 (0.63) | 73.2 (2.88) | 65.1 (2.56) | R19 | 40 (1.57) | 4 |
| | 300 | 155.4 (6.12) | 114.3 (4.5) | 21 (0.83) | 21 (0.83) | 27.4 (1.07) | 1.6 (0.06) | 22 (0.87) | 73.2 (2.88) | 68.3 (2.68) | R20 | 40 (1.57) | 4 |
| | 600 | 155.4 (6.12) | 114.3 (4.5) | 29.3 (1.15) | 29.3 (1.15) | 29.3 (1.15) | 6.4 (0.25) | 22 (0.87) | 73.2 (2.88) | 68.3 (2.68) | R20 | 40 (1.57) | 4 |
| 2" | 150 | 152.4 (6) | 120.7 (4.75) | 22 (0.87) | 20 (0.78) | 25.9 (1.02) | 1.6 (0.06) | 19 (0.75) | 91.9 (3.62) | 82.6 (3.25) | R22 | 48 (1.89) | 4 |
| | 300 | 165.1 (6.5) | 127 (5) | 22.8 (0.9) | 22.8 (0.89) | 30.8 (1.21) | 1.6 (0.06) | 19 (0.75) | 91.9 (3.62) | 82.6 (3.25) | R23 | 48 (1.89) | 8 |
| | 600 | 165.1 (6.5) | 127 (5) | 32.3 (1.27) | 32.3 (1.27) | 32.3 (1.27) | 6.4 (0.25) | 19 (0.75) | 91.9 (3.62) | 82.6 (3.25) | R23 | 48 (1.89) | 8 |
| 3" | 150 | 190.5 (7.5) | 152.4 (6) | 24.4 (0.96) | 24.4 (0.96) | 30.7 (1.21) | 1.6 (0.06) | 19 (0.75) | 127 (5) | 114.3 (4.50) | R29 | 73 (2.87) | 4 |
| | 300 | 209.5 (8.25) | 168.1 (6.62) | 29 (1.14) | 29 (1.14) | 36.9 (1.45) | 1.6 (0.06) | 22 (0.87) | 127 (5) | 123.8 (4.87) | R31 | 73 (2.87) | 8 |
| | 600 | 209.5 (8.25) | 168.1 (6.62) | 38.7 (1.52) | 38.7 (1.52) | 40.2 (1.58) | 6.4 (0.25) | 22 (0.87) | 127 (5) | 123.8 (4.87) | R31 | 73 (2.87) | 8 |
| 4" | 150 | 228.6 (9) | 190.5 (7.5) | 24.4 (0.96) | 24.4 (0.96) | 30.7 (1.21) | 1.6 (0.06) | 19 (0.75) | 158 (6.22) | 149.2 (5.87) | R36 | 96 (3.78) | 8 |
| | 300 | 254 (10) | 200 (7.87) | 32.2 (1.27) | 32.2 (1.27) | 40.2 (1.58) | 1.6 (0.06) | 22 (0.87) | 158 (6.22) | 149.2 (5.87) | R37 | 96 (3.78) | 8 |
| | 600 | 273 (10.75) | 215.9 (8.5) | 45 (1.77) | 45 (1.77) | 46.5 (1.83) | 6.4 (0.25) | 25 (1) | 158 (6.22) | 149.2 (5.87) | R37 | 96 (3.78) | 8 |

| EN 1092-1 DIMENSIONS | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | PN | A | B | C (RF) | C1 (FF) | | D | E | F (RF) | | G | HOLES |
| DN40 | 10/40 | 150 (5.9) | 110 (4.33) | 20 (0.78) | 20 (0.78) | | 3 (0.12) | 18 (0.71) | 88 (3.46) | | 40 (1.57) | 4 |
| DN50 | 10/40 | 165 (6.5) | 125 (4.92) | 20 (0.78) | 22 (0.86) | | 3 (0.12) | 18 (0.71) | 102 (4.01) | | 48 (1.89) | 4 |
| DN80 | 10/40 | 200 (7.87) | 160 (6.3) | 24 (0.95) | 24 (0.94) | | 3 (0.12) | 18 (0.71) | 138 (5.43) | | 73 (2.87) | 8 |
| DN100 | 10/16 | 220 (8.67) | 180 (7.08) | 20 (0.78) | | | 3 (0.12) | 18 (0.71) | 158 (6.22) | | 96 (3.78) | 8 |
| | 25/40 | 235 (9.25) | 190 (7.5) | 24 (0.95) | | | 3 (0.12) | 22 (0.87) | 162 (6.38) | | 96 (3.78) | 8 |

| JIS B 2202 DIMENSIONS | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | CLASS | A | B | C | | | D | E | F (RF) | | G | HOLES |
| 40A | 20K | 140 (5.5) | 105 (4.13) | 26 (1.02) | | | 2 (0.08) | 19 (0.75) | 81 (3.2) | | 40 (1.57) | 4 |
| 50A | 10K | 155 (6.1) | 120 (4.72) | 26 (1.02) | | | 2 (0.08) | 19 (0.75) | 96 (3.78) | | 48 (1.89) | 4 |
| | 40K | 165 (6.5) | 130 (5.12) | 26 (1.02) | | | 2 (0.08) | 19 (0.75) | 105 (4.13) | | 48 (1.89) | 8 |
| 80A | 10K | 185 (7.28) | 150 (5.9) | 26 (1.02) | | | 2 (0.08) | 19 (0.75) | 126 (4.96) | | 73 (2.87) | 8 |
| | 20K | 200 (7.87) | 160 (6.3) | 26 (1.02) | | | 2 (0.08) | 19 (0.75) | 132 (5.2) | | 73 (2.87) | 8 |
| 100A | 10K | 210 (8.27) | 175 (6.89) | 26 (1.02) | | | 2 (0.08) | 19 (0.75) | 151 (5.95) | | 96 (3.78) | 8 |

# LD400L - Wireless Flanged Pressure Transmitter with Integral Flange Wireless



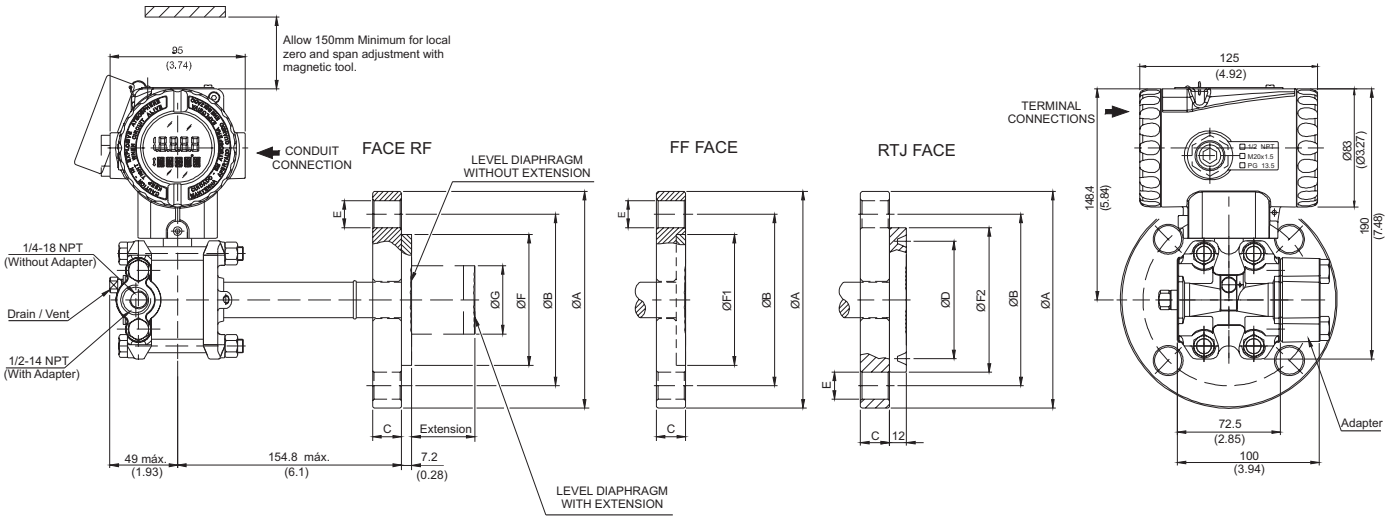

Notes:
- Extension lenght (mm): 0, 50, 100, 150 or 200
- Dimensions are mm (in)

| ANSI-B 16.5 Dimensions | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | Class | A | B | C (RF) | C1 (FF) | C2 (RTJ) | D (RF) | E | F (RF) | F1 (RTJ) | RTJ O'RING | G | Holes |
| 1.1/2" | 150 | 127 (5) | 98.6 (3.88) | 20 (0.78) | 19 (0.75) | 24.4 (0.96) | 1.6 (0.06) | 16 (0.63) | 73.2 (2.88) | 65.1 (2.56) | R19 | 40 (1.57) | 4 |
| | 300 | 155.4 (6.12) | 114.3 (4.5) | 21 (0.83) | 21 (0.83) | 27.4 (1.07) | 1.6 (0.06) | 22 (0.87) | 73.2 (2.88) | 68.3 (2.68) | R20 | 40 (1.57) | 4 |
| | 600 | 155.4 (6.12) | 114.3 (4.5) | 29.3 (1.15) | 29.3 (1.15) | 29.3 (1.15) | 6.4 (0.25) | 22 (0.87) | 73.2 (2.88) | 68.3 (2.68) | R20 | 40 (1.57) | 4 |
| 2" | 150 | 152.4 (6) | 120.7 (4.75) | 22 (0.87) | 20 (0.78) | 25.9 (1.02) | 1.6 (0.06) | 19 (0.75) | 91.9 (3.62) | 82.6 (3.25) | R22 | 48 (1.89) | 4 |
| | 300 | 165.1 (6.5) | 127 (5) | 22.8 (0.9) | 22.8 (0.89) | 30.8 (1.21) | 1.6 (0.06) | 19 (0.75) | 91.9 (3.62) | 82.6 (3.25) | R23 | 48 (1.89) | 8 |
| | 600 | 165.1 (6.5) | 127 (5) | 32.3 (1.27) | 32.3 (1.27) | 32.3 (1.27) | 6.4 (0.25) | 19 (0.75) | 91.9 (3.62) | 82.6 (3.25) | R23 | 48 (1.89) | 8 |
| 3" | 150 | 190.5 (7.5) | 152.4 (6) | 24.4 (0.96) | 24.4 (0.96) | 30.7 (1.21) | 1.6 (0.06) | 19 (0.75) | 127 (5) | 114.3 (4.50) | R29 | 73 (2.87) | 4 |
| | 300 | 209.5 (8.25) | 168.1 (6.62) | 29 (1.14) | 29 (1.14) | 36.9 (1.45) | 1.6 (0.06) | 22 (0.87) | 127 (5) | 123.8 (4.87) | R31 | 73 (2.87) | 8 |
| | 600 | 209.5 (8.25) | 168.1 (6.62) | 38.7 (1.52) | 38.7 (1.52) | 40.2 (1.58) | 6.4 (0.25) | 22 (0.87) | 127 (5) | 123.8 (4.87) | R31 | 73 (2.87) | 8 |
| 4" | 150 | 228.6 (9) | 190.5 (7.5) | 24.4 (0.96) | 24.4 (0.96) | 30.7 (1.21) | 1.6 (0.06) | 19 (0.75) | 158 (6.22) | 149.2 (5.87) | R36 | 96 (3.78) | 8 |
| | 300 | 254 (10) | 200 (7.87) | 32.2 (1.27) | 32.2 (1.27) | 40.2 (1.58) | 1.6 (0.06) | 22 (0.87) | 158 (6.22) | 149.2 (5.87) | R37 | 96 (3.78) | 8 |
| | 600 | 273 (10.75) | 215.9 (8.5) | 45 (1.77) | 45 (1.77) | 46.5 (1.83) | 6.4 (0.25) | 25 (1) | 158 (6.22) | 149.2 (5.87) | R37 | 96 (3.78) | 8 |

| EN 1092-1 Dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | PN | A | B | C (RF) | C1 (FF) | | D | E | F (RF) | | G | Holes |
| DN40 | 10/40 | 150 (5.9) | 110 (4.33) | 20 (0.78) | 20 (0.78) | | 3 (0.12) | 18 (0.71) | 88 (3.46) | | 40 (1.57) | 4 |
| DN50 | 10/40 | 165 (6.5) | 125 (4.92) | 20 (0.78) | 22 (0.86) | | 3 (0.12) | 18 (0.71) | 102 (4.01) | | 48 (1.89) | 4 |
| DN80 | 10/40 | 200 (7.87) | 160 (6.3) | 24 (0.95) | 24 (0.94) | | 3 (0.12) | 18 (0.71) | 138 (5.43) | | 73 (2.87) | 8 |
| DN100 | 10/16 | 220 (8.67) | 180 (7.08) | 20 (0.78) | | | 3 (0.12) | 18 (0.71) | 158 (6.22) | | 96 (3.78) | 8 |
| | 25/40 | 235 (9.25) | 190 (7.5) | 24 (0.95) | | | 3 (0.12) | 22 (0.87) | 162 (6.38) | | 96 (3.78) | 8 |

| JIS B 2202 Dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | Class | A | B | C | | D | E | F (RF) | | G | Holes |
| 40A | 20K | 140 (5.5) | 105 (4.13) | 26 (1.02) | | 2 (0.08) | 19 (0.75) | 81 (3.2) | | 40 (1.57) | 4 |
| 50A | 10K | 155 (6.1) | 120 (4.72) | 26 (1.02) | | 2 (0.08) | 19 (0.75) | 96 (3.78) | | 48 (1.89) | 4 |
| | 40K | 165 (6.5) | 130 (5.12) | 26 (1.02) | | 2 (0.08) | 19 (0.75) | 105 (4.13) | | 48 (1.89) | 8 |
| 80A | 10K | 185 (7.28) | 150 (5.9) | 26 (1.02) | | 2 (0.08) | 19 (0.75) | 126 (4.96) | | 73 (2.87) | 8 |
| | 20K | 200 (7.87) | 160 (6.3) | 26 (1.02) | | 2 (0.08) | 19 (0.75) | 132 (5.2) | | 73 (2.87) | 8 |
| 100A | 10K | 210 (8.27) | 175 (6.89) | 26 (1.02) | | 2 (0.08) | 19 (0.75) | 151 (5.95) | | 96 (3.78) | 8 |

# LD400L - Flanged Pressure Transmitter with Slip-on Flange

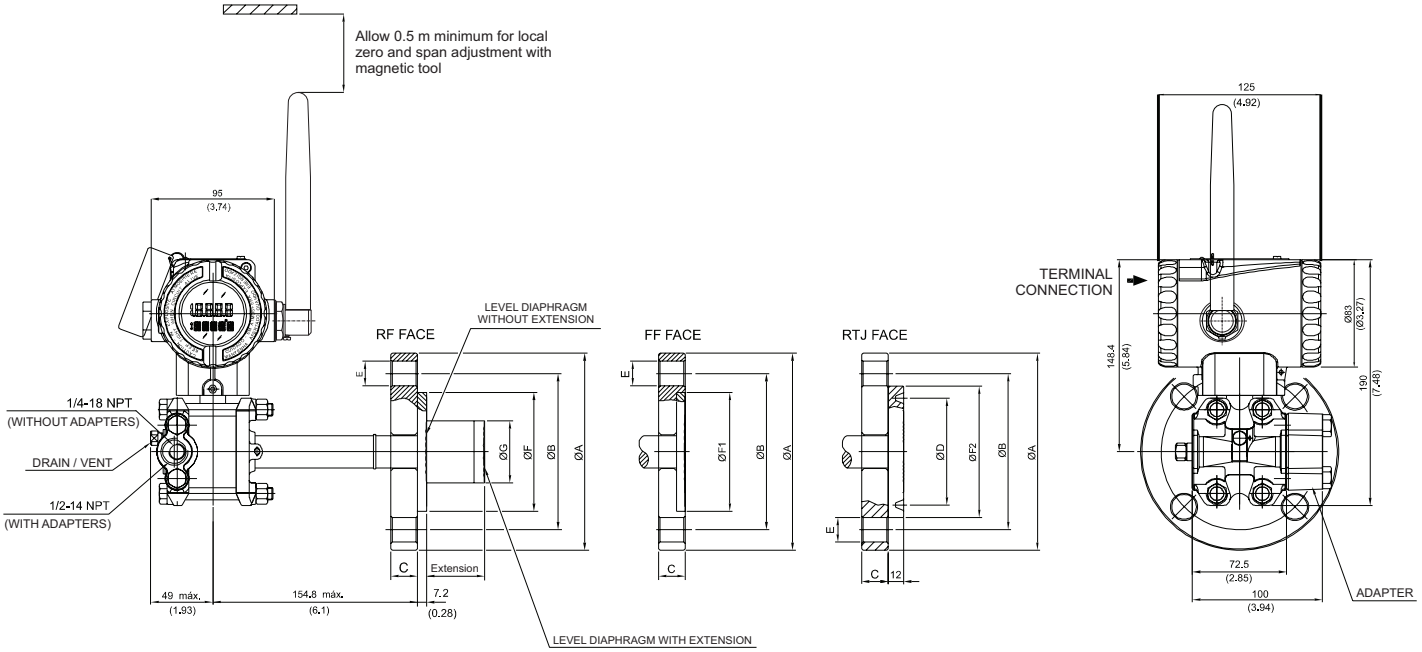



| ANSI-B 16.5 DIMENSIONS | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | CLASS | A | | B | | C | | D | | E | | F (RF) | | F1 (FF) | | F2 (RTJ) | | G | | HOLES |
| 1" | 150 | 108 | (4.25) | 79.4 | (3.16) | 14.3 | (0.56) | - | | 16 | (0.63) | 50.8 | (2) | 50.8 | (2) | - | | - | | 4 |
| | 300/600 | 124 | (4.88) | 88.9 | (3.5) | 17.5 | (0.69) | - | | 19 | (0.75) | 50.8 | (2) | 50.8 | (2) | - | | - | | 4 |
| 1 1/2" | 150 | 127 | (5) | 98.4 | (3.87) | 17.5 | (0.69) | - | | 16 | (0.63) | 73 | (2.87) | 73 | (2.87) | - | | 40 | (1.57) | 4 |
| | 300/600 | 156 | (6.14) | 114.3 | (4.5) | 22.2 | (0.87) | - | | 22 | (0.87) | 73 | (2.87) | 73 | (2.87) | - | | 40 | (1.57) | 4 |
| 2" | 150 | 152.4 | (6) | 120.7 | (4.75) | 17.5 | (0.69) | 82.6 | (3.25) | 19 | (0.75) | 92 | (3.62) | 92 | (3.62) | 101.6 | (4.00) | 48 | (1.89) | 4 |
| | 300 | 165.1 | (6.5) | 127 | (5) | 20.7 | (0.8) | 82.6 | (3.25) | 19 | (0.75) | 92 | (3.62) | 92 | (3.62) | 107.9 | (4.25) | 48 | (1.89) | 8 |
| | 600 | 165.1 | (6.5) | 127 | (5) | 25.4 | (1) | 82.6 | (3.25) | 19 | (0.75) | 92 | (3.62) | 92 | (3.62) | 107.9 | (4.25) | 48 | (1.89) | 8 |
| 3" | 150 | 190.5 | (7.5) | 152.4 | (6) | 22.3 | (0.87) | 114.3 | (4.50) | 19 | (0.75) | 127 | (5) | 127 | (5) | 133.4 | (5.25) | 73 | (2.87) | 4 |
| | 300 | 209.5 | (8.25) | 168.1 | (6.62) | 27 | (1.06) | 123.8 | (4.87) | 22 | (0.87) | 127 | (5) | 127 | (5) | 146.1 | (5.75) | 73 | (2.87) | 8 |
| | 600 | 209.5 | (8.25) | 168.1 | (6.62) | 31.8 | (1.25) | 123.8 | (4.87) | 22 | (0.87) | 127 | (5) | 127 | (5) | 146.1 | (5.75) | 73 | (2.87) | 8 |
| 4" | 150 | 228.6 | (9) | 190.5 | (7.5) | 22.3 | (0.87) | 149.2 | (5.87) | 19 | (0.75) | 158 | (6.22) | 158 | (6.22) | 171.5 | (6.75) | 89 | (3.5) | 8 |
| | 300 | 254 | (10) | 200 | (7.87) | 30.2 | (1.18) | 149.2 | (5.87) | 22 | (0.87) | 158 | (6.22) | 158 | (6.22) | 174.6 | (6.87) | 89 | (3.5) | 8 |
| | 600 | 273 | (10.75) | 215.9 | (8.5) | 38.1 | (1.5) | 149.2 | (5.87) | 25 | (1) | 158 | (6.22) | 158 | (6.22) | 174.6 | (6.87) | 89 | (3.5) | 8 |

| EN 1092-1 / DIN2501 DIMENSIONS- RF/ FF | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | PN | A | | B | | C | | E | | F | | G | | HOLES |
| 25 | 10/40 | 115 | (4.53) | 85 | (3.35) | 18 | (0.71) | 14 | (0.55) | 68 | (2.68) | - | | 4 |
| 40 | 10/40 | 150 | (5.91) | 110 | (4.33) | 18 | (0.71) | 18 | (0.71) | 88 | (3.46) | 73 | (2.87) | 4 |
| 50 | 10/40 | 165 | (6.50) | 125 | (4.92) | 20 | (0.78) | 18 | (0.71) | 102 | (4.01) | 48 | (1.89) | 4 |
| 80 | 10/40 | 200 | (7.87) | 160 | (6.30) | 24 | (0.95) | 18 | (0.71) | 138 | (5.43) | 73 | (2.87) | 8 |
| 100 | 10/16 | 220 | (8.67) | 180 | (7.08) | 20 | (0.78) | 18 | (0.71) | 158 | (6.22) | 89 | (3.5) | 8 |
| | 25/40 | 235 | (9.25) | 190 | (7.50) | 24 | (0.95) | 22 | (0.87) | 162 | (6.38) | 89 | (3.5) | 8 |

NOTES:
- Extension Lenght mm (in): 0, 50 (1.96) 100 (3,93), 150 (5.9) ou 200 (7.87)
- Dimensions are mm (in)

# LD400L - Wireless Flanged Pressure Transmitter with Slip-on Flange Wireless

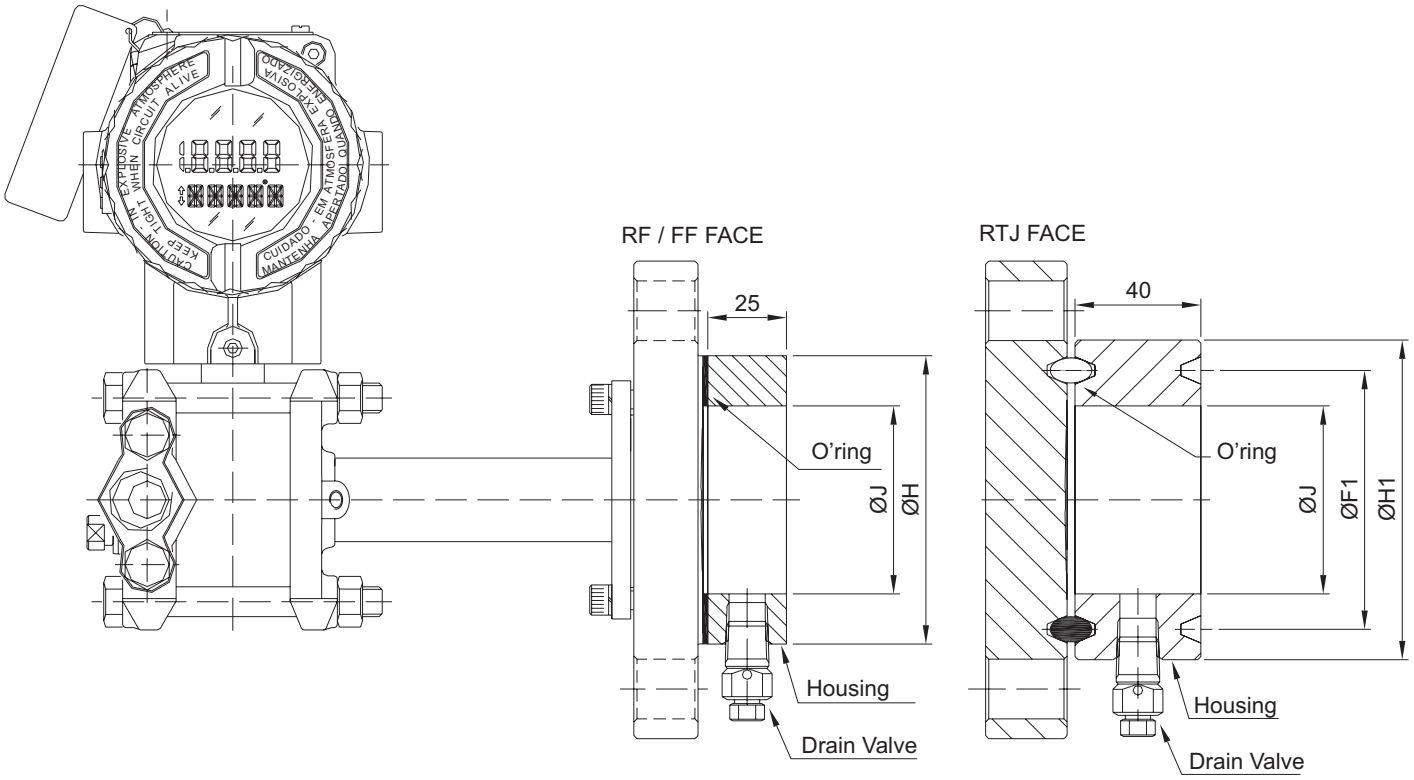



| ANSI-B 16.5 DIMENSIONS | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | CLASS | A | | B | | C | | D | | E | | F (RF) | | F1 (FF) | | F2 (RTJ) | | G | | Holes |
| 2" | 150 | 152.4 | (6) | 120.7 | (4.75) | 17.5 | (0.69) | 82.6 | (3.25) | 19 | (0.75) | 92 | (3.62) | 92 | (3.62) | 101.6 | (4.00) | 48 | (1.89) | 4 |
| | 300 | 165.1 | (6.5) | 127 | (5) | 20.7 | (0.8) | 82.6 | (3.25) | 19 | (0.75) | 92 | (3.62) | 92 | (3.62) | 107.9 | (4.25) | 48 | (1.89) | 8 |
| | 600 | 165.1 | (6.5) | 127 | (5) | 25.4 | (1) | 82.6 | (3.25) | 19 | (0.75) | 92 | (3.62) | 92 | (3.62) | 107.9 | (4.25) | 48 | (1.89) | 8 |
| 3" | 150 | 190.5 | (7.5) | 152.4 | (6) | 22.3 | (0.87) | 114.3 | (4.50) | 19 | (0.75) | 127 | (5) | 127 | (5) | 133.4 | (5.25) | 73 | (2.87) | 4 |
| | 300 | 209.5 | (8.25) | 168.1 | (6.62) | 27 | (1.06) | 123.8 | (4.87) | 22 | (0.87) | 127 | (5) | 127 | (5) | 146.1 | (5.75) | 73 | (2.87) | 8 |
| | 600 | 209.5 | (8.25) | 168.1 | (6.62) | 31.8 | (1.25) | 123.8 | (4.87) | 22 | (0.87) | 127 | (5) | 127 | (5) | 146.1 | (5.75) | 73 | (2.87) | 8 |
| 4" | 150 | 228.6 | (9) | 190.5 | (7.5) | 22.3 | (0.87) | 149.2 | (5.87) | 19 | (0.75) | 158 | (6.22) | 158 | (6.22) | 171.5 | (6.75) | 89 | (3.5) | 8 |
| | 300 | 254 | (10) | 200 | (7.87) | 30.2 | (1.18) | 149.2 | (5.87) | 22 | (0.87) | 158 | (6.22) | 158 | (6.22) | 174.6 | (6.87) | 89 | (3.5) | 8 |
| | 600 | 273 | (10.75) | 215.9 | (8.5) | 38.1 | (1.5) | 149.2 | (5.87) | 25 | (1) | 158 | (6.22) | 158 | (6.22) | 174.6 | (6.87) | 89 | (3.5) | 8 |

| EN 1092-1 / DIN2501 DIMENSIONS- RF/ FF | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | PN | A | | B | | C | | E | | F | | G | | Holes |
| 50 | 10/40 | 165 | (6.50) | 125 | (4.92) | 20 | (0.78) | 18 | (0.71) | 102 | (4.01) | 48 | (1.89) | 4 |
| 80 | 10/40 | 200 | (7.87) | 160 | (6.30) | 24 | (0.95) | 18 | (0.71) | 138 | (5.43) | 73 | (2.87) | 8 |
| 100 | 10/16 | 220 | (8.67) | 180 | (7.08) | 20 | (0.78) | 18 | (0.71) | 158 | (6.22) | 89 | (3.5) | 8 |
| | 25/40 | 235 | (9.25) | 190 | (7.50) | 24 | (0.95) | 22 | (0.87) | 162 | (6.38) | 89 | (3.5) | 8 |

Notes:
- Extension lenght mm (in): 0, 50 (1.96), 100 (3.93), 150 (5.9) or 200 (7.87)
- Dimensions are mm (in)

# LD400L - Flanged Pressure Transmitter with Housing



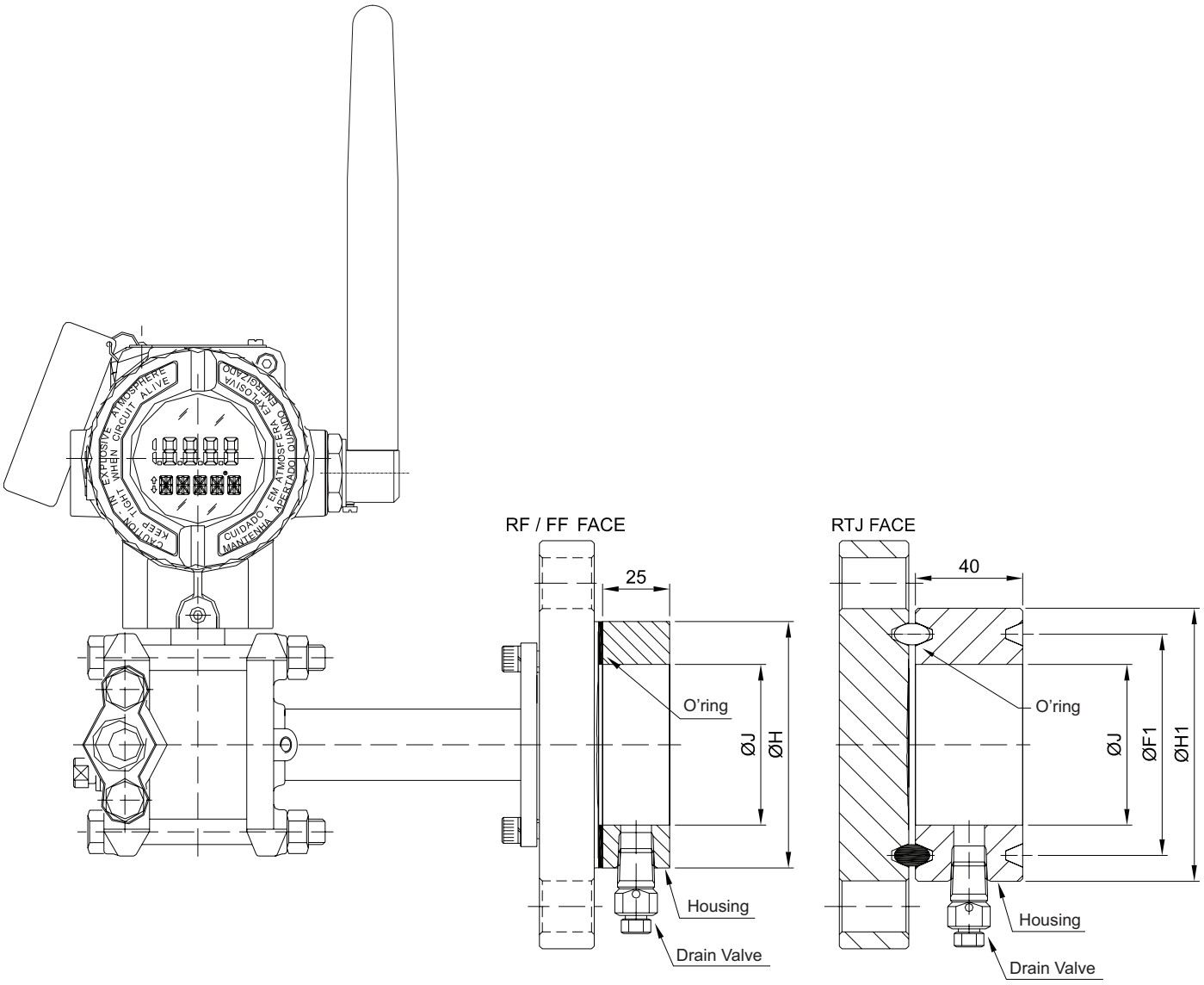

DIMENSIONS IN mm (")

| ANSI-B 16.5 DIMENSIONS | | | |
|---|---|---|---|
| DN | CLASS | H | J |
| 1.1/2" | ALL | 73.2 (2.88) | 48 (1.89) |
| 2" | | 91.9 (3.62) | 60 (2.36) |
| 3" | | 127 (5.00) | 89 (3.50) |
| 4" | | 158 (6.22) | 115 (4.53) |
| FORM D DIMENSIONS DIN EN1092-1/ DIN2501/2526 | | | |
| DN | PN | H | J |
| 40 | ALL | 88 (3.46) | 48 (1.89) |
| 50 | | 102 (4.02) | 60 (2.36) |
| 80 | | 138 (5.43) | 89 (3.50) |
| 100 | | 158 (6.22) | 115 (4.53) |
| JIS B 2202 DIMENSIONS | | | |
| DN | CLASS | H | J |
| 40A | 20K | 81 (3.19) | 48 (1.89) |
| 50A | 10K | 96 (3.78) | 60 (1.36) |
| | 40K | 105 (4.13) | 60 (1.36) |
| 80A | 10K | 126 (4.96) | 89 (3.50) |
| | 20K | 132 (5.20) | 89 (3.50) |
| 100A | 10K | 151 (5.94) | 115 (4.53) |

DIMENSIONS IN mm (")

| ANSI-B 16.5 DIMENSIONS - RTJ FACE | | | | | |
|---|---|---|---|---|---|
| DN | CLASSE | F1 | O'RING | H1 | J |
| 1.1/2" | 150 | 65.1 (2.56) | R19 | 82.5 (3.25) | 48 (1.89) |
| | 300 | 68.3 (2.69) | R20 | 90.5 (3.56) | 48 (1.89) |
| | 600 | 68.3 (2.69) | R20 | 90.5 (3.56) | 48 (1.89) |
| | 1500 | 68.3 (2.69) | R20 | 92 (3.62) | 48 (1.89) |
| | 2500 | 82.6 (3.25) | R23 | 114 (4.50) | 48 (1.89) |
| 2" | 150 | 82.6 (3.25) | R22 | 102 (4.00) | 60 (2.36) |
| | 300 | 82.6 (3.25) | R23 | 108 (4.25) | 60 (2.36) |
| | 600 | 82.6 (3.25) | R23 | 108 (4.25) | 60 (2.36) |
| | 1500 | 95.3 (3.75) | R24 | 124 (4.88) | 60 (2.36) |
| | 2500 | 101.6 (4.00) | R26 | 133 (5.25) | 60 (2.36) |
| 3" | 150 | 114.3 (4.50) | R29 | 133 (5.25) | 89 (3.50) |
| | 300 | 123.8 (4.87) | R31 | 146 (5.75) | 89 (3.50) |
| | 600 | 123.8 (4.87) | R31 | 146 (5.75) | 89 (3.50) |
| 4" | 150 | 149.2 (5.87) | R36 | 171 (6.75) | 115 (4.53) |
| | 300 | 149.2 (5.87) | R37 | 175 (6.88) | 115 (4.53) |
| | 600 | 149.2 (5.87) | R37 | 175 (6.88) | 115 (4.53) |

# LD400L - Wireless Flanged Pressure Transmitter with Housing Wireless



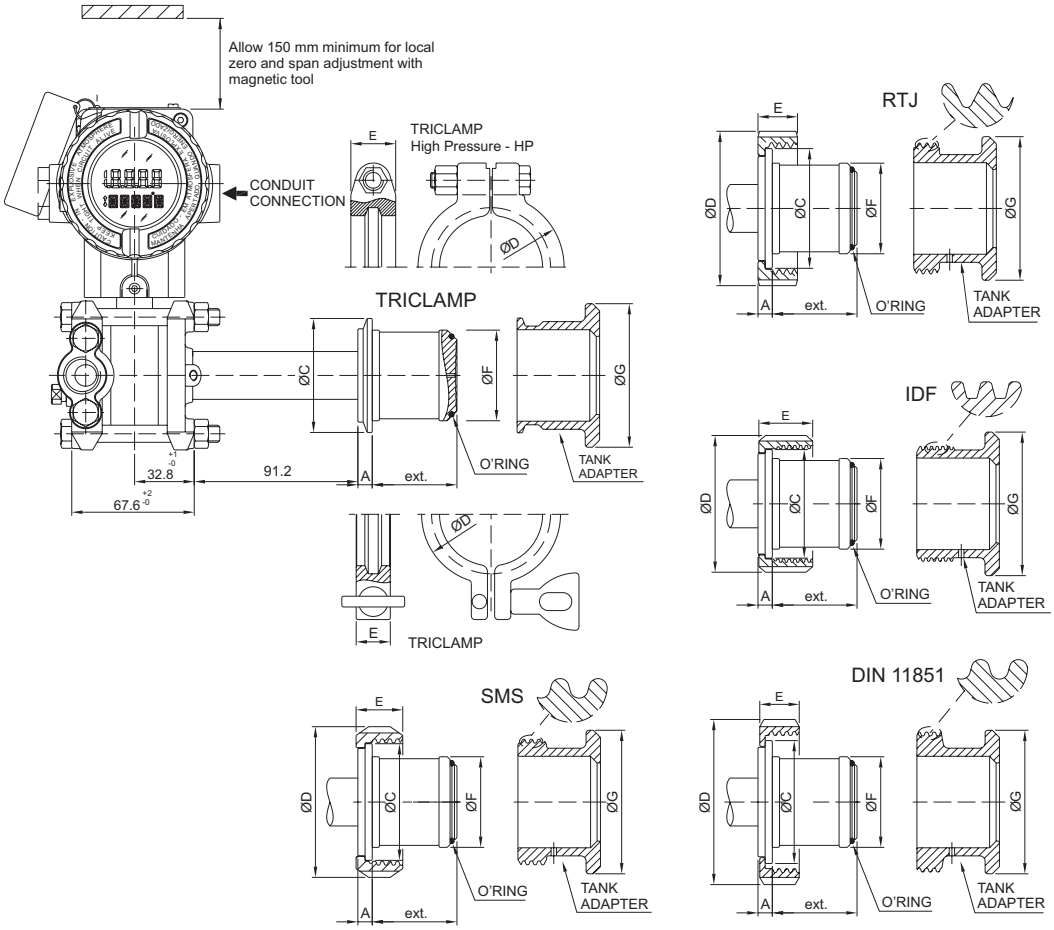

DIMENSIONS IN mm (")

| ANSI-B 16.5 DIMENSIONS | | | |
|---|---|---|---|
| DN | CLASS | H | J |
| 1.1/2" | ALL | 73.2 (2.88) | 48 (1.89) |
| 2" | | 91.9 (3.62) | 60 (2.36) |
| 3" | | 127 (5.00) | 89 (3.50) |
| 4" | | 158 (6.22) | 115 (4.53) |
| FORM D DIMENSIONS DIN EN1092-1/ DIN2501/2526 | | | |
| DN | PN | H | J |
| 40 | ALL | 88 (3.46) | 48 (1.89) |
| 50 | | 102 (4.02) | 60 (2.36) |
| 80 | | 138 (5.43) | 89 (3.50) |
| 100 | | 158 (6.22) | 115 (4.53) |
| JIS B 2202 DIMENSIONS | | | |
| DN | CLASS | H | J |
| 40A | 20K | 81 (3.19) | 48 (1.89) |
| 50A | 10K | 96 (3.78) | 60 (1.36) |
| | 40K | 105 (4.13) | 60 (1.36) |
| 80A | 10K | 126 (4.96) | 89 (3.50) |
| | 20K | 132 (5.20) | 89 (3.50) |
| 100A | 10K | 151 (5.94) | 115 (4.53) |

DIMENSIONS IN mm (")

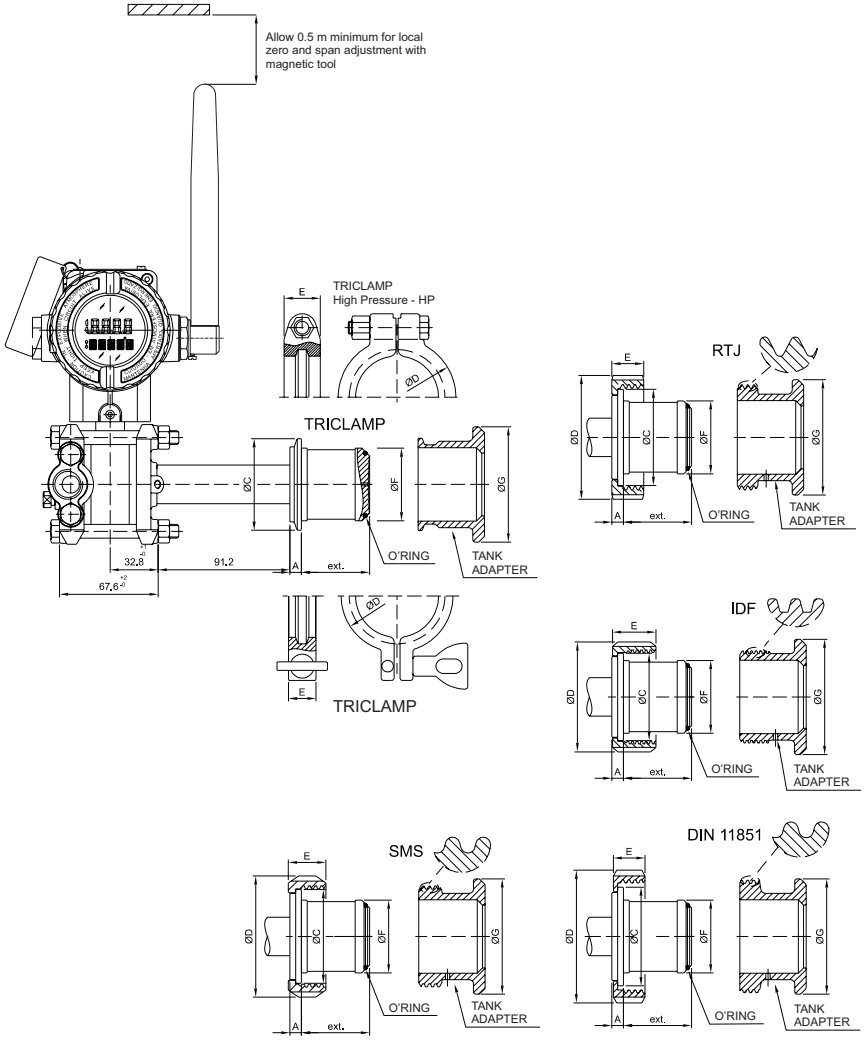
| ANSI-B 16.5 DIMENSIONS - FACE RTJ | | | | | |
|---|---|---|---|---|---|
| DN | CLASS | F1 | O'RING | H1 | J |
| 1.1/2" | 150 | 65.1 (2.56) | R19 | 82.5 (3.25) | 48 (1.89) |
| | 300 | 68.3 (2.69) | R20 | 90.5 (3.56) | 48 (1.89) |
| | 600 | 68.3 (2.69) | R20 | 90.5 (3.56) | 48 (1.89) |
| | 1500 | 68.3 (2.69) | R20 | 92 (3.62) | 48 (1.89) |
| | 2500 | 82.6 (3.25) | R23 | 114 (4.50) | 48 (1.89) |
| 2" | 150 | 82.6 (3.25) | R22 | 102 (4.00) | 60 (2.36) |
| | 300 | 82.6 (3.25) | R23 | 108 (4.25) | 60 (2.36) |
| | 600 | 82.6 (3.25) | R23 | 108 (4.25) | 60 (2.36) |
| | 1500 | 95.3 (3.75) | R24 | 124 (4.88) | 60 (2.36) |
| | 2500 | 101.6 (4.00) | R26 | 133 (5.25) | 60 (2.36) |
| 3" | 150 | 114.3 (4.50) | R29 | 133 (5.25) | 89 (3.50) |
| | 300 | 123.8 (4.87) | R31 | 146 (5.75) | 89 (3.50) |
| | 600 | 123.8 (4.87) | R31 | 146 (5.75) | 89 (3.50) |
| 4" | 150 | 149.2 (5.87) | R36 | 171 (6.75) | 115 (4.53) |
| | 300 | 149.2 (5.87) | R37 | 175 (6.88) | 115 (4.53) |
| | 600 | 149.2 (5.87) | R37 | 175 (6.88) | 115 (4.53) |

# LD400S - Sanitary Transmitter With Extension



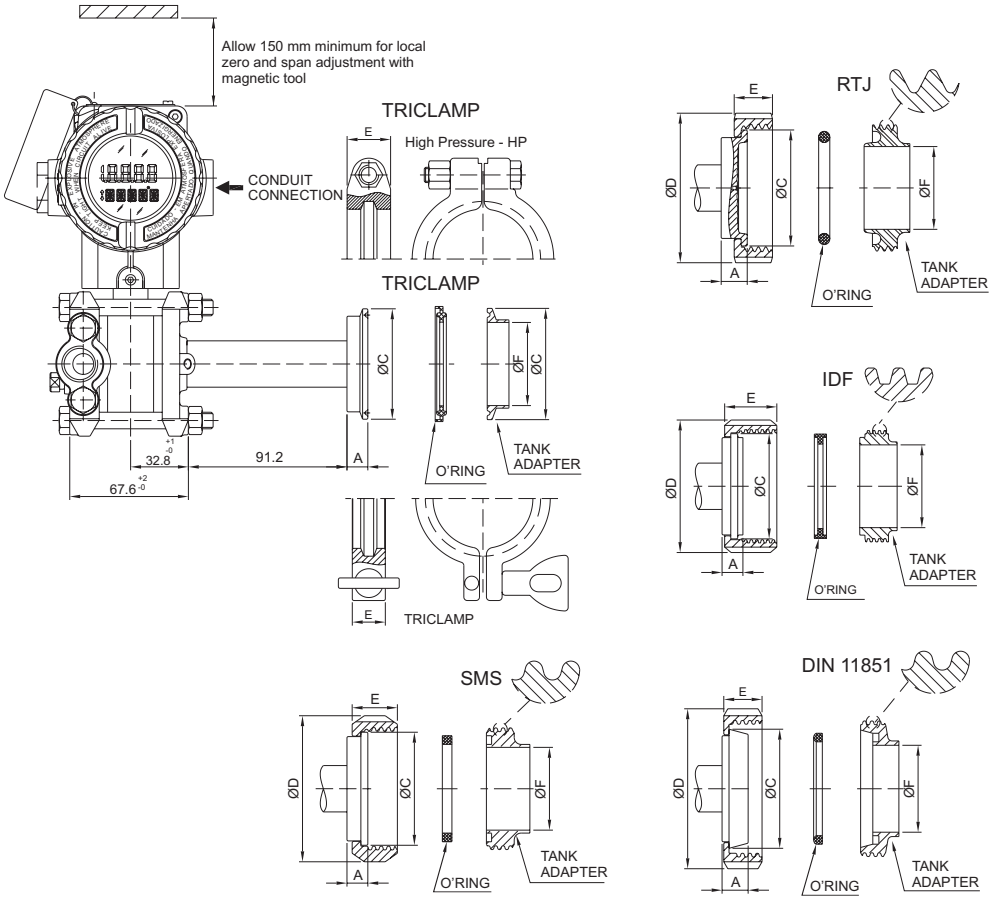

| LD400S | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONNECTIONW ITH EXTENSION | Dimensions in mm (") | | | | | | |
| | A | ØC | ØD | E | ØF | ØG | EXT. |
| Tri-Clamp DN50 | 8 (0.315) | 63.5 (2.5) | 76.5 (3.01) | 18 (0.71) | 52 (2.05) | 80 (3.15) | 47.2 (1.86) |
| Tri-Clamp DN50H P | 8 (0.315) | 63.5 (2.5) | 81 (3.19) | 25 (0.98) | 52 (2.05) | 80 (3.15) | 47.2 (1.86) |
| Tri-Clamp-2 " | 8 (0.315) | 63.5 (2.5) | 76.5 (3.01) | 18 (0.71) | 52 (2.05) | 80 (3.15) | 47.2 (1.86) |
| Tri-Clamp-2 "H P | 8 (0.315) | 63.5 (2.5) | 81 (3.19) | 25 (0.98) | 52 (2.05) | 80 (3.15) | 47.2 (1.86) |
| Tri-Clamp-3 " | 8 (0.315) | 91 (3.58) | 110 (4.33) | 18 (0.71) | 72.5 (2.85) | 100 (3.94) | 50 (1.96) |
| Tri-Clamp-3 "H P | 8 (0.315) | 91 (3.58) | 115 (4.53) | 25 (0.98) | 72.5 (2.85) | 100 (3.94) | 50 (1.96) |
| Threaded DN25-D IN 11851 | 6 (0.24) | 47.5 (1.87) | 63 (2.48) | 21 (0.83) | 43.2 (1.7) | 80 (3.15) | 26.3 (1.03) |
| Threaded DN40-D IN 11851 | 8 (0.315) | 56 (2.2) | 78 (3.07) | 21 (0.83) | 52 (2.05) | 80 (3.15) | 47.2 (1.86) |
| Threaded DN50-D IN 11851 | 8 (0.315) | 68.5 (2.7) | 92 (3.62) | 22 (0.86) | 52 (2.05) | 80 (3.15) | 47.2 (1.86) |
| Threaded DN80-D IN 11851 | 8 (0.315) | 100 (3.94) | 127 (5) | 29 (1.14) | 72.5 (2.85) | 100 (3.94) | 50 (1.96) |
| Threaded SMS-2 " | 8 (0.315) | 65 (2.56) | 84 (3.3) | 26 (1.02) | 52 (2.05) | 80 (3.15) | 47.2 (1.86) |
| Threaded SMS-3 " | 8 (0.315) | 93 (3.66) | 113 (4.45) | 32 (1.26) | 72.5 (2.85) | 100 (3.94) | 50 (1.96) |
| Threaded RJT- 2" | 8 (0.315) | 66.7 (2.63) | 86 (3.38) | 22 (0.86) | 52 (2.05) | 80 (3.15) | 47.2 (1.86) |
| Threaded RJT- 3" | 8 (0.315) | 92 (3.62) | 112 (4.41) | 22.2 (0.87) | 72.5 (2.85) | 100 (3.94) | 50 (1.96) |
| Threaded IDF-2 " | 8 (0.315) | 60.5 (2.38) | 76.2 (3) | 30 (1.18) | 52 (2.05) | 80 (3.15) | 47.2 (1.86) |
| Threaded IDF-3 " | 8 (0.315) | 87.5 (3.44) | 101.6 (4) | 30 (1.18) | 72.5 (2.85) | 100 (3.94) | 50 (1.96) |

# LD400S - Wireless Sanitary Transmitter With Extension Wireless



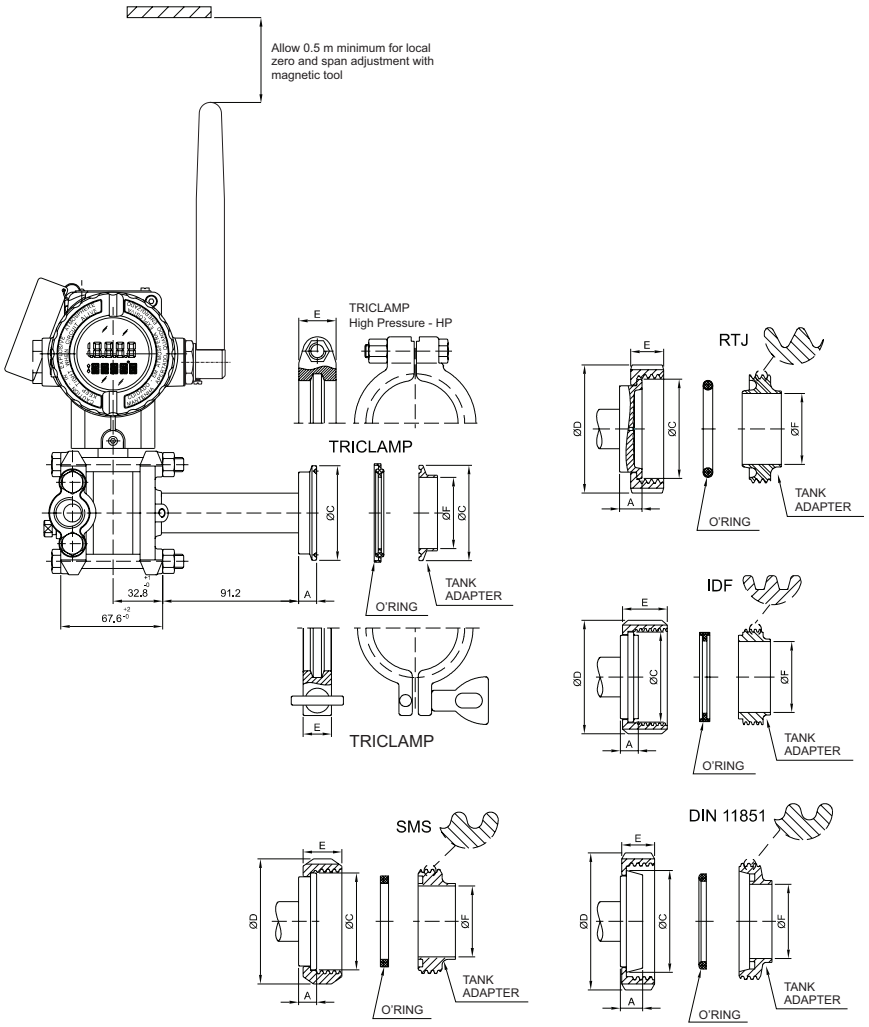

| LD400S | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONNECTION WITH EXTENSION | Dimensions in mm (") | | | | | | |
| | A | ØC | ØD | E | ØF | ØG | EXT. |
| Tri-Clamp DN50 | 8 (0.315) | 63.5 (2.5) | 76.5 (3.01) | 18 (0.71) | 52 (2.05) | 80 (3.15) | 47.2 (1.86) |
| Tri-Clamp DN50H P | 8 (0.315) | 63.5 (2.5) | 81 (3.19) | 25 (0.98) | 52 (2.05) | 80 (3.15) | 47.2 (1.86) |
| Tri-Clamp-2 " | 8 (0.315) | 63.5 (2.5) | 76.5 (3.01) | 18 (0.71) | 52 (2.05) | 80 (3.15) | 47.2 (1.86) |
| Tri-Clamp-2 "H P | 8 (0.315) | 63.5 (2.5) | 81 (3.19) | 25 (0.98) | 52 (2.05) | 80 (3.15) | 47.2 (1.86) |
| Tri-Clamp-3 " | 8 (0.315) | 91 (3.58) | 110 (4.33) | 18 (0.71) | 72.5 (2.85) | 100 (3.94) | 50 (1.96) |
| Tri-Clamp-3 "H P | 8 (0.315) | 91 (3.58) | 115 (4.53) | 25 (0.98) | 72.5 (2.85) | 100 (3.94) | 50 (1.96) |
| Threaded DN25-D IN 11851 | 6 (0.24) | 47.5 (1.87) | 63 (2.48) | 21 (0.83) | 43.2 (1.7) | 80 (3.15) | 26.3 (1.03) |
| Threaded DN40-D IN 11851 | 8 (0.315) | 56 (2.2) | 78 (3.07) | 21 (0.83) | 52 (2.05) | 80 (3.15) | 47.2 (1.86) |
| Threaded DN50-D IN 11851 | 8 (0.315) | 68.5 (2.7) | 92 (3.62) | 22 (0.86) | 52 (2.05) | 80 (3.15) | 47.2 (1.86) |
| Threaded DN80-D IN 11851 | 8 (0.315) | 100 (3.94) | 127 (5) | 29 (1.14) | 72.5 (2.85) | 100 (3.94) | 50 (1.96) |
| Threaded SMS-2 " | 8 (0.315) | 65 (2.56) | 84 (3.3) | 26 (1.02) | 52 (2.05) | 80 (3.15) | 47.2 (1.86) |
| Threaded SMS-3 " | 8 (0.315) | 93 (3.66) | 113 (4.45) | 32 (1.26) | 72.5 (2.85) | 100 (3.94) | 50 (1.96) |
| Threaded RJT- 2" | 8 (0.315) | 66.7 (2.63) | 86 (3.38) | 22 (0.86) | 52 (2.05) | 80 (3.15) | 47.2 (1.86) |
| Threaded RJT- 3" | 8 (0.315) | 92 (3.62) | 112 (4.41) | 22.2 (0.87) | 72.5 (2.85) | 100 (3.94) | 50 (1.96) |
| Threaded IDF-2 " | 8 (0.315) | 60.5 (2.38) | 76.2 (3) | 30 (1.18) | 52 (2.05) | 80 (3.15) | 47.2 (1.86) |
| Threaded IDF-3 " | 8 (0.315) | 87.5 (3.44) | 101.6 (4) | 30 (1.18) | 72.5 (2.85) | 100 (3.94) | 50 (1.96) |

# LD400S - Sanitary Transmitter Without Extension



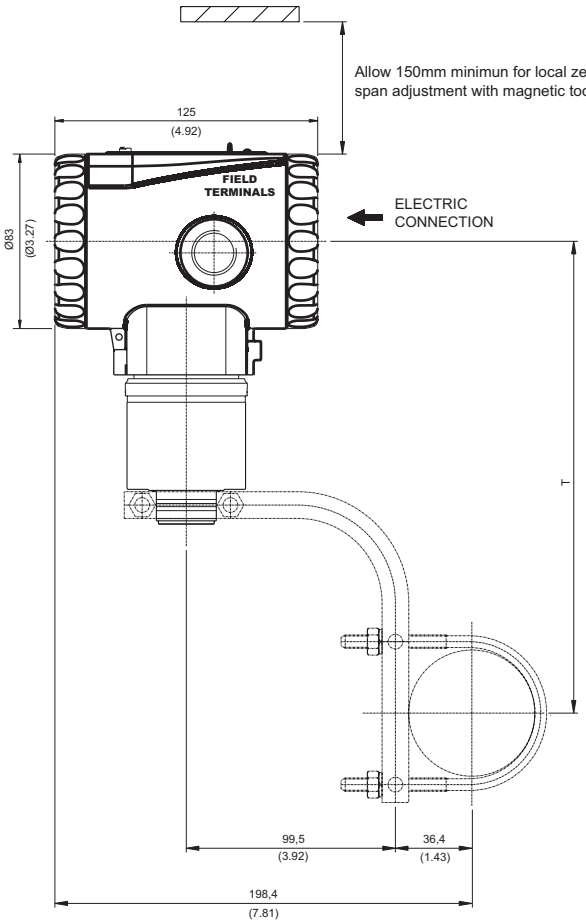

| LD400S | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONNECTION WITHOUT EXTENSION | Dimensions in mm (") | | | | | | |
| | A | ØC | ØD | E | ØF | ØG | EXT. |
| Tri-Clamp DN50 | 8 (0.315) | 63.5 (2.5) | 76.5 (3.01) | 18 (0.71) | 47.5 (1.87) | --- | --- |
| Tri-Clamp-11 /2" | 12 (0.47) | 50 (1.96) | 61 (2.4) | 18 (0.71) | 35 (1.38) | --- | --- |
| Tri-Clamp-11 /2"H P | 12 (0.47) | 50 (1.96) | 66 (2.59) | 25 (0.98) | 35 (1.38) | --- | --- |
| Tri-Clamp-2 " | 12 (0.47) | 63.5 (2.5) | 76.5 (3.01) | 18 (0.71) | 47.6 (1.87) | --- | --- |
| Tri-Clamp-2 "H P | 12 (0.47) | 63.5 (2.5) | 81 (3.19) | 25 (0.98) | 47.6 (1.87) | --- | --- |
| Tri-Clamp-3 " | 12 (0.47) | 91 (3.58) | 110 (4.33) | 18 (0.71) | 72 (2.83) | --- | --- |
| Tri-Clamp-3 "H P | 12 (0.47) | 91 (3.58) | 115 (4.53) | 25 (0.98) | 72 (2.83) | --- | --- |
| Threaded DN40-D IN 11851 | 13 (0.51) | 56 (2.2) | 78 (3.07) | 21 (0.83) | 38 (1.5) | --- | --- |
| Threaded DN50-D IN 11851 | 15 (0.59) | 68.5 (2.7) | 92 (3.62) | 22 (0.86) | 50 (1.96) | --- | --- |
| Threaded DN80-D IN 11851 | 16 (0.63) | 100 (3.94) | 127 (5) | 29 (1.14) | 81 (3.19) | --- | --- |
| Threaded SMS -11 /2" | 12 (0.47) | 55 (2.16) | 74 (2.91) | 25 (0.98) | 35 (1.38) | --- | --- |
| Threaded SMS -2 " | 12 (0.47) | 65 (2.56) | 84 (3.3) | 26 (1.02) | 48.6 (1.91) | --- | --- |
| Threaded SMS -3 " | 12 (0.47) | 93 (3.66) | 113 (4.45) | 32 (1.26) | 73 (2.87) | --- | --- |
| Threaded RJT -2 " | 15 (0.59) | 66.7 (2.63) | 86 (3.38) | 22 (0.86) | 47.6 (1.87) | --- | --- |
| Threaded RJT -3 " | 15 (0.59) | 92 (3.62) | 112 (4.41) | 22.2 (0.87) | 73 (2.87) | --- | --- |
| Threaded IDF- 2" | 12 (0.47) | 60.5 (2.38) | 76 (2.99) | 30 (1.18) | 47.6 (1.87) | --- | --- |
| Threaded IDF- 3" | 12 (0.47) | 87.5 (3.44) | 101.6 (4) | 30 (1.18) | 73 (2.87) | --- | --- |

# LD400S - Wireless Sanitary Transmitter Without Extension Wireless

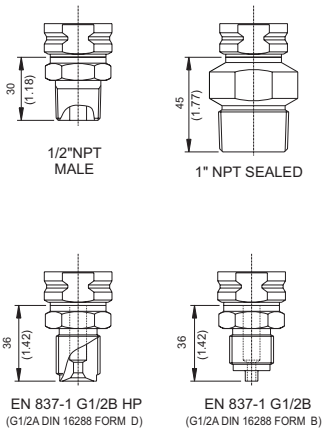


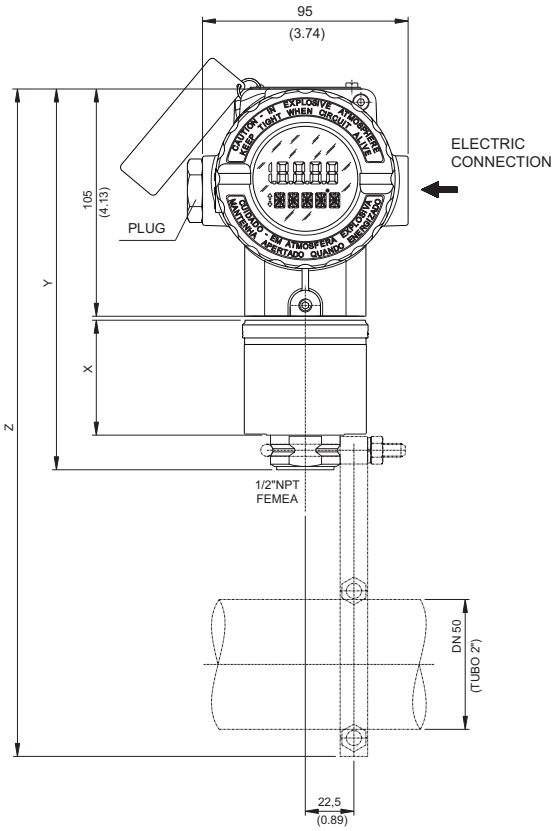

| LD400S | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONNECTION WITHOUT EXTENSION | Dimensions in mm (") | | | | | | |
| | A | ØC | ØD | E | ØF | ØG | EXT. |
| Tri-Clamp DN50 | 8 (0.315) | 63.5 (2.5) | 76.5 (3.01) | 18 (0.71) | 47.5 (1.87) | --- | — |
| Tri-Clamp-11 /2" | 12 (0.47) | 50 (1.96) | 61 (2.4) | 18 (0.71) | 35 (1.38) | --- | — |
| Tri-Clamp-11 /2"H P | 12 (0.47) | 50 (1.96) | 66 (2.59) | 25 (0.98) | 35 (1.38) | --- | — |
| Tri-Clamp-2 " | 12 (0.47) | 63.5 (2.5) | 76.5 (3.01) | 18 (0.71) | 47.6 (1.87) | --- | — |
| Tri-Clamp-2 "H P | 12 (0.47) | 63.5 (2.5) | 81 (3.19) | 25 (0.98) | 47.6 (1.87) | --- | — |
| Tri-Clamp-3 " | 12 (0.47) | 91 (3.58) | 110 (4.33) | 18 (0.71) | 72 (2.83) | --- | — |
| Tri-Clamp-3 "H P | 12 (0.47) | 91 (3.58) | 115 (4.53) | 25 (0.98) | 72 (2.83) | --- | — |
| Threaded DN40-DIN 11851 | 13 (0.51) | 56 (2.2) | 78 (3.07) | 21 (0.83) | 38 (1.5) | --- | — |
| Threaded DN50-DIN 11851 | 15 (0.59) | 68.5 (2.7) | 92 (3.62) | 22 (0.86) | 50 (1.96) | --- | — |
| Threaded DN80-DIN 11851 | 16 (0.63) | 100 (3.94) | 127 (5) | 29 (1.14) | 81 (3.19) | --- | — |
| Threaded SMS -11 /2" | 12 (0.47) | 55 (2.16) | 74 (2.91) | 25 (0.98) | 35 (1.38) | --- | — |
| Threaded SMS -2 " | 12 (0.47) | 65 (2.56) | 84 (3.3) | 26 (1.02) | 48.6 (1.91) | --- | — |
| Threaded SMS -3 " | 12 (0.47) | 93 (3.66) | 113 (4.45) | 32 (1.26) | 73 (2.87) | --- | — |
| Threaded RJT -2 " | 15 (0.59) | 66.7 (2.63) | 86 (3.38) | 22 (0.86) | 47.6 (1.87) | --- | — |
| Threaded RJT -3 " | 15 (0.59) | 92 (3.62) | 112 (4.41) | 22.2 (0.87) | 73 (2.87) | --- | — |
| Threaded IDF- 2" | 12 (0.47) | 60.5 (2.38) | 76 (2.99) | 30 (1.18) | 47.6 (1.87) | --- | — |
| Threaded IDF- 3" | 12 (0.47) | 87.5 (3.44) | 101.6 (4) | 30 (1.18) | 73 (2.87) | --- | — |

# LD400G - Gage Inline Pressure Transmitter

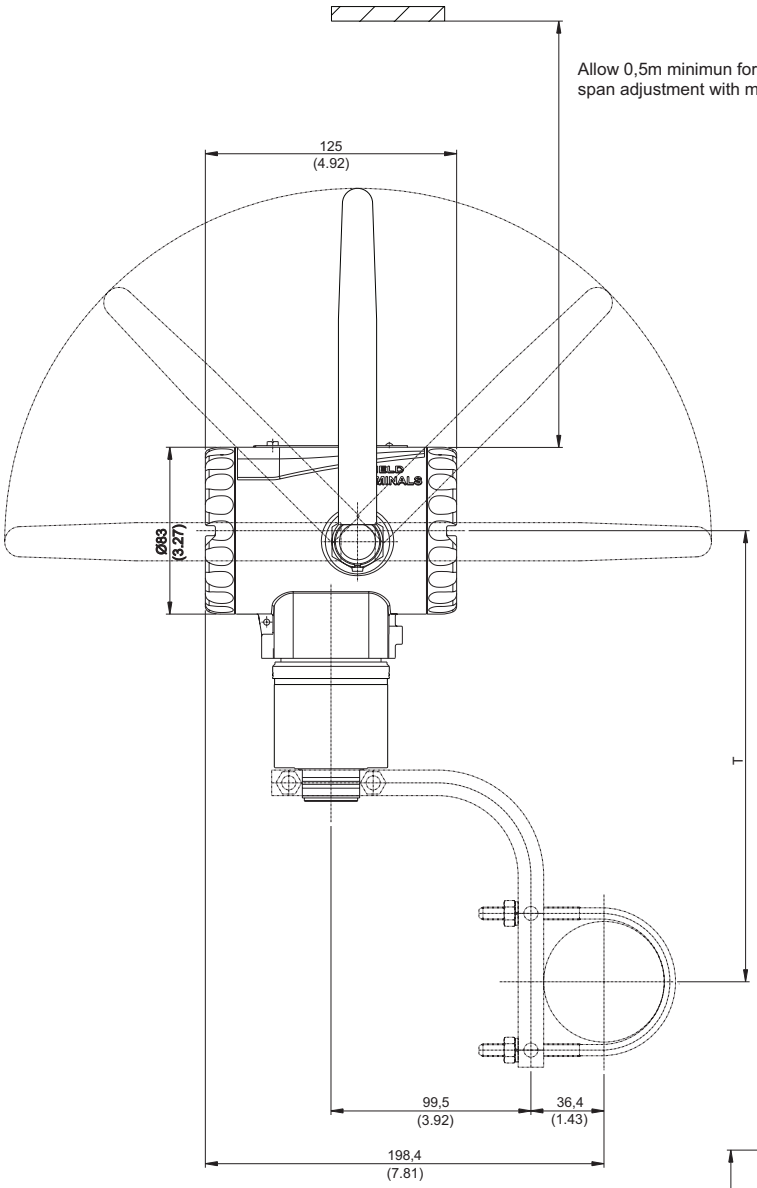



| RANGE | DIMENSIONS mm (") | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | X | | Y | | T | | Z | |
| 2-3 | 48.6 | (1.91) | 171.5 | (6.75) | 219.5 | (8.64) | 303.5 | (11.95) |
| 4 | 50.6 | (1.99) | 173.5 | (6.83) | 221.5 | (8.72) | 305.5 | (12.03) |
| 5 | 53.1 | (2.09) | 176 | (6.93) | 224 | (8.82 | 308 | (12.13) |

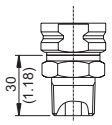


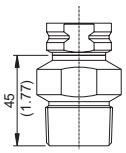
# LD400G - Gage Inline Pressure Transmitter Wireless



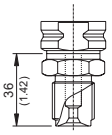

| RANGE | DIMENSIONS mm (") | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | X | | Y | | T | | Z | |
| 2-3 | 48,6 | (1.91) | 171,5 | (6.75) | 219,5 | (8.64) | 303,5 | (11.95) |
| 4 | 50,6 | (1.99) | 173,5 | (6.83) | 221,5 | (8.72) | 305,5 | (12.03) |
| 5 | 53,1 | (2.09) | 176 | (6.93) | 224 | (8.82) | 308 | (12.13) |



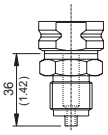

1/2"NPT
MALE



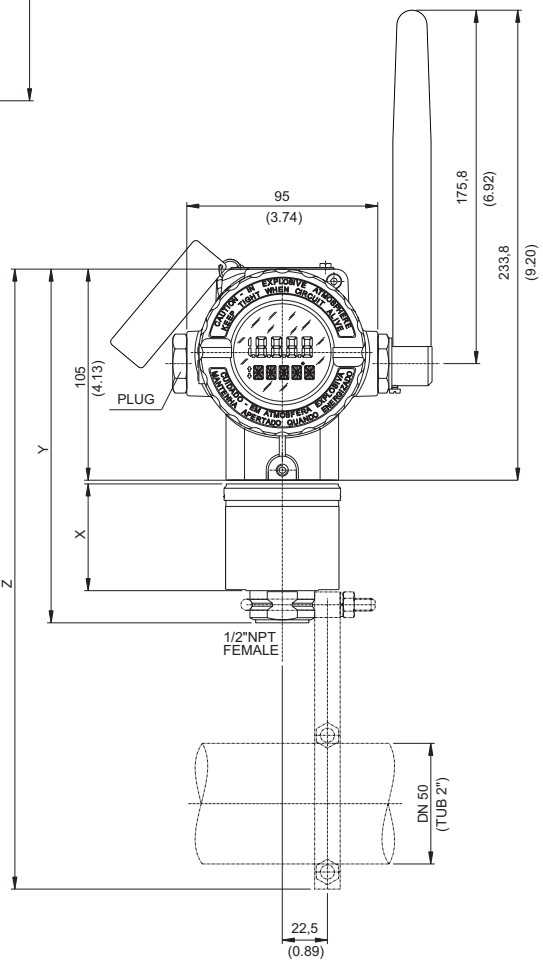

1" NPT SEALED



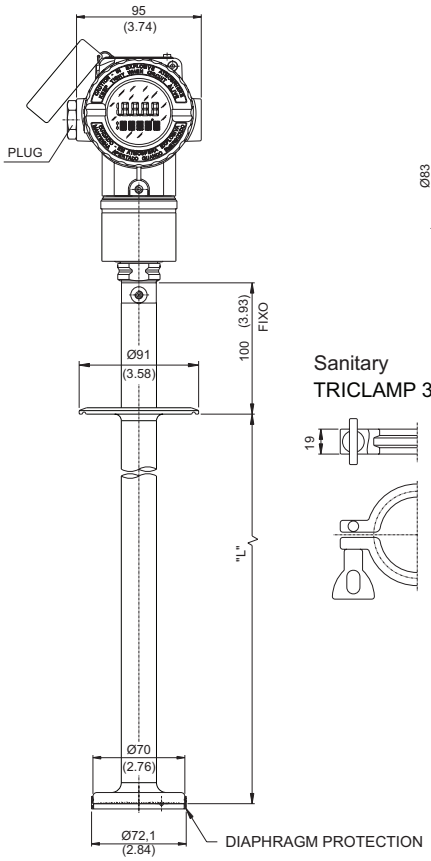

EN 837-1 G1/2B HP
(G1/2A DIN 16288 FORM D)

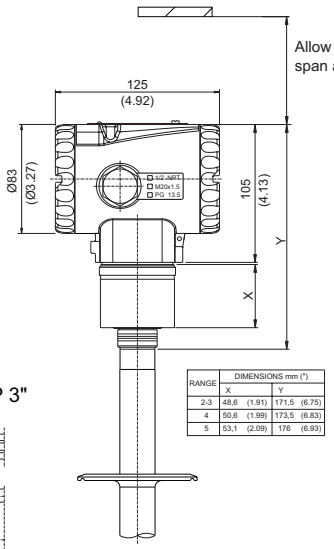



EN 837-1 G1/2B
(G1/2A DIN 16288 FORM B)



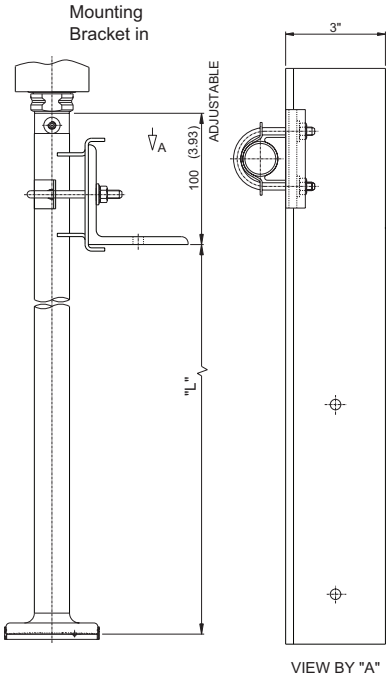
# LD400I - Pressure Transmitter with Extended Probe

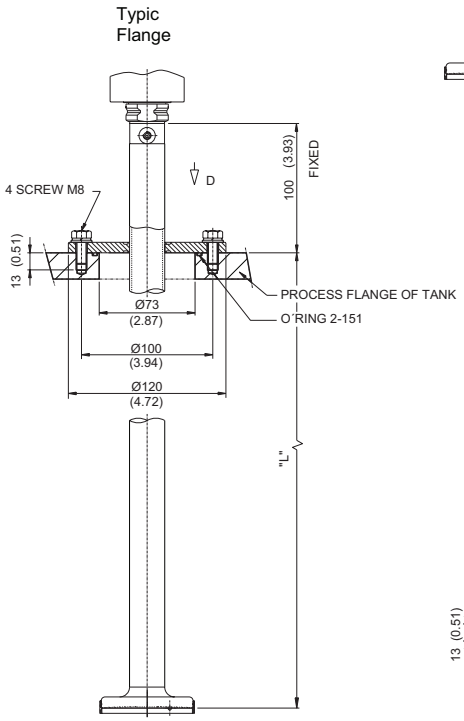


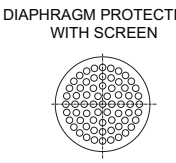



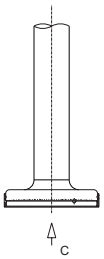


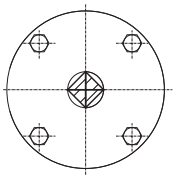


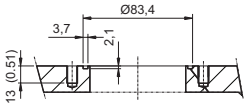


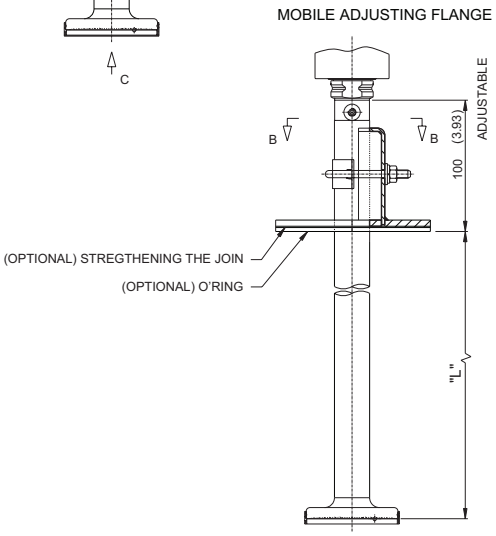



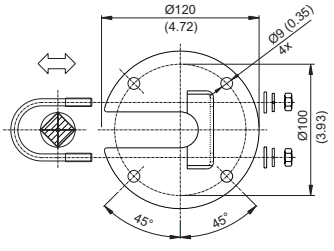



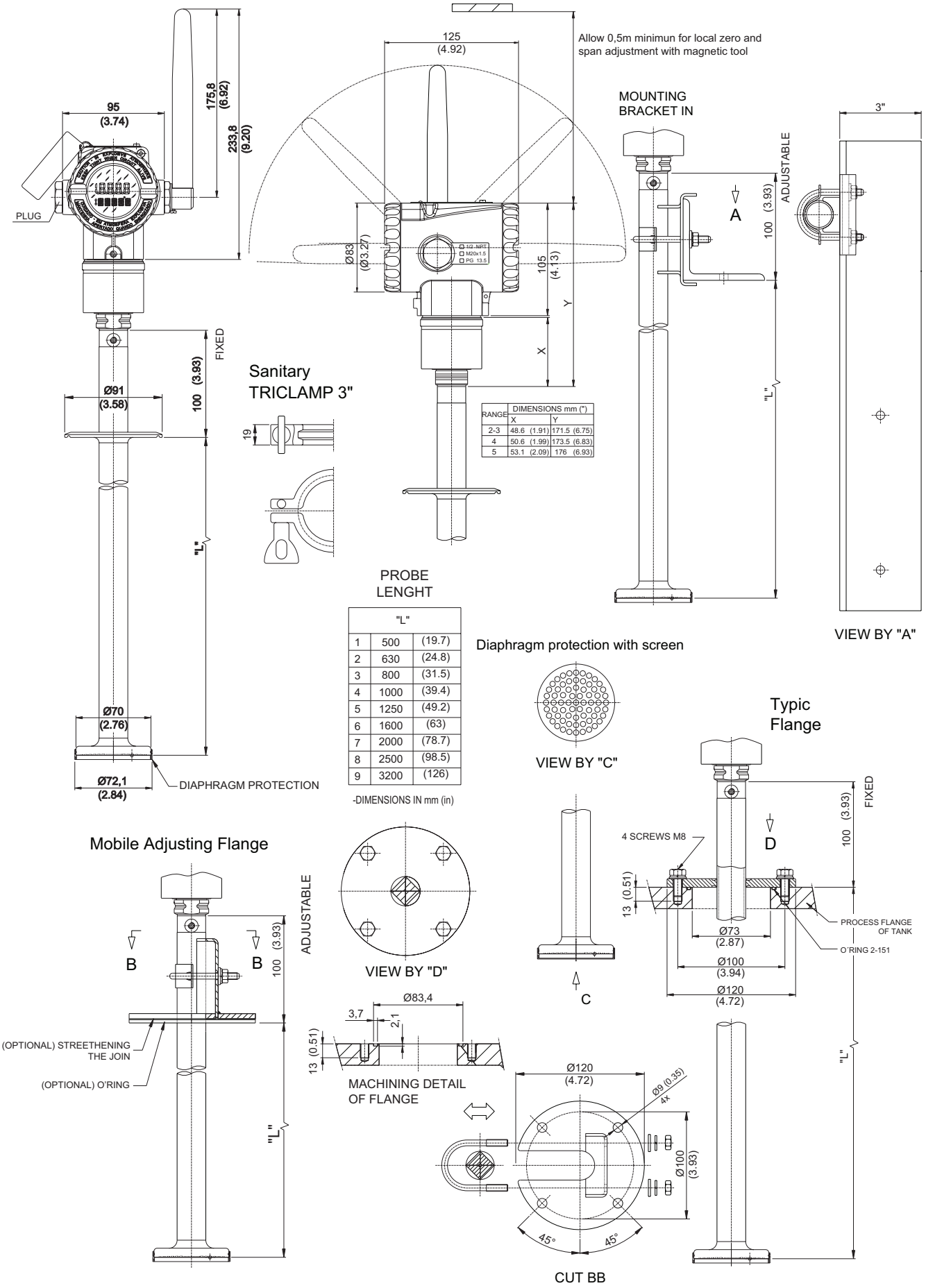




PROBE LENGTH

| | "L" | |
|---|---|---|
| 1 | 500 | (19.7) |
| 2 | 630 | (24.8) |
| 3 | 800 | (31.5) |
| 4 | 1000 | (39.4) |
| 5 | 1250 | (49.2) |
| 6 | 1600 | (63) |
| 7 | 2000 | (78.7) |
| 8 | 2500 | (98.5) |
| 9 | 3200 | (126) |

-DIMENSIONS IN mm (in)

# LD400I - Pressure Transmitter with Extended Probe Wireless



smar

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Specifications and information are subject to change without notice.
Up-to-date address information is available on our website.

web: www.smar.com/contactus.asp

LD400CE