



LD300 series

33301-33302-33303

PRESSURE TRANSMITTER

FOR PRESSURE, LEVEL AND FLOW APPLICATIONS

- $\pm 0.04\%$ High Accuracy
- $\pm 0.15\%$ of URL Stability - Guarantee for 12 Years
- 120:1 Rangeability
- Non-volatile Totalizer
- Tank Linearization
- 100 ms Total Response Time
- PID Control Capability
- Bi-directional Flow Measurement
- Advanced Diagnostics
- Largest Library of Function
- Instantiable Function Blocks
- Supported by DD, EDDL and FDT/DTM
- Three Technology Options



smar

- $\pm 0.04\%$ high performance option;
- $\pm 0.15\%$ of URL stability;
- 120:1 rangeability;
- Span as small as 50 Pa (0.2 inH₂O) up to a range limit of 40 MPa (5800 psi);
- Up to 52 MPa static pressure (7500 psi);
- Direct digital capacitance sensing (no A/D conversion);
- True non-interactive zero and span;
- Local zero and span adjustment;
- Remote calibration and parameterization;
- Transfer functions: linear, \sqrt{x} , $\sqrt{x^3}$ e $\sqrt{x^5}$;
- Tank linearization;
- Alphanumeric LCD indication;
- Small and lightweight;
- Explosion proof and weather proof housing approved (IP66/68 or IP66/68W);
- Intrinsically safe certification;
- Signal simulation for loop tests;
- Non-volatile flow totalization;
- Configurable user unit;
- Configurable local adjustment;
- EMC (Electromagnetic Compatibility) according to IEC61326-1, IEC61326-2-3, IEC61000-6-4, IEC61000-6-2;
- Write protection function;
- Protection against reverse polarity;
- Three technology options: HART®, FOUNDATION™ fieldbus, PROFIBUS PA.

HART® - 4 to 20 mA

- Update output current in 100 ms with 0.75 μ A resolution;
- Improved performance due to dedicated math co-processor;
- Multidrop operation mode;
- PID control function;
- Supports DTM and EDDL;
- Bi-directional flow measurement;
- With FMEDA analysis and MTBF of 244 years.

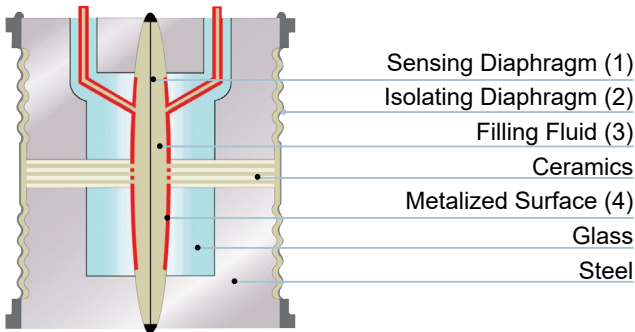
FOUNDATION™ fieldbus

- 17 different types of function blocks for control strategies and advanced diagnostics;
- Up to 20 function blocks;
- Execution of up to 29 external links;
- 12 mA consumption;
- Dynamic block instantiation improves interchangeability;
- Fieldbus Foundation™ registered and ITK approved, version 6.3.1;
- MVC (Multivariable Container) enabled;
- MTBF of 186 years;
- Link Master Function (LAS);
- Number of VCRs: 44.

PROFIBUS PA

- 12 mA consumption;
- Function blocks for analog input and totalization;
- Integrated to Smar ProfibusView or Simatic PDM;
- Supports DTM and EDDL;
- Profile 3.0 improves interchangeability;
- MTBF of 186 years.





LD300 Series offers:

- ± 0.04% accuracy for high performance option;
- ± 0.15% of URL stability guarantee for 12 Years;
- 120:1 rangeability;
- Compact and lightweight;
- Multiple Protocol Options.

LD300 Series uses the field-proven technique of capacitance cell sensor measurement.

The sensor is shown in the picture above. 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. 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).

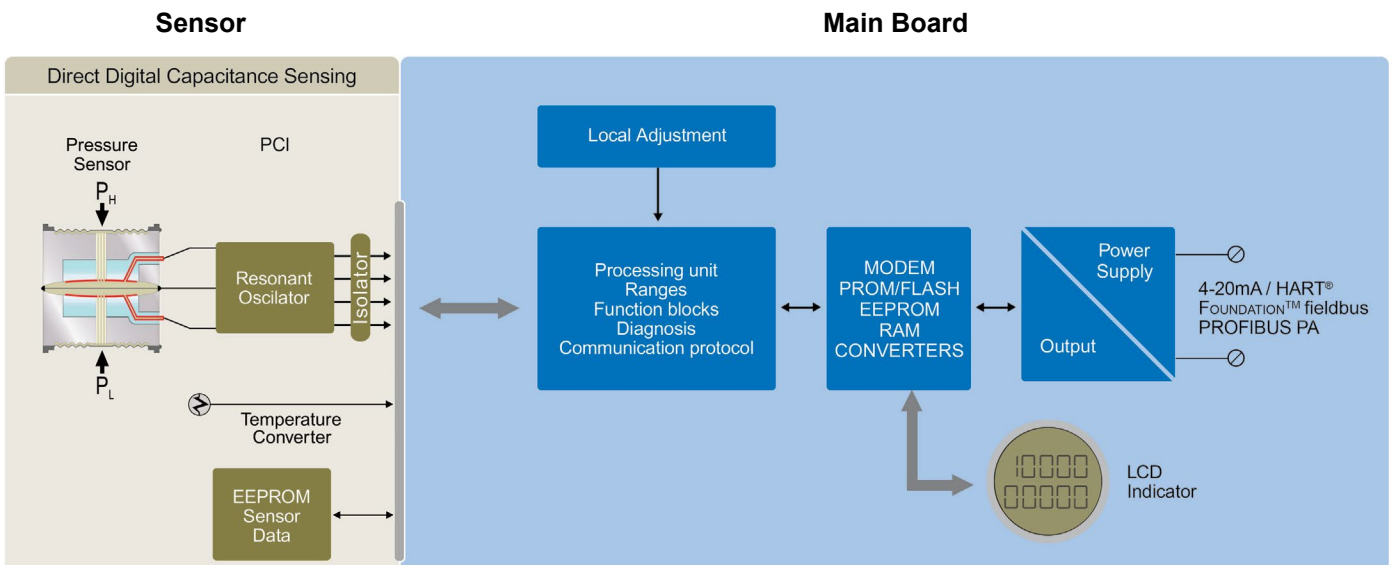
The sensing diaphragm is a moving capacitor plate while the two metallized surfaces (4) are fixed plates. The sensing diaphragm deflection results in capacitance variations between the moving and fixed plates.

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 **LD300 Series**.

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

The available protocol options are: HART®, FOUNDATION™ fieldbus and PROFIBUS PA.

These protocols are easily changed by either replacing the internal electronic board or downloading the firmware. A HART® transmitter can be changed into a FOUNDATION™ fieldbus / PROFIBUS PA device by replacing internal main electronic board, and vice versa. A FOUNDATION™ fieldbus device can be changed into a PROFIBUS PA device and vice versa, by simply downloading a new firmware.



Differential Pressure - LD300D and LD300H

Pressure is applied to high and low sides and differential pressure is measured. High static pressure is supported by **LD300H** models.

Flow - LD300D and LD300H

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

Absolute Pressure - LD300A

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

Gage Pressure - LD300M

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.

Level - LD300L

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



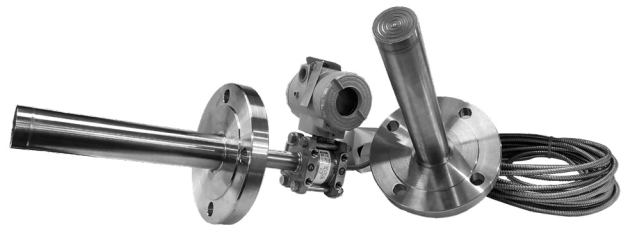
Remote Seals

SR301 is a remote seal designed for chemical and thermal isolation. **LD300 Series** 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) and Flanged with Extension (SR301E).

Typical applications for **LD300 Series** 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 Smar SR301 Series catalog for further information regarding application and specification.



Sanitary Transmitter

LD300S Series are specially designed for food and other applications where sanitary connections are required. With threaded or "tri-clamp" connections, it allows for easy and quick maintenance and cleaning. For further information, see the Smar SR301 Series Catalog.



LD300 Series are available in three different technologies: HART® (**LD301**), FOUNDATION™ fieldbus (**LD302**) and PROFIBUS PA (**LD303**).

These instruments can be configured with Smar software and other manufacturers' configuration tools. Local adjustment is available in all **LD300 Series**. It is possible to configure zero and span, totalization, set point 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.



HART® - LD301

LD301 (HART® protocol) can be configured by:

- DEVCOMDROID Smar software, used with HI331 (Bluetooth Interface);
- Smar CONF401 for Windows;
- Smar DDCON100 for Windows;
- Smar HPC301 and HPC401 for several models of Palm;
- Other manufacturers' configuration tools based on DD (Device Description) or DTM (Device Type Manager), such as AMST™, FieldCare™, PACTware™, HHT275 and HHT375, PRM Device Viewer.

For **LD301** management and diagnostics, AssetView ensures continuous information monitoring.

FOUNDATION™ fieldbus - LD302

LD302 utilizes the FOUNDATION™ fieldbus H1 protocol, an open technology that allows any H1 enabled configuration tool to configure this device.

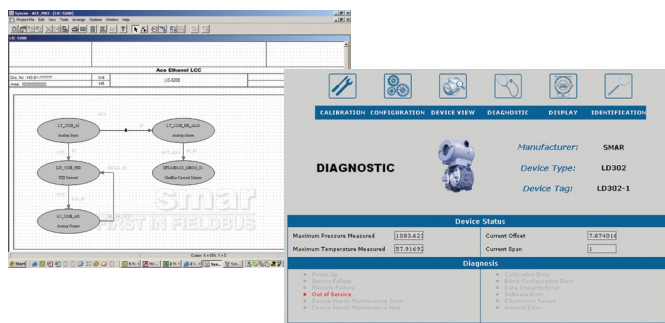
Sycon (System Configuration Tool) is a software tool used to configure, maintain and operate the field devices. Sycon offers efficient and friendly interaction with the user, using Windows.

Configuration tools such as AMST™, FieldCare™ and HHT375 can configure **LD302** devices. DD (Device Description) and CF (Capability File) files can be downloaded at either the Smar or Fieldbus Foundation™ website.

LD302 supports complex strategies configurations due to the high capacity and variety of dynamic instantiable function blocks.

Seventeen different types of function blocks are supported, and up to 20 function blocks can be running simultaneously.

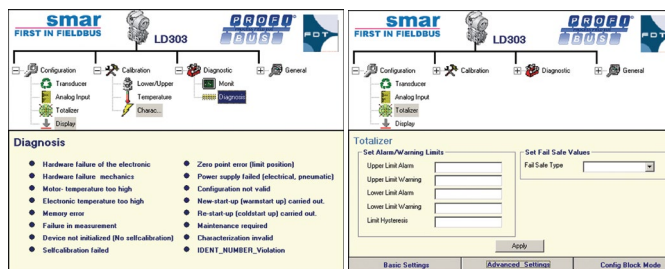
Maintenance procedures with AssetView diagnostics and status information from FOUNDATION™ fieldbus result in a safer plant with higher availability.



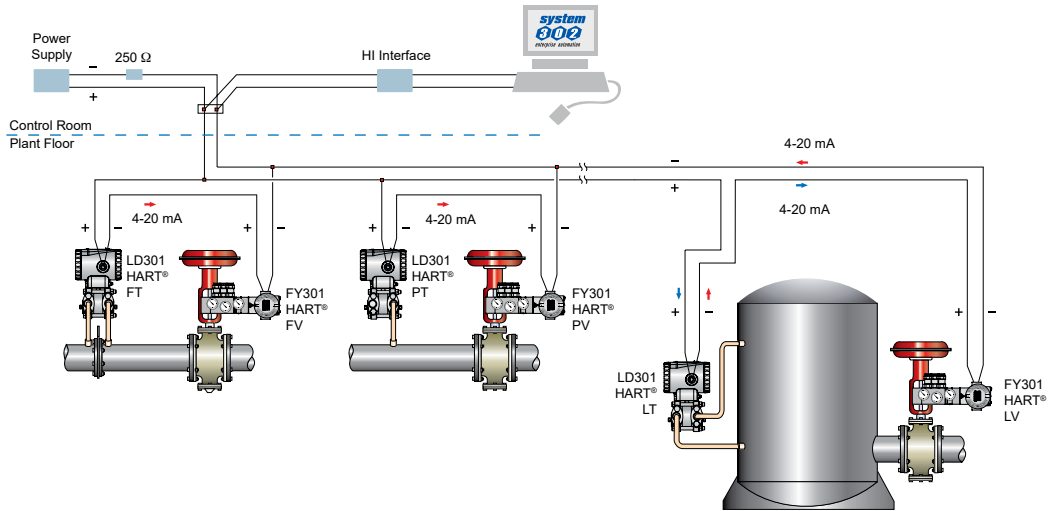
PROFIBUS PA - LD303

LD303 (PROFIBUS PA protocol) can be configured using Smar ProfibusView or Simatic PDM and by the FDT (Field Device Tool) and DTM (Device Type Manager) concept tools, such as FieldCare™ and PACTware™. It can also be integrated by any PROFIBUS System using the GSD file.

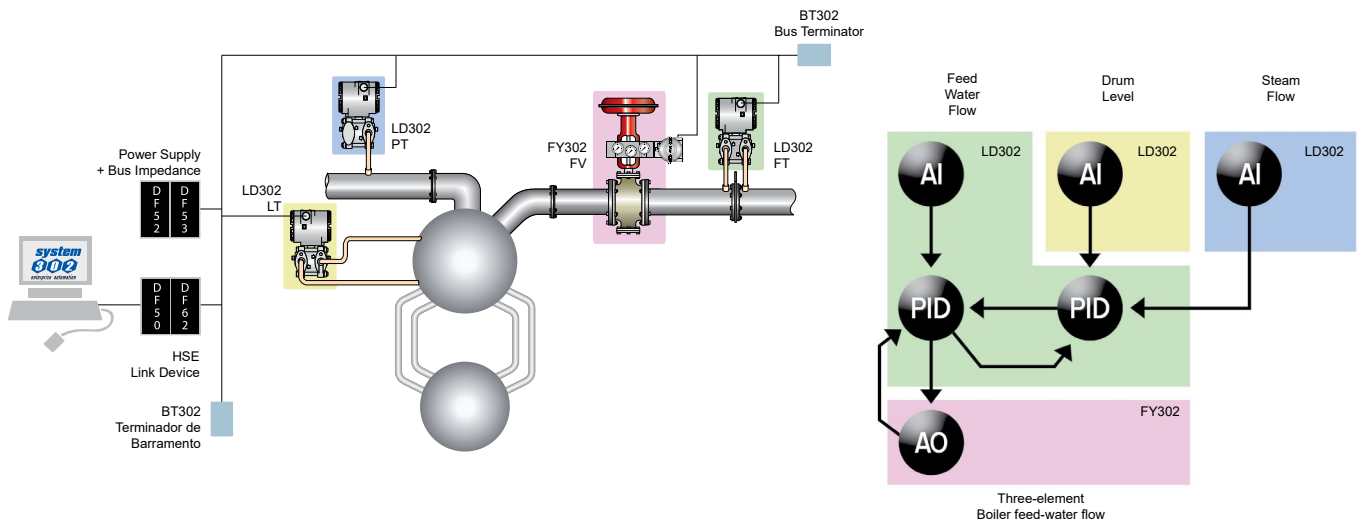
PROFIBUS PA also has quality and diagnostic information, improving plant management and maintenance. Conforms to profile 3.0.



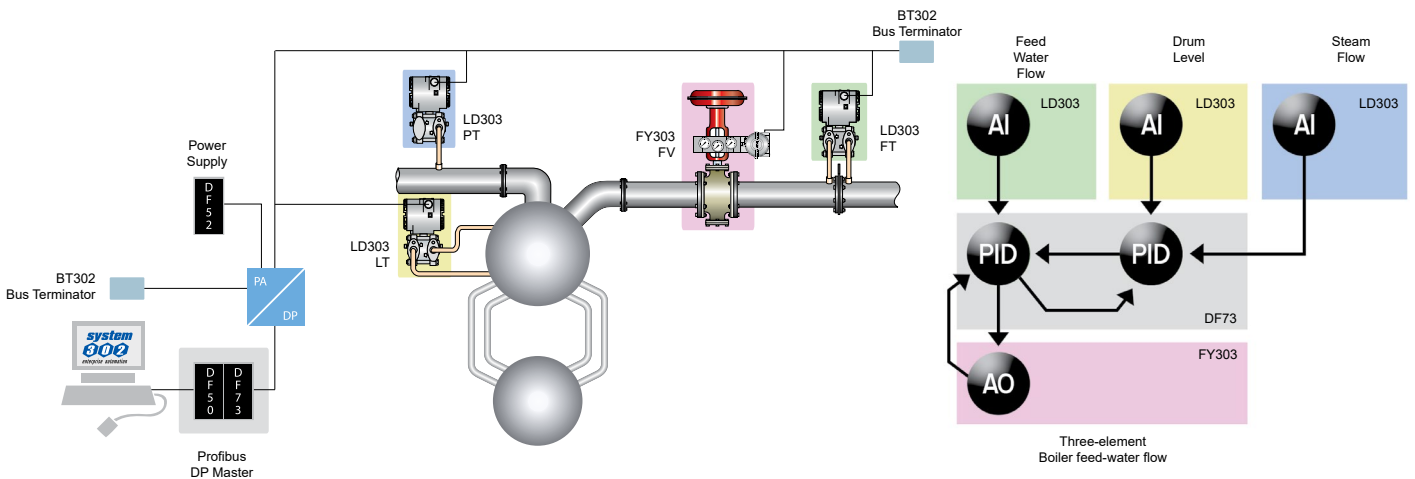
HART® - LD301



FOUNDATION™ fieldbus - LD302



PROFIBUS PA- LD303



Functional Specifications

Process Fluid	Liquid, gas or steam.
Output and Communication Protocol	<p>HART®: Two-wire, 4-20 mA according to NAMUR NE43 specification, with superimposed digital communication (HART® Protocol).</p> <p>FOUNDATION™ fieldbus and PROFIBUS PA: Digital only. Complies with IEC 61158-2:2000 (H1): 31.25 kbit/s voltage mode, bus powered.</p>
Power Supply / Current Consumption	<p>HART®: 12 to 45 Vdc.</p> <p>Transient Suppressor Vmax = 65 Vp; Differential mode - bi-directional; Low current leak and capacitance; Meets the standards: IEEE C62.41, IEEE C37.90.1, IEEE61000-4-4 and IEEE61000-4-5; Less than 5 ns response time.</p> <p>FOUNDATION™ fieldbus and PROFIBUS PA: Bus powered: 9 to 32 Vdc. Quiescent current consumption: 12 mA.</p>
Indicator	4½-digit numerical and 5-character alphanumeric LCD indicator (optional).
Hazardous Area Certifications	<p>HART®, FOUNDATION™ fieldbus and PROFIBUS PA: INMETRO certification (CEPEL), FM, ATEX, and IECEx (Nemko-Presafe and Dekra-Exam) for intrinsically safe and explosion proof, INMETRO (CEPEL) and FM for dust ignition proof.</p> <p>FOUNDATION™ fieldbus and PROFIBUS PA: FISCO Field Device Ex ia IIC T4 FNICO Field Device Ex n1 IIC T4</p>
European Directive Information	<p>Authorized representative in European Community Smar Europe BV De Oude Wereld 116 2408 TM Alphen aan den Rijn Netherlands</p> <p>PED Directive (2014/68/EU) - Pressure Equipment Directive This product is in compliance with Article 4 paragraph 3 of the Pressure Equipment Directive 2014/68/EU and was designed and manufactured in accordance with the sound engineering practice.</p> <p>EMC Directive (2014/30/EU) - Eletromagnetic Compatibility For products evaluation, the standard IEC 61326-1 were consulted, and to comply with the EMC directive, the installation must follow these special conditions: Use shielded, twisted-pair cable for powering the instrument and signal wiring. Keep the shield insulated at the instrument side, connecting the other one to the ground.</p> <p>ATEX Directive (2014/34/EU) - Equipment for explosive atmospheres The EC-Type Examination Certificate is released by DNV GL Presafe AS (CE2460) and DEKRA Testing and Certification GmbH (CE0158).</p> <p>LVD Directive 014/35/EU - Low Voltage According the LVD directive Annex II, electrical equipment for use in explosive atmosphere is outside the scope of this directive.</p> <p>The EC declarations of conformity for all applicable European directives for this product can be found at www.smar.com.</p>
Zero and Span Adjustments	Noninteractive, via digital communication or local adjustment.
Failure Alarm (Diagnostics)	<p>Detailed diagnostics through communication for all protocols.</p> <p>HART®: 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.</p> <p>FOUNDATION™ fieldbus and PROFIBUS PA: For sensor circuit failures, events are generated and status is sent to link outputs. Detailed diagnostics are available in the contained parameters.</p>

<p>Temperature Limits</p>	<p>Ambient: -40 to 85 °C (-40 to 185 °F) Process: -40 to 100 °C (-40 to 212 °F) (Silicone Oil) 0 to 85 °C (32 to 185 °F) (Inert Fluorolube Oil) -20 to 85 °C (-4 to 185 °F) (Inert Krytox Oil and Fomblim Oil) -40 to 150 °C (-40 to 302 °F) (LD301L) Storage: -40 to 85 °C (-40 to 185 °F) Digital Display: -20 to 80 °C (-4 to 176 °F) -40 to 85 °C (-40 to 185 °F) (without damage)</p>
<p>Turn-on Time</p>	<p>HART®: Performs within specifications in less than 5 seconds after power is applied to the transmitter.</p> <p>FOUNDATION™ fieldbus and PROFIBUS PA: Performs within specifications in less than 10 seconds after power is applied to the transmitter.</p>
<p>Configuration</p>	<p>HART®: Through digital communication, using DevComDroid configuration software (Android DDL Interpreter), used with HART interfaces, such as HI331 bluetooth interface. However, the old Palm with HPC301 or CONF401, which are obsolete, are still operable with the latest versions of HART transmitters. It can also be configured using DD and FDT/DTM tools, and can be partially configured through local adjustment.</p> <p>FOUNDATION™ fieldbus and PROFIBUS PA: Basic configuration may be done using the local adjustment magnetic tool if device is fitted with display. Complete configuration is possible using configuration tools.</p>
<p>Volumetric Displacement</p>	<p>Less than 0.15 cm³ (0.01 in³)</p>
<p>Static Pressure Limits</p>	<p>70 psi (5 bar) for range 0 1200 psi (80 bar) for range 1 2300 psi (160 bar) for ranges 2, 3 and 4 4600 psi (320 bar) for models H2 to H5 Except for LD30XA and LD30XM models</p> <p><i>Static pressure, in differential pressure measurement, is the pressure applied on both measuring chambers, simultaneously. For example, in flow measurement with restriction elements, the static pressure is the line pressure, present in both measuring chambers, simultaneously.</i></p>
<p>Overpressure Limits</p>	<p>70 psi (5 bar) for range 0 1200 psi (80 bar) for range 1 2300 psi (160 bar) for ranges 2, 3 and 4 5800 psi (400 bar) for range 5 7500 psi (520 bar) for range 6</p> <p>Flange Test Pressure (Burst Pressure): 68.95 MPa (10,000 psi) <i>Flange test is the maximum pressure applied to the transmitter without damage to the measuring set.</i></p> <p>Overpressures above will not damage the transmitter, but a new calibration may be necessary <i>Overpressure is the pressure applied to only one of the transmitter chambers when this pressure is higher than the sensor's reading pressure limit (URL). The concept applies to differential, gauge or absolute pressure transmitters.</i></p>
<p>Pressure Limits for Flanges</p>	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center; background-color: #0070C0; color: white; margin: 0;">WARNING</p> <p style="margin: 5px 0 0 0;">It is described here only the maximum pressures of some materials referenced in each standard, other materials on request. Temperatures above 150 °C are not available in level models.</p> </div>

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	54.3	48.6	44.1	41.1	38.1	36.3
	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

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	-	-

Pressure Limits for Flanges (continuation)

PRESSURES TABLE FOR SEAL AND LEVEL FLANGES ASME B16.5 2017 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
	600	103.4	103.4	103	100.3	96.7	92.7	85.7	82.6	80.4
	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
	600	103.4	103.4	101.3	91.9	85.3	80.9	77.7	76.3	75.3
	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

Pressure Limits for Flanges (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
	600	82.7	80	69.6	62.8	58.3	54.9	52.1	51	50.1
	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
	600	99.3	96.2	84.4	77	71.3	66.8	63.2	61.8	60.7
	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

PRESSURES TABLE FOR SEAL AND LEVEL FLANGES JIS 2220 – 2012 STANDARD

Material Group	Pressure Class	Maximum Temperature Allowed			
		Tamb at 120°	220°	300°	350°
		Maximum Pressure Allowed (bar)			
AISI316L	10k	14	12	10	--
	20k	37	31	29	26
	40k	68	62	57	52

**Pressure Limits
for Sanitary
Connections**

PRESSURES TABLE FOR TRICLAMP CONNECTIONS BS4825 P3

DN	PN normal		HP High Pressure	
	20°C (68°F)	120°C (248°F)	20°C (68°F)	120°C (248°F)
	Maximum Pressure Allowed (bar)			
1.1/2"	34	20	100	60
2" – DN50	28	17	70	42
3"	22	13	70	42

PRESSURES TABLE FOR THREADED CONNECTIONS

Sanitary Threads – Temperature Limits				
DN	RJT	IDF	SMS	DIN
	20°C (68°F)	120°C (248°F)	20°C (248°F)	120°C (248°F)
	BS4825 P5	BS4825 P4	SMS1145	DIN11851
Maximum Pressure Allowed (bar)				
DN25	--	--	--	40
1.1/2"-DN40	10	16	40	40
2-DN50	10	16	25	25
3-DN80	10	16	25	25

Humidity Limits

0 to 100% RH (Relative Humidity)

**Damping
Adjustment**

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

Performance Specifications

Reference Conditions	Span starting at zero, temperature of 25 °C (77 °F), atmospheric pressure, power supply of 24 Vdc, fill fluid in Silicone Oil, O'Ring in Buna-N, isolating diaphragms in 316L SST and digital trim equal to lower and upper range values.
Accuracy	<p>For range 0, and differential or gage models and 316L SST or hastelloy diaphragm with silicon or halocarbon filling fluid: 0.2 URL ≤ span ≤ URL: ± 0.1% of span 0.05 URL ≤ span < 0.2 URL: ± [0.025+0.015 URL/span]% of span</p> <p>For ranges 1, 2, 3, 4, 5 or 6, differential or gage models, and 316L SST or hastelloy diaphragm with silicon or halocarbon filling fluid: 0.1 URL ≤ span ≤ URL: ± 0.075% of span 0.025 URL ≤ span < 0.1 URL: ± [0.0375+0.00375.URL/span]% of span 0.0083 URL ≤ span < 0.025 URL: ± [0.0015+0.00465.URL/span]% of span</p> <p>For ranges 2 to 6 and absolute model. For tantalum or monel diaphragm. For fluorolube filling fluid: 0.1 URL ≤ span ≤ URL: ± 0.1% of span 0.025 URL ≤ span < 0.1 URL: ± 0.05[1+0.005 URL/span]% of span 0.0083 URL ≤ span < 0.025 URL: ± [0.01+0.006 URL/span]% of span</p> <p>For range 1 and absolute model: ± 0.2% of span</p> <p>For ranges 2, 3 or 4 and level model and 316L SST diaphragm with silicon or halocarbon filling fluid with maximum pressure matching the flange pressure class: 0.1 URL ≤ span ≤ URL: ± 0.075% of span 0.025 URL ≤ span < 0.1 URL: ± [0.0375+0.00375.URL/span]% of span 0.0083 URL ≤ span < 0.025 URL: ± [0.0015+0.00465.URL/span]% of span</p> <p>Linearity effects, hysteresis and repeatability are included.</p>
Stability	<p>For range 1, 2, 3, 4, 5 and 6: ± 0.15% of URL for 5 years at 20 °C temperature change and up to 7 MPa (1000 psi) of static pressure For range 0: ± 0.2% of URL for 12 months at 20 °C temperature change and up to 100 kPa (1 bar) of static pressure For level models: ± 0.2% of URL for 12 months at 20 °C temperature change</p>
Temperature Effect	<p>For ranges 2, 3, 4, 5 and 6: 0.2 URL ≤ span ≤ URL: ± [0.02% URL + 0.06% span] per 20 °C (68 °F) 0.0085 URL ≤ span < 0.2 URL: ± [0.023% URL + 0.045% span] per 20 °C (68 °F) For range 1: 0.2 URL ≤ span ≤ URL: ± [0.08% URL + 0.05% span] per 20 °C (68 °F) 0.025 URL ≤ span < 0.2 URL: ± [0.06% URL + 0.15% span] per 20 °C (68 °F) For range 0: 0.2 URL ≤ span ≤ URL: ± [0.15% URL + 0.05% span] per 20 °C (68 °F) 0.05 URL ≤ span < 0.2 URL: ± [0.1% URL + 0.3% span] per 20 °C (68 °F) For LD300L: 6 mmH₂O per 20 °C for 4" and DN100 17 mmH₂O per 20 °C for 3" and DN80 Consult for other flange dimensions and fill fluid.</p>
Static Pressure Effect	<p>Zero error: For ranges 2, 3, 4, 5 and 6: ± 0.033% URL per 7 MPa (1000 psi) For range 1: ± 0.05% URL per 1.7 MPa (250 psi) For range 0: ± 0.1% URL per 0.5 MPa (5 bar) For Level transmitters: ± 0.1% URL per 3.5 MPa (500 psi) The zero error is a systematic error that can be eliminated by calibrating at the operating static pressure. Span error: For ranges 2, 3, 4, 5 and 6: correctable to ± 0.2% of reading per 7 MPa (1000 psi) For range 1 and level transmitters: correctable to ± 0.2% of reading per 3.5 MPa (500 psi) For range 0: correctable to ± 0.2% of reading per 0.5 MPa (5 bar)</p>
Power Supply Effect	± 0.005% of calibrated span per volt.
Mounting Position Effect	Zero shift of up to 250 Pa (1 inH ₂ O) which can be calibrated out. No span effect.
Electromagnetic Interference Effect	Approved according to IEC61326-1:2006, IEC61326-2-3:2006, IEC61000-6-4:2006, IEC61000-6-2:2005.

Physical Specifications

<p>Electrical Connection</p>	<p>½ - 14 NPT M20 X 1.5 PG 13.5 DIN</p> <p>¾ – 14 NPT (with 316 SST adapter for 1/2 - 14 NPT) ¾ – 14 BSP (with 316 SST adapter for 1/2 - 14 NPT) ½ – 14 BSP (with 316 SST adapter for 1/2 - 14 NPT)</p>
<p>Process Connection</p>	<p>¼ - 18 NPT or ½ -14 NPT (with adapter). For L models see Ordering Code. See Ordering Code for more options.</p>
<p>Wetted Parts</p>	<p>Isolating Diaphragms: 316L SST, Hastelloy C276, Monel 400 or Tantalum.</p> <p>Drain/Vent Valves and Plug: 316 SST, Hastelloy C276 or Monel 400.</p> <p>Flanges: Plated Carbon Steel, 316 SST (ASTM - A351 CF8M), Hastelloy C276 (ASTM - A494 CW-12MW) or Monel 400.</p> <p>Wetted O-Rings (For Flanges and Adapters): Buna-N, Viton™, PTFE, Ethylene-Propylene, or Kalrez.</p> <p>Level Flanges (LD301L – ASME / DIN / JIS) 316L SST; 304L SST; Hastelloy C-276; Duplex UNS S31803 / S32205; Super Duplex UNS S32750 / S32760</p> <p>Flanges Isolating Diaphragms: 316L SST; 304L SST; Hastelloy C-276; Super Duplex UNS S32750 / S32760; 316L SST with Halar coating; 316L SST gold plated; Monel gold plated</p> <p>Flange's Gaskets: PTFE; Grafoil</p> <p>Sanitary connections (TC, SMS, RTJ, IDF, DIN 11851): 316L SST (without extension) 316L SST; Hastelloy C-276 (extension end of connection)</p> <p>Sanitary Diaphragms: 316L SST; Hastelloy C-276</p> <p>Sanitary connections - Sealing rings: Buna N; PTFE; Viton</p> <p>The LD300 is available in NACE MR-01-75/ISO 15156 compliant materials.</p>
<p>Nonwetted Parts</p>	<p>Electronic Housing: aluminum or 316 SST with polyester or epoxy painting or 316 SST without painting housing. Complies with NEMA 4X/6P, IP66 or IP66W*, IP68 or IP68W*. <i>*The IP68 sealing test (immersion) was performed at 10m for 24 hours. The W condition or 4X was tested for 200h and refer to saline atmosphere.</i></p> <p>Absolute/Gage Flange; reduced volume flange and Plug Flange 316 SST - CF8M (ASTM - A351 CF8M)</p> <p>Fill Fluid: Silicone, Fluorolube, Krytox, Halocarbon 4.2 or Fomblim oils.</p> <p>Cover O’Ring: Buna-N</p> <p>Mounting Bracket: Plated Carbon Steel or 316 SST. Accessories (bolts, nuts, washers and U-clamps) in Carbon Steel or 316 SST.</p> <p>Flange Bolts and Nuts: Plated Carbon Steel, Grade 8 or 316 SST. For NACE applications: Carbon Steel ASTM A193 B7M, Hastelloy, Super duplex.</p> <p>Identification Plate: 316 SST.</p>

Physical Specifications (continuation)

Mounting	<p>a) Flange mounted for Level and Sanitary models.</p> <p>b) Optional universal mounting bracket for surface or 2"- pipe (DN 50).</p> <p>c) Manifold Valve integrated to the transmitter.</p> <p>d) Directly on piping for closely coupled transmitter/orifice flange combinations.</p> <p>e) L mounting bracket</p>
Approximate Weights	<p>3.15 kg (7 lb): all models, except L models.</p> <p>4.6 kg to 23.5 kg (10 lb to 52 lb): L models depending on the flanges, extension and materials.</p>
Control Functions Characteristics (Optional)	<p>HART® PID Control (PID) and Totalizer (TOT)</p> <p>FOUNDATION™ fieldbus Resource (RS), Transducer (TRD), Display Transducer (DSP), Diagnostics Transducer Block (DIAG), Analog Input (AI), PID Control (PID), Advanced PID Control (APID), Arithmetic (ARTH), Integrator (INTG), Input Selector (ISEL), Signal Characterizer (CHAR), Analog Alarm (AALM), Timer and Logic (TIME), Lead Lag (LLAG), Output Signal Selector and Dynamic Limiter (OSDL), Constant (CT) and Density (DENS).</p> <p>PROFIBUS PA Physical Block (PHY), Transducer (TRD), Display Transducer (DSP), Analog Input (AI) and Totalizer (TOT)</p>

High Performance option (code L1) is available under the following conditions only:

Application	Differential Gage								
Range	D0	-1	1	0.05	kPa	-4	4	0.2	inH ₂ O
	D1	-5	5	0.10	kPa	-20	20	0.4	inH ₂ O
	D2	-50	50	0.42	kPa	-200	200	1.67	inH ₂ O
	D3	-250	250	2.08	kPa	-36	36	0.3	psi
	D4	-2500	2500	20.83	kPa	-360	360	3	psi
	M0	-1	1	0.05	kPa	-4	4	0.2	inH ₂ O
	M1	-5	5	0.10	kPa	-20	20	0.4	inH ₂ O
	M2	-50	50	0.42	kPa	-200	200	1.67	inH ₂ O
	M3	-100	250	2.08	kPa	-14.50	36	0.3	psi
	M4	-100	2500	20.83	kPa	-14.50	360	3	psi
	M5	-0.1	25	0.21	MPa	-14.50	3600	30	psi
	M6	-0.1	40	0.33	MPa	-14.50	5800	48.3	psi
	H2	-50	50	0.42	kPa	-200	200	1.67	inH ₂ O
	H3	-250	250	2.08	kPa	-36	36	0.3	psi
	H4	-2500	2500	20.83	kPa	-360	360	3	psi
H5	-25	25	0.21	MPa	-3600	3600	30	psi	
Diaphragm Material	316L SST Hastelloy C276								
Fill Fluid	Silicone								

Performance Specifications (Code L1)

Reference Conditions	Span starting at zero, temperature of 25 °C (77 °F), atmospheric pressure, power supply of 24 Vdc, silicone oil fill fluid, isolating diaphragms in 316L SST and digital trim equal to lower and upper range values.
Accuracy	<p>For all L1 ranges: 0.2 URL ≤ span ≤ URL: ± 0.04% of span 0.05 URL ≤ span < 0.2 URL: ± [0.021667 + 0.003667 URL/span]% of span 0.0085 URL ≤ span < 0.05 URL: ± [0.0021 + 0.004645 URL/span]% of span</p>
Stability	<p>For range 2: ± 0.05% of URL for 6 months For range 3: ± 0.075% of URL for 12 months For range 4: ± 0.1% of URL for 24 months For all M, D, and H transmitters: ± 0.15% of URL for 12 years, at 20 °C temperature change and up to 7 MPa (1000 psi) {70 bar} of static pressure, environment free of hydrogen migration.</p>
Temperature Effect	<p>From -10 °C to 50 °C, protected from direct sun radiation: 0.2 URL ≤ span ≤ URL: ± [0.018% URL + 0.012% span] per 20 °C (36 °F) 0.0085 URL ≤ span < 0.2 URL: ± [0.02% URL + 0.002% span] per 20 °C (36 °F)</p>
Static Pressure Effect	<p>Zero error: ± 0.025% URL per 7 MPa (1000 psi) The zero error is a systematic error that can be eliminated by calibrating at the operating static pressure.</p> <p>Span error: Correctable to ± 0.2% of reading per 7 MPa (1000 psi).</p>

Hastelloy is a trademark of the Cabot Corp.

Fluorolube is a trademark of Hooker Chemical Corp.

Foundation is a trademark of Fieldbus Foundation.

Monel is a trademark of International Nickel Co.

Halocarbon is a trademark of Halocarbon.

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MODEL DIFFERENTIAL, FLOW, GAGE, ABSOLUTE AND HIGH STATIC PRESSURE TRANSMITTERS

LD301 HART® & 4-20 mA
LD302 FOUNDATION™ fieldbus
LD303 PROFIBUS PA

COD.	Type	Range Limits		Min. Span	Unit	Range Limits		Min. Span	Unit
		Min	Max			Min	Max		
D0	Differential and Flow	-1	1	0.05	kPa	-4	4	0.2	inH ₂ O
D1	Differential and Flow	-5	5	0.10	kPa	-20	20	0.4	inH ₂ O
D2	Differential and Flow	-50	50	0.42	kPa	-200	200	1.67	inH ₂ O
D3	Differential and Flow	-250	250	2.08	kPa	-36	36	0.3	psi
D4	Differential and Flow	-2500	2500	20.83	kPa	-360	360	3	psi
M0	Gage	-1	1	0.05	kPa	-4	4	0.2	inH ₂ O
M1	Gage	-5	5	0.10	kPa	-20	20	0.4	inH ₂ O
M2	Gage	-50	50	0.42	kPa	-200	200	1.67	inH ₂ O
M3	Gage	-100	250	2.08	kPa	-14.50	36	0.3	psi
M4	Gage	-100	2500	20.83	kPa	-14.50	360	3	psi
M5	Gage	-0.1	25	0.21	MPa	-14.50	3600	30	psi
M6	Gage	-0.1	40	0.33	MPa	-14.50	5800	48.3	psi
A1	Absolute	0	5	2.00	kPa	0	37	14.8	mmHga
A2	Absolute	0	50	2.50	kPa	0	7.2	0.36	psia
A3	Absolute	0	250	5.00	kPa	0	36	0.73	psia
A4	Absolute	0	2500	20.83	kPa	0	360	3	psia
A5	Absolute	0	25	0.21	MPa	0	3600	30	psia
A6	Absolute	0	40	0.33	MPa	0	5800	48.3	psia
H2	Differential - High Static Pressure	-50	50	0.42	kPa	-200	200	1.67	inH ₂ O
H3	Differential - High Static Pressure	-250	250	2.08	kPa	-36	36	0.3	psi
H4	Differential - High Static Pressure	-2500	2500	20.83	kPa	-360	360	3	psi
H5	Differential - High Static Pressure	-25	25	0.21	MPa	-3600	3600	30	psi

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

COD. Diaphragm Material and Fill Fluid

1	316L SST	Silicone Oil (9)
2	316L SST	Inert Fluorolube Oil (2) (15)
3	Hastelloy C276	Silicone Oil (1) (9)
4	Hastelloy C276	Inert Fluorolube Oil (1) (2) (15)
5	Monel 400	Silicone Oil (1) (3) (9)
7	Tantalum	Silicone Oil (3) (9)
8	Tantalum	Inert Fluorolube Oil (2) (3) (15)
9	316L SST	Fomblin Oil (12)
A	Monel 400	Fomblin Oil (1)(3)
D	316 L SST	Inert Krytox Oil (3) (15)
E	Hastelloy C276	Inert Krytox Oil (1) (3) (15)
F	Hastelloy C276, Gold Plated	Silicone Oil (1) (9)
G	Tantalum	Inert Krytox Oil (3) (15)
I	316L SST, Gold Plated	Silicone Oil (3) (9)
J	Int 316L SST, Gold Plated	Inert Fluorolube Oil (2) (3) (4) (15)
K	Monel 400	Inert Krytox Oil (1) (3) (15)
L	Int.316L SST, Gold Plated	Inert Krytox Oil (3) (15)
M	Monel 400 Gold Plated	Silicone Oil (1) (3) (9)
P	Monel 400 Gold Plated	Inert Krytox Oil (1) (3) (15)
Q	316 L SST	Inert Halocarbon 4.2 Oil (2) (3) (15)
R	Hastelloy C276	Inert Halocarbon 4.2 Oil (1) (2) (3) (15)
S	Tantalum	Inert Halocarbon 4.2 Oil (2) (3) (15)
T	Int. 316LSST Gold Plated	Inert Halocarbon 4.2 Oil (15)
U	Integral 316L SST	Silicone Oil (3) (9)
V	Integral 316L SST	Inert Fluorolube Oil (15)
W	Integral 316L SST	Krytox Inert Oil (3) (15)
X	Integral 316L SST	Inert Halocarbon 4.2 Oil (15)

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

0	Without flanges, adapters and drain/vents	N	316 SST - CF8M (ASTM A351) (Drain/Vent In Hastelloy C276) (1)
C	Plated CS (Drain/Vent In Stainless Steel) (16)	P	316 SST - CF8M (ASTM A351) Flange with PVDF (Kynar) Insert (4) (5) (7) (11)
F	Monel 400 Laminated Bar (for HF applications)	O	316 SST - CF8M (Drain/Vent and plug in Monel) Nace Standard
H	Hastelloy C276 (CW-12MW, ASTM - A494) (1)	Z	User's specification
I	316 SST - CF8M (ASTM A351)		

COD. Wetted O'Rings Materials

0	Without O'Rings	E	Ethylene - Propylene	T	Teflon	Z	User's specification	Note: O'Rings are not available on the sides with Remote Seals.
B	Buna-N	K	Kalrez	V	Viton			

COD. Drain/Vent Position

0	Without Drain/Vent	U	Top	Note: For better drain/vent operation, vent valves are strongly recommended. Drain/vent valve not available on the sides with remote seals.
A	Drain/Vent (Opposite to Process Connection)	Z	See notes	
D	Bottom			

COD. Local Indicator

0	Without Indicator	1	With Digital Indicator
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COD. Continues next page

LD301 - D2 | 1 | I | - | B | U | 1 | *

← TYPICAL MODEL NUMBER

LD302 - D2 | 1 | I | - | B | U | 1 | *

LD303 - D2 | 1 | I | - | B | U | 1 | *

* Leave blank for no optional items.

MODEL	DIFFERENTIAL, FLOW, GAGE, ABSOLUTE AND HIGH STATIC PRESSURE TRANSMITTERS	
	COD. Process Connection	
	0	1/4 - 18 NPT (Without Adapter)
	1	1/2 - 14 NPT (With Adapter)
	2	CF16 (Without Adapter)
	3	Remote Seal (With Plug) (3) (8) (7)
	5	1/2 - 14 NPT Axial with PVDF Insert (5) (7) (14)
	6	Low Volume Flange
	8	Low Volume Flange - Welded
	9	Remote Seal (Low Volume Flange) (3) (4) (8) (7)
	A	High Side: 1/4 NPT and Low Side: Remote Seal (with plug)
	B	High Side: 1/2 - 14 NPT and Low Side: Remote Seal (With Plug) (10)
	D	High Side: Remote Seal (With Plug) and Low Side - 1/2 - 14 NPT (10)
	E	High Side: Remote Seal (with plug) and Low Side: 1/4 NPT (10) (12)
	F	High Side: 1/2 - 14 NPT and Low Side: Remote Seal (Low Volume Flange) (10) (4)
	G	High Side: 1/4 NPT and Low Side: Remote Seal (Low Volume Flange) (10)(12)
	H	High Side: Remote Seal (Low Volume Flange) and Low Side: 1/2 - 14 NPT (10) (4)
	I	High Side: Remote Seal (Low Volume Flange) and Low Side: 1/4 NPT (4) (10) (12)
	J	High Side: 1/2 NPT and Low Side: Low Volume Flange (4) (10)
	L	High Side: Low Volume Flange - 1/4 NPT and Low Side: 1/2 NPT (4) (10)
	N	High Side: 1/2 NPT and Low Side: Low Volume Flange - Welded (4) (10)
	P	High Side: Low Volume Flange - Welded and Low Side: 1/2 NPT (4) (10)
	Q	8 mm hole without thread (According to DIN19213) (13)
	T	1/2 - 14 BSP (With Adapter)
	U	Low Volume Flange for Level Welded
	V	Manifold Valve integrated to the transmitter
	Z	User's specification
	COD. Electrical Connection	
	0	1/2 - 14 NPT (17)
	1	3/4 - 14 NPT (with 316 SST adapter for 1/2 - 14 NPT) (18)
	2	3/4 - 14 BSP (with 316 SST adapter for 1/2 - 14 NPT) (6)
	3	1/2 - 14 BSP (with 316 SST adapter for 1/2 - 14 NPT) (6)
	A	M20 X 1.5 (17)
	B	PG 13.5 DIN (6)
	Z	User's specification
	COD. Set this code as "1" for LD301	
	COD. Mounting Bracket for 2" Pipe or Surface Mounting	
	0	Without bracket
	1	Carbon steel bracket and accessories
	2	316 SST bracket and accessories
	5	L type, carbon steel bracket and accessories
	6	L type, 316 SST bracket and accessories
	7	Carbon steel bracket. Accessories: 316 SST
	9	L type, carbon steel bracket. Accessories: 316 SST
	Z	User's specification
	COD. Continues next page	

LD301-D21IBU1	-	0	0	1	-	1	*
LD302-D21IBU1	-	0	0		-	1	*
LD303-D21IBU1	-	0	0		-	1	*

* Leave blank for no optional items.

Notes:

- (1) Meets NACE MR-01-75/ISO 15156 recommendations.
- (1a) Meets NACE MR-0103 standard.
- (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 (O₂) 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) Available for differential pressure transmitters, range 4, 7/16 UNF or M10 x 1.5 thread and for high static pressure transmitters, range 4, 7/16 UNF thread.
- (14) Only available for flange with PVDF (Kynar) insert
- (15) Inert Fluid: Safe Oxygen Service.
- (16) Not applicable for saline atmosphere.
- (17) Certification Ex-d for FM / ATEX / IECEx / INMETRO.
- (18) Certification Ex-d for INMETRO.

MODEL	DIFFERENTIAL, FLOW, GAGE, ABSOLUTE AND HIGH STATIC PRESSURE TRANSMITTERS	
COD. Flanges Bolts and Nuts Material		
A0	Plated Carbon Steel (Default) (16)	A3 SST according to NACE (1)
A1	316 SST	A6 Without Bolts and Nuts
A2	Carbon Steel according to NACE (1) (1a)(16)	A7 Super Duplex SST according to NACE (1) (1a)
COD. Special Procedure		
C0	Standard	C5 Assembly Conforming NACE
C1	Degrease Cleaning (oxygen or chlorine service)	C6 Test of Overpressure at 380 bar and static pressure at 480 bar
COD. Flange Thread for Fixing Accessories (Adapters, Manifolds, Mounting Brackets, etc) (8)		
D0	7/16" UNF (Default)	D2 DIN19213 M12 X 1.75
D1	DIN19213 M10 X 1.5	D3 Without flange
COD. Output Signal		
G0	4 - 20 mA (Default)	G3 NAMUR NE extended 4-20 mA (Burnout 3.55 to 22.8 mA)
G1	0 - 20 mA (4-wire) (6)	
COD. Housing Material		
H0	Aluminum (Default) (IP/TYPE)	H3 316 SST for saline atmosphere (IPW/TYPEX)
H1	316 SST - CF8M (ASTM - A351) IP/TYPE	H4 Copper free Aluminum (IPW/TYPEX)
H2	Aluminum for saline atmosphere (IPW/TYPEX)	
COD. Identification Plate		
I1	FM: XP, IS, NI, DI (USA)	IC IECEX (MINING)
I3	CSA: XP, IS, NI, DI (CANADIAN)	IE IECEX (GAS)
I4	EXAM (DMT): Ex-ia, NEMKO: Ex-d (ATEX-GAS)	IJ NEMKO: EEx-d
I5	CEPEL: Ex-d, Ex-ia (INMETRO - GAS)	IO CEPEL: (INMETRO - DUST)
I6	Without Certification	IR GOST: Ex-d, Ex-ia (RUSSIA)
I7	EXAM : Ex-ia (ATEX - MINING)	
COD. PID Configuration		
M0	With PID (Default)	M5 10-point calibration
M1	Without PID	M6 Special acquisition method disabled
M3	Factory configured with square root extraction*	
M4	Calibration with reading on the up/down (hysteresis)	
COD. Painting		
P0	Gray Munsell N 6.5 Polyester	P8 Without Painting
P1	Safety Blue Epoxy - Immersion Condition (19)	P9 Blue Safety Epoxy
P2	Safety Blue Epoxy - Atmospheric Zone (19)	PC Blue Safety Polyester
P3	Black Polyester	PG Orange Safety Epoxy
P7	Beige Epoxy	PH Special Painting
COD. Manufacturing Standard		
S0	SMAR	
COD. Painting		
Y0	Percentage (Default)	Y4 Display2: Current - I (mA)
Y1	Display1: Current - I (mA)	Y5 Display2: Pressure (Eng Unit)
Y2	Display1: Pressure (Eng Unit)	Y6 Display2: Temperature (°C)
Y3	Display1: Temperature (°C)	YU According to user - See notes (20)
COD. Tag Plate		
J0	With tag, when specified (Default)	
J1	Blank	
COD. Special Characteristics		
Z0	Standard	
ZZ	See Notes *	
COD. Burn Out*		
BD	Down Scale	
BU	Up Scale	
COD. Performance		
L1	High Performance	
OP	Standard Performance	
COD. Flange Assembly		
R0	Standard	
R1	90° Rotated Flange	

LD301-D21IBU1-0011	A0	C0	D0	G0	H0	I6	M0	P0	S0	Y2	J1	Z0	BD	OP	R0
LD302-D21IBU1-00 1	A0	C0	D0	G0	H0	I6	M0	P0	S0	Y2	J1	Z0	BD	OP	R0
LD303-D21IBU1-00 1	A0	C0	D0	G0	H0	I6	M0	P0	S0	Y2	J1	Z0	BD	OP	R0

← TYPICAL MODEL NUMBER

Notes:

(1) Meets NACE MR-0175 / ISO15156 standard.
 (1a) Meets NACE MR-0103.
 (2) Not available for absolute models nor vacuum applications.
 (3) Not available for range 0 and 1.
 (4) Not recommended for vacuum service.
 (5) Maximum pressure 24 bar (350 psi).
 (6) Options not certified for hazardous locations.
 (7) Drain/Vent not applicable.
 (8) For remote seal only 316 SST - CF8M flange (thread 7/16 20UNF).
 (9) Silicone Oil is not recommended for oxygen (O2) 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, only 316/CF-8M.
 (14) Only available for flange with PVDF (Kynar) insert.
 (15) Inert Fluid: Safe for oxygen service.
 (16) Not applicable for saline atmosphere.
 (17) Certification Ex d for FM / ATEX / IECEX / INMETRO.
 (18) Certification Ex d for INMETRO.
 (19) Petrobras N1021 Standard.
 (20) Limited values to 4 1/2 digits; unit limited to 5 characters.

MODEL FLANGED PRESSURE TRANSMITTER												
LD301	HART®											
LD302	FOUNDATION™ fieldbus											
LD303	PROFIBUS PA											
COD.	Range Limits		Min. Span	Unit.	Range Limits		Min. Span	Unit.				
	Min.	Máx.			Min.	Máx.						
L2	-50	50	1.25	kPa	-200	200	5	inH ₂ O	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.			
L3	-250	250	2.08	kPa	-36	36	0.3	psi				
L4	-2500	2500	20.83	kPa	-360	360	3	psi				
L5	-25000	25000	208.30	kPa	-3625	3625	30.2	psi				
COD. Diaphragm material and Fill Fluid (Low Side)												
1	316L SST	- Silicone Oil (2) (20)			K	Monel 400	- Inert Krytox Oil (1) (18)					
2	316L SST	- Inert Fluorolube Oil (3) (18) (20)			L	Int.316L SST Gold Plated	- Krytox Oil (18)					
3	Hastelloy C276	- Silicone Oil (1) (2)			M	Monel 400 Gold Plated	- Silicone Oil (1) (2)					
4	Hastelloy C276	- Inert Fluorolube Oil (1) (3) (18)			P	Monel 400 Gold Plated	- Inert Krytox Oil (1) (18)					
5	Monel 400	- Silicone Oil (1) (2)			Q	316L SST	- Inert Halocarbon 4.2 Oil (18) (20)					
7	Tantalum	- Silicone Oil (2)			R	Hastelloy C276	- Inert Halocarbon 4.2 Oil (1) (18)					
8	Tantalum	- Inert Fluorolube Oil (3) (18)			S	Tantalum	- Inert Halocarbon 4.2 Oil (18)					
9	316L SST	- Fomblin Oil (20)			T	316L Int Gold Plated	- Halocarbon 4.2 Oil (18)					
A	Monel 400	- Fomblin Oil (1)			U	316L SST Integral	- Silicone Oil (2)					
D	316L SST	- Inert Krytox Oil (18) (20)			V	316L SST Integral	- Fluorolube Oil (3) (18)					
E	Hastelloy C276	- Inert Krytox Oil (1) (18)			W	316L SST Integral	- Krytox Oil (18)					
G	Tantalum	- Inert Krytox Oil (18)			X	316L SST Integral	- Halocarbon 4.2 Oil (18)					
I	Int.316L SST Gold Plated	- Silicone Oil (2)			Z	Special	- See notes					
J	Int.316L SST Gold Plated	- Fluorolube Oil (18)										
COD. Flange, Adapter and Drain/Vent Valves material (Low Side)												
A	304L SST				I	316 SST – CF8M (ASTM – A351)						
C	Plated CS (Drain/Vent in Stainless Steel) (19)				N	316 SST – CF8M (ASTM – A351) (Drain/Vent in Hastelloy C276) (1)						
F	Monel 400 Plated Bar (for HF applications)				P	316 SST – CF8M (ASTM – A351) Flange with PVDF (Kynar) insert (4) (5)						
H	Hastelloy C276 (CW – 12MW, ASTM – A494) (1)				Z	Special – See notes						
COD. Wetted O'Ring Material (Low Side)												
0	Without O'Rings			E	Ethylene - Propylene			T	Teflon			
B	Buna-N			K	Kalrez			V	Viton			
Note: O'rings are not available on the sides with remote seals.												
COD. Drain/Vent Position (Low Side)												
0	Without Drain/Vent				D	Low		Note: For better Drain/Vent operation, vent valves are strongly recommended.				
A	Drain/Vent (Opposite to Process Connection)				U	Upper		Drain/Vent valve are not available on the sides with remote seals				
COD. Local Indicator												
0	Without Indicator											
1	With Digital indicator											
COD. Process Connection (Low Side)												
0	1/4 - 18 NPT (Without Adapter)				8	Low Volume Flange - Welded (3)				V	Without Connection (Mounted with Gage Flange) (4)	
1	1/2 - 14 NPT (With Adapter)				9	Remote Seal (Low Volume Flange) (3) (4)				W	Without Connection (Absolut Reference) (4)	
3	Remote Seal (With Plug) (4)				T	1/2 14 BSP (With Adapter)				Z	Special – See notes	
5	1/2 - 14 NPT Axial with PVDF Insert (4)				U	Low Volume Flange for Level Welded (3)(4)						
6	Low Volume Flange - 1/4 NPT (3)											
COD. Electrical Connection												
0	1/2 – 14 NPT (7)				A	M20 x 1.5 (7)						
1	3/4 – 14 NPT (with 316 SST adapter for 1/2 - 14 NPT) (7a)				B	PG 13.5 DIN (11)						
2	3/4 – 14 BSP (with 316 SST adapter for 1/2 - 14 NPT) (11)				Z	User's specification						
3	1/2 – 14BSP (with 316 SST adapter for 1/2 - 14 NPT) (11)											
COD. Zero and Span Adjust												
1	With Local Adjustment											
COD. Process Connection												
U	1" 150 # (ANSI B16.5)			B	2" 600 # (ANSI B16.5)			5	DN 25 PN 10/40			
V	1" 300 # (ANSI B16.5)			1	3" 150 # (ANSI B16.5)			R	DN 40 PN 10/40			
W	1" 600 # (ANSI B16.5)			2	3" 300 # (ANSI B16.5)			E	DN 50 PN 10/40			
O	1.1/2" 150 # (ANSI B16.5)			C	3" 600 # (ANSI B16.5)			6	DN 80 PN 10/40			
P	1.1/2" 300 # (ANSI B16.5)			N	3" 1500 # (ANSI B16.5)			7	DN 100 PN 10/16			
Q	1.1/2" 600 # (ANSI B16.5)			3	4" 150 # (ANSI B16.5)			8	DN 100 PN 25/40			
9	2" 150 # (ANSI B16.5)			4	4" 300 # (ANSI B16.5)			S	JIS 40A 20K (9)			
A	2" 300 # (ANSI B16.5)			D	4" 600 # (ANSI B16.5)			F	JIS 50A 10K (9)			
COD. Material and Flange Type (Level Tap)												
1	316 SST (9)				Z	User's specification				D	Duplex (UNS S31803/S32205) (9)	
2	316L SST				3	Hastelloy C276 (9)				S	Super Duplex UNS S32750/S32760 (9)	
COD. Extension Length												
0	0 mm (0")		2	100 mm (4")		4	200 mm (8")		Note: Extension Material 316L SST			
1	50 mm (2")		3	150 mm (6")		Z	User's specification					
COD. Diaphragm Material / Extension (Level Tap)												
A	304L SST / 304L SST				4	Tantalum / 316 SST (8)						
1	316L SST / 316 SST				5	Titanium / 316 SST (8)						
2	Hastelloy C276 / 316 SST				7	316L SST with Gold Plated (9)						
3	Monel 400 / 316 SST (8)				L	316L Stainless Steel with Halar Coating (17)						
COD. Fill Fluid (Level Tap)												
1	DC 200 Silicone Oil (2)				T	Syltherm 800 Oil				H Halocarbon 4.2		
3	DC 704 Silicone Oil (2)				N	Neobee M20 Propylene Glycol Oil						
2	MO – 10 Fluorolube Oil (3)(6)				4	Krytox Oil						
COD. Lower Housing Material												
0	Without Lower Housing (10)				3	Super Duplex (UNS S32750/S32760) (9)						
1	Stainless Steel 316				4	Duplex (UNS S31803/S32205) (9)						
2	Hastelloy C276				M	Monel 400						
COD. Gasket Material												
0	Without gasket				G	Grafoil (Flexible lead)						
T	Teflon (PTFE)				I	Stainless 316 L (RTJ) (14)						
COD. Continues Next Page												

LD301	L2	1	I	B	U	1	0	0	1	1	2	0	1	1	0	0	*
LD302	L2	1	I	B	U	1	0	0		1	2	0	1	1	0	0	*
LD303	L2	1	I	B	U	1	0	0		1	2	0	1	1	0	0	*

← TYPICAL MODEL NUMBER

* Leave it blank when there are not optional items.

MODEL		FLANGED PRESSURE TRANSMITTER (CONTINUATION)	
COD.		Bolts and Nuts of Flange / Adapters Material	
A0	Plated CS	A5	Hastelloy C276 according to NACE (1) (1a)
A1	316 SST	A7	Super Duplex SST according to NACE (1) (1a)
A2	Carbon Steel according to NACE (1) (1a)		
COD.		Special Procedure	
C0	Without special procedure	C2	For vacuum service
C1	Degrease Cleaning (oxygen or chlorine service)	C5	Assembly Conforming NACE
COD.		Flange (5)	
D0	SMAR Standard Thread 7/16 UNF	D2	DIN 19213 M12x1,75
D1	DIN 19213 M10x1,5		
COD.		Output Signal	
G0	4-20 mA		
G3	NAMUR NE43 Extended 4-20 mA (Burnout 3.55 and 22.8 mA)		
COD.		Housing Material	
H0	Aluminum (Default) (IP/TYPE)	H3	316 SST for saline atmosphere (IPW/TYPEX)
H1	316 SST – CF8M (ASTM – A351) IP/TYPE)	H4	Copper free Aluminum (IPW/TYPEX)
H2	Aluminum for saline atmosphere (IPW/TYPEX)		
COD.		Identification Plate	
I1	FM: XP, IS, NI, DI (USA)	IC	IECEX (MINING)
I4	EXAM (DMT): Ex-ia, NEMKO: Ex-d (ATEX-GAS)	IE	IECEX (GAS)
I5	CEPEL: Ex-d, Ex-ia (INMETRO – GAS)	IJ	NEMKO: EEx-d
I6	Without Certification	IO	CEPEL: (INMETRO – DUST)
I7	EXAM: Ex-ia (ATEX – MINING)	IR	GOST: Ex-d, Ex-ia (RUSSIA)
COD.		PID Configuration	
M0	With PID (Default)	M5	10-point calibration
M1	Without PID	M6	Special acquisition method disabled
COD.		Painting	
P0	Gray Munsell N 6.5 Polyester	P7	Beige Epoxy
P1	Safety Blue Epoxy – Immersion Condition- -Petrobras N1021	P8	Without Painting
P2	Safety Blue Epoxy – Atmospheric Zone - Petrobras N1021	P9	Blue Safety Epoxy
P3	Black Polyester	PG	Orange Safety Epoxy
		PH	Special Painting
COD.		Manufacturing Standard	
S0	SMAR		
COD.		LCD Indication	
Y0	Percentage (Default)	Y4	Display2: Current – I (mA)
Y1	Display1: Current – I (mA)	Y5	Display2: Pressure (Eng Unit)
Y2	Display1: Pressure (Eng Unit)	Y6	Display2: Temperature (°C)
Y3	Display1: Temperature (°C)	YU	According to user – See notes (12)
COD.		Tag Plate	
J0	With tag	J1	Blank
COD.		Special Characteristics	
ZZ	See notes		
COD.		Burn Out	
BD	Down Scale	BU	Up Scale
COD.		Performance	
OP	Standard Performance		
COD.		Face	
Q0	Face RF (Raised Face)		
Q1	Face FF (Flat Face)		
Q2	Face RTJ (Ring Joint Face) (14)		
COD.		Gasket Connection	
U0	1 Con. Flush 1/2" NPT (If supplied with gasket)		
U1	2 Con. Flush 1/4" NPT at 180°		
U3	U0 2 Con. 1/2"-14 NPT at 180° (with cover)		
U4	Without Flush connection (without gasket)		
U5	1 Con. Flush 1/2" NPT		

LD301-L21-BU10-01-120110-0 / A1 | C0 | D0 | G0 | H0 | I6 | M0 | P0 | S0 | Y2 | J0 | ZZ | BD | OP | Q0 | U4

LD302-L21-BU10-01-120110-0 / A1 | C0 | D0 | G0 | H0 | I6 | M0 | P0 | S0 | Y2 | J0 | ZZ | BD | OP | Q0 | U4

LD303-L21-BU10-01-120110-0 / A1 | C0 | D0 | G0 | H0 | I6 | M0 | P0 | S0 | Y2 | J0 | ZZ | BD | OP | Q0 | U4

← TYPICAL MODEL NUMBER

Notes - LD300L:

- (1) Meets NACE MR-0175 / ISO15156 standard.
- (1a) Meets NACE MR-0103
- (2) Silicone Oils not recommendations for Oxygen (O₂) or Chlorine service.
- (3) Not applicable for vacuum service.
- (4) Drain/Vent not applicable.
- (5) For remote seal, flange only in 316/cf-8m thread 7/16-20UNF
- (6) Fluorolube fill fluid is not available for Monel diaphragm.
- (7) Certification Ex d for FM / ATEX / IECEx / INMETRO.
- (7a) Certification Ex d for INMETRO.
- (8) Attention, check corrosion rate for the process, AISI 316L extension 3 to 6mm. Diaphragms of Titanium and Monel available only in 0.1 mm, and diaphragms of Tantalum only in 0.075 mm.
- (9) Item by inquiry.
- (10) Supplied without Gasket.
- (11) Without certification for Explosion proof certification or Intrinsically safe..
- (12) Limited values to 4 1/2 digits; unit limited to 5 characters.
- (13) Degrease cleaning is not available for carbon steel flanges.
- (14) Gasket for housing, available only in Stainless 316.
- (15) Finishing of the flange faces according to specific standards.
- (16) Range of application of temperature from -40 °C to 150 °C.
- (17) Applicable only to:
 - Diameter/capillary length:
 - 2" ANSI B 16.5 DN 50 DIN, JIS 50 A, for seals up to 3 meters of capillary and level models (by inquiry).
 - 3" ANSI B 16.5 DN 80 DIN, JIS 80 A, for seals up to 5 meters of capillary and level models.
 - 4" ANSI B 16.5, DN 100 DIN, JIS 100 A, for seals up to 8 meters and level models.
 - Faces: RF and FF;
 - Temperature Range: +10 °C to 100 °C
+ 101 to 150 °C (by inquiry)
 - Not applicable for use with gasket.
- (18) Inert Fluid: Oxygen Compatibility, safe for oxygen service.
- (19) Not applicable for saline atmosphere.
- (20) 316L SST sensors range 0,1,2 has Hastelloy C276 diaphragm.

MODEL	PRESSURE SANITARY TRANSMITTER														
LD301	HART®														
LD302	FOUNDATION™ fieldbus														
LD303	PROFIBUS PA														
COD.	Range Limits				Min. Span	Unit.	Range Limits				Min. Span	Unit.			
	Min.	Max.	Min.	Max.			Min.	Max.	Min.	Max.					
S2	-50	50	1.25	200	5	kPa	-200	200	5	inH ₂ O	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 connection.				
S3	-250	250	2.08	36	0.3	kPa	-36	36	0.3	psi					
S4	-2500	2500	20.83	360	3	kPa	-360	360	3	psi					
S5	-25000	25000	208.30	3625	30.2	kPa	-3625	3625	30.2	psi					
COD. Diaphragm Material and Fill Fluid (Low Side)															
1	316L SST	Silicone Oil (2) (17)			3	Hastelloy C276	Silicone Oil (1) (2)								
2	316L SST	Inert Fluorolube Oil (3) (13) (16)			4	Hastelloy C276	Inert Fluorolube Oil (1) (3) (13)								
COD. Flange(s), Adapter (s) and Drain Valve(s) Material (Low Side)															
I	316 SST - CF8M (ASTM-A351)														
COD. Wetted O-Ring Material (Low Side)															
0	Without O-Ring			E	Ethylene - Propylene			V	Viton			Note: O-Rings are not available on the sides with remote seal.			
B	Buna-N			T	Teflon			K	Kalrez						
COD. Drain Position (Low Side)															
0	Without Drain				D	Bottom		Note: For better drain operation, drain valves are strongly recommended. Drain valve are not available on the sides with remote seal							
A	Drain (Opposite to process connection)				U	Top									
COD. Local Indicator															
0	Without Indicator					1	With Digital Indicator								
COD. Process Connection (Low Side)															
0	1/4 - 18 NPT (Without Adapter)				T	1/2 14 BSP (With Adapter)									
1	1/2 - 14 NPT (With Adapter)				V	Without Connection (Mounted with Gage Flange) (4)									
3	Remote Seal (With Plug) (4) (5)				W	Without Connection (Absolut Reference) (4)									
9	Remote Seal (Low Volume Flange) (3) (4) (5)				Z	User's Specification									
COD. Electrical Connection															
0	1/2 - 14 NPT (14)				A	M20 X 1.5 (14)									
1	3/4 - 14 NPT (With 316 SST adapter for 1/2 - 14 NPT) (15)				B	PG 13.5 DIN (7)									
2	3/4 - 14 BSP (With 316 SST adapter for 1/2 - 14 NPT) (7)				Z	User's Specification									
3	1/2 - 14 BSP (With 316 SST adapter for 1/2 - 14 NPT) (7)														
COD. Zero and Span Adjust															
1	With Local Adjustment														
COD. Process Connection															
8	Threaded DN25 DIN 11851 - with ext. / 316L SST (8)				1	Threaded SMS 3" - without ext. / 316L SST (8)									
9	Threaded DN40 DIN 11851 - with ext. / 316L SST (8)				F	Tri-Clamp 1 1/2" - without ext. / 316L SST									
H	Threaded DN40 DIN 11851 - without ext. / 316L SST (8)				Q	Tri-Clamp 1 1/2" HP - without ext. / 316L SST (6)									
V	Threaded DN50 DIN 11851 - with ext. / 316L SST (8)				6	Tri-Clamp 2" - with ext. / 316L SST									
U	Threaded DN50 DIN 11851 - without ext. / 316L SST (8)				D	Tri-Clamp 2" - without ext. / 316L SST									
X	Threaded DN80 DIN 11851 - with ext. / 316L SST (8)				N	Tri-Clamp 2" HP - with ext. / 316L SST (6)									
W	Threaded DN80 DIN 11851 - without ext. / 316L SST (8)				P	Tri-Clamp 2" HP - without ext. / 316L SST (6)									
4	Threaded IDF 2" - with ext. / 316L SST (8)				I	Tri-Clamp 3" - with ext. / 316L SST									
B	Threaded IDF 2" - without ext. / 316L SST (8)				G	Tri-Clamp 3" - without ext. / 316L SST									
K	Threaded IDF 3" - with ext. / 316L SST (8)				J	Tri-Clamp 3" HP - with ext. / 316L SST (6)									
3	Threaded IDF 3" - without ext. / 316L SST (8)				R	Tri-Clamp 3" HP - without ext. / 316L SST (6)									
5	Threaded RJT 2" - with ext. / 316L SST (8)				A	Tri-Clamp DN50 - With extension									
C	Threaded RJT 2" - without ext. / 316L SST (8)				O	Tri-Clamp DN50 HP - With extension (6)									
L	Threaded RJT 3" - with ext. / 316L SST (8)				Y	According to special Option									
2	Threaded RJT 3" - without ext. / 316L SST (8)				Z	User's specification									
S	Threaded SMS 1 1/2" - without ext. / 316L SST (8)				Note: ext. = extension HP = High Pressure										
7	Threaded SMS 2" - with ext. / 316L SST (8)														
E	Threaded SMS 2" - without ext. / 316L SST (8)														
M	Threaded SMS 3" - with ext. / 316L SST (8)														
COD. Diaphragm Material (High Side)															
H	Hastelloy C276					I	316L SST								
COD. Fill Fluid															
S	DC 200 - Silicone Oil (2)				T	Syltherm 800									
D	DC 704 - Silicone Oil (2)				N	Neobee M20 (13)									
F	Fluorolube MO-10 (13)				Z	Special - See notes									
COD. Wet O-ring															
0	Without O-ring			T	Teflon			B	Buna-N			V	Viton		
COD. Tank Adapter															
0	Without Tank Adapter				Z	User's Specification									
1	With Tank Adapter in 316 SST														
COD. Tri-Clamp															
0	Without Tri-Clamp				Z	User's Specification									
2	With Tri-Clamp in 304 SST														
COD. Continues next page															

LD301	S2	1	I	B	U	1	0	0	1	1	I	D	V	1	0	*
LD302	S2	1	I	B	U	1	0	0		1	I	D	V	1	0	*
LD303	S2	1	I	B	U	1	0	0		1	I	D	V	1	0	*

← TYPICAL MODEL NUMBER

* Leave it blank when there are not optional items.

MODEL		DIFFERENTIAL PRESSURE TRANSMITTER WITH SANITARY CONNECTION (CONTINUATION)	
COD. Bolts, Nuts and Adapters Material		A0 Carbon Steel (12)	A2 CS compatible with NACE (1) (1a) (12)
A1	316 SST	A7	Super Duplex SST according to NACE (1) (1a)
COD. Special Procedure		C0 Without special procedure	C2 For vacuum service
C1	Cleaning for use in oxygen/hydrogen peroxide/chlorine		
COD. Flange (5)		D0 SMAR Standard Thread 7/16 UNF	D2 DIN 19213 - M12x1,75
D1	DIN 19213 - M10x1,5		
COD. Output Signal		G0 4-20 mA	G3 NAMUR NE43 Extended 4-20 mA (Burnout 3.55 and 22.8 mA)
COD. Housing Material		H0 Aluminum (Default) (IP/TYPE)	H3 316 SST for saline atmosphere (IPW/TYPEX) (11)
H1	316 SST – CF8M (ASTM – A351) IP/TYPE)	H4	Copper free Aluminum (IPW/TYPEX) (11)
H2	Aluminum for saline atmosphere (IPW/TYPEX) (11)		
COD. Identification Plate		I1 FM: XP, IS, NI, DI (USA)	IC IECEX (MINING)
I4	EXAM (DMT): Ex-ia, NEMKO: Ex-d (ATEX-GAS)	IE	IECEX (GAS)
I5	CEPEL: Ex-d, Ex-ia (INMETRO – GAS)	IJ	NEMKO: EEEx-d
I6	Without Certification	IO	CEPEL: (INMETRO – DUST)
I7	EXAM: Ex-ia (ATEX – MINING)	IR	GOST: Ex-d, Ex-ia (RUSSIA)
COD. PID Configuration		M0 With PID (Standard)	M4 Calibration with reading on the up/down (hysteresis)
M1	Without PID	M6	Special acquisition method disabled
COD. Painting		P0 Gray Munsell N 6.5 Polyester	P8 Without Painting
P1	Safety Blue Epoxy – Immersion Condition-Petrobras N1021	P9	Blue Safety Epoxy
P2	Safety Blue Epoxy – Atmospheric Zone - Petrobras N1021	PG	Orange Safety Epoxy
P3	Black Polyester	PH	Special Painting
P7	Beige Epoxy		
COD. Manufacturing Standard		S0	SMAR
COD. LCD Indication (10)		Y0 Percentage (Default)	Y4 Display2: Current – I (mA)
Y1	Display1: Current – I (mA)	Y5	Display2: Pressure (Eng Unit)
Y2	Display1: Pressure (Eng Unit)	Y6	Display2: Temperature (°C)
Y3	Display1: Temperature (°C)	YU	According to user – See notes (10)
COD. Tag Plate		J0 With tag	J1 Blank
COD. Special Characteristics		ZZ	See notes*
COD. Burn Out*		BD Down Scale	BU Up Scale
COD. Performance		OP	Standard Performance
COD. Process Connection and Material (Level Tap)		K0	Without process connection and Special Material
K1	Tri-Clamp 2" DIN 11864-3 no/ext/ AI 316L	K2	Varivent 68

LD301-S211-BU10-01-1IDV10	/	A1	C0	D0	G0	H0	I6	M0	P0	S0	Y2	J1	ZZ	BD	OP	K0
LD302-S211-BU10- 1IDV10	/	A1	C0	D0	G0	H0	I6	M0	P0	S0	Y2	J1	ZZ	BD	OP	K0
LD303-S211-BU10- 1IDV10	/	A1	C0	D0	G0	H0	I6	M0	P0	S0	Y2	J1	ZZ	BD	OP	K0

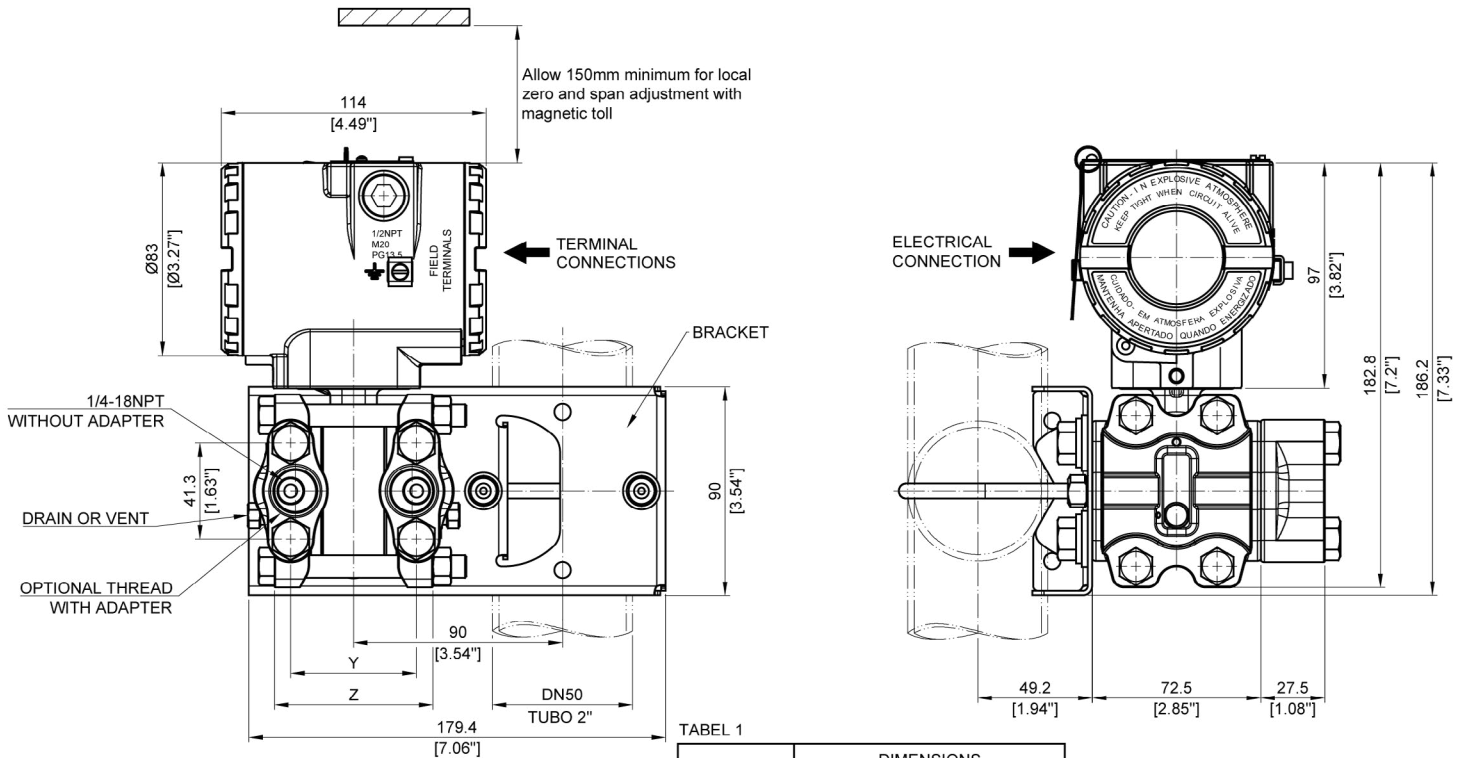
← TYPICAL MODEL NUMBER

Note - LD300S:

(1) Meets NACE MR-0175 / ISO15156 standard.
 (1a) Meets NACE MR-0103.
 (2) Silicone oil not recommended for Oxygen (O2) or Chlorine Service.
 (3) Not applicable for vacuum service.
 (4) Drain/Vent not applicable.
 (5) For remote seal is only available flange in 316 Stainless Steel - CF8M (ASTM A351) (thread 7/16).
 (6) HP – High Pressure.
 (7) Options not certified for hazardous locations.

(8) Not available for Tri-clamp.
 (9) Without certification for explosion proof or intrinsically safe.
 (10) Limited values to 4 1/2 digits; limited unit to 5 characters.
 (11) Item by inquiry.
 (12) Not applicable for saline atmosphere.
 (13) The inert fluid guarantees safety for Oxygen (O2) service.
 (14) Certification Ex d for FM / ATEX / IECEX / INMETRO.
 (15) Certification Ex d for INMETRO.
 (16) 316L SST sensors range 2 has Hastelloy C276 diaphragm.

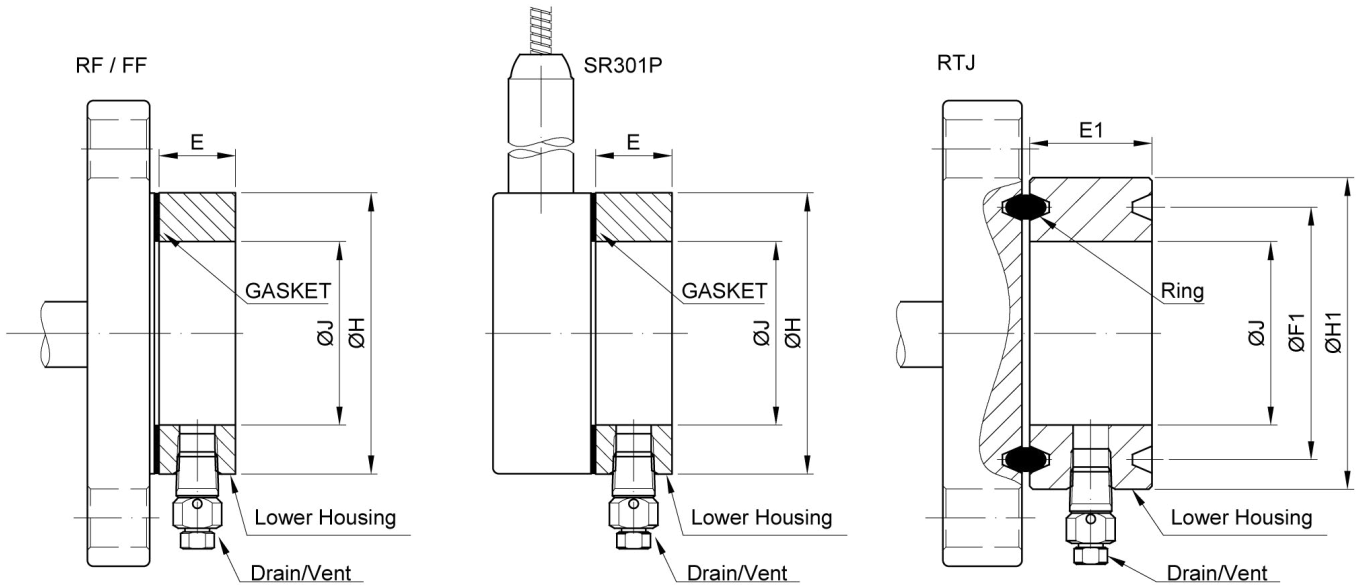
LD300 - Differential, Flow, Gage, Absolute and High Static Pressure Transmitters with Mounting Bracket



TABEL 1

RANGE	DIMENSIONS	
	Y	Z
0-1-2-3	54,0 (2.13)	69,6 (2.74)
4	56,0 (2.20)	71,6 (2.82)
5	58,3 (2.30)	73,9 (2.91)
6	58,7 (2.31)	74,3 (2.93)

LD300L - Flanged Pressure Transmitter with Housing

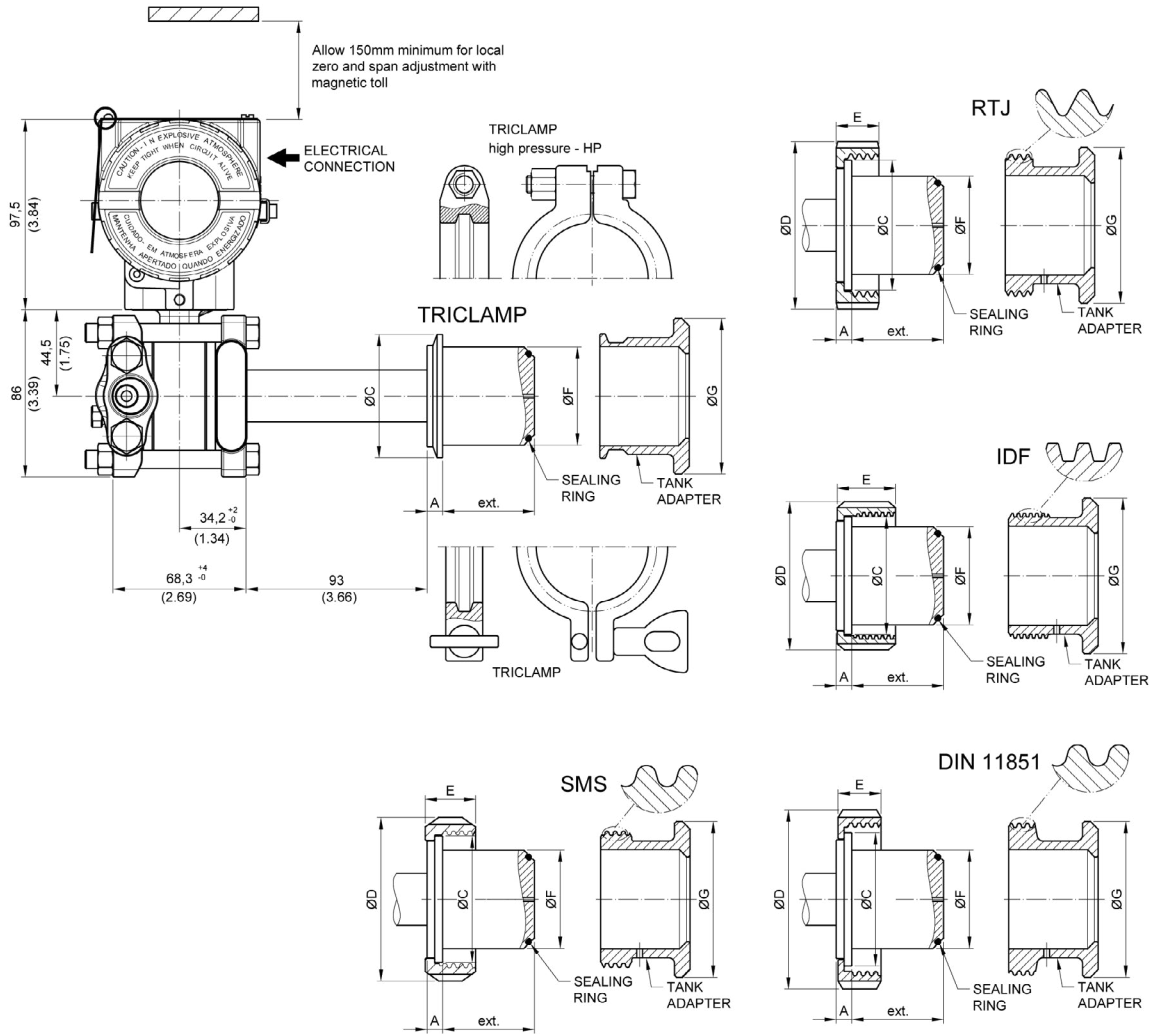


DIMENSIONS - RF / FF - mm (inch)						
STANDARD	DN	CLASS	H	J	E	
					1/4"NPT	1/2"NPT
ASME B16.5	1"	ALL	50,8 (2,00)	35 (1,38)	25	35
	1.1/2"		73,2 (2,88)	48 (1,89)	25	35
	2"		91,9 (3,62)	60 (2,36)	25	35
	3"		127 (5,00)	89 (3,50)	25	35
	4"		158 (6,22)	115 (4,53)	25	35
DIN EN 1092-1	25	ALL	68 (2,68)	35 (1,38)	25	35
	40		88 (3,46)	48 (1,89)	25	35
	50		102 (4,02)	60 (2,36)	25	35
	80		138 (5,43)	89 (3,50)	25	35
	100		158 (6,22)	115 (4,53)	25	35
JIS B 2220	40A	20K	81 (3,19)	48 (1,89)	25	35
	50A	10K	96 (3,78)	60 (1,36)	25	35
		40K	105 (4,13)	60 (1,36)	25	35
	80A	10K	126 (4,96)	89 (3,50)	25	35
		20K	132 (5,20)	89 (3,50)	25	35
	100A	10K	151 (5,94)	115 (4,53)	25	35

DIMENSIONS - RTJ - mm (inch) - ASME B16.5							
DN	CLASS	F1	RING	H1	J	E1	
						1/4"NPT	1/2"NPT
1"	150	47,6 (1,87)	R15	63,5 (2,50)	35 (1,38)	40	45
	300	50,8 (2,00)	R16	70 (2,75)	35 (1,38)	40	45
	600	50,8 (2,00)	R16	70 (2,75)	35 (1,38)	40	45
	1500	50,8 (2,00)	R16	71,5 (2,81)	35 (1,38)	40	45
	2500	60,3 (2,37)	R18	73 (2,88)	35 (1,38)	40	45
1.1/2"	150	65,1 (2,56)	R19	82,5 (3,25)	48 (1,89)	40	45
	300	68,3 (2,69)	R20	90,5 (3,56)	48 (1,89)	40	45
	600	68,3 (2,69)	R20	90,5 (3,56)	48 (1,89)	40	45
	1500	68,3 (2,69)	R20	92 (3,62)	48 (1,89)	40	45
	2500	82,6 (3,25)	R23	114 (4,50)	48 (1,89)	40	45
2"	150	82,6 (3,25)	R22	102 (4,00)	60 (2,36)	40	45
	300	82,6 (3,25)	R23	108 (4,25)	60 (2,36)	40	45
	600	82,6 (3,25)	R23	108 (4,25)	60 (2,36)	40	45
	1500	95,3 (3,75)	R24	124 (4,88)	60 (2,36)	40	45
	2500	101,6 (4,00)	R26	133 (5,25)	60 (2,36)	40	45
3"	150	114,3 (4,50)	R29	133 (5,25)	89 (3,50)	40	45
	300	123,8 (4,87)	R31	146 (5,75)	89 (3,50)	40	45
	600	123,8 (4,87)	R31	146 (5,75)	89 (3,50)	40	45
4"	150	149,2 (5,87)	R36	171 (6,75)	115 (4,53)	40	45
	300	149,2 (5,87)	R37	175 (6,88)	115 (4,53)	40	45
	600	149,2 (5,87)	R37	175 (6,88)	115 (4,53)	40	45

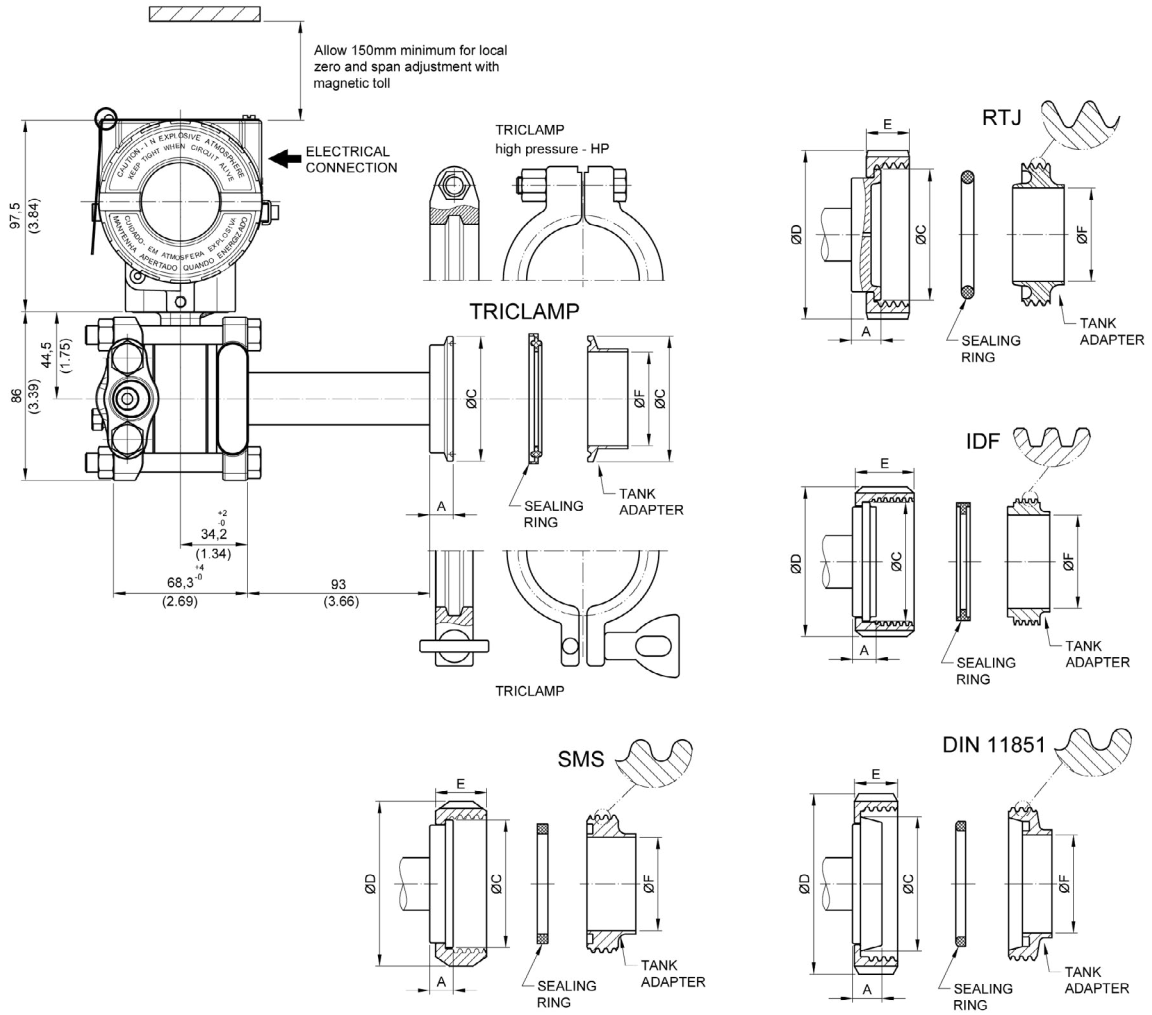
LOWER HOUSING 1/2NPT SUPPLIED WITH PLASTIC PROTECTION
 NOT LOWER HOUSING 1/2 NPT FOR 1 INCH

LD300S - Sanitary Transmitter with Extension



SR301S / LD30XS / LD400S							
CONNECTIONS WITH EXTENSION	Dimensions in mm (inch)						
	A	ØC	ØD	E	ØF	ØG	EXT.
Tri-Clamp DN50 - with extension	8 (0.315)	64 (2.52)	---	---	50,5 (1.99)	80 (3.15)	48 (1.89)
Tri-Clamp DN50 HP - with extension	8 (0.315)	64 (2.52)	---	---	50,5 (1.99)	80 (3.15)	48 (1.89)
Tri-Clamp - 2" - with extension	8 (0.315)	64 (2.52)	---	---	50,5 (1.99)	80 (3.15)	48 (1.89)
Tri-Clamp - 2" HP -with extension	8 (0.315)	64 (2.52)	---	---	50,5 (1.99)	80 (3.15)	48 (1.89)
Tri-Clamp - 3" - with extension	8 (0.315)	91 (3.58)	---	---	72,5 (2.85)	100 (3.94)	50 (1.96)
Tri-Clamp - 3" HP - with extension	8 (0.315)	91 (3.58)	---	---	72,5 (2.85)	100 (3.94)	50 (1.96)
Thread DN25 - DIN 11851 - with extension	6 (0.24)	47,5 (1.87)	63 (2.48)	21 (0.83)	43,2 (1.7)	80 (3.15)	26,3 (1.03)
Thread DN40 - DIN 11851 - with extension	8 (0.315)	56 (2.2)	78 (3.07)	21 (0.83)	50,5 (1.99)	80 (3.15)	48 (1.89)
Thread DN50 - DIN 11851 - with extension	8 (0.315)	68,5 (2.7)	92 (3.62)	22 (0.86)	50,5 (1.99)	80 (3.15)	48 (1.89)
Thread DN80 - DIN 11851 - with extension	8 (0.315)	100 (3.94)	127 (5)	29 (1.14)	72,5 (2.85)	100 (3.94)	50 (1.96)
Thread SMS - 2" - with extension	8 (0.315)	65 (2.56)	84 (3.3)	26 (1.02)	50,5 (1.99)	80 (3.15)	48 (1.89)
Thread SMS - 3" - with extension	8 (0.315)	93 (3.66)	113 (4.45)	32 (1.26)	72,5 (2.85)	100 (3.94)	50 (1.96)
Thread RJT - 2" - with extension	8 (0.315)	66,7 (2.63)	86 (3.38)	22 (0.86)	50,5 (1.99)	80 (3.15)	48 (1.89)
Thread RJT - 3" - with extension	8 (0.315)	92 (3.62)	112 (4.41)	22,2 (0.87)	72,5 (2.85)	100 (3.94)	50 (1.96)
Thread IDF - 2" - with extension	8 (0.315)	60,5 (2.38)	76,2 (3)	30 (1.18)	50,5 (1.99)	80 (3.15)	48 (1.89)
Thread IDF - 3" - with extension	8 (0.315)	87,5 (3.44)	101,6 (4)	30 (1.18)	72,5 (2.85)	100 (3.94)	50 (1.96)

LD300S - Sanitary Transmitter without Extension



SR301S / LD30xS / LD400S							
CONNECTIONS WITHOUT EXTENSION	Dimensions in mm (inch)						
	A	ØC	ØD	E	ØF	ØG	EXT.
Tri-Clamp - 1 1/2" - without extension	12 (0.47)	50 (1.96)	---	---	35 (1.38)	---	---
Tri-Clamp - 1 1/2" HP - without extension	12 (0.47)	50 (1.96)	---	---	35 (1.38)	---	---
Tri-Clamp - 2" - without extension	12 (0.47)	63.5 (2.5)	---	---	47.6 (1.87)	---	---
Tri-Clamp - 2" HP - without extension	12 (0.47)	63.5 (2.5)	---	---	47.6 (1.87)	---	---
Tri-Clamp - 3" - without extension	12 (0.47)	91 (3.58)	---	---	72 (2.83)	---	---
Tri-Clamp - 3" HP - without extension	12 (0.47)	91 (3.58)	---	---	72 (2.83)	---	---
Thread DN40 - DIN 11851 - without extension	13 (0.51)	56 (2.2)	78 (3.07)	21 (0.83)	38 (1.5)	---	---
Thread DN50 - DIN 11851 - without extension	15 (0.59)	68.5 (2.7)	92 (3.62)	22 (0.86)	50 (1.96)	---	---
Thread DN80 - DIN 11851 - without extension	16 (0.63)	100 (3.94)	127 (5)	29 (1.14)	81 (3.19)	---	---
Thread SMS - 1 1/2" - without extension	12 (0.47)	55 (2.16)	74 (2.91)	25 (0.98)	35 (1.38)	---	---
Thread SMS - 2" - without extension	12 (0.47)	65 (2.56)	84 (3.3)	26 (1.02)	48.6 (1.91)	---	---
Thread SMS - 3" - without extension	12 (0.47)	93 (3.66)	113 (4.45)	32 (1.26)	73 (2.87)	---	---
Thread RJT - 2" - without extension	15 (0.59)	66.7 (2.63)	86 (3.38)	22 (0.86)	47.6 (1.87)	---	---
Thread RJT - 3" - without extension	15 (0.59)	92 (3.62)	112 (4.41)	22.2 (0.87)	73 (2.87)	---	---
Thread IDF - 2" - without extension	12 (0.47)	60.5 (2.38)	76 (2.99)	30 (1.18)	47.6 (1.87)	---	---
Thread IDF - 3" - without extension	12 (0.47)	87.5 (3.44)	101.6 (4)	30 (1.18)	73 (2.87)	---	---

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