Customer benefits

The LLT100 is specifically made for industrial applications and harsh environments. It provides continuous, non-contact level measurement capabilities for process automation and inventory management in industries such as mining, aggregates, oil & gas, chemicals, food & beverages, power, pulp & paper, pharma, and water & waste water.

Optimize process or inventory management

- Precise measurement of any solid or liquid
- Independent of material properties

Low cost of ownership

- Fast and flexible installation
- No maintenance
- Single product configuration works for many applications

Main features

ABB brings laser level transmitters to the next level of non-contact measurements by packaging laser ranging technology with the required features for industrial applications. Using a pulsed laser to perform time of flight measurement, the LLT100 provides accurate distance measurements while being powered from the 4–20 mA loop. Available in aluminum or stainless steel body, it comes with a variety of process interfaces. It can meet the demands of hazardous area locations, high pressure and high temperature applications.

Convenient

- Easy setup function
- Articulated embedded graphical user interface
- 2-wire powered and HART 7 communication

Reliable

- Dust and fog penetration capabilities
- Accurate measurement at short and long distances
- Explosion-proof class 1, division 1 (zone 1)
LLT100
Laser level transmitter

Product configurations

**Base model**
Ideal for measuring level of solids at up to 100 m (328 ft) and liquids at up to 30 m (98 ft) when the process is at normal pressures. Affordable, powerful level transmitter for a wide range of applications, even in hazardous areas.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Base model details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Range</strong></td>
<td>0.5 m to 100 m (2 ft to 330 ft)</td>
</tr>
<tr>
<td><strong>Process fitting</strong></td>
<td>ASME class 150, NPS 2 in.</td>
</tr>
<tr>
<td></td>
<td>DN 50 PN 16 flat face</td>
</tr>
<tr>
<td><strong>Operating temperature</strong></td>
<td>−40 °C to +60 °C (−40 °F to +140 °F)</td>
</tr>
<tr>
<td><strong>Process pressure</strong></td>
<td>−1 bar to +2 bar (29 psi)</td>
</tr>
<tr>
<td><strong>Typical accuracy</strong></td>
<td>±11 mm (0.4 in.)</td>
</tr>
</tbody>
</table>

**Hygienic model**
Ideal for food and beverage or pharmaceutical applications. Model fitted with a 4 in. triclover clamp interface with hygienic certifications. As all models, available with aluminum or stainless steel enclosure.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Hygienic model details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Range</strong></td>
<td>0.5 m to 100 m (2 ft to 330 ft)</td>
</tr>
<tr>
<td><strong>Process fitting</strong></td>
<td>4 in. triclover clamp</td>
</tr>
<tr>
<td><strong>Operating temperature</strong></td>
<td>−40 °C to +60 °C (−40 °F to +140 °F)</td>
</tr>
<tr>
<td><strong>Process pressure</strong></td>
<td>−1 bar to +1 bar (15 psi)</td>
</tr>
<tr>
<td><strong>Typical accuracy</strong></td>
<td>±11 mm (0.4 in.)</td>
</tr>
</tbody>
</table>
**High pressure models**  
Ideal for high-pressure applications. Same performance as the base model, but fitted with a choice of pressure rated flanges. As all models, is certified for use in hazardous area zone 1, and laser beam can be sent safely into zone 0.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>0.5 m to 100 m (2 ft to 330 ft)</td>
</tr>
<tr>
<td>Process fitting</td>
<td>ASME class 150/300, NPS 2 in.</td>
</tr>
<tr>
<td></td>
<td>DN 50 PN 16/40 raised face</td>
</tr>
<tr>
<td>Process temperature</td>
<td>–40 °C to + 60 °C (–40 °F to +140 °F)</td>
</tr>
<tr>
<td>Process pressure</td>
<td>–1 bar to +50 bar (720 psi)</td>
</tr>
<tr>
<td>Typical accuracy</td>
<td>±11 mm (0.4 in.)</td>
</tr>
</tbody>
</table>

**Accessories**  
Configure the transmitter to a wide variety of applications.
- Dust tube
- Purge ring for dust tube
- Cooling tube (increases maximum process temperature to 280 °C [535 °F])
- Heated window (requires 4-wire power)
- Through-The-Glass HMI
- Flange adapters
- Alignment laser pointer
- External relays
- Rotating bracket, swivel flange
LLT100
Laser level transmitter

Functions

- Rotating display with touch through-the-glass interface
- Industrial enclosure, IP67 and explosion proof class 1/division 1 (also zone 1)
- Pressure-rated flanges available
- Powered from 4–20 mA loop, HART communication
- Eye safe, class 1 laser beam

Advantages/New features

Laser transmitter measures any solid or liquid, from close to long range. A single instrument meets a wide variety of demands.

LLT100 can be used in challenging hazardous areas, in the presence of potentially explosive dust or gases. It can be used in class 1/division 1 (zone 1) environments. For zone-rated environments, the LLT100 configured with fused glass process flanges is approved for forming the barrier between zone 1 and zone 0 and sending its laser beam into zone 0.

For dusty applications, the dust tube prevents dust deposition on the window, removing the need for preventive maintenance. For very high dust level, a purge ring can be added to the dust tube to provide an air flow to enhance the dust protection.

High temperature applications are made possible by the addition of a cooling tube. Cooling tubes with different process interfaces and different pressure ratings are available.
Solid application

A typical LLT100 application is to measure the level of solid materials in silos or tanks. They can be found in various industries such as mining, aggregates, chemicals, food and beverages, power, pulp and paper, pharma.

The high sensitivity of the LLT100 allows level measurement in tall vessels. Its narrow laser beam can be precisely aimed around obstacles, and instrument installation is very flexible, as the transmitter can be placed close to the wall or be aimed at an angle inside the vessel.

Finally, material build-up on vessel sides as no effect on the measurement, as the narrow beam (beam angle <0.3 degrees) does not interact with the vessel sides.

The new LLT100 sets the new standard for industrial laser level measurement.

Liquid application

Liquid measurement represents a large portion of level applications. LLT100 can detect any liquid, even transparent liquids.

The LLT100 comes with the heated window option to prevent condensation on its optics.

In liquid application, the laser beam must be as perpendicular as possible to the liquid surface. Alignment of the beam should be within ±5 degrees from vertical. To help in performing the alignment of the beam, the swivel flange accessory is very convenient as it provides a simple and efficient way to precisely align the laser beam.

For high pressure applications, the LLT100 comes with a variety of process flanges, rated at pressures up to 50 bar (725 psi).
Mixer/Obstruction

Another challenge in the field of level measurement is the reliable measurement in the presence of obstructions or mixing blades.

The narrow beam of the LLT100 allows to install the device at almost any place at the top of the vessel. Coupled with the fact that the laser beam is very narrow (<0.3 degrees), it can easily be positioned between the vessel wall and the edge of the mixer, providing reliable measurements. When it is not possible to avoid the mixer blades, the LLT100 has advanced processing functions that can still perform the measurement reliably by efficiently tracking the real level when the mixer crosses the path of the laser beam.

Positioning

Another application for the LLT100 is to measure the position of wagons, tripper cars or other moving objects in order to position them accurately.

A tripper car being positioned in the wrong place when it unloads its cargo causes wasted time, damage, and lost time. Similarly, the LLT100 can be used to prevent collisions by moving cranes and other machinery.

The LLT100 can provide accurate position measurement at distances up to 200 m (660 ft) with the added use of a reflector.
### Specification

#### Measurement

**Range**
- 0.5 m to 30 m (2 ft to 100 ft) for liquids
- 0.5 m to 100 m (2 ft to 330 ft) for solids
- 0.5 m to 200 m (2 ft to 660 ft) for positioning applications with reflective target

**Resolution**
- 5 mm (0.2 in.)

**Typical accuracy**
- ±1 mm (0.4 in.)

**Measuring beam**
- Laser wavelength: 905 nm, eye safe, Class 1

**Laser beam divergence**
- < 0.3°

#### Environmental conditions

**Operating temperature**
- -40 °C to +60 °C (−40 °F to +140 °F)

**Storage temperature**
- -40 °C to +85 °C (−40 °F to +185 °F)

**Survival temperature**
- -40 °C to +80 °C (−40 °F to +175 °F)

**Process pressure**
- Base model:
  - -1 bar to +2 bar (29 psi)
- Hygienic model:
  - -1 bar to +1 bar (15 psi)
- Pressure-rated model:
  - -1 bar to +49.6 bar (719 psi), depending on flange

#### Output

**Analog**
- 4 – 20 mA, NAMUR compliant

**Digital**
- HART 7 (multi-variable output)

**Communication**
- Local HMI, EDD/DTM, handheld

**Power supply**
- Powered from the loop
  - 4 – 20 mA, 16 VDC to 42 VDC (If using HART, minimum input voltage is 21 VDC)

**Heated lens option**
- 24 VDC (3 W)

### Mechanical

**Enclosure material**
- Powder coated aluminum (standard), 316L stainless steel (option)

**Dimensions (W x H x D)**
- Universal – flat flange: 247 mm × 215 mm × 165 mm (9.7 in. × 8.5 in. × 6.5 in.)
- Class 150 – raised flange: 240 mm × 242 mm × 154 mm (9.5 in. × 9.5 in. × 6.1 in.)
- Class 300 – raised flange: 247 mm × 242 mm × 165 mm (9.7 in. × 9.5 in. × 6.5 in.)
- DIN PN 16 – raised flange: 247 mm × 242 mm × 165 mm (9.7 in. × 9.5 in. × 6.5 in.)
- DIN PN 40 – raised flange: 247 mm × 242 mm × 165 mm (9.7 in. × 9.5 in. × 6.5 in.)
- Hygienic flange: 223 mm × 215 mm × 137 mm (8.8 in. × 8.5 in. × 5.4 in.)

**Weight of standard model**
- Aluminum enclosure with universal aluminum flange: 3.7 kg (8.2 lb)
- 316L stainless steel enclosure with universal stainless steel flange: 8.6 kg (19.0 lb)

**Weight of pressure rated model**
- Aluminum enclosure: 6.7 kg to 7.2 kg (14.8 lb to 15.9 lb) depending on flange
- 316L stainless steel enclosure: 10.0 kg to 10.5 kg (22.1 lb to 23.2 lb) depending on flange

**Weight of hygienic model**
- Aluminum enclosure: 5.8 kg (12.8 lb)
- 316L stainless steel enclosure: 9.1 kg (20.1 lb)

**Protection class**
- IP66/IP67/Nema 4X (for all versions except flange H which is IP66/type 4X)

**Process fitting**
- Flange (ASME 2 in., DN50), hygienic fitting/triclover 4 in. (ISO2852)

**Wetted parts**
- Aluminum, cemented borosilicate window (base model)
- 316L SST, cemented borosilicate window (base model, hygienic model)
- 316L SST, fused borosilicate window (high pressure models)
LLT100
Laser level transmitter

**Operation**

**Display**
Integrated 128 × 64 pixels LCD display with TTG (Through-The-Glass) interface

**Software features**
Volume computation, damping, filtering, thresholds/alarms, user-defined display (with HMI)

**Optical**

**Total optical aperture**
50 mm (2 in.)

**Standard window material**
Tempered borosilicate cemented glass

**Pressure rated window material**
Borosilicate fused glass

**Lens impact resistance**
Impact tested at 4 joules

**Beam divergence**
$\Delta < 0.3^\circ$

**Beam spot width**

<table>
<thead>
<tr>
<th>Distance</th>
<th>1 m</th>
<th>3 m</th>
<th>5 m</th>
<th>10 m</th>
<th>20 m</th>
<th>30 m</th>
<th>50 m</th>
<th>100 m</th>
<th>150 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>(ft)</td>
<td>(3 ft)</td>
<td>(10 ft)</td>
<td>(16 ft)</td>
<td>(33 ft)</td>
<td>(66 ft)</td>
<td>(98 ft)</td>
<td>(164 ft)</td>
<td>(328 ft)</td>
<td>(492 ft)</td>
</tr>
<tr>
<td>Approx. spot width</td>
<td>0.7 cm</td>
<td>2.0 cm</td>
<td>3.3 cm</td>
<td>6.6 cm</td>
<td>13.5 cm</td>
<td>20 cm</td>
<td>34 cm</td>
<td>69 cm</td>
<td>108 cm</td>
</tr>
<tr>
<td>(in)</td>
<td>(0.3 in)</td>
<td>(0.8 in)</td>
<td>(1.3 in)</td>
<td>(2.6 in)</td>
<td>(5.3 in)</td>
<td>(7.9 in)</td>
<td>(13.4 in)</td>
<td>(27.2 in)</td>
<td>(42.5 in)</td>
</tr>
</tbody>
</table>

**Beam direction**
$90^\circ \pm 5^\circ$ from mounting flange for measurements of liquids

**Laser**

**Measuring laser**
905 nm near infrared pulsed semiconductor laser
7.1 μW average power output
45 W peak power output

**Measuring laser life expectancy**
25 years typical MTBF

**Measuring laser safety**
Always on IEC60825-1 Ed.2, 2007
A class 1 laser is safe for all conditions of use.
Approvals

**CE**
ATEX Directive 2014/34/EU
Electromagnetic compatibility Directive (EMC) 2014/30/EU
Low Voltage Directive (LVD) 2014/35/EU
Restriction of Hazardous Substances Directive (RoHS) 2011/65/EU

**ATEX, IECEx, KCs**
ATEX: FM16ATEX0032X, IECEx FMG 16.0023X, KCs registration no: 17-AV4BO-0305X

For flanges A and B:

- II 2 (1) G Ex db [op is T6 Ga] IIC T6...T5 Gb –50 °C ≤ Ta ≤ +75 °C...+85 °C
- II 2 (1) D Ex tb [op is Da] IIC T85°C...T100°C Db –50 °C ≤ Ta ≤ +75 °C...+85 °C
- Ex db [op is T6 Ga] IIC T6...T5 Gb –50 °C ≤ Ta ≤ +75 °C...+85 °C
- Ex tb [op is Da] IIC T85°C...T100°C Db –50 °C ≤ Ta ≤ +75 °C...+85 °C - IP66/IP67

For flanges C, D, F, and G:

- II 1/2 (1) G Ex db [op is T6 Ga] IIC T6...T5 Ga/Gb –50 °C ≤ Ta ≤ +75 °C...+85 °C
- II 2 (1) D Ex tb [op is Da] IIC T85°C...T100°C Db –50 °C ≤ Ta ≤ +75 °C...+85 °C
- Ex db [op is T6 Ga] IIC T6...T5 Ga/Gb –50 °C ≤ Ta ≤ +75 °C...+85 °C
- Ex tb [op is Da] IIC T85°C...T100°C Db –50 °C ≤ Ta ≤ +75 °C...+85 °C - IP66/IP67

**FM**


For flanges A, B, C, D, F, and G and only for housings AI and SI:

- US: Class I, Division 1, Groups A, B, C, D T5 –50 °C ≤ Ta ≤ 85 °C
- US: Class I, Division 1, Groups A, B, C, D T6 –50 °C ≤ Ta ≤ 75 °C
- CAN: Class I, Division 1, Groups B, C, D T5 –50 °C ≤ Ta ≤ 85 °C
- CAN: Class I, Division 1, Groups B, C, D T6 –50 °C ≤ Ta ≤ 75 °C
- Class II/III, Division 1, Groups E, F, G T5 –50 °C ≤ Ta ≤ 85 °C
- Class II/III, Division 1, Groups E, F, G T6 –50 °C ≤ Ta ≤ 75 °C

For flanges A, B, C, D, F, and G and only for housings AM and SM:

- US only: Class I, Division 1, Groups A, B, C, D T5 –50 °C ≤ Ta ≤ 85 °C
- US only: Class I, Division 1, Groups A, B, C, D T6 –50 °C ≤ Ta ≤ 75 °C
- US only: Class II/III, Division 1, Groups E, F, G T5 –50 °C ≤ Ta ≤ 85 °C
- US only: Class II/III, Division 1, Groups E, F, G T6 –50 °C ≤ Ta ≤ 75 °C

For flanges A and B:

- Class I, Zone 1, AEx/Ex db [op is T6 Ga] IIC T6...T5 Gb –50 °C ≤ Ta ≤ +75 °C...+85 °C
- Zone 21, AEx/Ex tb [op is Da] IIC T85°C...T100°C Db –50 °C ≤ Ta ≤ +75 °C...+85 °C
- For flanges C, D, F, and G:
- Class I, Zone 0/1, AEx/Ex db [op is T6 Ga] IIC T6...T5 Ga/Gb –50 °C ≤ Ta ≤ +75 °C...+85 °C
- Zone 21, AEx/Ex tb [op is Da] IIC T85°C...T100°C Db –50 °C ≤ Ta ≤ +75 °C...+85 °C

**CSA**
CLASS - C363186 - ELECTRICAL EQUIPMENT FOR MEASUREMENT USE -
Certified to US Standard

CLASS - C363106 - ELECTRICAL MEASUREMENT AND TEST EQUIPMENT -
Certified to CAN Standard

3A
3-A Certificate authorization number: 3500

Certified to 3-A #46-03 Sanitary standard for refractometers and energy absorbing optical sensors for milk and milk products
LLT100
Laser level transmitter

Dimensions
Dimensions in mm (in.)

Fig. 1: LLT100 with universal flange (aluminum and stainless steel)
Dimensions in mm (in.)

Fig. 2: LLT100 with class 150 flange
LLT100
Laser level transmitter

Dimensions in mm (in.)

Fig. 3: LLT100 with class 300 flange
Fig. 4: LLT100 with PN16 / PN 40 flange
LLT100
Laser level transmitter

Dimensions in mm (in.)

Fig. 5: LLT100 with triclover flange
Interface

HART terminal – 2 wires

Internal protective earth (ground)

Cover lock screw M4

*Optional Ext. Meter (+)

Negative (–)

Positive (+)

External ground termination point

---

HART terminal with heater option – 2 + 2 wires

Internal protective earth (ground)

External DC supply for heated lens option: +24 V

0 V (Return)

External ground termination point

Cover lock screw M4

*Optional Ext. Meter (+)

Negative (–)

Positive (+)
LLT100
Laser level transmitter

Accessories

**Dust tube**
Dimensions in mm (in.)

![Diagram of dust tube dimensions]

- Ø 57 (2.3)
- 165 (6.5)
- 6.4 (0.3)
- 257 (10.1)
- Ø 58 (2.3)
- Ø 165 (6.5)
Purge ring
Dimensions in mm (in.)

Dust tube assembly with purge ring

Dust tube  Gasket  Purge ring  Gasket  LLT100 device
LLT100
Laser level transmitter

Cooling tube
Dimensions in mm (in.)

Cooling tube with universal flange
234 (9.2)
165 (6.5)

Cooling tube with pressure rated flange
261 (10.3)
159 – 165 (6.3 – 6.5) depending on process flange
**Adjustable pivot bracket**
Dimensions in mm (in.)

- 185 (7.3)
- Ø 18 (0.7)
- Ø 121 (4.8)
- 167 (6.6)

± 30° rotation angle

- Ø 8.8 (0.4)
- ± 10° rotation angle
- 22 (0.9)
- 45 (1.8)
- 45 (1.8)
- 9 (0.4)

**Adjustable swivel flange**
Dimensions in mm (in.)

- 210 (8.3)

Top flange

Bottom flange
## LLT100
Laser level transmitter

### Accessories — specifications

**Dust tube**

**Base plate diameter**
165 mm (6.5 in.) mounts on LLT100 standard flange

**Length**
257 mm (10.1 in.)

**Material**
316 Stainless steel

**Gasket material**
Black compressible Buna-N rubber durometer rating shore 60A

**Function**
Static air space prevents dust buildup, can be purged. Offset from hot process interface to allow convection cooling, can be purged.

### Flange reducer

<table>
<thead>
<tr>
<th>Side</th>
<th>2 in. ANSI</th>
<th>3 in. ANSI</th>
<th>4 in. ANSI</th>
<th>6 in. ANSI</th>
<th>DN25</th>
<th>DN50</th>
<th>PN40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raise</td>
<td>class 150</td>
<td>class 150</td>
<td>class 150</td>
<td>class 150</td>
<td>PN100</td>
<td>PN40</td>
<td>PN40</td>
</tr>
<tr>
<td>Face</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Adjustable swivel flange

**Outer diameter**
210 mm (8.3 in.)

**Mounting bolt pattern**
3 bolt holes, 10 mm (0.4 in.) diameter

**Tilt angle for aiming**
Continuously adjustable from 0° to 6°

**Material**
Aluminum

### Adjustable pivot bracket

**Overall dimensions**
185 mm × 249 mm × 55 mm (7.3 in. × 9.8 in. × 2.2 in.)

**Opening diameter**
60 mm (2.4 in.)

**Mounting plate thickness**
5 mm (0.2 in.)

**Mounting bolt**
4× HHCS 5/8-11 × 2 SS + 8× Washers + 2× lock washers + 4× nuts, bolt hole 8 × 18 mm (0.7 in.)

### Reflector

**Function**
Reflective panel for positioning applications up to 200 m (656 ft)

**Size**
90 cm × 90 cm (36 in. × 36 in.)

**Material**
Aluminum with reflective paint

### Cable glands

**Description**
Ex cable glands with ½ in. NPT or M20 thread size
Ex C1/D1 cable glands with ½ in. NPT or M20 thread size

### Demo kit

**Description**
Rugged carrying case with LLT100, dust tube, battery pack, laser pointer tool

### External laser pointer tool

**Function**
Laser pointer accessory used for targeting and aiming purpose.

**Pointing laser**
650 nm wavelength
Less than 1 mW output power

**Pointing laser safety**
Class 2M
## Ordering information

<table>
<thead>
<tr>
<th>Base model</th>
<th>LLT100</th>
<th>.XX</th>
<th>.X</th>
<th>.X</th>
<th>.XX</th>
<th>.XXX</th>
<th>.XXX</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Body and electrical connection</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum body – M20 x 1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AM</td>
</tr>
<tr>
<td>Stainless steel body – M20 x 1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SM</td>
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<tr>
<td>Aluminum body – ½ in. NPT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AI</td>
</tr>
<tr>
<td>Stainless steel body – ½ in. NPT and electrical connection</td>
<td></td>
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<td></td>
<td>SI</td>
</tr>
<tr>
<td>Demo kit</td>
<td></td>
<td></td>
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<td></td>
<td>DEMO</td>
</tr>
<tr>
<td><strong>Process flange</strong></td>
<td></td>
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</tr>
<tr>
<td>ASME 2 in. class 150/DIN 50 mm PN16 bolt pattern, flat face, alu, cem. window</td>
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<td></td>
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<td>A</td>
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<tr>
<td>ASME 2 in. class 150/DIN 50 mm PN16 bolt pattern, flat face, SS, cem. window</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
</tr>
<tr>
<td>ASME 2 in. class 150, SS, raised face, fused window</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>C</td>
</tr>
<tr>
<td>ASME 2 in. class 300, SS, raised face, fused window</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>D</td>
</tr>
<tr>
<td>DIN 50mm PN16, SS, raised face, fused window</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>F</td>
</tr>
<tr>
<td>DIN 50mm PN40, SS, raised face, fused window</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>G</td>
</tr>
<tr>
<td>Triclover 4 in., SS, cem. window</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td>H</td>
</tr>
<tr>
<td><strong>Heated window</strong></td>
<td></td>
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<tr>
<td>No heated lens</td>
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## LLT100
Laser level transmitter

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<td>A910</td>
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### Accessory options

| **Purge ring for dust tube** |      |      |      | P910 |      |      |
| **Dry-contact relay (4–20 mA HART) (qty 2)** |      |      |      | DCMA |      |      |
| **Laser alignment tool** |      |      |      | LAS  |      |      |
| **Adaptor to LM80 bolt pattern** |      |      |      | ADA  |      |      |

### Gaskets and o-rings

| **Gasket (qty 2) for flat face process flange (A or B) BUNA-N** |      |      | G900 |      |      |
| **Triclover o-ring (qty 10), 4 in. diameter** |      |      | G901 |      |      |

### Process flange converter

| **Stainless steel 3 in./DN80 adaptor plate, class 150 and DN80/PN6 bolt pattern, non-pressure rated** |      |      | PC03 |      |      |
| **Stainless steel 4 in./DN100 adaptor plate, class 150 and DN100/PN10 bolt pattern, non-pressure rated** |      |      | PC04 |      |      |
| **Stainless steel 6 in./DN150 adaptor plate, class 150 and DN150/PN10 bolt pattern, non-pressure rated** |      |      | PC06 |      |      |
| **3 in. raised face ANSI class 150 flange converter** |      |      | FC04 |      |      |
| **4 in. raised face ANSI class 150 flange converter** |      |      | FC05 |      |      |
| **6 in. raised face ANSI class 150 flange converter** |      |      | FC06 |      |      |
| **DIN80 raised face PN10 flange converter** |      |      | FC10 |      |      |
| **DIN100 raised face PN10 flange converter** |      |      | FC11 |      |      |
| **DIN150 raised face PN10 flange converter** |      |      | FC12 |      |      |

### Certificate

| **Material traceability certification** | MTC  |      |      |      |      |      |
| **Certificate of origin** | COO   |      |      |      |      |      |
| **Attested certificate of origin** | ACO   |      |      |      |      |      |
| **Calibration certificate** | CC    |      |      |      |      |      |

### ID tag plate

| **Supplemental wired-on stainless steel plate** | WSSP |      |      |      |      |      |
| **Supplemental screwed-on stainless steel plate** | SSSP |      |      |      |      |      |
Notes
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