



Description

The DDP3352 diaphragm pressure transmitter is designed for some severe working conditions, where the sensor is not suitable to touch directly with the medium. The sensor collects the pressure and outputs signals like 4~20 Ma and RS485 with the application of intellectual transmit module. The EB3351T-G possesses high accuracy and very small effect of temperature drift due to the application of digital temperature difference compensation technology and the perfect housing design of anti-explosion.

Applications

- Oil & Gas transportation
- Steel smelting industry
- Sewage treatment industry
- Process control in chemical industry
- Nonferrous metal smelting industry
- Process control in power plants

Technical parameters

| Functional parameters | | | | |
|-------------------------------|--|-------------------|--|-------------------|
| Accuracy | 0.2% | | | |
| Effect of ambient temperature | $\leq \pm 0.2\%F.S/10\text{ }^{\circ}\text{C}$ | | | |
| Long term stability | $\leq \pm 0.2\%/URL$ (1 year) | | | |
| Effect of installation | Can be rectified by re-zero setting | | | |
| Response time | 0.25s | | | |
| Effect of power supply | $\leq \pm 0.005\%/URL/v$ | | | |
| Effect of vibration | $\leq \pm 0.25\%/URL/g$ | | | |
| Applicable working conditions | | | | |
| Working temperature | -40~315 °C | | | |
| Ambient/storage temperature | -40~85 °C | | | |
| Application/storage humidity | $\leq 95\%RH$ | | | |
| Electromagnetic compatibility | | | | |
| N0. | Test items | General standard | Test conditions | Performance level |
| 1 | Radiation interference (shell) | GB/T 9251-2008 | 30MHz~1000MHz | Qualified |
| 2 | Conduction emission (DC interface) | GB/T 9251-2008 | 0.15MHz~30MHz | Qualified |
| 3 | ESD immunity | GB/T 17626.2-2006 | 4kV(Electric Shock) 8kV(Air) | B |
| 4 | Electromagnetic field immunity | GB/T 17626.3-2006 | 10V/m(80MHz~1GHz) | A |
| 5 | Power frequency magnetic field immunity | GB/T 17626.8-2006 | 30A/m | A |
| 6 | Point fast transient burst immunity | GB/T 17626.4-2008 | 2kV(5/50ns,5kHz) | B |
| 7 | Surge immunity | GB/T 17626.5-2008 | 500V(Between lines) 1kV(1.2μs/50μs) | B |
| 8 | Transmitted interference immunity | GB/T 17626.6-2008 | 3V(150kHz~80MHz) | A |

| Transmit module | |
|------------------------------|---|
| Power supply | 10~32V DC* |
| Load range | Current load resistance $RL \leq (U_s - U_{min}) / 0.026$ |
| Instrument failure diagnosis | Output alarm current in case of failure |
| Display variables | Percentage, current, master variable (Pa、kPa、MPa、mbar、bar、psi、mmH ₂ O) |

*: Voltage should be ≥ 18.5 when HART needed.

| Sensor measurement segment and the limit value | | | | |
|--|---------------|-------------------|-------------------|---------------------|
| Measurement segment | Minimum range | Upper range limit | Lower range limit | Over pressure limit |
| 0~40kPa | 4kPa | 40kPa | -40kPa | 1MPa |
| 0~250kPa | 25kPa | 250kPa | -100kPa | 4MPa |
| 0~3MPa | 150kPa | 3MPa | -100kPa | 15MPa |
| 0~10MPa | 0.5MPa | 10MPa | -100kPa | 20MPa |
| 0~40MPa | 2MPa | 40MPa | -100kPa | 50MPa |

| Material Specifications | |
|--------------------------------|---|
| Housing | Cast aluminum alloy (default option), SUS304, SUS316 |
| Ingress protection | IP65 (default option), IP67 |
| Sensor diaphragm | PTFE(default option) |
| Diaphragm filling oil | Silicone oil(default option), Fluorine oil |
| Flange | SUS304(default option), SUS316L |
| Diaphragm | SUS316L, Hastelloy C-276, Tantalum, Monel, SUS316 Gilding, Metal coated with PTFE |
| Name plate | SUS304 |
| Capillary | SUS304(default option), SUS316L |
| Sheath of capillary | SUS304 (default option), SUS316, SUS304+PVC, SUS316+PVC |
| Bracket | Nickel plating on carbon steel, SUS304 |
| Form of flange sealing surface | RF Raised (default option), Concurve FM, Convex M, Ring connection RJ |

Annotation: Flange can be customized.

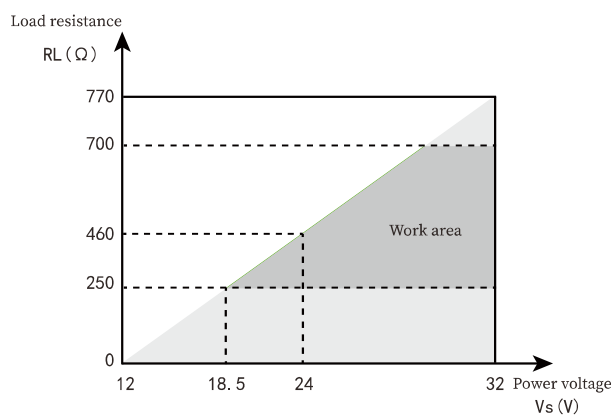


Figure Relationship of power voltage and load resistance

Load resistance RL calculation formula

$$RL = (Vs - 12) / 0.026 (\Omega)$$

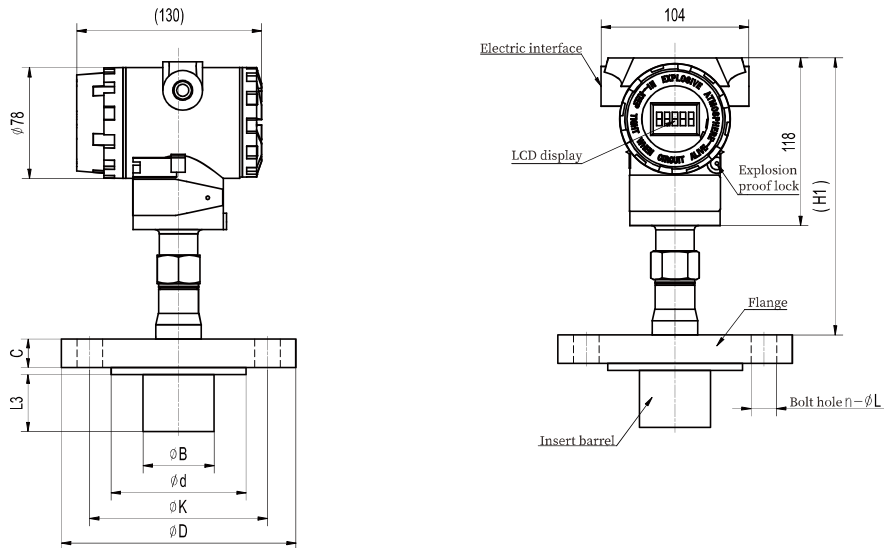
RL — Load resistance value(Ω)

Vs — Power supply voltage(V)

Overall dimension

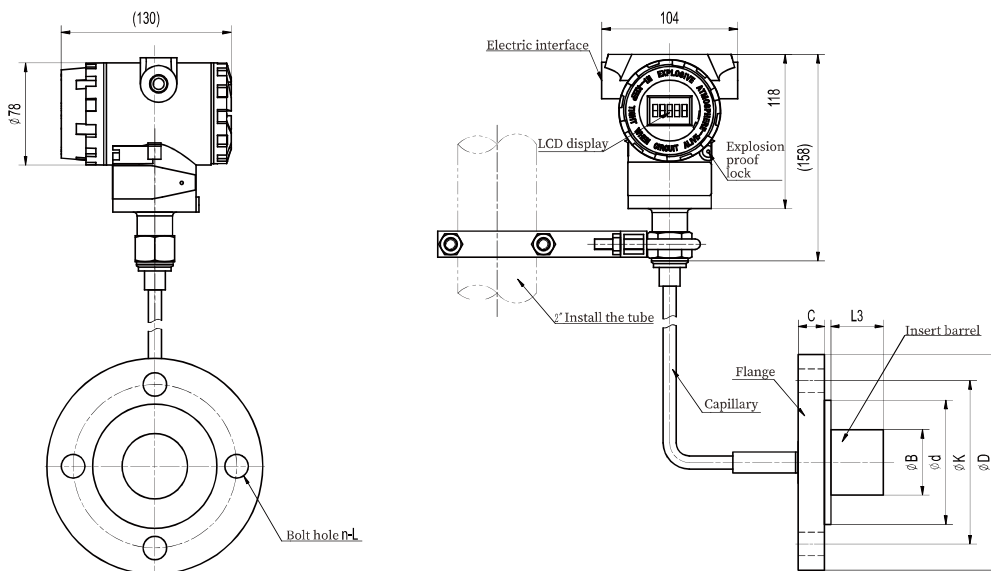
The model without capillary

Unit: mm



The model with capillary

Unit: mm



| The code of sensor | H1 Size |
|--------------------|---------|
| 1、 2 | 189 |
| 3、 4、 5 | 195 |

Annotation: L3 is determined by the parameters in the below “code for product selection”

Code table product selection

| Item | Code | Description |
|--------------------------------|---------|--|
| Product model | DDP3352 | |
| Sensor measurement range | 3 | 0~40kPa |
| | 4 | 0~250kPa |
| | 5 | 0~3MPa |
| | 6 | 0~10MPa |
| Output signal | E | 4~20mA |
| | S | 4~20mA,HART |
| | M | Modbus RS485 |
| Electric interface | 1 | M20*1.5 Female |
| | 2 | NPT1/2 Female |
| | 3 | G1/2 Female |
| Display | M5 | Intelligent LCD |
| Diaphragm filling oil | N | Normal temperature (Silicone oil, -35℃~150℃) |
| | F | High temperature (Silicone oil, 15℃~315℃) |
| | S | Oil forbidden type (Fluorine oil, -45℃~205℃) |
| | Z | Hygienic type (Vegetable oil, 10℃~80℃) |
| Flange type | 1 | Integrated flange |
| | 3 | Clamp |
| Flange & Pressure | H3 | HG/T20592; PN10/16 |
| | H5 | HG/T20592; PN25/40 |
| | H7 | HG/T20592; PN63 |
| | H8 | HG/T20592; PN100 |
| | A1 | ASME B16.5; 150 LB |
| | A2 | ASME B16.5; 300 LB |
| | A4 | ASME B16.5; 600 LB |
| | J2 | JIS B2220; 10K |
| | J3 | JIS B2220; 20K |
| | J5 | JIS B2220; 30K |
| | T | Size |
| Nominal size of flange | 3 | DN25/1" |
| | 4 | DN32/1.25" |
| | 5 | DN40/1.5" |
| | 6 | DN50/2" |
| | 7 | DN65/2.5" |
| | 8 | DN80/3" |
| | 9 | DN100/4" |
| | K | φ 50.5mm Clamp |
| | L | φ 64mm Clamp |
| Form of flange sealing surface | A | RF Raised face |
| | B | FM Concave |
| | C | M Convex |
| | D | FF Plane |
| | E | RJ Ring connection surface |
| | K | Clamp sealing |
| Flange material | A | SUS304 |
| | B | SUS316L |

| | | |
|----------------------------|---|---|
| Diaphragm material | 2 | SUS316L |
| | 3 | HC-276 |
| | 4 | Monel |
| | 5 | Tantalum |
| | 6 | Titanium |
| Wetted material coating | N | Nothing |
| | Y | PFA |
| | G | Gilding |
| Raised length of diaphragm | 0 | 0 |
| | 1 | 50mm |
| | 2 | 100mm |
| | 3 | 150mm |
| | 4 | 200mm |
| | T | Special size |
| Capillary length* | <input type="checkbox"/> <input type="checkbox"/> | Length of capillary from 1m to 10m(For example 3m means 03) |

| Additional options | | |
|--------------------------------------|------|---------------------------------|
| Item | Code | Description |
| Explosion proof | D | Flame proof(Exd II CT6) |
| | A | Intrinsically safe(Exia II CT6) |
| Special material of capillary | S6 | SUS316L |
| Special material of capillary sheath | A | SUS316 Armor |
| | B | SUS304+PVC |
| | C | SUS316+PVC |
| Bracket material | Z4 | SUS304 |
| Housing material | K4 | SUS304 |
| | K6 | SUS316 |
| Ingress protection | P7 | IP67 |

- Annotation: 1.Bracket is not available when the length of capillary is 0.
 2.Please contact us if the length of capillary is longer than 10m or it is not a integer.
 3.When oxygen is the the medium to measure, Fluorine oil is required to be the filling sensor oil.
 4.If you choose tantalum as the wetted element, the medium temperature should be -10~200℃.
 5.The effect of temperature and static pressure and the response time maybe bigger if the wetted elements are HC, tantalum, titanium, the filling oil is silicon oil or the length of capillary is longer than 5m.
 6.If the medium is corrosive, you should be very careful with the material of wetted parts, for it will result in damage in case wetted parts occurred problems.
 7.Please contact us if some of the parameters cannot meet your requirements.