



Description

The DTP3351 differential pressure transmitter is the typical DP of ENBBON. It takes over 7 years for the R&D team to develop the metal capacitive sensor for the transmitter. The sensor collects the pressure and outputs signals like 4~20 Ma and RS485 with the application of intellectual transmit module. The DTP3351 DP possesses high accuracy and stability due to the application of digital temperature difference compensation technology.

Applications

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

Technical parameters

Functional parameters				
Accuracy	0.1%, 0.2%			
Effect of ambient temperature	$\leq \pm 0.2\% \text{F.S}/10^\circ\text{C}$			
Long term stability	$\leq \pm 0.2\%/\text{URL}$ (1 year)			
Effect of installation	Can be rectified by re-zero setting			
Response time	0.25s			
Effect of power supply	$\leq \pm 0.005\%/\text{URL}/\text{v}$			
Effect of vibration	$\leq \pm 0.25\%/\text{URL}/\text{g}$			
Applicable working conditions				
Working temperature	-40~105 °C			
Ambient/storage temperature	-40~85 °C			
Application/storage humidity	$\leq 95\% \text{RH}$			
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.

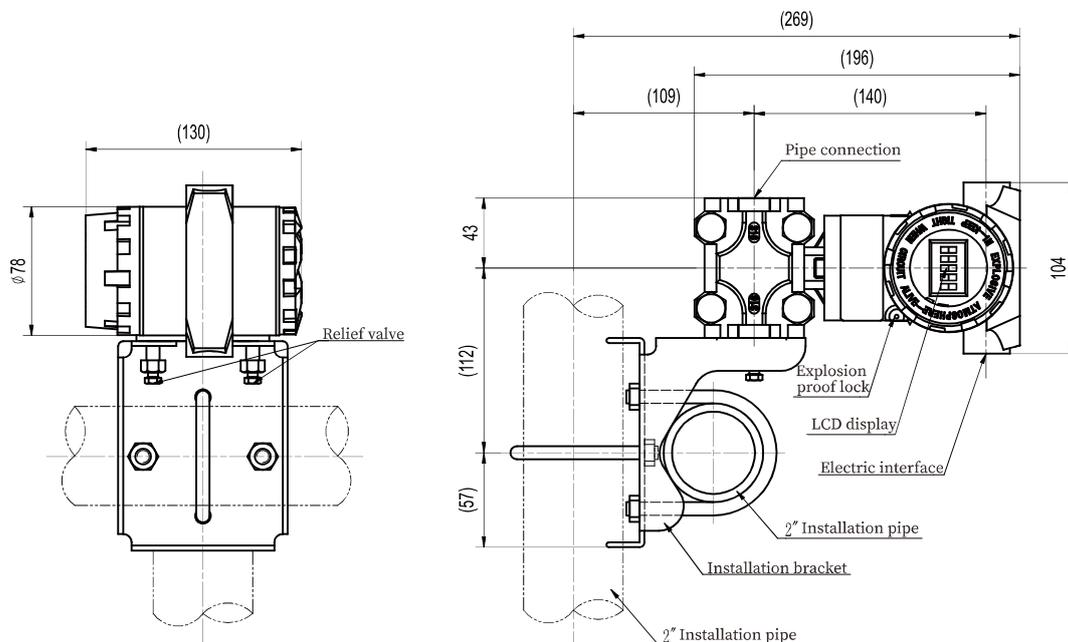
Sensor measurement segment and the limit value					
Measurement segment	Types of measurement	Minimum range	Upper range limit	Lower range limit	Over pressure limit
0~1.6kPa	Micro DP	0.16kPa	1.6kPa	-1.6kPa	2MPa
0~6kPa	DP	1.6kPa	6kPa	-6kPa	4MPa
	High SP	1.6kPa	6kPa	-6kPa	10MPa
	GP	1.6kPa	6kPa	-6kPa	1MPa
0~40kPa	DP	6kPa	40kPa	-40kPa	10MPa
	High SP	6kPa	40kPa	-40kPa	16/25/32MPa
	GP	6kPa	40kPa	-40kPa	1MPa
0~200kPa	DP	40kPa	200kPa	-200kPa	10MPa
	High SP	40kPa	200kPa	-200kPa	16/25/32MPa
	GP	40kPa	200kPa	-200kPa	2MPa
	AP	40kPa	200kPa	4kPa A	2MPa
0~1MPa	DP	180kPa	1MPa	-1MPa	10MPa
	High SP	180kPa	1MPa	-1MPa	16/25/32MPa
	GP	180kPa	1MPa	-1MPa	4MPa
	AP	180kPa	1MPa	4kPa A	4MPa
0~2.5MPa	DP	0.8MPa	2.5MPa	-2.5MPa	10MPa
	High SP	0.8MPa	2.5MPa	-2.5MPa	16/25MPa
	GP	0.8MPa	2.5MPa	-2.5MPa	4MPa
	AP	0.8MPa	2.5MPa	4kPa A	4MPa
0~10MPa	DP	2MPa	10MPa	-10MPa	10MPa
	GP	2MPa	10MPa	-10MPa	15MPa
	AP	2MPa	10MPa	4kPa A	15MPa
0~20MPa	GP	8MPa	20MPa	-20MPa	30MPa
	AP	8MPa	20MPa	4kPa A	30MPa

Material Specifications	
Housing	Cast aluminum alloy (default option), SUS304, SUS316
Ingress protection	IP65 (default option), IP67
Sensor diaphragm	SUS316L(default option), Hastelloy C, Monel, Tantalum, Gilding
Sensor filling liquid	Silicone oil(default option), Fluorine oil, Vegetable oil
Sensor sealing element	Fluororubber, PTFE, Red copper
Sealing diaphragm for housing	Nitrile rubber
Name plate	SUS304
Clamp flange	SUS316L
Bolt & Nut	SUS304, SUS316
Relief valve	SUS304, SUS316L
Bracket	Carbon steel(default option), SUS304

Overall dimension

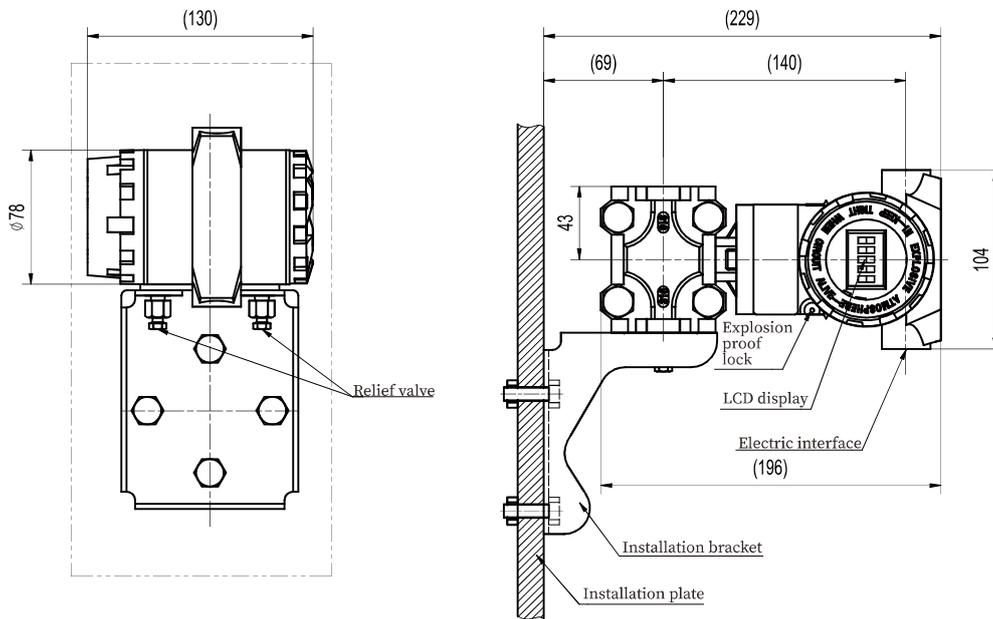
B1 Pipe curved bracket

Unit: mm



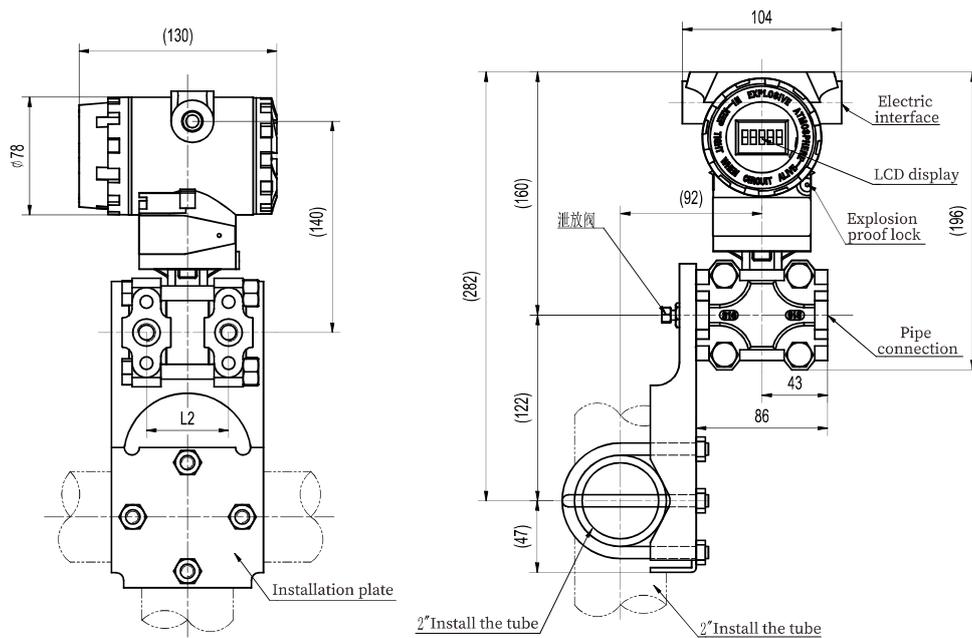
B2 Plate curved bracket

Unit: mm



B3 Pipe flat bracket

Unit: mm



Code table product selection

Item	Code	Description		
Product model	DTP3351			
Measurement type	D	DP		
	G	GP		
	A	AP		
Sensor measurement range	2	0~1.6kPa	D	
	3	0~6kPa	D/G	
	4	0~40kPa	D/G	
	5	0~200kPa	D/G/A	
	6	0~1MPa	D/G/A	
	7	0~2.5MPa	D/G/A	
	8	0~10MPa	D/G/A	
Static pressure degree*	9	0~20MPa	D/A	
	1	General static pressure		
	2	10MPa		
	3	25MPa		
Output signal	4	32MPa		
	E	4~20mA		
	S	4~20mA,HART		
Electric interface	M	Modbus RS485		
	1	M20*1.5 Female		
	2	NPT1/2 Female		
Display	3	G1/2 Female		
	M5	Intelligent LCD		
Process connection	0	NPT1/4 Female		
	1	NPT1/2 Female		
	2	M20*1.5 Male		
	3	NPT1/2 Male		
	4	G1/2 Male		
Wetted parts		[Process connection]	[Diaphragm]	[Relief valve]
	1	SUS304	SUS316L	SUS304
	2	SUS316	SUS316L	SUS316L
	3	SUS316	Hastelloy C	SUS316L
	4	SUS316	Monel	SUS316L
	5	SUS316	Tantalum	SUS316L
Installation bracket	6	SUS316	Titanium	SUS316L
	B1	Pipe curved bracket		
	B2	Plate curved bracket		
	B3	Pipe flat bracket		

Additional options		
Item	Code	Description
Explosion proof	D	Flame proof(Exd II CT6)
	A	Intrinsically safe(Exia II CT6)
Ingress protection	P7	IP67
Bolt & Nut material	L6	SUS316L
Bracket material	Z4	SUS304
Housing material	K4	SUS304
	K6	SUS316
Sensor sealing elements	M2	PTFE shim
	M3	Red copper shim
Sensor filling liquid	S	Fluorine oil
	Z	Vegetable oil
Sensor wetted diaphragm	G	Gilding

- Annotation:
- 1.Please contact us if copper or zinc are not allowed to be used for the products.
 - 2.The temperature that the sensor feels should be less than 100 C .
 - 3.The sensor filling liquid should be fluorine oil in case the medium is oxygen.
 - 4.When GP is required, static pressure is considered as general by default.
 - 5.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.
 - 6.Please contact us in case the above product specifications cannot meet your requirement.