OVERVIEW

LFT720 flange-mounted transmitter consists of the LFT710 Differential Pressure Transmitter and a welded level flange. The flange and the sensor are filled with silicone oil to transfer the pressure, avoiding the measurement influence of the measured medium through the pilot tube. The Influence on the measurement caused by the measured medium passing through the pilot tube includes crystalline solidification vaporisation (boiling), condensation, fractionation (heavy change), etc. It is used to measure the pressure of liquids, gases or steams and then convert it into a 4-20mA signal. The measurement principle is the same as LFT710 DP Transmitter. The only difference lies in the pressure transfer route, pressure is firstly transmitted through the diaphragm of the level flange and the filled oil, then through the transmitter body and finally reach the measuring sensor.

STANDARD SPECIFICATIONS

Pressure range is calibrated based on the standard zero point, stainless steel 316L diaphragm, filled liquid is silicone oil.

1)Pressure calibration reference accuracy

Including linearity, hysteresis and repeatability from zero point			
Linear output accuracy	TD≤10	±0.2%	Standard range: 40kPa, 250kPa, 1MPa, 3MPa
	10 < TD≤100	±0.02TD%	
Note: TD is range turn down ratio. When |URV|≥|LRV|, TD=URL/|URV|; when |URV|≤|LRV|, TD=URL/|LRV			

2) Power supply influence

When the power supply voltage varies within 12~36 VDC, if zero point and span variation not exceed ±0.005%*URV per voltage, the influence can be ignored.

FUNCTIONAL SPECIFICATION

1) Range

Range/Upper and lower range limits(URL&LRL)		kPa	Range ratio TD
C	Range	1~40	1~40
	URL&LRL	-40~40	
D	Range	2.5~250	1~100
	URL&LRL	-250~250	
E	Range	10~1000	1~100
	URL&LRL	-500~1000	
F	Range	30~3000	1~100
	URL&LRL	500~3000	

2) Range selection

Within the upper range limit (URL) and lower range limit(LRL), you can adjust the TD value within the allowable range to select the range. For example, if URL and LRL -40~40kPa, then adjust the TD value to 10 and select the output of 0~4kPa or -4~4kPa. To ensure accuracy, the TD value should be as small as possible, generally within 10.

3) Zero point setting

Zero and Span can be adjusted to any value within the measuring range in the table, as long as calibrated span ≥ minimum span.

4) Impact of the installation position

The level flange can be mounted in any position. The best condition is to keep the flange in a vertical position, and the offset caused by positional deviation can be corrected by zero clearing.

5) Output

Signal	Type	Output method
4~20mA	linear	two-wire
4~20mA+HART	linear	two-wire
RS485	linear	four-wire

6) Alarm current

Low alarm mode (minimum): 3.8 mA
High alarm mode (maximum): 20.8 mA
No alarm mode (hold): maintain the effective current value before the fault
Alarm current standard setting: High alarm mode

7) Response time

Total damping constant time: Equal to the sum of the damping constants time of the electronic circuit components and the sensing diaphragm box.
Electronic circuit components damping time: 0-60S adjustable
Sensing diaphragm box damping time: ≤0.2S
Start-up time after power failure: ≤5S
Data recovery to normal use time; ≤2S

8) Environmental temperature

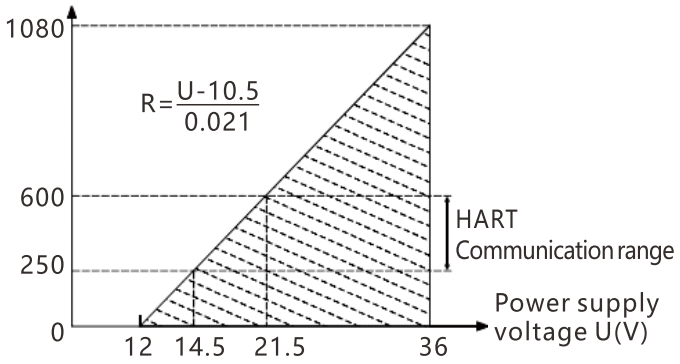
Item	Operation Conditions
Ambient working temperature	-20~70℃with display
Storage temperature	-40~85℃
Ambient humidity temperature	5-100%RH@40℃
Protection level	IP65
Hazardous occasions	ExdIICT6

INSTALL

Power supply and load conditions

Output	Power Supply Requirement
Current	14.5~36VDC, load resistance during communication 250 ~600Ω
RS485	12-36VDC

R(Ω)load resistance



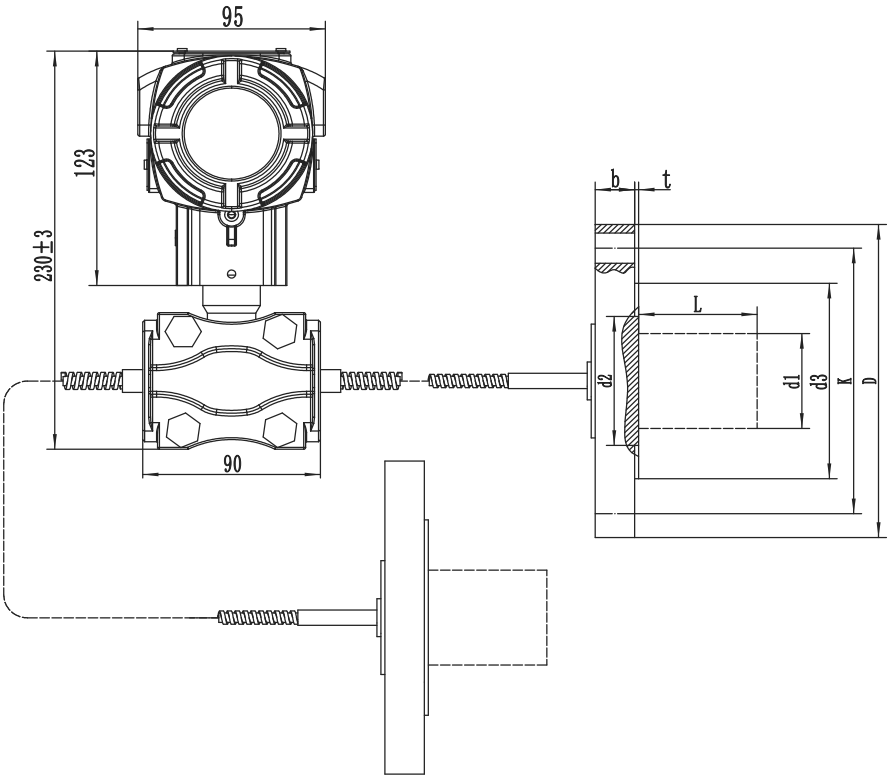
Electrical connection

Item	Description
Electrical connection	Aluminum alloy junction box, 2 wire outlet ports with female thread M20*1.5, the main body is light blue,white cover
Wire outlet protection	One end with M20*1.5 waterproof connector, the other end with plug, PVC material, suitable for wire diameter 6-8mm, protection class IP65
	Explosion-proof configuration, one end with female NPT1/2 thread, the other end with a plug, stainless steel, for wire diameter 6-8mm, protection class IP65
	Explosion-proof configuration, one end with internal thread M20*1.5, the other end with plug, stainless steel, for wire diameter 6-8mm, protection class IP65

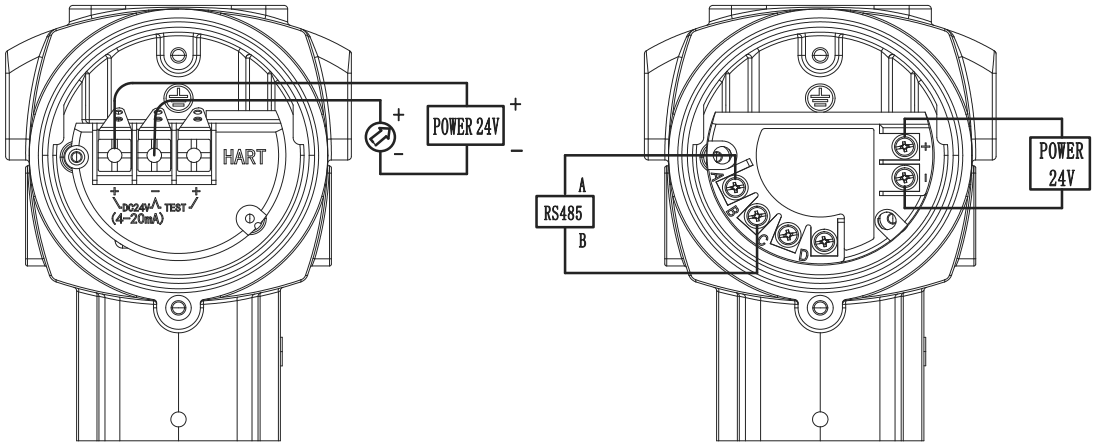
PHYSICAL SPECIFICATIONS

Measuring diaphragm enclosure	Stainless steel 316L
Diaphragm	316L, Hastelloy, Tantalum, FEP, PFA, PTFE
Process flange	Stainless Steel 304, Stainless Steel 316L
Nuts and bolts	Stainless steel (A4), colored zinc
Sealing ring	NBR, FKM, EPDM
Transmitter housing	Aluminium alloy material
Housing Seal	Nitrile rubber (NBR)
Nameplate	Stainless steel 304

DIMENSIONS (mm)



ELECTRICAL CONNECTION



ORDER REF NO.

Code and Description															
Double Flange Differential Pressure Transmitter LFT720															
1	Range	C	0-1kPa~40kPa(0-100~4000mmH2O)/(0-10~400mbar)												
		D	0-2.5kPa~250kPa(0-0.25~25mH2O)/(0-25~2500mbar)												
		E	0-10kPa~1MPa(0-1~100mH2O)/(0-0.1~10bar)												
		F	0-30kPa~3MPa(0-3~300mH2O)/(0-0.3~30bar)												
2	Diaphragm Material	S	316L												
		H	Hastelloy C												
		T	Tantalum												
3	Filling Liquid	D	Room temperature silicone oil (-30~180°C)												
		E	Low temperature silicone oil (-40~80°C)												
		F	High temperature silicone oil (-10~350°C)												
4	Electrical Connection	1	M20*1.5 female thread, PVC												
		2	M20*1.5 female thread, stainless steel												
		4	1/2 NPT female thread, stainless steel												
5	Output	N	4~20mA												
		J	4~20mA+HART												
		F	RS485												
6	Flange Standards	N	HG-T20592-2009(PN type)(European DIN Standards)												
		J	HG-T20615-2009(Class type)(America ANSI Standards)												
		F	Other flange standard												
7	Flange Type	R	Flange Type												
		E	Insert tube type (Only for DN80, 2 inche and above)												
8	Flange Size	D50	DN50	2 inches											
		D80	DN80	3 inches											
		D100	DN100	4 inches											
		DXX	Other												
9	Nominal Pressure Rating	P1	PN10	Class150 (lb)											
		P2	PN16	Class150 (lb)											
		P3	PN25	Class300 (lb)											
		P4	PN40												
		PX	Special Grade												
10	Insertion Tube Extension Length	S0	0 (without insertion tube)												
		S2	50mm												
		S4	100mm												
		S6	150mm												
		S8	200mm												
		SX	Customized length												
11	Capillary tube length at high pressure end	□□	1~10m (4m: 04)												
12	Capillary tube length at low pressure end	□□	1~10m (4m: 04)												
13	Explosion-proof	N	without Explosion-proof												
		D	Explosion-proof ExdIICT6												
14	Display	M5	With display												
		N	No display												
15	Additional requirements	N	Connector material is 316L												
		K	Degreasing and cleaning treatment												
		L	Hanging tag plate												
		H	Lightning protection (withstands transient voltage)												
		E	English nameplate												
LFT720		C	S	D	1	N	N	N	D50	P2	S2	04	04	N	N