

## OVERVIEW

LFT705 can accurately measure the pressure of liquid, gas or steam and convert it into a 4~20mA output signal. It can be operated by three buttons on the Transmitter, or through Hand Manipulator or Configuration Software. The display and configuration adjustment can be performed without impacting 4~20mA output signal. It is widely used in pressure measurements in industrial sites such as petroleum, chemical, electric power, and hydrology.



## STANDARD SPECIFICATIONS

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

## PERFORMANCE REQUIREMENT

Overall performance includes but not limited to reference accuracy, static pressure influence, ambient temperature influence, and other influence.

### 1) Pressure calibration reference accuracy

Including linearity, hysteresis and repeatability from zero point			
Linear output accuracy	TD≤10	±0.2%	Standard range: 6kPa, 40kPa, 250kPa, 1MPa, 3MPa, 10MPa
	10 < TD≤100	±0.02TD%	
TD is range turn down ratio. when $ URV  \geq  LRV $ , TD=URL/URV when $ URV  \leq  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  $\pm 0.005\% \times \text{URV}$  per voltage, the influence can be ignored.

## FUNCTIONAL SPECIFICATION

### 1) 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.

### 2) Zero point setting

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

### 3) Impact of the installation position

Installation at any position, if offset pressure not more than 400Pa, can be corrected by zero clearing.

### 4) Range

Gauge pressure

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	-100~250	
E	Range	10~1000	1~100
	URL&LRL	-100~1000	
F	Range	30~3000	1~100
	URL&LRL	-100~3000	
G	Range	100~10000	1~100
	URL&LRL	-100~10000	

### 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 time constants of the electronic circuit components and the sensor diaphragm box;

Damping time of electronic circuit components:

adjustable from 0-60 seconds;

Sensor diaphragm box damping time:  $\leq 0.2\text{s}$ ;

Power-on start-up time after power failure:  $\leq 5\text{s}$ ;

Data recovery time to normal use:  $\leq 2\text{s}$ ;

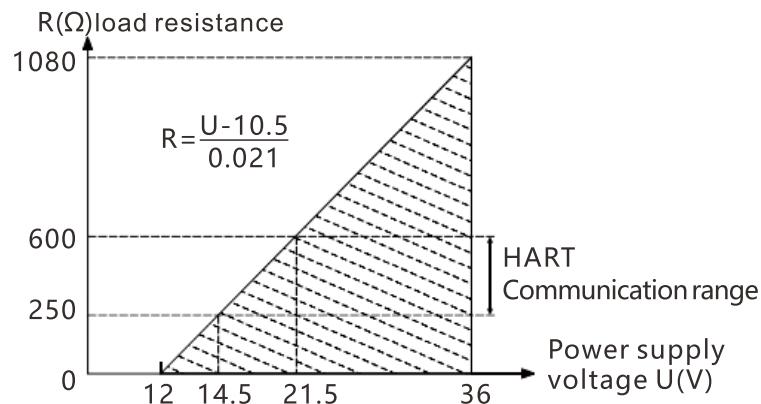
### 8) Environmental temperature

Item	Spec
Ambient working temperature	-20~70°C with display
Storage temperature	-40~85°C
Operating ambient humidity	5-100%RH@40°C
Protection	IP65
Dangerous occasions	ExdI ICT6

## INSTALL

### 1) Power supply and load conditions

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



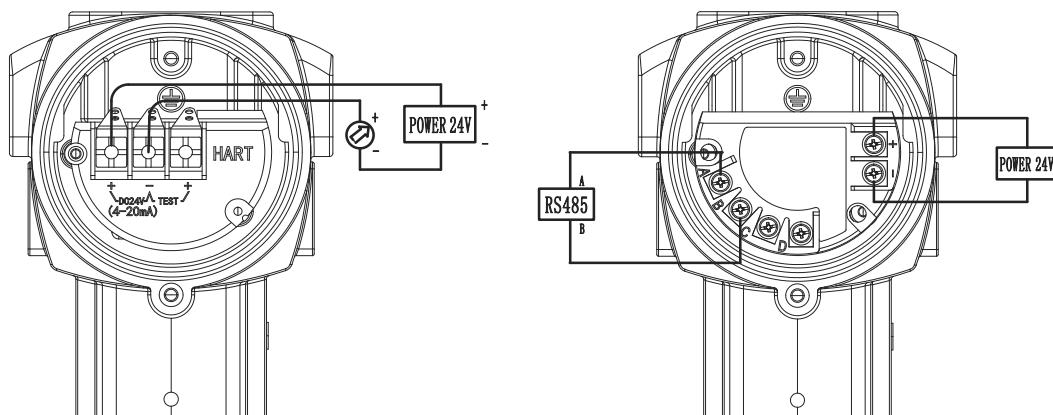
### 2) Electrical connection

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
Process flange	Stainless steel 304, stainless
Transmitter housing	Aluminum alloy
Housing seal	Nitrile rubber (NBR)
Nameplate	Stainless Steel 304

## ELECTRICAL CONNECTION



## ORDER REF NO.

Code and Description													
Flange Pressure Transmitter LFT705													
1	Range	C	0-1kPa~40kPa(0-100~4000mmH20)/(0-10~400mbar)										
		D	0-2.5kPa~250kPa(0-0.25~25mH20)/(0-25~2500mbar)										
		E	0-10kPa~1MPa(0.1~100mH20)/(0-0.1~10bar)										
		F	0-30kPa~3MPa(0.3~300mH20)/(0-0.3~30bar)										
		G	0-100kPa~10MPa(0-10~1000mH20)/(0-1~100bar)										
2	Diaphragm Material	S	316L										
		H	Hastelloy C(not available for Insertion tube type)										
		T	Tantalum (not available for Insertion tube type)										
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 PVC										
		2	M20*1.5 Female, Stainless Steel										
		4	1/2NPT Female, Stainless Steel										
5	Output	N	4~20mA										
		J	4~20mA+HART										
		F	RS485										
6	Flange Standard	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	Insertion tube type(Only for DN80, 2 inche and above)										
8	Flange Sizes	D40	DN40										
		D50	DN50										
		D80	DN80										
		D100	DN100										
		DXX	Other										
9	Pressure Grade	P1	PN10										
		P2	PN16										
		P3	PN25										
		P4	PN40										
		PX	Special Grade										
10	Pressure Grade	S0	0(Without insertion)										
		S2	50mm										
		S4	100mm										
		S6	150mm										
		S8	200mm										
		SX	Customized length										
11	Capillary length							<input type="checkbox"/>	<input type="checkbox"/>	From 1~10m, (4m: 04)			
12	Explosion-proof							N	Without Explosion proof				
		D	Explosion proof ExdIICt6										
13	Display							M5	With display				
		N	No display										
14	Additional Requirement							B	Mounting Bracket				
		P	Pressure Connection 316L										
		K	Degreasing and cleaning treatment										
		L	Hanging Tag plate										
		H	Lightning protection (withstands transient voltage)										
		E	English Nameplate										
	LFT705	C	S	D	1	N	N	R	D40	P1	S1	04	N
										P			