

FEATURES

- The sensor serves as a hygienic and easy-to-sterilize measurement point
- All connection components are manufactured using a single-piece welding and polishing process.
- Wetted parts are made of sanitary-grade materials with a roughness value $Ra \leq 0.8 \mu m$
- High measurement accuracy and strong interference resistance



DESCRIPTION

The LFT6727 Digital Sanitary Pressure Transmitter is designed for pressure measurement in the food, beverage, pharmaceutical, and biotechnology industries. Its housing features a fully stainless steel construction, with connection components fabricated through integral welding and polishing processes. Wetted parts are made of sanitary-grade materials with a roughness value of $Ra < 0.8$, providing a smooth surface finish, dead-leg-free construction, reduced contamination risk, easy cleaning and sterilization (via Tri-Clamp connection), and convenient sterilization capabilities.

PERFORMANCE SPECIFICATION

(Using standard zero point as the reference calibration range; equipped with a 316L stainless steel diaphragm and filled with silicone oil)

Total performance includes, but is not limited to, reference accuracy and other combined errors.

Typical Accuracy: $\pm 0.2\%$ F.S.

Annual stability: $\pm 0.2\%$ F.S./year

(1) Reference Accuracy and Temperature Effects

Linear Precision	$\pm 0.2\%$ F.S	Nominal range: 20 kPa, 40 kPa, 100 kPa, 250 kPa, 500 kPa, 1 MPa, 1.6 MPa, 2.5 MPa, 4 MPa
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(2) Power Supply Effect

The supply voltage varies within the range of 12–36 V DC; both the zero point and the range variation do not exceed $\pm 0.005\%$ of the upper limit of the measurement range per volt, which is negligible.

FUNCTIONAL SPECIFICATION

(1) Range Selection

Within the specified upper and lower limits, you can adjust the Turndown Ratio within permissible ranges to set the measurement range. For example, if the limits are -40 to 40 kPa, setting the Turndown Ratio to 10 produces an output range of 0–4 kPa or -4–4 kPa. For optimal accuracy, the turndown ratio should be kept as low as practical.—typically below 10—since larger values may compromise precision.

(2) Zero Point Setting

The zero point and range can be adjusted to any value within the instrument's measurement range, provided that the set range is greater than or equal to the minimum range.

(3) Mounting Position Effect

The transmitter may be mounted in any orientation. Mounting position induced zero shift shall not exceed 400 Pa. and can be corrected through zero adjustment.

Minimum Range		Range	Overload Pressure
B	10KPa	± 20 KPa	120KPa
C	20KPa	± 40 KPa	120KPa
D	40KPa	± 100 KPa	300KPa
E	100KPa	-100~250KPa	1MPa
F	250KPa	0~500KPa	1.5MPa
H	500KPa	-0.1~1MPa	3MPa
I	1MPa	0~1.6MPa	3MPa
J	1.6MPa	-0.1~2.5MPa	5MPa
K	2.5MPa	0~4MPa	6MPa

(5) Output

Signal	Type	Output Signal
4~20mA	linear	2-wired
4~20mA+Hart	linear	2-wired

(6) Alarm current

Low Alarm Mode (Minimum): 3.8 mA

High Alarm Mode (Maximum): 20.8 mA

No Alarm Mode (Hold): Maintains the last valid current value before the fault occurred.

Default Alarm Setting: High Alarm Mode

(7) Response Time

Total damping time constant = sum of the damping time constants of electronic circuit components and the sensormodule:Electronic circuit component damping time adjustable within 0-60s; sensor module damping time ≤ 0.2s;Power-on startup time after power loss ≤ 5s; Data recovery to normal operation time ≤ 2s.

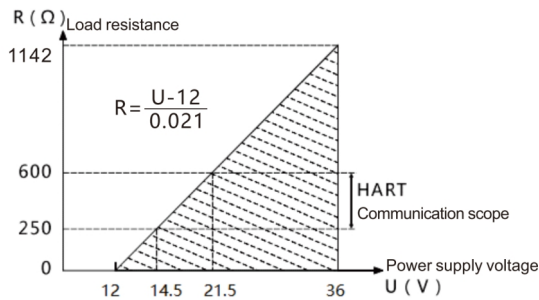
(8) Environmental Temperature

Item	Operating condition
Operating Temperature Range	-20~70℃
Relative Humidity	5~100%RH@40℃
Storage environment temperature	-40~85℃
Enclosure protection	IP67
For details, please consult the engineer.	

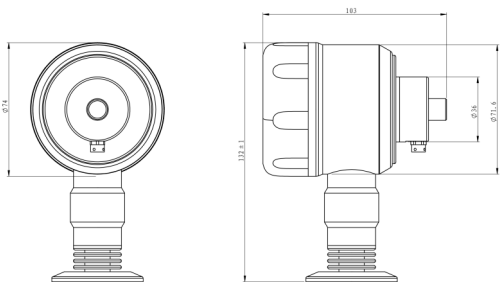
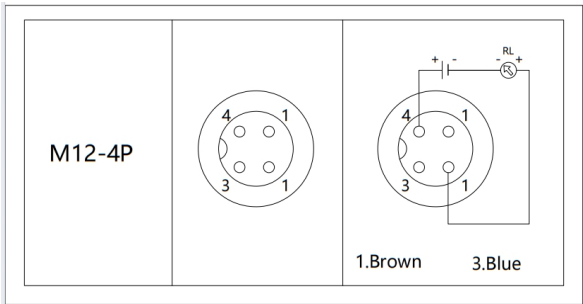
INSTALLATION

(1) Power Supply and Load Conditions

Item	Operating condition
Supply voltage	4~20mA: 12~36VDC
	4~20mA+Hart: 14.5~36VDC
Load resistance	The operating range is 0Ω to 1142Ω, with HART communication capability at 250Ω to 600Ω.
Transmission distance	<1000米
Power dissipation	≤500mW@24VDC, 20.8mA



(2) Electrical Connections



PHYSICAL SPECIFICATION

Diaphragm Material	Stainless Steel 316L
Connection Material	Stainless Steel 316L
Wetted Surface Roughness	Ra<0.8um
Fill Fluid	Room temperature silicone oil (-30°C to 180°C), high-temperature silicone oil (-20°C to 320°C), etc.
Number of Cooling Fins	Default: 3 pieces; or customize to 5 or 10 pieces
Material of the Transmitter Housing	Stainless Steel 304

ORDER REF NO

Code and Description										
Selection of Digital Display, Hygienic Type Pressure Transmitter: LFT6727										
LFT6727	G	Gauge Pressure								Pressure Type
		B	0-10~20KPa							Range
		C	0-20~40KPa							
		D	0-40~100KPa							
		E	0-100~250KPa							
		F	0-250~500KPa							
		H	0-500~1000KPa							
		I	0-1MPa~1.6MPa							
		J	0-1.6MPa~2.5MPa							
		K	0-2.5MPa~4MPa							
	Y	Customized								
	S	Stainless Steel 316L								Diaphragm Material
		D	Room temperature silicone oil (-30℃ to 180℃)							Fill Fluid
		Y	Customized							
	M1	M12 4-pin aviation connector without cable								Electrical Connection
		M2	M12 4-core aviation connector with standard cable							
		M3	M12 4-pin shielded aviation cable							
N	4~20mA								Output Signal	
	J	4~20mA+Hart								
K1	50.5 mm Tri-Clamp connection(DIN 32676)								Process Connection	
	K2	64 mm Tri-Clamp connection(DIN 32676)								
	Y	Customized								
N	N Non-explosion-proof								Explosion Protection	
	M5	M5 With Local Display (Standard)							Display	
LFT6727 G B S D M1 N K1 N M5										Selection Example