

Strain Gauge Flush Diaphragm Pressure Transmitter

GAMICOS

GPT431

PRODUCT OVERVIEW

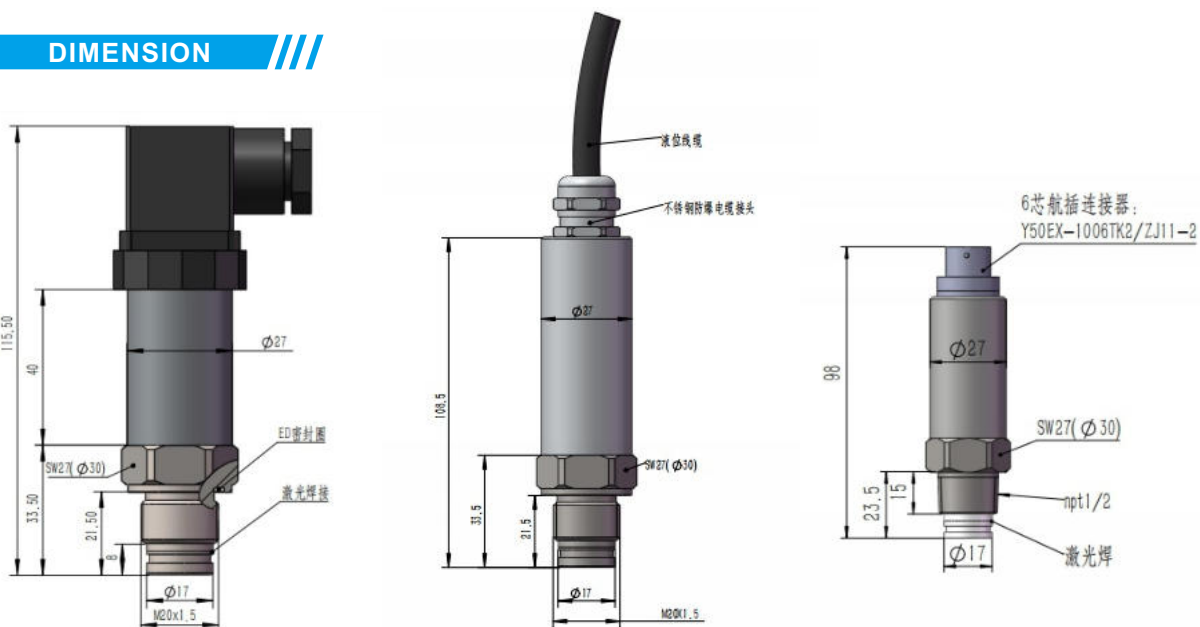
The GPT431 is primarily designed for pressure measurement and control in viscous media such as mud, asphalt, crude oil, and chemical coatings. It is ideal for mud pumps, grouting machines, fracturing and acidizing systems, and other industrial sites requiring anti-clogging properties and resistance to high abrasion and strong vibration. It ensures long-term stable and reliable operation under harsh working conditions, solving the common problem of standard flush diaphragm pressure sensor membranes being damaged by impact and abrasion from cement and sand. The probe's flush diaphragm structure is particularly suitable for measuring pressure in viscous media, avoiding measurement errors caused by medium clogging the cavity.



MAIN FEATURES

- Flush diaphragm design, prevents medium clogging
- Excellent resistance to high abrasion and vibration
- Anti-clogging design, suitable for complex media
- Optional elastic body materials, flexible corrosion resistance
- Multi-dimensional customization (range, temperature, accuracy, etc.)
- Integrated structure, easy installation
- Suitable for harsh industrial environments

DIMENSION



APPLICATION

- Oilfield drilling, exploration, and development
- Coal mining and related equipment
- Hydraulic machinery systems
- Mud pumps, grouting machines
- Fracturing and acidizing systems
- Chemical coating production
- Food and pharmaceutical industries
- Operations in highly corrosive environments
- Large-scale excavation and propulsion machinery
- Mining and tunneling equipment

TECHNICAL PARAMETERS

Range	0MPa~1MPa ...100MPa	
Pressure type	Gauge, absolute pressure	
Output signals	4~20mA	
	0~5V、0.5-4.5V、0-10V	
	RS485	
Accuracy (FS%)	0.2 (OEM)	0.5
Non-linearity (FS%)	≤0.2	≤0.4
Hysteresis & Repeatability (FS%)	≤0.05	≤0.1
Thermal Drift (Zero & Sensitivity) (%FS/°C)	≤0.03	≤0.05
Long-term stability(%FS/年)	≤0.2	≤0.5
Power supply (VDC)	+12~+30 (Calibration value+24)	
Medium temperature	-40°C~+150°C	
Environmental temperature	-40°C~+85°C	
Storage temperature	-40°C~+125°C	
Overload Capacity	≤300%FS (0~60MPa) ≤200%FS (70~100MPa)	
Load Resistance (Ω)	Current (2-wire) : $R \leq (U-10) / 0.02 - RD$ (U: Supply voltage, RD: Cable resistance)	
Response time	≤3ms (10%~90%)	
Medium	Liquids compatible with 17-4PH stainless steel	
Diaphragm material	17-4PH stainless steel	
Housing material	304, 316L	
Protection grade	IP65 (OEM)	
Vibration	20g (@10Hz~2000Hz)	
Shock resistance	100g/11ms	
Service life	> 10 million load cycles (within measuring range)	

ORDERING GUIDE

GPT243 Pressure Transmitter							
Code		Range					
0/X		0~1...100MPa					
Code		Pressure type					
G		Gauge					
A		Absolute pressure					
Code		Output					
T1		4~20mA					
T2		0~5VDC					
T3		0~10VDC					
T4		RS485					
Code		Power supply					
V1		12~30VDC					
V2		24VDC					
V3		5VDC					
Code		Accuracy					
A1		0.2%F.S. (OEM)					
A2		0.5%F.S. (Optional)					
A3		1%F.S.					
Code		Electrical Interface					
B1		Hirschmann					
B2		Aviation Plug					
B3		Direct Lead					
B4		Submersible Cable Outlet					
B5		OEM (Specify directly)					
Code		Pressure interface					
C1		M20*1.5					
C2		G1/2					
C3		NPT1/2					
CX		Other					
GPT2430	5MPa	G	T1	V2	A1	B3	C2