Wibbow

SG Sensor 1

Wibbow International Co., Limited

Content

Features

SGPS45 series piezoresistive pressure transducers adopt high-sensitivity piezoresistive silicon chip inside for pressure sensing. The chip is protected against ambient influences by a stainless-steel housing sealed with a concentrically corrugated diaphragm. The housing is filled with silicone oil for the transfer the pressure from diaphragm to the sensing component. Exchanging the pressure into MV electrical output signal.

Electric Performance

Power supply	1.5mA(typ.)
Electric connection	Kovar pin or 100mm silicon rubber flexible wires
Common mode voltage output	50% of input (typ.)
Input impedance	2kΩ-6kΩ
Output impedance	2kΩ-6kΩ
Insulation resistor	250MΩ.250VDC
Overpressure	<6MPa, 2 times FS; (6~60)MPa, 1.5times FS; Differential pressure or Low pressure range 1.3times FS

Construction

Diaphragm	stainless steel 316L
Housing	stainless steel 316L
Pin	Kovar
O-ring	Viton
Net weight	~30g (general type) ~50g (flush diaphragm) ~150g (assembled type)

Specifications

Item	Min	Type	Max	Unit
Linearity		±0.15	±0.25	%FS,BFSL
Repeatability		±0.1		%FS
Hysteresis		±0.05	±0.1	%FS
Zero output		±2		mVDC
FS output	60			mVDC
Zero thermal error		±0.02		%FS/℃
FS thermal error		±0.03		%FS/℃
<70Kpa FS thermal error		±0.05		%FS/℃
Compensated temp, range	-10		70	℃
<70Kpa Compensated temp, range	0		70	℃
Storage temp, range	-20		65	℃
Stability		±0.2	±0.3	%FS/year

*testing at basic condition, G: Gauge; A: Absolute; S: Sealed gauge

Piezoresistive Silicon Pressure Sensor

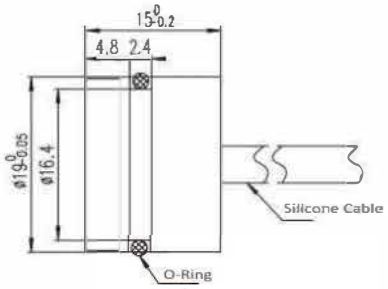
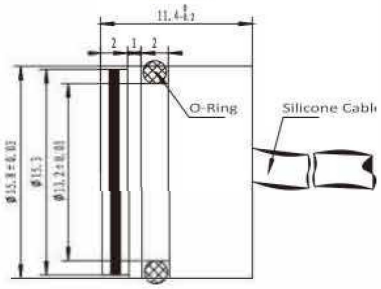
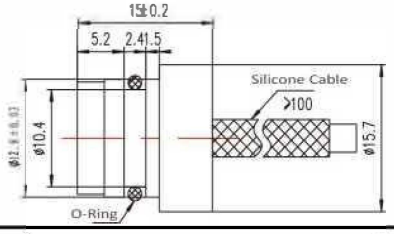
Basic Condition

Media temperature	(25±1)℃
Environment temperature	(25±1)℃
Shock	0.1g (1m/s/s) Max
Humidity	(50%±10%) RH
Local air pressure	(86-106) kPa
Power supply	(1.5±0.0015) MADC

Electric Connection & Environment Condition

Pin	Connection
Red	IN+
Yellow	OUT+
Black, Green	IN
White	OUT
Position	Deviate 90° from any orientation, zero change <0.05%FS
Impact	100g, 11ms
Media compatibility	The gas or liquid which is compatible with construction material and Viton

Products

Model	Image	Drawing (Unit:mm)
C19 Series		
C16 Series		
C13 Series		

Model Option

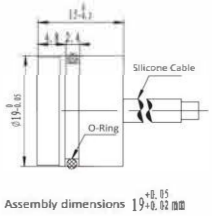
SGPS45	OEM Piezoresistive Pressure transducers						
	Code	Type					
	C19	Size: Φ 19mm Range: 0.017 ~ 60MPa					
	C16	Size: Φ 16mm Range: 0.1 ~ 2.1MPa					
	C13	Size: Φ 13mm Range: 3.5 ~ 35MPa					
		Code	Pressure range	Reference pressure			
				Gauge(G)	Absolute (A)	Sealed gauge (SG)	
		0.017	17kpa	√			
		0.035	35kPa	√			
		0.07	70kPa	√			
		0.1	100kPa	√	√		
		0.2	200kPa	√	√		
		0.35	350kPa	√	√		
		0.7	700kPa	√	√		
		1.4	1.4MPa	√	√	√ (13)	
		2.1	2.1Mpa	√	√	√ (13)	
		3.5	3.5MPa	√	√	√ (13)	
		7	7MPa		√	√ (13)	
		17	17MPa		√	√ (13)	
		35	35MPa		√	√ (13)	
		60	60MPa		√	√	
			Reference Pressure	Code	Excitation		
				C	1.5mA		
				V	Others (please specify)		
					Code	Temperature compensated type	
					N	no compensation	
					R	compensated by resistors	
						Code	Electric connection
						1	kovar
						2	silicon rubber flexible wires
SGPS45	C19	0.35	G	C	N	1	

Features

SGPS45 series provides customers with a variety of shape structure products; While maintaining the performance of the original product, it is also suitable for a variety of application scenarios.

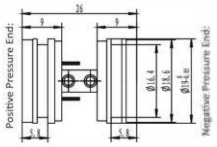
Products

Pressure Range	35KPa～700KPa
Pressure Type	Gauge Pressure, Absolute Pressure, Sealed Gauge Pressure
Output	mV /0.5～4.5V
Typical Application	Food, Biochemistry, Pressure Transmitters, Penetration Meters, Medical Systems, Liquid Level Systems



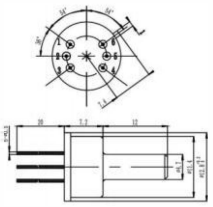
SGPS45 Flush Type Pressusre Sensor

Pressure Range	35KPa～2MPa
Pressure Type	Differential Pressure
Output	mV
Typical Application	Pressure Tank Level, Flow Control, Pressure Transmitter, Filtration Equipment



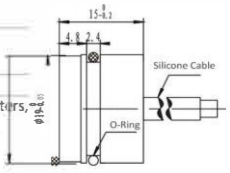
SGPS45 Differential Pressure Sensor

Pressure Range	35KPa～700KPa
Pressure Type	Gauge Pressure, Absolute Pressure, Differential Pressure
Output	mV
Typical Application	Automotive, Process Control, Medical Equipment, Barometer,



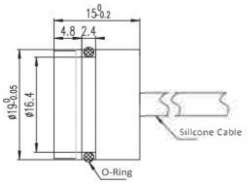
Simplified Silicon Piezoresistive Pressure Sensor

Pressure Range	17KPa～60MPa
Pressure Type	Gauge Pressure, Absolute Pressure, Sealed Gauge Pressure
Output	mV/Pt100
Typical Application	Food, Biochemistry, Pressure Transmitters, Penetration Meters, Medical Systems, Liquid Level Systems



SGPS45F Temperature-Pressure Pressure Sensor

Pressure Range	100KPa～10MPa
Pressure Type	Gauge Pressure, Absolute Pressure
Output	I²C
Typical Application	Pressure Tank Level, Flow Control, Pressure Transmitter, Filtration Equipment



SGPS45Z Digital Pressure Sensor

Universal Pressure Transmitter

Features

- Stainless steel construction; optional pressure port; Optional Output signal; Various outline structures, accepting custom design;
- Reversed-polarity, transient current & voltage protection, which Conform to EMI standard;
- Strong anti-interference ability, perfect long-term stability
- High precision, anti-vibration;
- Protection IP67;

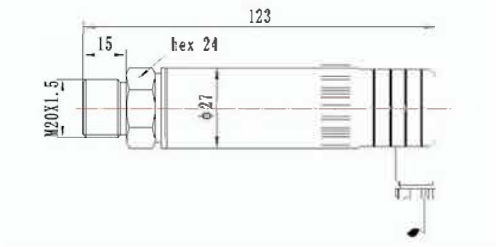
SGPPT633 Universal Pressure Transmitter adopts piezoresistive pressure sensor with isolated stainless-steel diaphragm as sensing element inside. The inlaying circuits transform millivolt signal into standard voltage, current and frequency signal. It can connect to computers and controlling instruments directly, and be chronically used in severe environment. SGPPT633 provides a variety of pressure ranges and electrical interfaces, which has high anti-vibration and impact resistance. Widely used in process control field of petroleum, chemical industry, pumps and compressors, general machinery, hydraulic/pneumatic systems, power, boiler, natural gas etc.

Specifications

Pressure Type	Gauge pressure, Absolute pressure, Sealed gauge
Measuring Medium	Liquid, gas, vapor, which are compatible with SUS304
Pressure range (MPa)	-0.1 1 1.6 6 10 20 40 60 or customized
Pressure range (bar)	-1 10 16 60 100 200 400 600 or customized
Pressure range (psi)	-14.5 300 700 900 2k 4k 8k or customized
Overload range	200%FS
Bursting pressure	300%FS
Power Supply	(9~36) VDC, (9~36) VDC, (9—36) VDC
Output signal	(0 —5)V, (1-5)V, (4 —20)mA
Transmitting	2-wires, 3-wires, 3-wires,
Load	≤(U-15)/0.02Q, >100k, >100k
Vibration	10 ~500Hz 25g
Shock resistance	50g 11ms
Accuracy	±0.5%FS(typ.) @25 ℃
Zero temp.drift	±0.03%FS/℃
FS temp.drift	±0.03%FS/℃
Long-term stability	±0.2%FS/Y
Insulation resistance	250 MQ/250V, 100MQ/250V
Medium temp.	(-40-125) ℃
Ambient temp.	(-40~85)℃
Storage temp.	(-40-125) ℃
Compensated temp.	(-10~80)℃
Housing	SUS304
Diaphragm	SS316L
O-ring	Viton
Protection	IP67

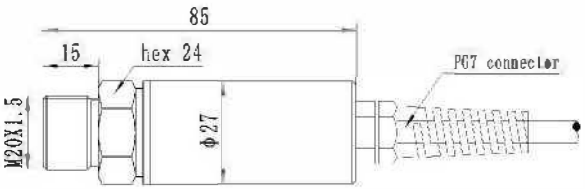
Outline Structure (Unit: mm)

1. Hirschman



Widely used in air compressor, Pump, medic etc.

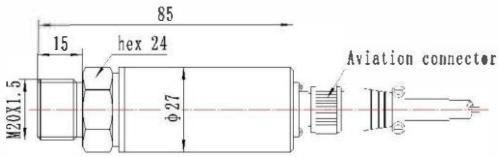
2.PG7



Waterproof, IP65.

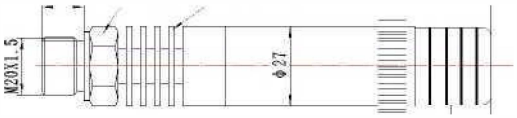
Widely used in hydraulic, presswind, power etc.

3.Aviation connector



Widely used in aeronautical equipment.

4.Cable directly



Waterproof, IP68.

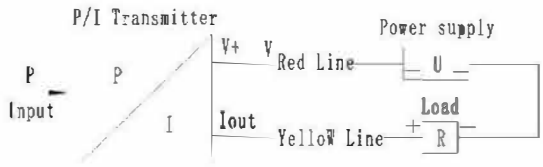
Widely used in Shipping, Oil and Chemical industry.

Electrical connection

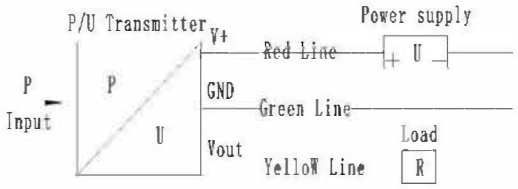
Cable connection wiring

Color	2-wires	3-wires
Red	+V	+V
Yellow	0V/+OUT	GND
Green	Null	+OUT

2-wires,4~20mA output



3-wires,0~5V,1~5V output



Model Option

SGPPT633	Universal Pressure Transmitter							
	(-0.1-60) MPa	Pressure range (Unit:Psi,Bar,Kpa,Mpa...)						
		Code	Pressure reference					
		A	Absolute pressure					
		G	Gauge pressure					
		S	Sealed gauge pressure					
			Code	Excitation				
			V1	24V				
			V2	12V				
			V3	others (please specify)				
				Code	Output signal			
				S1	4~20mA			
				S2	1~5V			
				S3	0~5V			
				S4	others (please specify)			
					Code	Pressure connection		
					Cl	M20x1.5		
					C2	G1/2"		
					C3	others (please specify)		
						Code	Electrical connection	
						E1	Hirschman	
						E2	Cable directly	
						E3	Air plug	
						E4	(others please specify)	
							Code	Accuracy
							Al	0.1%FS
							A2	0.25%FS
							A3	0.5%FS(typ.)
							A5	1%FS
								Other
SGPPT633	0~1lMPa	G	V1	S1	C1	E1	A3	

Order Note

1. The material of measuring medium should be compatible with the stainless steel. If it is corrosive, pls specify its material in detail.
2. Please note in the order if you need zero pressure as negative pressure.
3. Please note it in detail if your application environment is critical or the elements which may influence the pressure transmitter normal operation existed.
4. The structure and dimension of the pressure transmitter can be used for most of the application occasions, if your application space is too small or having other requirements to the transmitters, please specify it in detail.
5. All specifications are subject to change. Contact Wibbow for specifications and engineering drawings that are critical to your application. Drawings contained in this document are for reference only.

Miniaturized Pressure Transmitter

Features

- Pressure range: -100kpa~0~2kpa...60Mpa;
- Output signal: 0~5V,4~20mA, 200~1000Hz;
- Small, easy installation, accepting OEM design;
- Stainless steel construction, pressure interface reliable
- High precision, high stability;
- Anti-vibration, anti-overload;

The Pressure Transducer adopts piezoresistive pressure sensor with isolated stainless-steel diaphragm as sensing element inside. The inlaying circuits transform millivolt signal into standard voltage, current and frequency signal. It can connect to computers and controlling instruments directly, and be chronically used in severe environment.

MB320 provides a variety of pressure ranges and electrical interfaces, which has high anti-vibration and impact resistance.

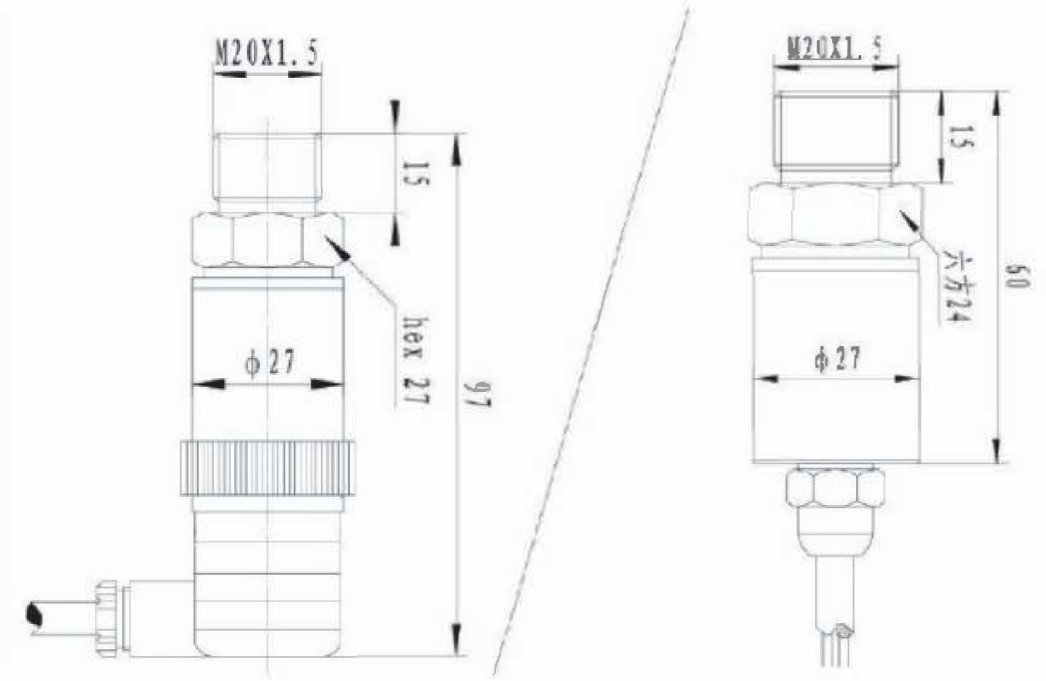
Application

- HVAC and refrigeration
- Engineering machinery, engine control
- Compressor, hydraulic, equipment
- Energy and water treatment

Specifications

Pressure Type	Gauge pressure, Absolute pressure, Sealed gauge
Measuring Medium	Liquid ,gas, vapor, which are compatible with SUS304
Pressure range(Mpa)	-0.1 1 6 10 20 40 60 or customized
Pressure range (bar)	-1 10 60 100 200 400 600 or customized
Pressure range (psi)	-14.5 300 700 900 2k 4k 8k or customized
Overload range	200% FS
Power Supply	24VDC
Output signal	(0~5)V, (1~5)V, (4~20)mA, 200~1000Hz
Transmitting	2-wires, 3-wires
Load	≤(U-15)/0.02Q, >100k, >100k
Vibration	10 ~500Hz 25g
Shock resistance	50g 11ms
Accuracy	±0.25%, ±0.5%FS(typ.)
Zero temp.drift	±0.05%FS/℃
FS temp.drift	±0.03%FS/℃
Long-term stability	±0.2%FS/Y
Insulation resistance	250 MO/250V, 100MQ/250V
Medium temp.	(-40 — 125) ℃
Ambient temp.	(-20~85)℃
Storage temp.	(-40 — 125)℃
Compensated temp.	(-10~80)°C

Outline Structure (Unit: mm)

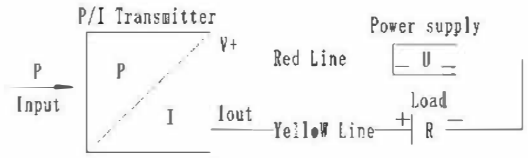


Electrical connection

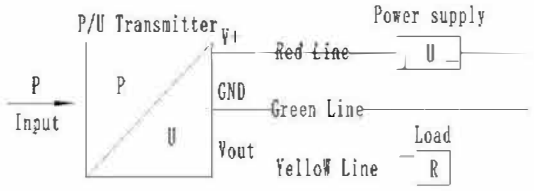
Cable connection wiring

Color	2-wires	3-wires
Red	+V	+V
Yellow	0V/+OUT	GND
Green	Null	+OUT

2-wires,4~20mA output



3-wires,0~5V,1~5V output



Model Option

SGPPT653	Pressure Transducer							
	-0.1~60MPa	II (Unit: Psi, Bar, Kpa, Mpa...)						
		Code	Pressure reference					
		A	Absolute pressure					
		G	Gauge pressure					
		S	Sealed gauge pressure					
			Code	Excitation				
			V1	24V				
				Code	Output signal			
				S1	4~20mA			
				S2	1~5V			
				S3	0~5V			
				S4	others (please specify)			
					Code	Pressure connection		
					C1	M20x1.5		
					C2	others (please specify)		
						Code	Accuracy	
						A1	0.3%FS	
						A2	0.5%FS(typ.)	
							I	Exia II CT6
							L	Cable length
SGPPT653	0~IMPa	G	V1	S1	C1	A2	IL2M	

Order Note

1. The material of measuring medium should be compatible with the stainless steel. If it is corrosive, pls specify its material in detail.
2. Please note in the order if you need zero pressure as negative pressure.
3. Please note it in detail if your application environment is critical or the elements which may influence the pressure transmitter normal operation existed.
4. The structure and dimension of the pressure transmitter can be used for most of the application occasions, if your application space is too small or having other requirements to the transmitters, please specify it in detail.
5. All specifications are subject to change. Contact Wibbow for specifications and engineering drawings that are critical to your application. Drawings contained in this document are for reference only.

Explosion-proof Pressure Transmitter

Features

- Explosion-proof, mildewproof, moitureproof;
- High precision, anti-vibration, anti-jamming;
- Perfect long-term stability;
- Various output signal, accepting custom design.

The Explosion-proof Pressure Transmitter is designed for explosion occasions pressure measurement. Exia II CT6, Exia II BT4 authorized. All-welded stainless-steel construction. High strength and small volume, perfect anti-vibration, mildewproof & moitureproof designing.

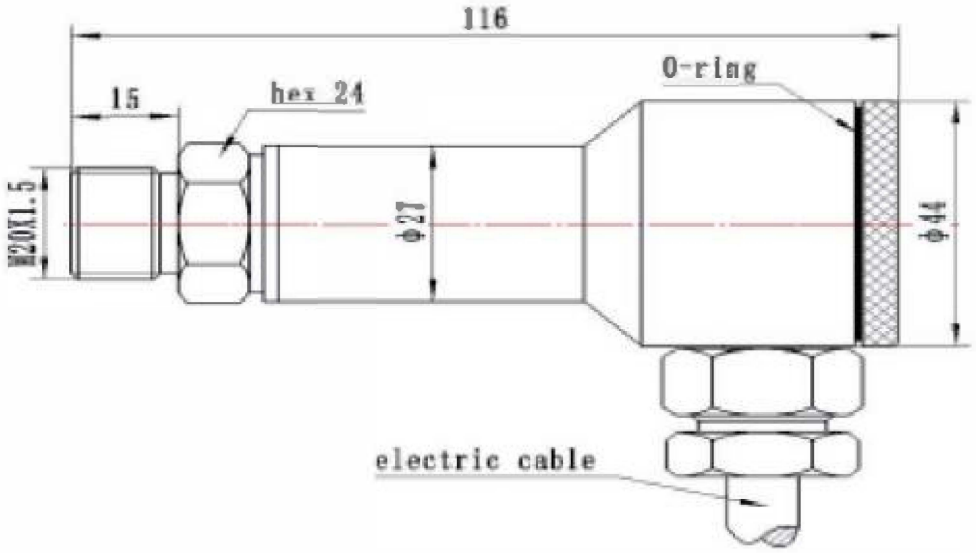
Application

- Engineering machinery, Car
- Oil and Chemical industry
- Automatic checkout system
- Shipping, Railway transportation
- Wind power generation
- Supply heating, Medicine
- Hydraulic pressure, Air compressor and Pump

Specifications

Pressure Type	Gauge pressure, Absolute pressure, Sealed gauge pressure
Measuring Medium	Liquid ,gas, vapor,which are compatible with SUS304
Pressure range(MPa)	-0.1 1 1.6 6 10 20 40 60 or customized
Pressure range (bar)	-1 10 16 60 100 200 400 600 or customized
Pressure range (psi)	-14.5 300 700 900 2k 4k 8k or customized
Overload range	200%FS
Bursting pressure	300%FS
Power Supply	(9~36) VDC, (9~36) VDC, (9~36) VDC
Output signal	(0~5)V, (1~5)V, (4~20)mA
Transmitting	2-wires, 3-wires, 3-wires,
Load	≤(U-15)/0.02Q, >100k, >100k
Vibration	10~500Hz 25g
Shock resistance	50g 11ms
Accuracy	±0.5%FS(typ.) @25 ℃
Zero temp.drift	±0.03%FS/℃
FS temp.drift	±0.03%FS/℃
Long-term stability	±0.2%FS/Y
Insulation resistance	250 MO/250V, 100MQ/250V
Medium temp.	(-40-125) ℃
Ambient temp.	(-40~85)℃
Storage temp.	(-40-125) ℃
Compensated temp.	(-10~80)℃
Housing	SUS304
Diaphragm	SS316L
O-ring	Viton
Protection	IP67

Outline Structure (Unit: mm)

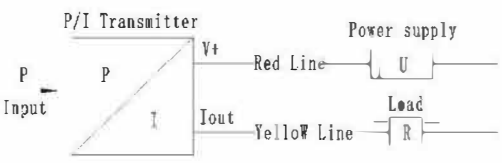


Electrical connection

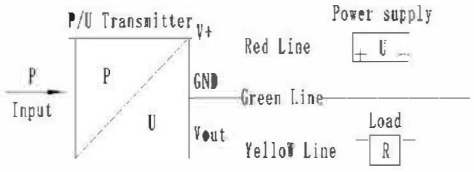
Cable connection wiring

Color	2-wires	3-wires
Red	+V	+V
Yellow	0V/+OUT	GND
Green	Null	+OUT

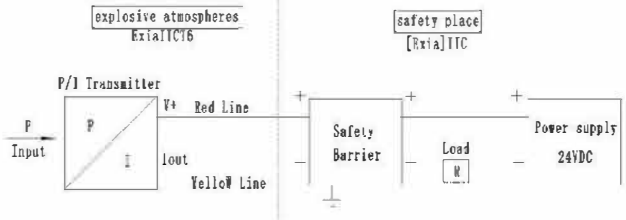
2-wires,4~20mA output



3-wires,0~5V,1~5V output



Intrinsic safe system:



Parameters:

Ui≤28VDC Ii≤mA
Li=omH Ci=22nF Pi≤0.65W

Safety Barrier Parameters:

Uo≤28VDC Io≤mA

Model Option

SGPPT663	Explosion-proof Pressure Transmitter							
	0~30MPa	Pressure range (Unit:Psi,Bar,Kpa,Mpa...)						
		Code	Pressure reference					
		A	Absolute pressure					
		G	Gauge pressure					
		S	Sealed gauge pressure					
			Code	Excitation				
			V1	24V				
			V2	12V				
			V3	others (please specify)				
				Code	Output signal			
				S1	4 ~ 20mA			
				S2	1~5V			
				S3	0~5V			
				S4	others (please specify)			
					Code	Pressure connection		
					C1	M20xl.5 orGl/2		
					C2	Gl/2		
					C3	others (please specify)		
						Code	Accuracy	
						A1	0.1%FS	
						A2	0.25%FS	
						A3	0.5%FS	
							Code	Specific need
							I	Intrinsically safe Exia II CT6
							E	Anti-vibration
							K	Anti-impact
							L	Cable length 2m
							Y	Other requirements
SGPPT663	0~30MPa	G	V1	S1	C1	A1	E	

Order Note

1. The material of measuring medium should be compatible with the stainless steel. If it is corrosive, pls specify its material in detail.
2. Please note in the order if you need zero pressure as negative pressure.
3. Please note it in detail if your application environment is critical or the elements which may influence the pressure transmitter normal operation existed.
4. The structure and dimension of the pressure transmitter can be used for most of the application occasions, if your application space is too small or having other requirements to the transmitters, please specify it in detail.
5. All specifications are subject to change. Contact Wibbow for specifications and engineering drawings that are critical to your application. Drawings contained in this document are for reference only.

Silicon Sanitary Flush Pressure Transmitter

Features

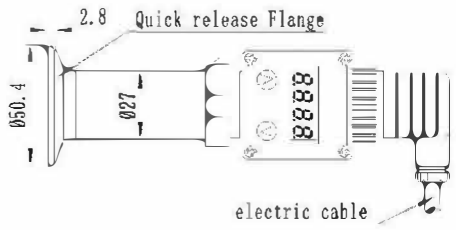
- Flush diaphragm structure, ease to clean;
- High precision, anti-impact
- Perfect long-term stability
- Various output signal, accepting custom design

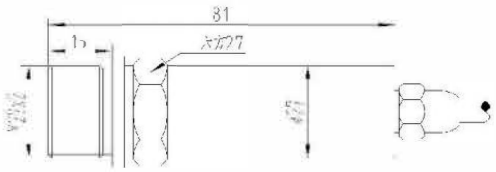
The Flush Diaphragm Pressure Transmitter has an integrated stainless steel and flush diaphragm construction. Designed for food, medical, pharmaceutical industry etc. The inlaying circuits transform millivolt signal into standard voltage, current and frequency signal. It can connect to computers and controlling instruments directly. Widely used in food, medical, wine making, pharmaceutical industry etc.

Specifications

Pressure Type	Gauge pressure, Absolute pressure, Sealed gauge
Measuring Medium	Liquid, gas, vapor, which are compatible with SUS304
Pressure range (MPa)	-0.1 1 1.6 6 10 20 40 60 or customized
Pressure range (bar)	-1 10 16 60 100 200 400 600 or customized
Pressure range (psi)	-14.5 300 700 900 2k 4k 8k or customized
Overload range	200% FS
Bursting pressure	300% FS
Power Supply	(12-36) VDC, (12-36) VDC, (12—36) VDC
Output signal	(0~5) V, (1~5) V, (4~20) mA
Transmitting	2-wires, 3-wires, 3-wires,
Load	≤ (U-15)/0.02Q, >100k, >100k
Vibration	10 ~500Hz 25g
Shock resistance	50g 11ms
Accuracy	±0.5%FS (typ.) @25 ℃
Zero temp.drift	±0.03%FS/℃
FS temp.drift	±0.03%FS/℃
Long-term stability	±0.2%FS/Y
Insulation resistance	250 MQ/250V, 100MO/250V
Medium temp.	(-40~ 125) ℃
Ambient temp.	(-40~85) ℃
Storage temp.	(-40-125) ℃
Compensated temp.	(-10-80) ℃
Housing	SUS304
Diaphragm	SS316L

Outline Structure (Unit: mm)



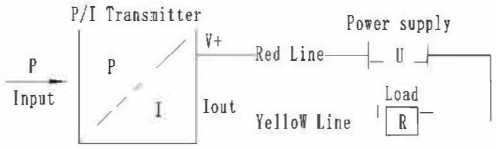


Electrical connection

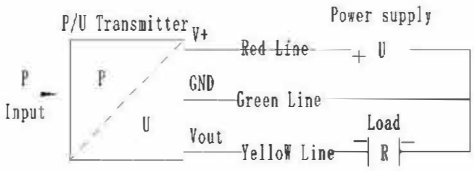
Cable connection wiring

Color	2-wires	3-wires
Red	+V	+V
Yellow	0V/+OUT	GND
Green	Null	+OUT

2-wires, 4~20mA output



3-wires, 0~5V, 1~5V output



Housing Industrial Pressure Transmitter

Features

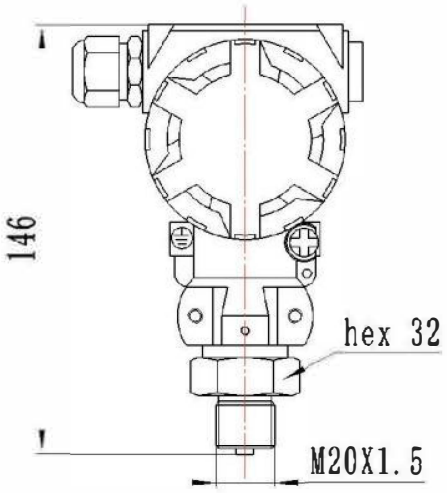
- LCD and LED indicator optional;
- Reverse signal polarity, moment overcurrent, overvoltage and Interference protection;
- Anti- lightning, Anti-jamming;
- Optional signal output;
- Customized design is acceptable.

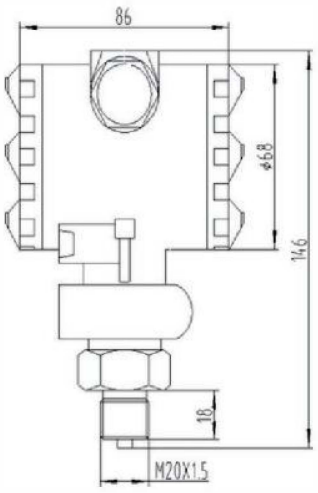
SGPPT733 Industrial Pressure Transmitter adopts piezoresistive OEM all-welded pressure sensor as a sensing element and the amplifier circuit transforms sensor signal into standard output signal. Through long-term aging and stability testing, its performance is stable and reliable. Widely used in process control field of petroleum, chemical industry, metallurgy, engineering machinery, hydraulic/pneumatic systems, power, boiler, automatic checkout system, shipping, railway transportation, natural gas etc.

Specifications

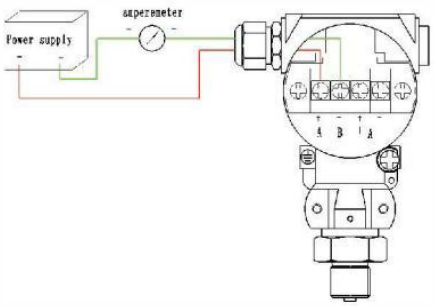
Pressure Type	Gauge pressure, Absolute pressure, Sealed gauge pressure.
Medium	Liquid, gas, vapor, which are compatible with SUS304
Pressure range(MPa)	-0.1 1 1.6 6 10 20 40 60 or customized
Pressure range (bar)	-1 10 16 60 100 200 400 600 or customized
Pressure range (psi)	-14.5 300 700 900 2k 4k 8k or customized
Overload range	200% FS
Bursting pressure	300% FS
Power Supply	(9~36) VDC
Output signal	(0~5) V, (1~5) V, (4~20) mA
Transmitting	2-wires, 3-wires, 3-wires,
Load	≤(U-15)/0.02Q, >100k, >100k
Vibration	10~500Hz 25g
Shock resistance	50g 11ms
Accuracy	±0.5%FS
Zero temp.drift	±0.03% FS/ ℃
FS temp.drift	±0.03% FS/ ℃
Long-term stability	±0.2%FS/Y
Insulation resistance	250 MQ/250V
Medium temp.	(-40-125) ℃
Operation temp.	(-40~80) ℃
Storage temp.	(-40-125) ℃
Compensated temp.	(-10~70) ℃
Housing	SUS304
Diaphragm	SS316L
O-ring	Viton
Protection	IP67

Outline Structure (Unit: mm)

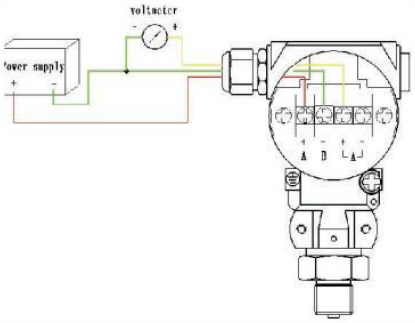




Electrical connection



2-wires、4~20mA output:



3-wires、0~5V or 1~5V output:

Model Option

SGPPT733	Industrial Pressure Transmitter								
	-0.1~60MPa	Pressure range (Unit: Mpa, kpa, psi, bar etc.)							
		Code	Pressure reference						
		A	Absolute pressure						
		G	Gauge pressure						
		S	Sealed gauge pressure						
			Code	Excitation					
			V1	24V					
			V2	12V					
			V3	others (please specify)					
				Code	Output signal				
				S1	4~20mA				
				S2	1~5V				
				S3	0~5V				
				S4	others (please specify)				
					Code	Pressure connection			
					C1	M20*1.5			
					C2	GI/2"			
					C3	others (please specify)			
						Code	Electrical connection		
						J1	direct cable connection		
						J2	others (please specify)		
							Code	Accuracy	
							P1	0.1%FS	
							P2	0.25%FS	
							P3	0.5%FS(typ.)	
							P4	1%FS	
								S	Others Please specify)
SGPPT733	O~IMPa	G	V1	S1	C1	J1	P3	S	

Order Note

1. The material of measuring medium should be compatible with the stainless steel. If it is corrosive, pls specify its material in detail.
2. Please note in the order if you need zero pressure as negative pressure.
3. Please note it in detail if your application environment is critical or the elements which may influence the pressure transmitter normal operation existed.
4. The structure and dimension of the pressure transmitter can be used for most of the application occasions, if your application space is too small or having other requirements to the transmitters, please specify it in detail.
5. All specifications are subject to change. Contact Wibbow for specifications and engineering drawings that are critical to your application. Drawings contained in this document are for reference only.

Submersible Level Transmitter

Features

- Separate construction. Full sealed stainless steel construction for submersible part; sensor and amplifier circuit are all in the sealed housing; IP68;
- Aluminum-alloy electric connection box is optional to ease wiring; IP65;
- Removable top stainless steep cap; prevent diaphragm damage and ease cleaning.

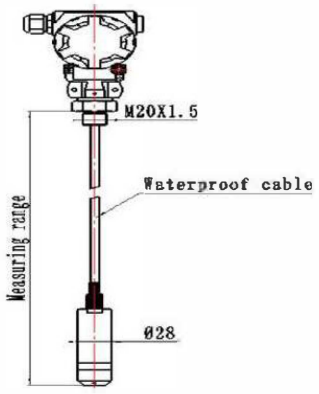
The Submersible Level Transmitter adopts high performance pressure sensor as sensing element, which could measure liquid static pressure that is positive proportional to level depth precisely, and transform pressure signal into standard current/voltage signal output by amplifier circuit to measure accurate level depth. The product has high accuracy, compact size, easy installation, can be submersible into the liquid directly to measure level from transmitter bottom to the liquid surface.

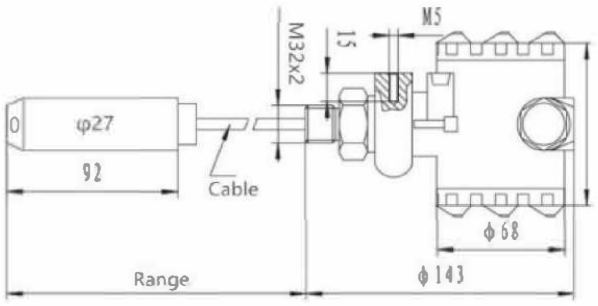
It can be widely used for water and level measure and control of petroleum, chemi-industry, power station, city water supply and drainage and hydrology, etc.

Specifications

Pressure range	1 2 5 10 20 50 100 200 mH2O			
Measuring Medium	Liquid, which is compatible with stainless steel 316L.			
Pressure type	Gauge			
Overpressure	200% FS			
Accuracy	±0.5%FS(typ.)			
Transmitting	2-wires 3-wires			
Output signal	4~20mA 0~5V,1~5V etc.			
Power supply	12-36VDC			
Load(Ω)	<(U-15)/0.02A			
Operation ambient temp.	-40~85 ℃			
Storage temp.	-30-100 ℃			
Medium temp.	-40~125 ℃			
Compensated temp.	-10~70 ℃			
Material contacting with media	**Housing**	Stainless steel	**Seal part**	Viton
	Diaphragm	Stainless steel 316L		
	Submersible Cable	NBR		
Protection	IP68(Sensor part); IP65(Connection box)			
EX-Proof class	Exia II CT6, Intrinsic Safe			
Character	Anti-impact, Anti-vibration			
Indicator	0~100% linear; LED digital indicator optional			

Outline Structure (Unit: mm)

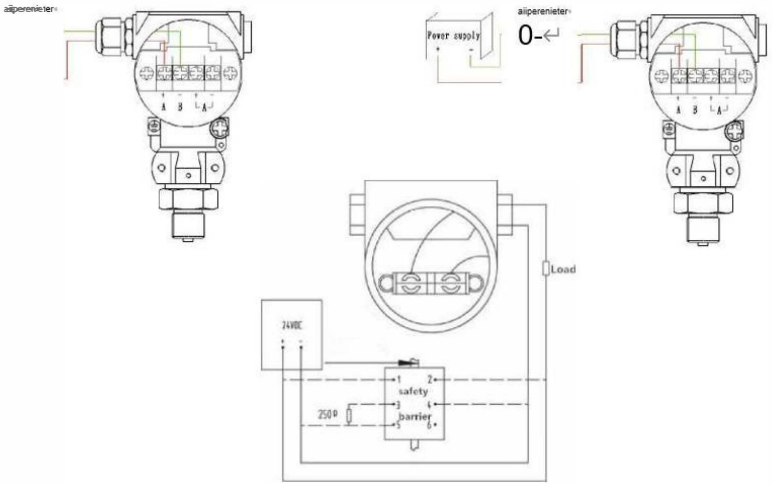




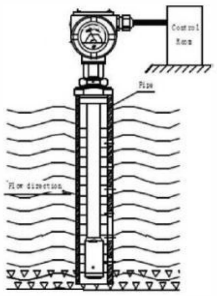
Electrical connection

2-wires' 4~20mA output:

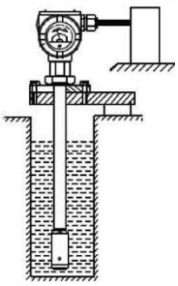
3-wires、 0~5V or 1~5V output:



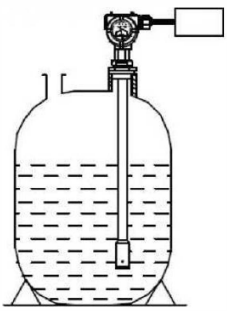
Application



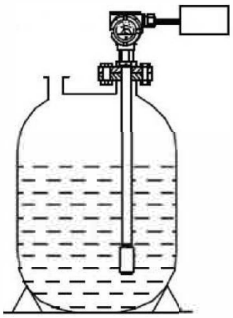
Install in the flowing water



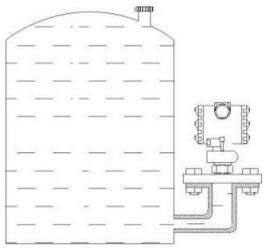
Install in the static water



Thread type installed in the open oil tank



Flange type installed in the open oil tank



Flange type installed on the bottom of the big oil tank

Differential Pressure Transmitter

Features

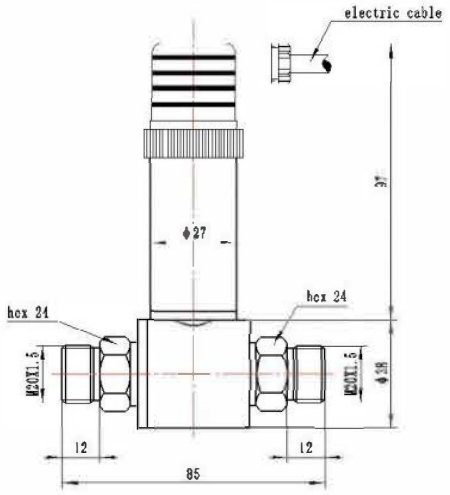
- 316L stainless steel construction, compact size, easy installation;
- Laser welding, full-sealed construction; Protection IP67;
- High precision, wider temperature compensate range;
- Anti-impact, anti-vibration, anti-overloading;
- Temperature compensation and aging, stable performance;
- Various outline structures, accepting custom design

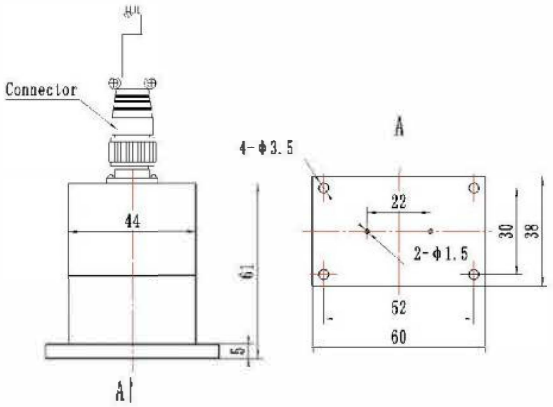
The Differential Pressure Transmitter adopts piezoresistive OEM differential pressure sensor as sensing element inside. The measured pressure worked on two diaphragms of the sensing elements, through amplifier circuit, the differential pressure can be transformed into electrical signal. MB510 has various output for choice, (millivolt, standard voltage, current, frequency etc.). Stainless steel housing decides its strong anti-corrosion ability. Two M20*1.5 (or customized connector dimension) pressure connectors can be installed on the measuring tube directly (or get a connection through a connecting tube). Widely used in differential pressure measurement of petroleum, chemi-industry, power station, hydrology, navigation, aviation, HVAC etc.

Specifications

Pressure Type	Differential Pressure
Medium	Liquid, gas, vapor, which is compatible with SUS304
Pressure range(MPa)	0~...0.7 or customized
Pressure range (bar)	0~...700 or customized
Pressure range (psi)	0~...100 or customized
Overload range	200% FS
Bursting pressure	300% FS
Power Supply	(9—36) VDC
Output signal	(0~5) V, (1~5) V, (4~20) mA
Vibration	10 ~500Hz 25g
Shock resistance	50g 11ms
Accuracy	±0.5%FS(typ.) @25℃
Zero temp.drift	±0.03%FS/℃
FS temp.drift	±0.03%FS/℃
Long-term stability	±0.2%FS/Y
Insulation resistance	250 MΩ/250V, 100MΩ/250V
Medium temp.	(-40~125)℃
Operation temp.	(-40~85) ℃
Storage temp.	(-40-125)℃
Compensated temp.	(-10~80)℃
Housing	SUS304
Diaphragm	SS316L
O-ring	Viton
Protection	IP67

Outline Structure (Unit: mm)



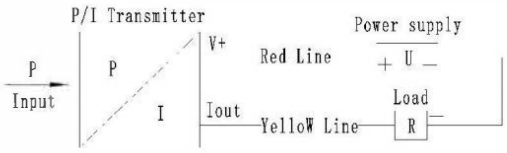


Electrical connection

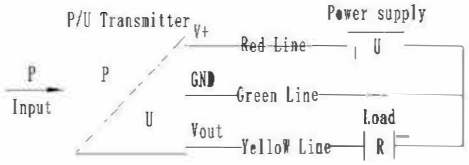
Cable connection wiring

Color	2-wires	3-wires
Red	+V	+V
Yellow	0V/+OUT	GND
Green	Null	+OUT

2-wires,4~20mA output



3-wires,0~5V,1~5V output



Model Option

SGPPT843	Differential Pressure Transmitter						
	0~60MPa	Pressure range (Unit:Mpa,kpa,psi,bar...)					
		Code	Excitation				
		V1	24V				
		V2	12V				
		V3	others (please specify)				
			Code	Output signal			
			S1	4~20mA			
			S2	1~5V			
			S3	others (please specify)			
				Code	Pressure connection		
				C1	M20x1.5		
				C2	GI/2"		
				C3	others (please specify)		
					Code	Electrical connection	
					E1	Hirschman connection	
					E2	PG7 Connection	
					E3	Aviation connection	
					E4	Cable directly	
					E5	Others(Pls specify)	
						Code	Accuracy
						A1	0.1%FS
						A2	0.25%FS
						A3	0.5%FS(typ.)
						A4	1%FS
SGPPT84	60MPa	V1	S1	C1	E1	A3	

Order Note

1. The material of measuring medium should be compatible with the stainless steel. If it is corrosive, pls specify its material in detail.
2. Please pay attention that the measured pressure should be in the rating pressure range, too small or too large will influence the measuring result or even damage the transmitter.
3. Please note it in detail if your application environment is critical or the elements which may influence the pressure transmitter normal operation existed.
4. The structure and dimension of the pressure transmitter can be used for most of the application occasions, if your application space is too small or having other requirements to the transmitters, please specify it in detail.
5. We suggest to install tri-value between the measured point and the transmitter to protect the media adding on transmitter's positive and negative cavities slowly.
6. Please to make two pressure ports horizontally to reduce installation direction effect.
7. All specifications are subject to change. Contact Wibbow for specifications and engineering drawings that are critical to your application. Drawings contained in this document are for reference only.

Platinum Resistance Temperature Sensor

Features

- High-strength stainless steel structure
- Wider Measured temperature range: -50 C ~+400'C
- Output signal: PtlOO, PtlOOO
- High accuracy, perfect long term stability impact resistance
- Anti-vibration, high pressure resistance
- Multiple connection modes, excellent field interactivity, customized available

SGTS433 temperature transmitter adopts temperature resistance cable for guarantee wider measuring range within lower cost. The thermal resistance temperature transmitter, capitalizes on the theory that resistance of platinum resistor varies with temperature as a certain function relations to measure the temperature. Usually mated with temperature transmitter display instruments and computers, could measure the temperature of liquid, gas, vapor, even the surface of solid from -50 C to 400 C. Its simple integrated stainless-steel construction is easily for connecting with a variety of available multiple lead ways and external structures.

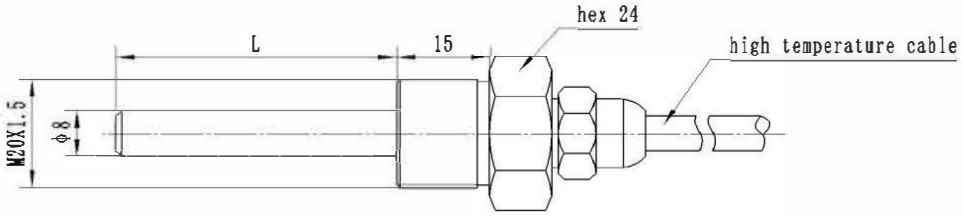
Application

- Engineering machinery, Car
- Oil and Chemical industry
- Automatic checkout system
- Shipping, Railway transportation
- Wind power generation
- Supply heating, Medicine
- Hydraulic pressure, Air compressor and Pump

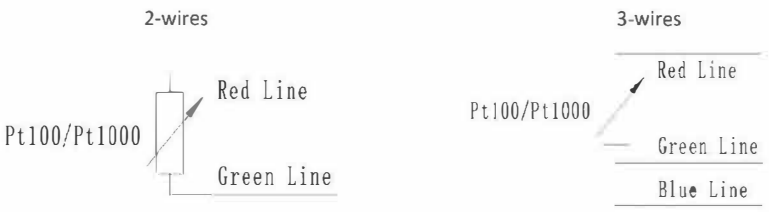
Specifications

Measured Medium	Gas, liquid, vapor or solid surface which is compatible with stainless steel.
Measured Temperature range	-50℃-+400℃
Output signal	Pt100, Pt1000
Accuracy/Permissible error	A: 100±(0.15+0.002|t|); B: 100±(0.30+0.002|t|)
Insulating strength	100MΩ/100VDC
Thermal response time	≤30s
Min. Insertion depth.	≥20mm
Excitation	(1.6~5) mA

Outline Structure (Unit: mm)



Electrical connection



Model Option

SGTS433	Temperature Transmitter						
	0-300 ℃	Measured Temperature range (Unit: ℃)					
		Code	Output signal				
		P1	Pt100				
		P2	PT1000				
			Code	Connection			
			C0	Unfixed apparatus			
			C1	Flange			
			C2	Thread			
			C3	Others(please specify)			
				Code	Diameter of external protecting tube		
				D1	Φ6		
				D2	Φ8		
				D3	Φ10		
				D4	Φ16		
				D5	others (please specify)		
					Code	Electrical connection	
					E1	Hirschman connector	
					E2	PG7 connector	
					E3	Aviation connector	
					E4	Cable directly	
					E5	Others	please specify)
						S	Others, please note in detail
SGTS433	0-300 C	P1	C0	D1	E1	S	

Order Note

1. The material of measuring medium should be compatible with the stainless steel. If it is corrosive, pls specify its material in detail.
2. Please note it in detail if your application environment is critical or the elements which may influence the pressure transmitter normal operation existed.
3. The structure and dimension of the transmitter can be used for most of the application occasions, if your application space is too small or having other requirements to the transmitters, please specify it in detail.
4. All specifications are subject to change. Contact Wibbow for specifications and engineering drawings that are critical to your application. Drawings contained in this document are for reference only.

Features

- High-strength stainless steel housing, impact resistant, high-Pressure resistance
- High precision, good stability, good anti-interference ability
- Multiple connection modes, multiple output signals
- Customized structures are available.

SGTS533 integrated temperature transmitter is composed of temperature sensor, compensation circuit and switch circuit, which is characterized by stability, high sensitivity and high reliability etc. The transmitter with all-welded construction and high-strength housing is widely used in automatic temperature measure control system of petroleum machinery, chemical machinery, pump and compressor, electricity, boiler, natural gas etc.

Application

- Engineering machinery, Car
- Oil and Chemical industry
- Automatic checkout system
- Shipping, Railway transportation
- Wind power generation
- Supply heating, Medicine
- Hydraulic pressure, Air compressor and Pump

Specifications

Measuring Medium	The gas, liquid, or solid surface, which is compatible with ICrl8Ni9Ti stainless steel
Temperature range	-50℃~+300℃
Output signal	4mA∽20mA、1V~5V> 0V~5V
Accuracy	0.5%FS
Power Supply	12VDC-36VDC
Working temp.	-40℃~85℃
Relative humidity	5% ~95%
Long term stability	0.2%FS/Y

Outline Structure (Unit: mm)

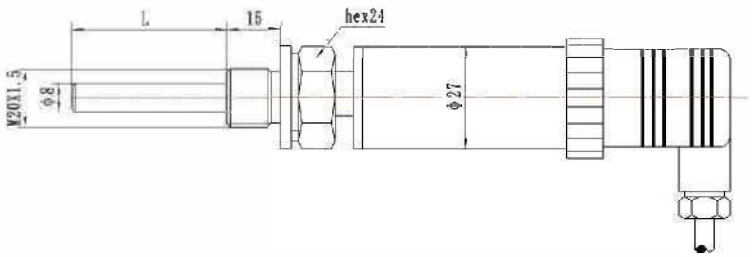
Universal structure

Used in universal industrial occasions and lab temperature measurement.

Diameter of external protecting tube: Φ6mm

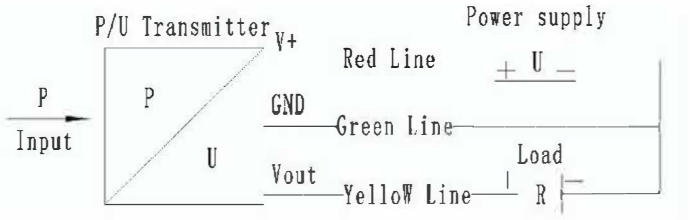
Length:20mm

1/4npt Thread



Electrical connection

3-wires,0~5V or 1~5V output:



Model Option

SGTS533	Temperature Transmitter						
	0-300 ℃	Measured Temperature range					
		Code	Power supply				
		V1	24v				
		V2	12v				
		V3	±12v				
			Code	Output signal			
			S1	4~20mA			
			S2	1~5V			
			S3	Others(please specify)			
				Code	Connection		
				C0	Unfixed apparatus		
				C1	Flange		
				C2	Thread		
				C3	Others(please specify)		
					Code	Diameter of external protecting tube	
					F1	Φ6	
					F2	Φ8	
					F3	ΦIO	
					F4	Φ16	
					F5	others (please specify)	
						Code	Electrical connection
						E1	Hirschman connector
						E2	PG7 connector
						E3	Aviation connector
						E4	Cable directly
						E5	Others (please specify)
							S Others requirement Please note in detail
SGTS533	0-300 C	VI	SI	CO	FI	EI	S

Order Note

1. The material of measuring medium should be compatible with the stainless steel. If it is corrosive, pls specify its material in detail.
2. Please note it in detail if your application environment is critical or the elements which may influence the pressure transmitter normal operation existed.
3. The structure and dimension of the transmitter can be used for most of the application occasions, if your application space is too small or having other requirements to the transmitters, please specify it in detail.
4. All specifications are subject to change. Contact Wibbow for specifications and engineering drawings that are critical to your application. Drawings contained in this document are for reference only.

Explosion Proof Ex-Proof Digital Temperature Sensor

Features

- High-strength stainless steel housing, impact resistant, high-Pressure resistance
- High precision, good stability, good anti-interference ability
- Multiple connection modes, multiple output signals
- Customized structures are available.

Application

- Environment, Pipeline, Tank Medium
- Solid, Soil, Material Surface
- Engines, Boilers, Flues, Petroleum Refining Systems

Specifications

	Technical Parameter:	
Model	GW300	
Thermosensitive Element	Z:Hot Resistance	R: Thermocouple
Temperature Range	-50-300℃ (Option)	0~1600℃ (Option)
Power Supply	12-24VDC / Passive	
Output Signal	S1:4-20mA S2:1-5V S3:4-20mA (HART)	
Intrinsic Error	J1:±0.2%F.S J2:±0.5%F.S J3:±1%F.S	
Housing Type	B1:Integrated Junction Box B2:Monolithic Cylinder B3:Separate Transmitter	
Protective Tube Diameter	Φ6, Φ8, Φ10, Φ12, Φ16, Φ20, Non-Standard Custom	
Structure	C1:No Fixed C2:Fixed Thread C3:Fixed Flange C4:Movable Thread C1:Movable Flange	
Mechanical Interface	A1:M14x1.5 A2:M16x1.5 A3:M20x1.5 A4:M27x2 A5:DN20 A6:DN50 A7:DN80 A8:Non-Standard	
Insertion Depth	L=0-2000mm(option) Includes Thread and Flange	
Electrical Connection	Y1:Cable Directly Y2:Plug Y3:Junction Box Y4:Customized	
Display	H:Display	
Insulation Resistance	>500MΩ (250VDC)	
Other Customized	N	

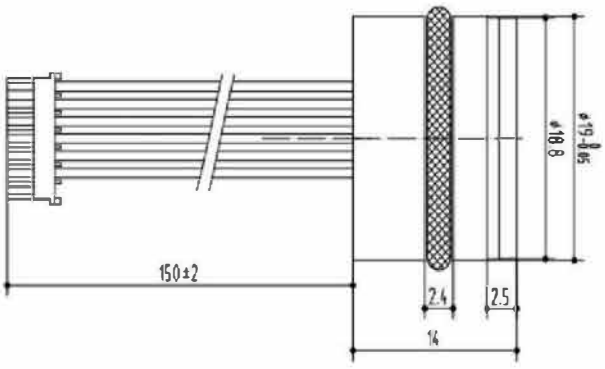
Features

Monocrystalline silicon pressure core system adopts MEMS monocrystalline silicon pressure chip imported from Germany to achieve international leading overvoltage performance and ensure excellent signal stability. Assembled with a fully welded seal structure and filled with silicone oil under high vacuum, the measuring diaphragm of different materials can not only isolate the measured medium and the pressure chip, but also enable the sensor to carry out long-term reliable measurement of the pressure difference signal of various highly corrosive media. The product is measured pressure directly on the diaphragm of the sensor, so that the diaphragm generates a micro displacement proportional to the pressure, the integrated electronic circuit detects this change, and converts a standard measurement signal corresponding to the pressure

Specifications

Pressure range	6KPa~40MPa
pressure type	gauge pressure, absolute pressure, sealed gauge pressure
Power supply	constant current: 1.5mA Constant voltage: 5V
output	mV
Measuring media	compatible with 316L stainless steel for liquids, gases and vapors
Operating temperature	-40~85℃
Storage temperature	-50~125℃
Zero temperature drift	±0.05%FS/℃
Insulation resistance	250MQ/250VDC
Temperature lag	±0.1%FS (range ≥10Kpa); ±0.5%FS (range <10Kpa)
Pressure lag	±0.05%FS
Long-term drift	±0.05%FS/year
Nonlinear	±0.5%FS (range >10Kpa); ±1.5%FS (range <10Kpa)

Outline Structure (Unit: mm)



Features

- High precision 0.075%
- High stability
- Intelligent static pressure compensation
- Intelligent temperature compensation
- General measurement of positive and negative pressure
- Excellent overload performance
- Germany Monocrystalline silicon chip
- 316L stainless steel all-welded structure
- Suitable for the mainstream threaded shell in the market

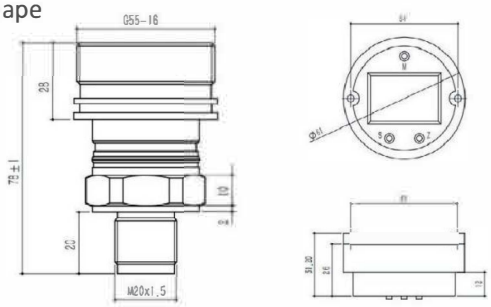
DS12G monocrystalline silicon pressure sensor module adopts high stability chip imported from Germany with high precision, high stability and other characteristics. It has preset signal processing module, and static pressure and temperature compensation with 0.075% measurement accuracy.

Specifications

Power supply	11-36V	**Whole Temperature Zone Accuracy**	0. 075%FS
Electrical Connection	Silicone Conductor	**Position effect**	Horizontal and vertical positions are approximately 200pa
Bridge resistance	6KΩ±0. 5KΩ	**Overpressure effect**	< 0. 05%FS/10Mpa
Response time	≤10ms	**Stability**	≤0.03%FS/year
Insulation resistance	500MΩ/500VDC	**Power effect**	< 0.005%FS/V
Operating temperature	-40 ~ +85°C	**Repeatability**	<±0. 05%F. S.
Storage temperature	-50 ~ +125°C	**Protocol lag**	<±0. 05%F. S.
Sensor output	4-20mA DC+HART Protocol	**Diaphragm material**	316L/Hastelloy C
Process connection	216/16UNS External thread M20*1.5 External thread	**Junction Box Connection**	M27 X 2 External thread

Outline Structure (Unit: mm)

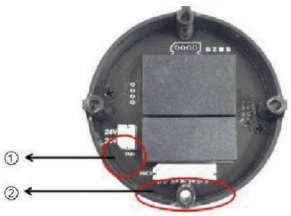
(1)Product shape



(2)Electrical connection

① Power interface;

② monocrystalline silicon sensor interface.



Multi-scenario Monocrystal Silicon Differential Pressure Sensor

Features

- High precision
- High stability
- Intelligent static pressure compensation
- Intelligent temperature compensation
- General measurement of positive and negative pressure
- Excellent overload performance
- Germany Monocrystalline silicon chip
- 316L stainless steel all-welded structure
- Suitable for the mainstream threaded shell in the market

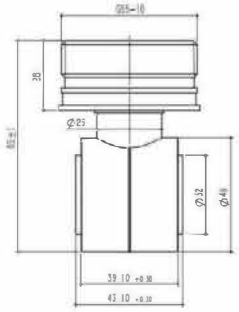
DS12D monocrystalline silicon differential pressure core adopts high stability chip imported from Germany, with high precision, high stability and other characteristics, built-in temperature sensitive components, can greatly improve the temperature performance of monocrystalline silicon pressure core, all 316L stainless steel welded structure, with excellent overload performance, suitable for a variety of harsh environments of -40-120 ℃.

Specifications

Power Supply	5 (Default) ~12V	**Pressure Hysteresis**	<±0.05%F. S.
Electrical Connection	110mm Silicone Conductor	**Long Term Drift**	<±0.05%F.S. / year
Bridge Resistance	6KΩ±0.5KΩ	**Non-Linear Error**	<±0. 3%F.S. (10kPa Range of sensitive element Haste Alloy≤ 10MPa)
Response Time	≤10ms		<±1.7%F. S. (Range of sensitive element Haste Alloy>10MPa)
Insulation Resistance	500MΩ/500VDC	**Repeatability**	<±0.05%F. S.
Operating Temperature	-40~+85°C	**Hysteresis**	<±0.05%F. S.
Storage Temperature	-50~+125°C	**Influence of Static Pressure**	<±0.1%F. S. /10MPa (10kPa Range of sensitive element Haste Alloy<10MPa)
Full output voltage	60~140mV (3kPa 50~120mV)		<±0.15%F. S. /10MPa (Range of sensitive element Haste Alloy<10kPa or =10MPa)
Zero temperature effect	±0. 05%F.S. /°C	**Influence of Static Pressure**	316L / Haste Alloy C
Junction Box Connection	M27X2 Externa l Thread	**Temperature Delay**	<±0.1%F. S. (10kPa ≤ Range of sensitive element Haste Alloy ≤ 10MPa)
	M56X1.5 External Thread		<±0.5%F. S. (Range of sensitive element Haste Alloy<10kpa)
	23/16UNS External Thread		
Installation	H-Type Structure, Double Flanges, Process link internal thread, the back end of the flange has a liquid exhaust valve, 316L Stainless Steel		

Outline Structure (Unit: mm)

(1)Product shape



(2)Electrical Connection
Red Line - Power Supply Positive;
Black Line - Power Negative:
Yellow Line- Output Positive;
White Line -Output Negative:
Blue Line - Temperature Positive;
Green Line - Temperature Negative.

Monocrystal Silicon Differential Pressure Transmitter

Features

- Utilizing Advanced Single-Crystal Silicon Pressure Sensor Technology and Packaging Processes
- Modular Design Centered Around a Microprocessor with Advanced Digital Isolation Technology
- Innovative Dual-Compensation Technology for True 0.075% High Accuracy

The GH3351 series of intelligent pressure/differential pressure transmitters feature a globally leading high-precision silicon pressure/differential pressure sensor technology and packaging process. The single-crystal silicon pressure/differential pressure sensor is located at the top of the metal body, far away from the medium contact surface, achieving mechanical and thermal isolation. The glass-sintered integrated sensor lead achieves high-strength electrical insulation with the metal substrate, enhancing the flexibility and transient voltage protection of the electronic circuitry. With platinum-level accuracy reaching ±0.05%, it can withstand a maximum one-way overpressure of 25MPa. The transmitter boasts excellent static pressure performance, with static pressure error optimally controlled within ±0.05%/10MPa, and minimal temperature impact variations controllable within ±0.04%/10K.

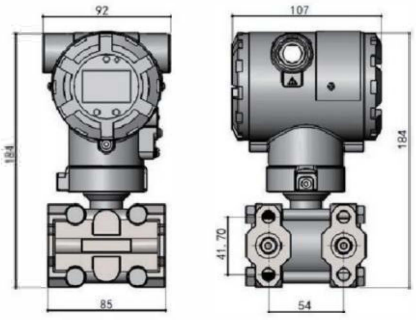
In terms of circuit design, a modular design centered on a microprocessor and assisted by advanced digital isolation technology is adopted, ensuring the instrument's excellent anti-interference capability and stability. Communication is achieved using the HART protocol, allowing remote operation through a HART handheld device or a computer with HART software to configure measurement parameters. Meanwhile, digital compensation technology is employed, and the transmitter is calibrated using a built-in temperature sensor, improving measurement accuracy, reducing temperature drift, and ensuring long-term stability and high reliability.

The user-friendly design includes infrared wireless settings and a one-button reset function, meeting the safety requirements for operation in hazardous environments. It provides quick and convenient menu navigation, enabling complete parameter configuration and comprehensively enhancing the transmitter's performance.

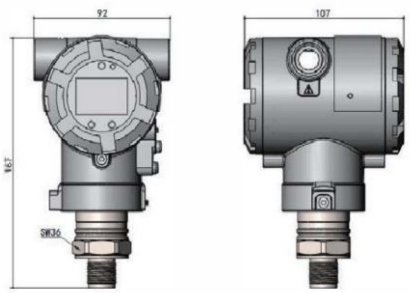
Specifications

Measurement Medium	Gas, Steam, Liquid
Inaccuracy	±0.05%> ±0.075%> ±0.1% (including Linearity, Return Difference and Repeatability from Zero)
Stability	±0.1%/3 years
Ambient Temp. Effect	≤±0.04%URL/10℃
Static Pressure Effect	±0.05%/10MPa
Power	10 ~ 36V DC (Recommendation 24V DC)
Power Supply Effect	±0.001% /10V (10 ∽36V DC), Negligible
Adjustable Range	If TD>10 (TD=Maximum Pressure Range/Regulating Range), then: ±(0.075xTD)%
Accuracy Reference	The square root output accuracy is 1.5 times of the current reference accuracy above.
Ambient Temp.	-40℃ ~ 85 ℃
Measuring Medium Temp.	-40℃ ~ 120 ℃
Storage Temp.	-40℃ ~ 105 ℃
Display	LCD, OLED
Module Temp. Display	-20℃ ~70℃ (LCD), -40℃ ~80℃ (OLED)

Outline Structure (Unit: mm)



1, Differential Pressure Sensor



2, Pressure Sensor

Mine-used Intrinsically Safe Pressure Transmitter

Applications

Used for monitoring the pressure and liquid level of coal mining equipment or systems in dangerous underground coal mining scenarios.

- For monitoring the pressure of cooling water, hydraulic oil, and the oil level of coal cutter
- For monitoring the pressure of hydraulic systems and the oil level of oil tanks, including those of heading machine motors, oil cylinders, pump stations, operating consoles, internal spraying systems, etc.
- For the electrical control systems of coal mine overhead man-riding devices and mine-used monorail cranes.
- For the underground safety monitoring system.

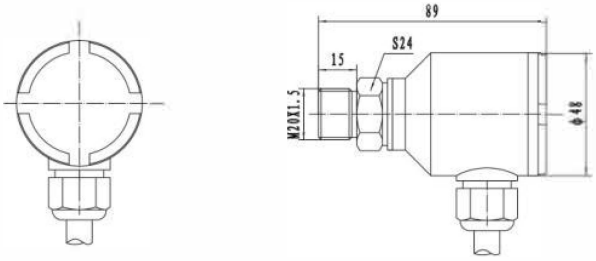
Features

- Adopts a diffused silicon pressure-sensitive element and advanced diaphragm isolation technology.
- Small in size and light in weight.
- High in accuracy, good in stability, and fast in response.
- Made of an all-stainless-steel, fully welded structure.

Specifications

Measuring Medium	Liquids or gas media compatible with 316L stainless steel
Operating Voltage	DC12~30V
Shell	All stainless steel
Scale Range	0~6MPa
Integrated Accuracy	±0.5%FS
Output Signal	4~20mA or 0~5V or 1~5V
Medium Temp.	-40~85°C
Environment Temp.	0~40°C
Environment Hmdty.	Not more than 95% (+25°C)
Housing Protection Rating	IP54
Overload Pressure	Maximum 200%FS
Explosion-proof Type	Mine-used Intrinsically Safe
Explosion-proof Mark	Exib I Mb

Outline Structure (Unit: mm)



Mine-used Intrinsically Safe Temperature Transmitter

Applications

Used for pressure and liquid level monitoring of coal mining equipment or systems in hazardous areas underground coal mines.

- For monitoring the oil temperature of coal shearer and road header oil tanks.
- For monitoring the temperature of scraper conveyors and belt conveyors.
- For temperature measurement in the underground safety monitoring system.

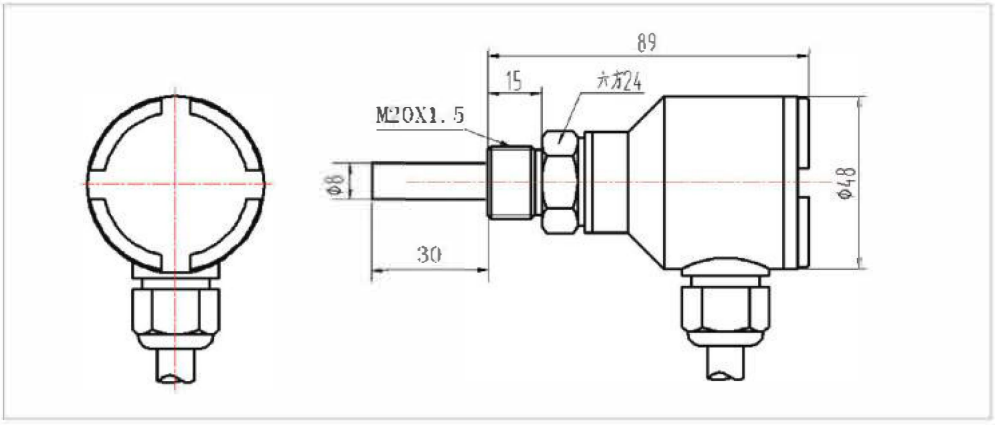
Features

- Adopts a thermal resistance sensitive element with a short response time.
- Small in size, light in weight, high in accuracy, and good in stability.
- The all-stainless-steel, fully welded structure is corrosion-resistant.

Specifications

Measuring Medium	Liquids or gas media compatible with stainless steel
Operating Voltage	DC12~30V
Shell	All stainless steel
Scale Range	0~200°C
Basic Error	±2°C
Output Signal	4~20mA or 0~5V or 1~5V
Medium Temp.	-40~85°C
Environment Temp.	Not more than 95% (+25°C)
Environment Hmdty.	IP54
Housing Protection Rating	Mine-used Intrinsically Safe
Overload Pressure	Exib I Mb
Explosion-proof Type	4~20mA or 0~5V or 1~5V
Explosion-proof Mark	-40~85°C

Outline Structure (Unit: mm)



Mine-used Intrinsically Safe Pressure Transmitter

Applications

Used for monitoring the pressure and liquid level of coal mining equipment or systems in dangerous underground coal mining scenarios.

For monitoring the pressure of cooling water, hydraulic oil, and the oil level of coal cutter

For monitoring the pressure of hydraulic systems and the oil level of oil tanks, including those of heading machine motors, oil cylinders, pump stations, operating consoles, internal spraying systems, etc.

For the electrical control systems of coal mine overhead man-riding devices and mine-used monorail cranes.

For the underground safety monitoring system.

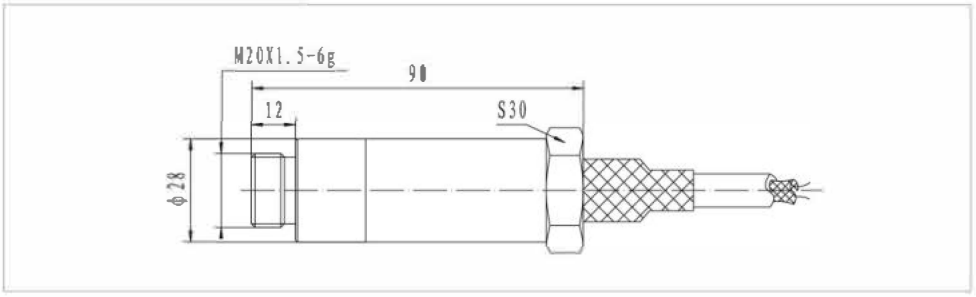
Features

- Adopts a diffused silicon pressure-sensitive element and advanced diaphragm isolation technology.
- Small in size and light in weight.
- High in accuracy, good in stability, and fast in response.
- Made of an all-stainless-steel, fully welded structure.

Specifications

Measuring Medium	Liquids or gas media compatible with 316L stainless steel
Operating Voltage	DC12~30V
Shell	All stainless steel
Scale Range	0~60MPa
Integrated Accuracy	±0.5%FS
Output Signal	4~20mA or 0~5V or 1~5V
Medium Temp.	-40~125°C
Environment Temp.	-40~85°C
Environment Hmdty.	Not more than 95% (+25°C)
Housing Protection Rating	IP54
Overload Pressure	Maximum 120%FS
Explosion-proof Type	Mine-used Intrinsically Safe
Explosion-proof Mark	Exib I Mb

Outline Structure (Unit: mm)



Mine-used Explosionproof Pressure Transmitter

Applications

Used for monitoring the pressure and liquid level of coal mining equipment or systems in dangerous underground coal mining scenarios.

- For monitoring the pressure of cooling water, hydraulic oil, and the oil level of coal cutter
- For monitoring the pressure of hydraulic systems and the oil level of oil tanks, including those of heading machine motors, oil cylinders, pump stations, operating consoles, internal spraying systems, etc.
- For the electrical control systems of coal mine overhead man-riding devices and mine-used monorail cranes.
- For the underground safety monitoring system.

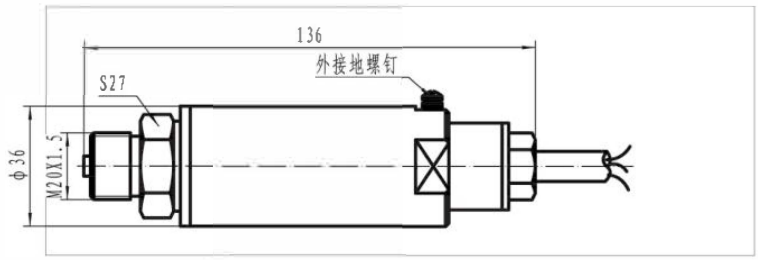
Features

- Adopts a diffused silicon pressure-sensitive element and advanced diaphragm isolation technology.
- Small in size and light in weight.
- High in accuracy, good in stability, and fast in response.
- Made of an all-stainless-steel, fully welded structure.

Specifications

Measuring Medium	Liquids or gas media compatible with 316L stainless steel
Operating Voltage	DC12~30V
Shell	All stainless steel
Scale Range	0~60MPa
Integrated Accuracy	±0.5%FS
Output Signal	4~20mA or 0~5V or 1~5V
Medium Temp.	-40~125°C
Environment Temp.	-40~85°C
Environment Hmdty.	Not more than 95% (+25°C)
Housing Protection Rating	IP54
Overload Pressure	Maximum 120%FS
Explosion-proof Type	Mine-used Intrinsically Safe
Explosion-proof Mark	Exd I Mb

Outline Structure (Unit: mm)



Mine-used Intrinsically Safe Temperature Sensor

Applications

Used for monitoring the pressure and liquid level of coal mining equipment or systems in dangerous underground coal mining scenarios.
For monitoring the axial temperature and oil tank temperature of coal cutters, road headers, etc.
For the temperature measurement in underground safety monitoring systems

Features

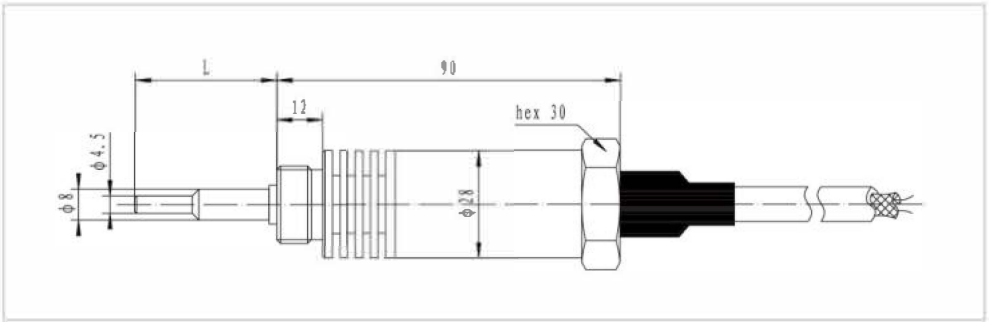
- Adopts a diffused resistance temperature detector sensing element and fast in response.
- Small in size, light in weight, high in accuracy and good in stability.
- The all-stainless-steel, fully welded structure is corrosion-resistant.

Specifications

Measuring Medium	Liquids or gas media compatible with stainless steel
Operating Voltage	Passive Type
Shell	All stainless steel
Scale Range	0~200°C
Integrated Accuracy	Grade B
Output Signal	PT100 resistance signal or analog output
Protection Tube Diameter	Options include Φ6, Φ8, Φ10, etc.
Protection Tube Length	L=0~1000mm
Environment Temp.	0~40°C
Environment Hmdty.	Not more than 95% (+25°C)
Housing Protection Rating	IP54
Explosion-proof Type	Mine-used Intrinsically Safe
Explosion-proof Mark	Exib I Mb

Outline Structure (Unit: mm)

The diameter and length of the protection tube are optional, and the installation methods include threaded connection, quick-connect fitting connection, etc.



Mine-used Intrinsically Flameproof Temperature Transmitter

Applications

Used for monitoring the pressure and liquid level of coal mining equipment or systems in dangerous underground coal mining scenarios.

For monitoring the axial temperature and oil tank temperature of coal cutters, road headers, etc.

For the temperature measurement in underground safety monitoring systems

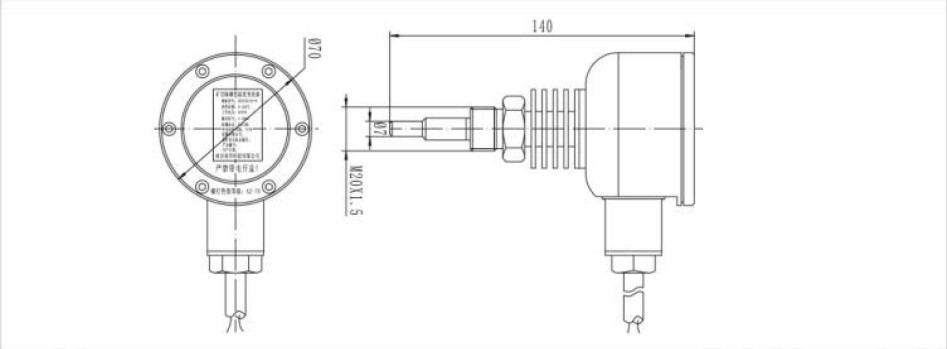
Features

- Adopts a diffused resistance temperature detector sensing element and fast in response.
- Small in size, light in weight, high in accuracy and good in stability.
- The all-stainless-steel, fully welded structure is corrosion-resistant.

Specifications

Measuring Medium	Liquids or gas media compatible with stainless steel
Operating Voltage	(12~30) V
Shell	All stainless steel
Scale Range	(0~200) °C
Basic Error	±5°C
Output Signal	DC (4~20) mA (Load resistance 0~250 Ω)
Protection Tube Diameter	Options include Φ6, Φ8, Φ10, etc.
Protection Tube Length	L= (0~500) mm
Environment Temp.	(0~40°) C
Environment Hmdty.	Not more than 95% (+25°C)
Housing Protection Rating	IP54
Explosion-proof Type	Mine-used flameproof
Explosion-proof Mark	Exd I Mb
Surrounding air	An environment with explosive mixtures but without corrosive gases that can damage insulation
Applicable occasions	Continuous temperature measurement of electromechanical equipment in coal mine shafts

Outline Structure (Unit: mm)



Mine-used Intrinsically Safe Digital Pressure Gauge

Applications

Used for monitoring the pressure and liquid level of coal mining equipment or systems in dangerous underground coal mining scenarios.

For monitoring the pressure of cooling water, hydraulic oil, and the oil level of coal cutter

For monitoring the pressure of hydraulic systems and the oil level of oil tanks, including those of heading machine motors, oil cylinders, pump stations, operating consoles, internal spraying systems, etc.

For the electrical control systems of coal mine overhead man-riding devices and mine-used monorail cranes.

For the underground safety monitoring system.

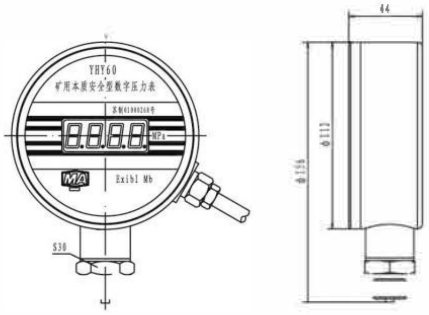
Features

- Adopts a diffused silicon pressure-sensitive element and advanced diaphragm isolation technology.
- Small in size and light in weight.
- High in accuracy, good in stability, and fast in response.
- Digital display on site, supporting RS485 digital signal output

Specifications

Measuring Medium	Liquids or gas media compatible with 316L stainless steel	
Operating Voltage	(18~30) V DC	
Shell	304 stainless-steel (O6Cr19Ni10)	
Scale Range	(0~60) MPa	
Integrated Accuracy	±1.0%FS	
Digital Display on Site	Display range of the 4-digit digital tube (00.00~60.00) MPa	
Electrical Current Signal	DC (4~20) mA (Load resistance 0~160 Ω)	
RS485 Digital Signal	a. Transmission Mode	Master-slave mode
	b. Data Transmission Rate	9600bps
	c. Signal Peak-to-peak Value	(3.5~5) V
Environment Temp.	(-5~40) °C	
Environment Hmdty.	Not more than 95% (+25°C)	
Overload Pressure	Maximum 120%FS	
Housing Protection Rating	IP54	
Explosion-proof Type	Mine-used Intrinsically Safe	
Explosion-proof Mark	Exib I Mb	

Outline Structure (Unit: mm)



Mine-used Intrinsically Safe Pressure Transmitter

Applications

The SGIDPT83 mine-used intrinsically safe pressure transmitter (hereinafter referred to as the transmitter) can measure pressure. This product features a reasonable structural design, accurate detection, stable performance, and convenient installation and maintenance. It is suitable for underground coal mine areas where there are risks of coal dust and gas explosions. It can be used in conjunction with underground coal mine electromechanical equipment or coal mine monitoring systems.

It has high measurement accuracy and strong anti-interference ability. The exterior adopts a fully-sealed stainless-steel structure, which can meet the requirements of harsh working conditions such as moisture-proof, explosion-proof, corrosion-proof, and dust-proof.

Specifications

Environment Temp.	0~40°C
Average Relative Hmdty.	Not more than 95% (+25°C)
Power Supply Performance	a) Operating Voltage: DC 12 V b) Operating Current: ≤ 100 mA
Scale Range	0~50MPa
Output Signal	
CAN Communication Interface	a) Number of interfaces: 1 channel; b) Transmission mode: Master-slave mode, CAN; c) Transmission rate: Typical value is 10 kbps (alternatively, 20 kbps, 50 kbps, 100 kbps, 125 kbps, 250 kbps are also available); d) Peak-to-peak value of the signal operating voltage: (1-5) V;
RS485 Communication Interface	a) Number of interfaces: 1 channel; b) Transmission mode: Half-duplex, master-slave mode, RS485; c) Transmission rate: Typical value is 115200 bps (alternatively, 4800 bps, 9600 bps, 19200 bps, 38400 bps, 57600 bps are also available); d) Peak-to-peak value of the signal operating voltage: 2V-12V;
Basic Error	±1%(FS)

Outline Structure (Unit: mm)

Dimensions: (Diameter × Length): 432 × 140; Weight: Approximately 0.6 kg.

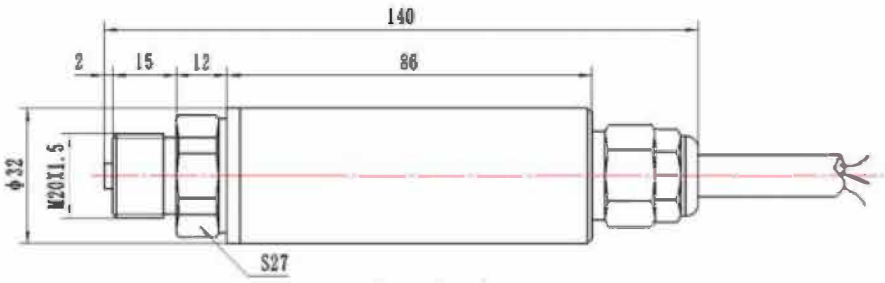


***Fig 1.**-Fractal structure size*

Mine-used Intrinsically Safe Pressure Transmitter

Applications

Used in underground coal mine environments where there exists a potential hazard of coal dust and gas explosions. It is designed to be compatible and used in conjunction with underground coal mine electromechanical equipment or coal mine monitoring systems.

For monitoring the pressure of cooling water, hydraulic oil, and the oil level of coal cutter

For monitoring the pressure of hydraulic systems and the oil level of oil tanks, including those of heading machine motors, oil cylinders, pump stations, operating consoles, internal spraying systems, etc.

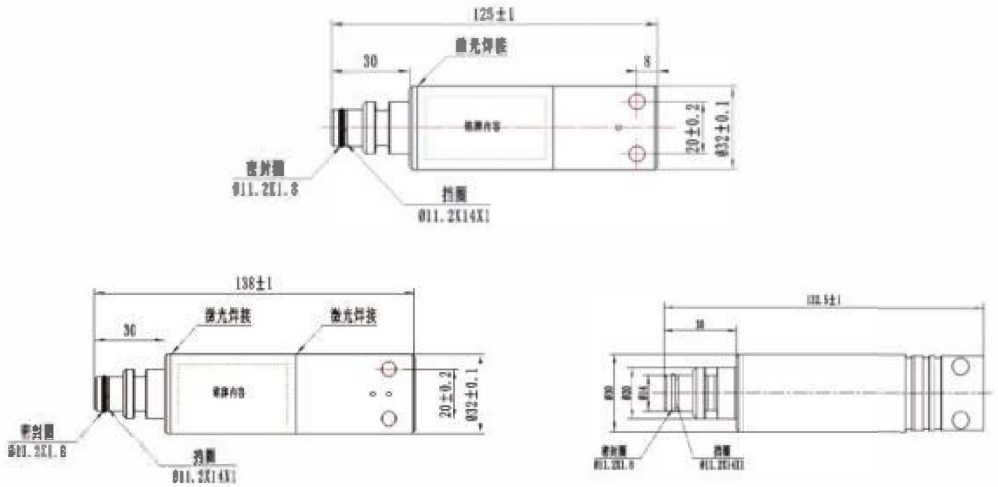
For the electrical control systems of coal mine overhead man-riding devices and mine-used monorail cranes.

For the underground safety monitoring system.

Specifications

Measuring Medium	Liquids or gas media compatible with 304L stainless steel		
Operating Voltage	12V±1V DC	**Storage Temp.**	-40~85°C
Shell	304 stainless-steel	**Environment Hmdty.**	Not more than 95% (+25°C)
Scale Range	0~60MPA 150MPA	**Overload Pressure**	Maximum 120%FS
Threaded Interfaces	DN10, KJ10, M20×1.5 (optional)	**Housing Protection Rating**	IP54
Accuracy	0.25%FS or ±0.5%FS	**Explosion-proof Type**	Mine-used Intrinsically Safe
Output Signal	(0.5~4.5) V, or (0.78~4.94) V or (4~20mA)	**Explosion-proof Mark**	Exib I Mb
Environment Temp.	-20~60°C		

Outline Structure (Unit: mm)



Mine-used Intrinsically Safe Float Level Switch

Applications

Used for monitoring the oil level in the oil tanks of coal mining equipment in hazardous areas underground coal mines. Be applicable for water level monitoring in underground safety monitoring systems.

Features

- Compact structure, sensitive control and easy installation.
- High accuracy, good stability and fast response speed.
- Made of an all-stainless-steel and all-welded structure.

Specifications

Measuring Range of Liquid Level Height (mm)	18~275		
Operating Liquid Level Height (mm) and Error	50±5		
Output Signal	One pair of normally-open/normally-closed, contact outputs, and the contact capacity is DC 24V/200mA. When the contact is closed, the contact resistance is no more than 0.5 Ω. When the contact is open, the leakage resistance is no less than 100 kΩ.		
Operating Voltage	12V±1V DC	**Storage Temperature**	-40~85°C
Function	When the liquid level rises or falls to the operating liquid level height of the switch, the normally-open contact is closed and the normally-closed contact is open		

Outline Structure (Unit: mm)

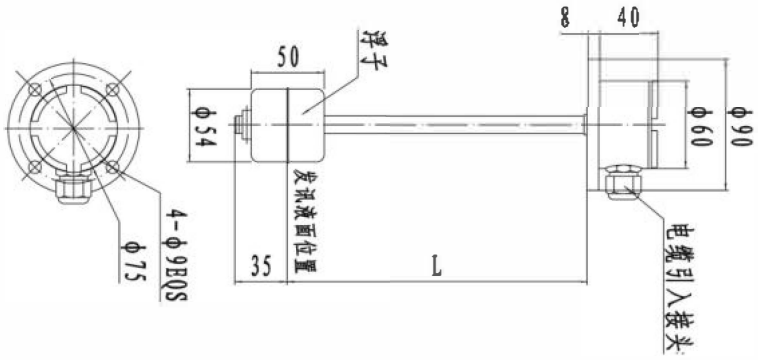


***Fig 1.**-Fractal structure size*

Mine-used Intrinsically Safe Liquid Level Transmitter

Applications

The mine-used intrinsically safe liquid level transmitter is manufactured in accordance with the "Coal Mine Safety Regulations" and the standard of GB 3836.4-2010 "Explosive atmospheres-Part 4: Equipment protection by intrinsic safety “I”.

This product features a reasonable structural design, accurate detection, stable performance, and convenient installation and maintenance. It is suitable for underground coal mine areas where there are risks of coal dust and gas explosions, and is used for pressure measurement and automatic control in the electro-hydraulic control system of coal mine hydraulic supports. It has high measurement accuracy and strong anti-interference ability. The exterior adopts a fully-sealed stainless-steel structure, which can meet the requirements of harsh working conditions such as moisture-proof, explosion-proof, corrosion-proof, and dust-proof.

Specifications

General Requirements	
Measuring Medium	Liquids or gas media compatible with 304L stainless steel
Environment Temp.	-20~60°C
Storage Temp.	-40~85°C
Environment Hmdty.	Not more than 95% (+25°C)
Basic Functions	
Real-time monitoring of the water level, oil level height and depth in coal mine shafts	
Main Technical Indicators	
Power Supply Performance	
a) Operating voltage	DC 24V
b) Power supply fluctuation	DC 12-30V
c) Operating current	≤ 20 mA
Scale Range	0-10 meters of water column
Output Signal	4-20 mA
Basic Error	± 0.5% (FS)
Hysteresis Error	± 0.5% (FS)

Outline Structure (Unit: mm)

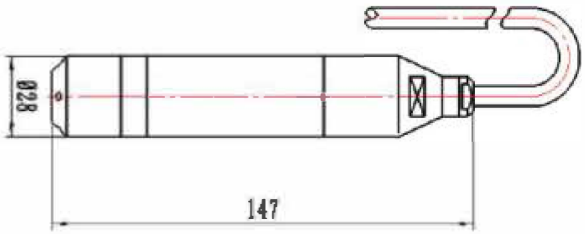


***Fig 1.**-Fractal structure size of GUY10 mine-used intrinsically safe liquid level transmitter*

Mine-used Flameproof Displacement Sensor

Applications

The product is based on the magneto strictive principle and designed according to the flameproof standard. It is suitable for hazardous areas with explosion risks such as coal and gas. It features high measurement accuracy and strong anti-interference ability. The housing is made of a fully-sealed stainless-steel structure, which can meet the requirements of harsh working conditions including moisture-proof, explosion-proof, corrosion-proof, and dust-proof. It can monitor the stroke of hydraulic cylinders in real-time.

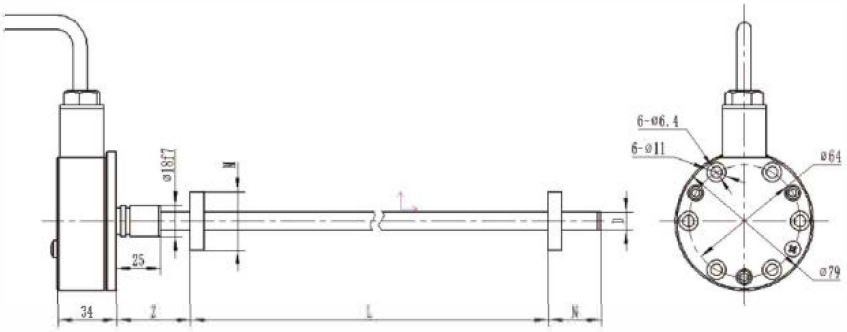
Features

- Sturdy and reliable, suitable for in-cylinder installation.
- Fully enclosed electronic compartment, with strong anti-interference ability.
- High accuracy, high resolution, and good stability.
- Non-contact measurement, wear-free, and long service life.
- Fast response, linear measurement, and absolute position output.
- Flameproof housing design with a high protection level.

Specifications

Operating Voltage	12VDC/24VDC
Shell	All stainless steel
Stroke Range	100mm-2500mm
Output signal	Analog voltage/Analog current/SSI/RS485/Profibus/CANbus
Resolution	16-bit DA/up to 0.5um
Non-linearity	≤ ±0.05%FS
Repeatability Accuracy	≤ ± 0.002%FS
Measuring Rod Pressure Resistance	35MPa continuous/70MPa peak
Operating Temperature	-40°C~85°C
Housing Protection Rating	IP54

Outline Structure (Unit: mm)



Mine-used Intrinsically Safe Displacement Sensor

Applications

This product is designed based on the magneto strictive principle and in accordance with intrinsically safe standards. It is suitable for use in areas with explosion hazards such as coal dust and gas in mines. It boasts high measurement accuracy and strong anti-interference capabilities. The enclosure is made of fully-sealed stainless steel, meeting the requirements of harsh working conditions including moisture-proofing, explosion-proofing, corrosion-proofing, and dust-proofing. It can monitor the stroke of hydraulic cylinders in real-time.

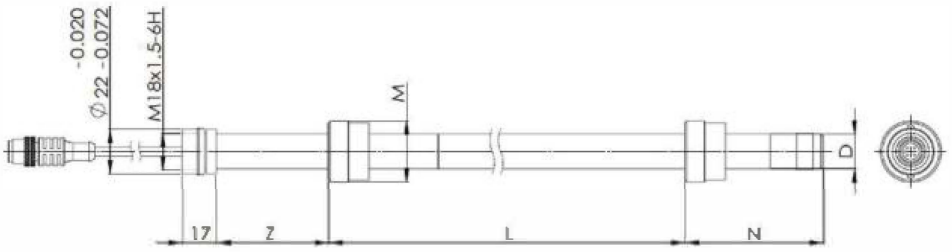
Features

- Sturdy and reliable, suitable for in-cylinder installation.
- Integrated design of the electronic compartment and the rod body, occupying less space.
- High accuracy, high resolution, and good stability.
- Non-contact measurement, wear-free, and long service life.
- Fast response, linear measurement, and absolute position output.
- High protection level.

Specifications

Operating Voltage	12VDC
Shell	All stainless steel
Stroke Range	200mm~2500mm
Output signal	0.5V~4.5V/4mA~20mA
Resolution	12-bit D/A
Non-linearity	≤ ±0.25%FS
Repeatability Accuracy	≤ ± 0.1%FS
Measuring Rod Pressure Resistance	35MPa continuous/70MPa peak
Operating Temperature	-20°C~60°C
Housing Protection Rating	IP54

Outline Structure (Unit: mm)



Mine-used Intrinsically Safe Rotational Speed Sensors

Applications

The SGIDSH mine-used intrinsically safe rotational speed sensor employs highly reliable dual-channel self-adjusting Hall gear-sensitive devices. Triggered by a gear made of magnetically conductive material, when the output signal is paired with a rotational speed converter, a voltage-output rotational speed measurement system can be formed. The product's exterior features a fully-sealed stainless-steel structure, which can meet the requirements of harsh working conditions such as moisture-proof, explosion-proof, corrosion-proof, and dust-proof. It is suitable for underground coal mine areas where there are risks of coal dust and gas explosions.

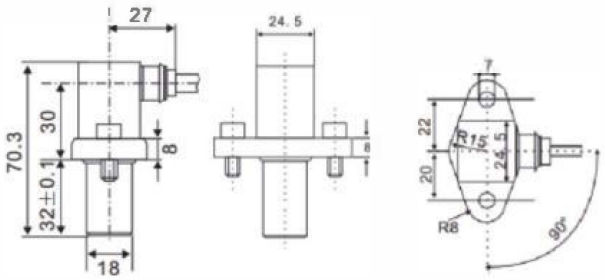
Explosion-proof type: Mine-used intrinsically safe type; Explosion-proof mark: Ex ib I Mb.

Specifications

Functions: Used for measuring the gear rotational speed, generating a voltage output signal proportional to the gear rotational speed. Meanwhile, it outputs a voltage output signal corresponding to the ambient temperature of the probe.

Operating Voltage	(8~30) VDC (powered through an isolated safety barrier)
Power Consumption	≤ 20 mA
Scale Range	10~200 r/min (for low-speed disc, reciprocating teeth/r) 5~1500 r/min (for high-speed disc)
Measurement Distance	0.3 mm~2 mm
Output Zero Position	When the voltage is 0.50 V±0.01 V, the rotational speed is considered to be 0
Reciprocating Rotation	When the voltage changes from 0.50 V to 4.50 V, the voltage change is proportional to the rotational speed
Pulse Output	Each time the sensor detects a gear; it emits a frequency - multiplied signal with an amplitude of 5 VDC (not less than 4.5 V)
Direction Signal	The output voltage is 5 VDC (not less than 4.5 V) for forward rotation and 0 VDC (not more than 1 V) for reverse rotation
Linearity	±1% FS
Protection Functions	The sensor has short-circuited protection, transient over-voltage protection, and reverse-polarity protection functions
Temp. Measurement Range	-20 °C~100 °C (corresponding to 0.50 V~4.50 V)
Environment Temp.	-20~60°C
Environment Hmdty.	Not more than 95% (+25°C)
Housing Protection Rating	IP67
Explosion-proof Type	Mine-used Intrinsically Safe

Outline Structure (Unit: mm)



Mine-used Intrinsically Safe Temperature and Vibration Sensor

Applications

The mine-used intrinsically safe temperature and vibration sensor is widely applied in underground coal mines. It is used for measuring the vibration and temperature of rotating machinery and other equipment in the coal mining industry, such as fans, water pumps, compressors, reducers, vibrating screens, etc.

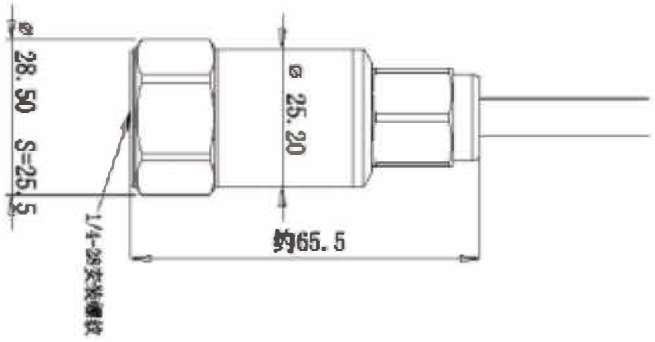
Features

This product is a two-wire vibration and temperature sensor. It outputs independent 4~20mA signals for vibration and temperature simultaneously, and can directly communicate with controllers such as PLCs and data acquisition systems.

Specifications

Operating Voltage	DC24V (Fluctuation range DC12V~DC30V)
Operating Current	≤ 25 mA
Scale Range	0~50mm/s (root-mean-square value of vibration velocity)
Output Signal	4~20mA (two-wire current type, with a load impedance not greater than 250Ω)
Measurement Error	≤ 5%
Frequency Response Range	10~1000Hz (±1dB)
Temperature	
Operating Voltage	DC24V (Fluctuation range DC12V~DC30V)
Operating Current	≤ 25 mA
Scale Range	-20°C~100°C
Output Signal	4~20mA (two-wire current type, with a load impedance not greater than 250Ω)
Measurement Error	≤ 5%

Outline Structure (Unit: mm)



Mine-used Intrinsically Safe Emulsion Concentration Sensor

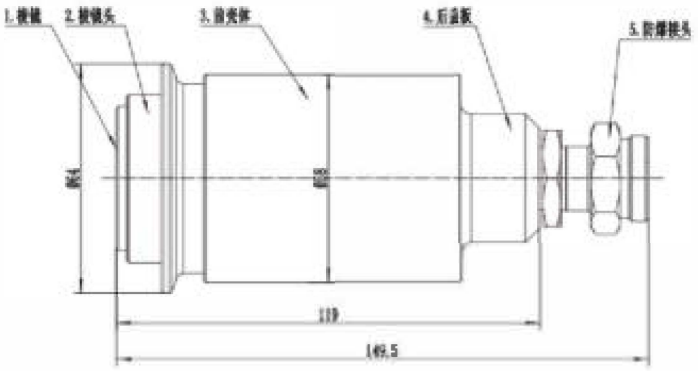
Applications

The SGIDCS48 emulsion concentration analyzer conducts automatic detection based on the refraction of light. It can be applied to the on-line automatic detection of the concentration of metal working fluids such as cutting fluids, emulsions, quenching fluids, and wire drawing fluids. It is mainly used in occasions such as the installation of bypass pipelines for working fluids. The whole process requires no human intervention and is maintenance-free. The data can be transmitted to the machine platform and the central control room through a 4 mA~20 mA signal or an RS485 digital signal.

Specifications

Rated Operating Voltage	12VDC/24VDC
Scale Range	BRIX: 0.0 to 15.0%
Resolution	BRIX:0.1%
Accuracy	BRIX: ±0.2%
Measurement Temperature	0~60°C
Temperature Compensation	5~50°C
Ambient Temperature	5~40°C
Key Materials	Material of the detection contact liquid surface: 316L; Prism: Optical-grade sapphire
Output Signal	Three-wire 4 mA~20 mA analog signal, RS485 digital signal
Communication rate	1200 bps~15200 bps, Default: 9600 bps
Pressure resistance	<1MPa

Outline Structure (Unit: mm)



Mine-used Intrinsically Safe Temperature and Liquid Level Sensor

Overview

The mine-used intrinsically safe temperature and liquid level sensor complies with the provisions of MT209-1990 and this standard, and is manufactured according to the technical documents and drawings approved by the prescribed procedures and the inspection unit authorized by the state.

This product features a reasonable structural design, accurate detection, stable performance, and convenient installation and maintenance. It is suitable for underground coal mine areas where there are risks of coal dust and gas explosions. It is used to collect the temperature and vibration signals during the operation of coal mine equipment to determine whether the working state of the equipment is normal.

It has high measurement accuracy and strong anti-interference ability. The exterior adopts a fully-sealed stainless-steel structure, which can meet the requirements of harsh working conditions such as moisture-proof, explosion-proof, corrosion-proof, and dust-proof.

The GWP100/10 mine-used intrinsically safe temperature and liquid level sensor.

Explosion-proof type: Mine-used intrinsically safe type; Explosion-proof mark: Exib I Mb.

Specifications

Pressure Part	
Rated Operating Voltage	DC 12V
Operating Current	No more than 10mA
Measurement Range	0~10 meters of water column
Output Signal	0~5V
Basic Error	±1.0%
Temperature Part	
Rated Voltage	The temperature measurement of this sensor is passive
Measurement Range	0~100°C
Basic Error Limit	≤ ± 2.5%
Response Time (T)	≤15s
Output Signal	Pt100 resistance value

Outline Structure (Unit: mm)

Dimensions: (Diameter × Length): 36 (hexagonal) × 90 (as shown in Fig 1); Weight: Approximately 300g.

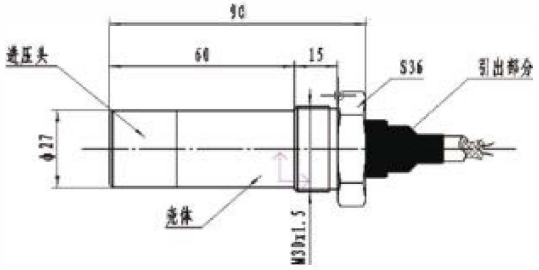


Fig 1.

Mine-used Intrinsically Safe Height Sensor

Applications

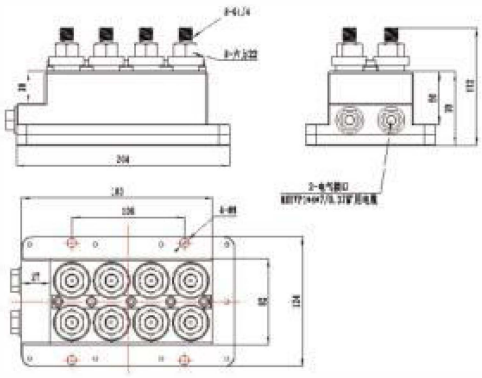
The SGIDPPT93(C) mine-used flameproof pressure transmitter complies with the provisions of MT209-1990 and this standard, and is manufactured according to the technical documents and drawings approved by the prescribed procedures and the inspection unit authorized by the state.

This product features a reasonable structural design, accurate detection, stable performance, and convenient installation and maintenance. It is suitable for underground coal mine areas where there are risks of coal dust and gas explosions. It is used for the pressure measurement and automatic control of the hydraulic systems of coal mine equipment. It has high measurement accuracy and strong anti-interference ability. The exterior adopts a fully-sealed stainless-steel structure, which can meet the requirements of harsh working conditions such as moisture-proof, explosion-proof, corrosion-proof, and dust-proof.

Specifications

Power Supply Performance	
a) Rated Operating Voltage	DC 24V
b) Operating Current	≤ 10mA
Measurement Range	0~60MPa
Basic Error	± 0.5% (FS)
Repeatability Error	± 0.5%
CAN Interface	
a) Number of Interfaces	1 channel
b) Transmission Mode	Half-duplex
c) Transmission Rate	250kbps
d) Peak-to-peak Operating Voltage	1V~5V
e) Maximum Transmission Distance	Maximum transmission distance: 10m (using MHYVP1X4X7/0.37 mine-used polyethylene insulated braided shielded PVC sheathed communication cable)
Function	The transmitter converts the detected pressure signal into a CAN bus signal for output

Outline Structure (Unit: mm)



Mine-used Intrinsically Safe Height Sensor

Overview

The SGIDUS43 mine-used intrinsically safe height measurement sensor complies with the provisions of MT209-1990 and this standard. This product features a reasonable structural design, accurate detection, stable performance, and convenient installation and maintenance. It is suitable for underground coal mine areas where there are risks of coal dust and gas explosions. It is mainly a sensor for measuring the height of hydraulic supports, and it also has the function of measuring the angle of the top beam. It is one of the main sensors of the electro-hydraulic control system.

Features

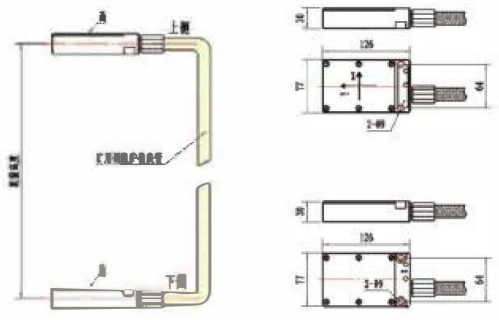
- It has high measurement accuracy and strong anti-interference ability. The exterior adopts a fully-sealed stainless-steel structure, which can meet the requirements of harsh working conditions such as moisture-proof, explosion-proof, corrosion-proof, and dust-proof.
- Explosion-proof type: Mine-used intrinsically safe type; Explosion-proof mark: Ex ib I Mb.

Specifications

Supply Operating Voltage	DC 12V
Operating Current	≤ 50mA
Height Measurement Range	0.5~10 meters
Height Measurement Accuracy	0.5%FS
Height Measurement Resolution	1mm
Angle Measurement Range	Pitch angle: -90°-90°; Roll angle: -90°-90°
Angle Resolution	0.1°
Transmission Mode	485 or UART full-duplex
Transmission Rate	19.2kbps
Transmission Distance	0.5m
Peak-to-peak Operating Voltage of the Transmission Signal	-0.5V~5.5V (when UART is powered by 5V)
Housing Protection Rating	IP68

Outline Structure (Unit: mm)

Weight: Approximately 7.5kg.



Marine Pressure Transmitter

Applications

Used for monitoring pressure and liquid level in various ship compartments in the marine industry.

Features

- Utilizes diffused silicon pressure-sensitive elements and advanced diaphragm isolation technology.
- Certified by China Classification Society (CCS).
- High accuracy, stability, and fast response speed.

Specifications

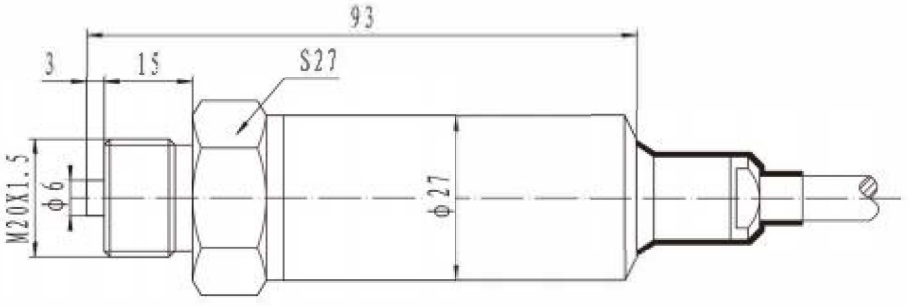
Parameter	Value	Selection Code		
Pressure Range	-100kPa～0～2kPa...60MPa(or0～50mH20)	0~xMPa(or0~xmH_2O)		
Pressure Type	Gauge(G)、Absolute(A)、Sealed Gauge(S)	G	A	S
Power Supply	24VDC(supplied through a safety barrier)	V1:24V		
Output Signal	4～20mA(B1),1～5V(B2),0～5V(B3)	B1	B2	B3
Pressure Connection	M20×1.5(C1), G1/2"(C2), Customer select (C3)	C1	C2	C3
Electrical Connection	Hirschmann cable(J1)、Direct cable(J2)、Aviation plug cable(J3)	J1	J2	J3
Explosion-proof Mark	ExiaIICT6			
Protection	IP68			
Accuracy	±0.5%FS			
Operating Temp.	-40～85℃			

Model Option

To precisely customize the product you need, simply make a selection in each required category and add any additional requirements. For example:

Code	Range	Pressure Type	Supply	Output	Pressure Interface	Electrical Appliance Connection	Cable Length	Other Requirements
MBC-1	0~6MPa	G	V1	B1	C1	J2	5 meters	

Outline Structure (Unit: mm)



Applications

Used for monitoring pressure and liquid level in various ship compartments in the marine industry.

Features

- Utilizes diffused silicon pressure-sensitive elements and advanced diaphragm isolation technology.
- Certified by China Classification Society (CCS).
- High accuracy, stability, and fast response speed.

Specifications

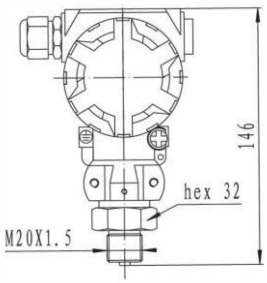
Parameter	Value	Selection Code		
Pressure Range	-100kPa～0～2kPa…60MPa(or0～50mH20)	0~xMPa(or0~xmH_2O)		
Pressure Type	Gauge(G)、Absolute(A)、Sealed Gauge(S)	G	A	S
Power Supply	24VDC(supplied through a safety barrier)	V1:24V		
Output Signal	4～20mA(B1),1～5V(B2),0～5V(B3)	B1	B2	B3
Pressure Connection	M20×1.5(C1), G1/2"(C2), Customer select (C3)	C1	C2	C3
Additional Functions	0～100%Linear Indication(M1)、LED Digital Display(M2)	M1		M2
Explosion-proof Mark	ExiaIICT6			
Protection	IP65			
Accuracy	±0.5%FS			
Operation Temp.	-40～85℃			

Model Option

To precisely customize the product you need, simply make a selection in each required category and add any additional requirements. For example:

Code	Range	Pressure Type	Supply	Output	Pressure Interface	Additional Functions	Other Requirements
MBC-2	0~6MPa	G	V1	B1	C1	M2	

Outline Structure (Unit: mm)



Applications

Used for monitoring pressure and liquid level in various ship compartments in the marine industry.

Features

- Utilizes diffused silicon pressure-sensitive elements and advanced diaphragm isolation technology.
- Certified by China Classification Society (CCS).
- High accuracy, stability, and fast response speed.

Specifications

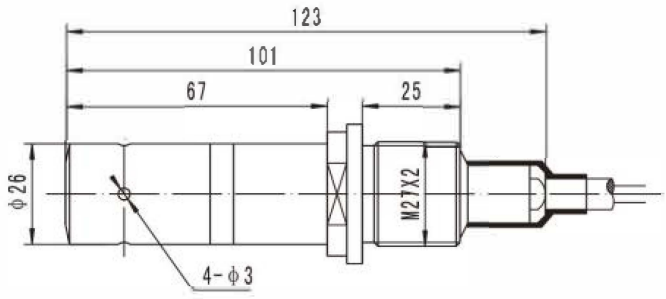
Parameter	Value	Selection Code		
Pressure Range	500kPa	0~xkPa(or0~xmH_2O)		
Pressure Type	Gauge(G)、Absolute(A)、Sealed Gauge(S)	G	A	S
Power Supply	24VDC(supplied through a safety barrier)		V1:24V	
Output Signal	4～20mA(B1),1～5V(B2),0～5V(B3)	B1	B2	B3
Pressure Connection	M20×1.5(C1), G1/2"(C2), Customer select (C3)	C1	C2	C3
Explosion-proof Mark	ExiaIICT6			
Protection	IP68			
Accuracy	±0.5%FS			
Operation Temp.	-40～85℃			

Model Option

To precisely customize the product you need, simply make a selection in each required category and add any additional requirements. For example:

Code	Range	Pressure Type	Supply	Output	Pressure Interface	Cable Length	Other Requirements
MBY	0~6MPa	G	V1	B1	C1	5 meters	

Outline Structure (Unit: mm)



SGIDMF433

3-in-1 Flow Transmitter

Applications

The SGIDMF433 flow probe is designed for measuring flow velocity, pressure, and temperature in urban sewage and stormwater pipelines. The product features an ingenious structural design, accurate detection, stable performance, convenient installation and maintenance, and strong anti-interference capability. Its housing is made of high-strength, corrosion-resistant plastic, and the interior is filled with high-performance potting compound to achieve a fully sealed structure. This design enables it to operate underwater for extended periods, meeting the requirements for waterproofing and corrosion resistance in harsh working conditions.

Features

- Compact Size and Lightweight Design

The product is designed to be compact and lightweight, utilizing high-strength, highly corrosion-resistant plastic that is injection-molded in a single process. This significantly reduces the overall weight of the product.

- High Precision and Stability

The stable and reliable chips are equipped with temperature compensation, ensuring that temperature drift remains within the highest precision range. This design ensures long-term stability and reduces maintenance requirements.

- Reliable Circuitry and Fast Response

The product features highly reliable integrated circuits specifically designed for this type of application, ensuring rapid response and reliable operation.

- Advanced Diaphragm Isolation Technology

The product employs advanced diaphragm/oil-isolation technology with minimal oil filling, ensuring efficient pressure transmission. This design enhances the ability to withstand extreme destructive pressures and improves corrosion resistance.

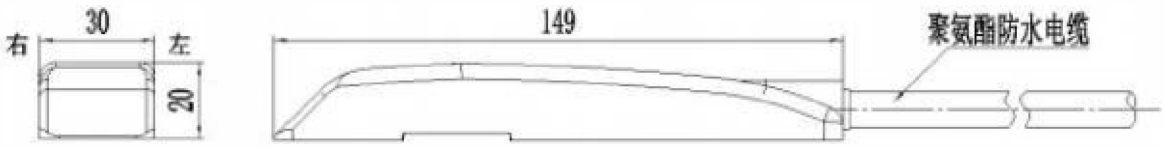
- Fully Sealed Structure

The entire product is sealed with high-performance sealant, providing excellent resistance to vibration, impact, and corrosion. The design achieves a high level of protection.

Specifications

Measuring Medium	A liquid medium compatible with 316L stainless steel and ABS plastic
Operation Power	The pressure sensing part is DC 18 to 28 V, and the flow velocity and temperature part are passive.
Shell	ABS
Scale Range	0~10 Meters of water
Accuracy	±0.5%FS
Output Signal	4 ~ 20mA
Operating Ambient Temp.	0℃~60℃
Overload Pressure	Maximum of 200%FS

Outline Structure (Unit: mm)



Applications

The product is almost compatible with all liquid media and is also suitable for measuring free-flowing solid powders or granules of medium density. It is widely used in industries such as metallurgy, building materials, chemical engineering, light industry, and food processing.

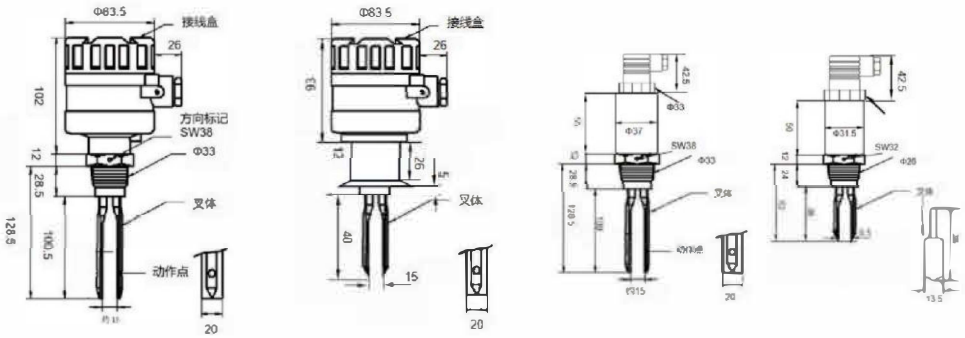
Features

The tuning fork level switch operates by installing a pair of piezoelectric crystals on the tuning fork base, which causes the fork to vibrate at a specific resonant frequency. When the tuning fork comes into contact with the measured medium, the frequency and amplitude of the fork will change. These changes are detected and processed by intelligent circuits and then converted into a switching signal. Since the switch has no moving parts, it requires no maintenance or adjustment, making it simple and convenient to use.

Specifications

Supply Voltage	24VDC、220VAC
Medium Temp.	-40~200℃
Environment Temp.	-40~70℃
Operation Pressure	-0.1~1.6MPa
Medium Density	≥0.7g/cm³
Liquid Viscosity	≤10000mm²/S
Electrical Connection	M20×1.5
Protection	IP65
Fork Length	40mm、100mm
Cable Box Material	Aluminum Alloy, Stainless Steel

Outline Structure (Unit: mm)



Applications

Conductive and non-conductive liquids: Chemical, petroleum, water treatment.
Conductive and non-conductive slurries: Papermaking, pharmaceutical, water treatment.
Powders: Power plants, metallurgy, cement.
Granules: Food, pharmaceutical, metallurgy, grain.

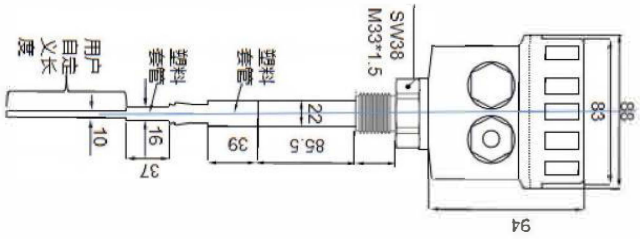
Features

- Universal Applicability: Capable of measuring liquid levels and material levels, meeting measurement requirements for various temperatures, pressures, and media. Suitable for harsh conditions such as corrosive and impact environments.
- Anti-Fouling: Unique circuit design and sensor structure ensure that measurements are unaffected by material build-up on the sensor, eliminating the need for regular cleaning and preventing erroneous measurements.
- Maintenance-Free: The measurement process involves no moving parts, eliminating the risk of mechanical failure and the need for maintenance.
- Anti-Interference: Contact measurement with strong resistance to interference, capable of overcoming the effects of steam, foam, and agitation on measurement accuracy.

Specifications

Measuring Range	0～1cm~20m
Output Signal	
Power	24VDC,220VAC
Probe Rod Material	304 Stainless Steel, 316LStainless Steel, Stainless Steel with PTFE Coating
Medium Temp.	-40℃~260℃
Environment Temp.	-20℃~65℃

Outline Structure (Unit: mm)



Applications

The capacitive level gauge, with its robust structural design and installation method, prevents blockages and cold bridging. It is suitable for continuous level detection of liquids, materials, or substances under special conditions such as high temperature, high pressure, corrosive environments, crystallization tendencies, and solid powdery or granular materials. It is widely used for monitoring and control in various industrial processes, including metallurgy, petroleum, chemical engineering, building materials, papermaking, food processing, pharmaceuticals, heat treatment, and water treatment.

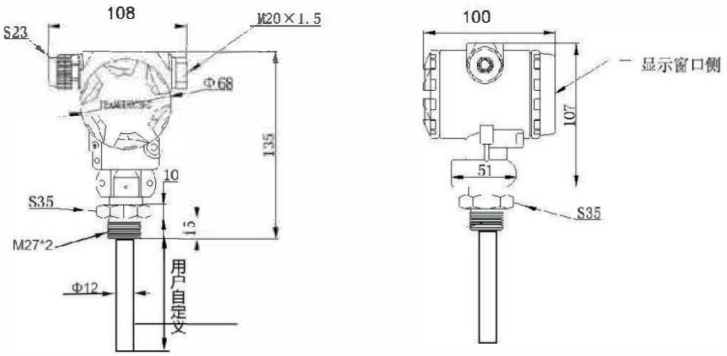
Features

- Simple Structure: No moving or elastic components, ensuring high reliability and minimal maintenance.
- Wide Measurement Range: No blind spots along the entire length of the sensor for liquid level measurement.
- Versatile Applications: Suitable for level measurement of liquids in high-temperature, high-pressure, and corrosive media.
- User-Friendly: Pre-configured parameters at the factory; plug-and-play functionality. Zero and range parameters can be individually adjusted for convenient calibration and correction.

Specifications

Scale	0.05m~20m
Accuracy	±0.5%FS、±1%FS
Pressure Range	-0.1～6MPa
Operation Temp.	-40～260℃
Environment Temp.	-20～60℃
Suitable Media	Acids, bases, salts, or any medium that is non-corrosive to polytetrafluoroethylene (PTFE).
Display Approach	Analog display 0-100%, LCD, LED.

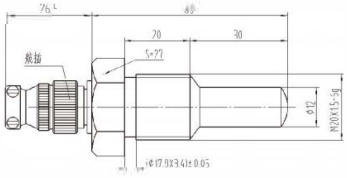
Outline Structure (Unit: mm)



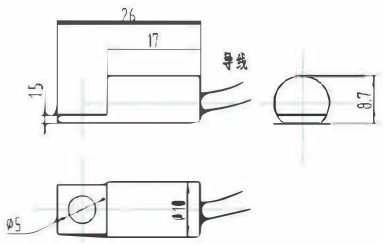
Overview

The temperature sensor employs a high-performance, reliable imported Pt100 platinum resistor. It features an integrated stainless-steel structure, which is characterized by its compact size and rapid thermal response. The sensor has a wide operating temperature range and is easy to install. It also exhibits excellent resistance to vibration and impact.

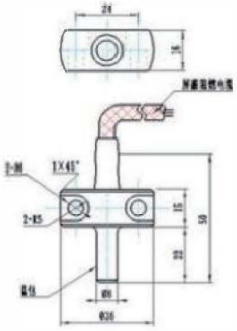
Operation Temp.	-40℃~+85℃
Meas. Temp. Range	-80℃~+200℃ (Optional)
Resistance Category	Platinum Resistance
Scale Number	Pt100
Accuracy Class	Class A, Class B
Connection Method	Optional 2-/3-/4-wire systems
Permissible Current	<5mA
Thermal Response Time	T0.5≤30s（SD）



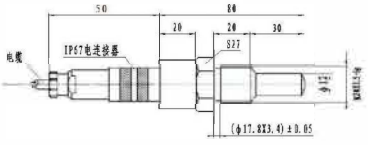
Operation Temp.	-40℃~+100℃
Meas. Temp. Range	-50℃~+150℃ (Optional)
Sensitive Element	Platinum Resistance
Scale Number	Pt100
Rec. Op. Current	1mA
Accuracy Class	Class B
DWV	2kV



Operation Temp.	-50℃~+120℃
Meas. Temp. Range	-50℃~+120℃ (Optional)
Sensitive Element	Platinum Resistance
Scale Number	Pt100
Rec. Op. Current	1mA
Accuracy Class	Class B
DWV	2500VAC



Operation Temp.	-40℃~+85℃
Meas. Temp. Range	-85℃~+200℃ (Optional)
Resistance Category	Platinum Resistance
Scale Number	Pt100(Four-Wire System)
Accuracy Class	Class A
Connection Method	IP67 Electrical connector

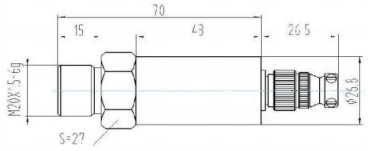


Overview

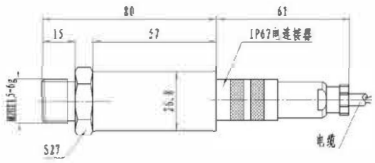
The SGPPT633N is a pressure transmitter designed for pressure testing and control in automotive, locomotive, and aerospace applications. It features excellent resistance to vibration, temperature, and electromagnetic compatibility.

The sensitive element of the SGPPT633N pressure transmitter is manufactured using MEMS (Micro-Electro-Mechanical Systems) technology, which leverages the piezoresistive effect of silicon to achieve the conversion of mechanical force to electrical signals in pressure measurement.

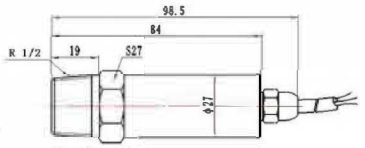
Measuring Media	Fluid Compatibility: 316L
Scale Range	(0～60)MPa Optional
Power Supply	12VDC～30VDC
Output Signal	4～20mA;1～5V Typically
Accuracy	±0.5%FS
Temperature Drift	0.03%FS/℃
Medium Temp.	-40～125℃
Environment Temp.	-40～85℃
Time Drift	≤0.2%FS per year
Overload Capacity	200%FS



Measuring Media	Fluid Compatibility: 316L
Scale Range	(0～60)MPa Optional
Power Supply	12VDC～30VDC
Output Signal	4～20mA;1～5V Typically
Accuracy	±0.5%FS
Temperature Drift	0.03%FS/℃
Medium Temp.	-40～125℃
Environment Temp.	-40～85℃
Time Drift	≤0.2%FS per year
Overload Capacity	200%FS
Protection Rating	IP67



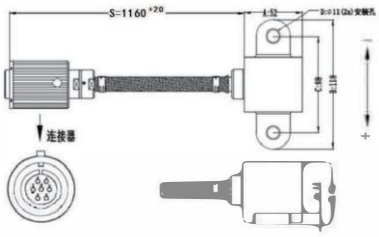
Measuring Media	Fluid Compatibility: 316L
Scale Range	(0～60)MPa Optional
Power Supply	12VDC～30VDC
Output Signal	4～20mA;1～5V Typically
Accuracy	±0.5%FS
Temperature Drift	0.03%FS/℃
Medium Temp.	-40～125℃
Environment Temp.	-40～85℃
Time Drift	≤0.2%FS per year
Overload Capacity	200%FS
Protection Rating	IP67



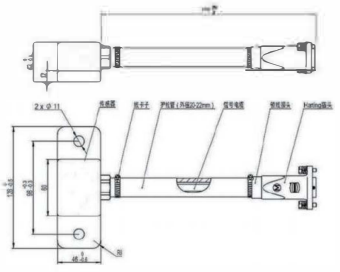
Overview

The sensitive elements of the SGIDMJ series accelerometers employ micro-electro-mechanical capacitive sensing technology to convert acceleration into voltage signals. These signals are then transformed into a 4-20mA current output via a voltage-to-current (V/I) conversion circuit. The sensors are primarily used for detecting acceleration in three orthogonal axes.

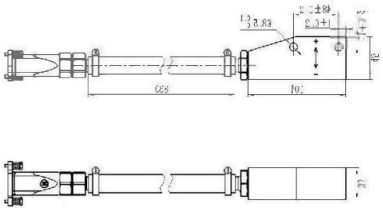
Rated Voltage	12VDC
Zero-Output Current	12mA±0.6mA
Output Current Range	(4～20)mA
Load Resistance	less than 250Ω
Operation Range	±10G
Accuracy	±10%FS;
Withstand Voltage Test	AC4000V,50Hz/min
Protection	IP68



Rated Voltage	12VDC
Zero-Output Current	12mA±0.8mA(3 channels)
Output Current Range	(4~20)mA(3 channels)
Load Resistance	less than 250Ω
Operation Range	±10m/s(3 directions)
Accuracy	±5%FS;
Withstand Voltage Test	AC 4kV/50Hz, <5mA
Protection	IP68



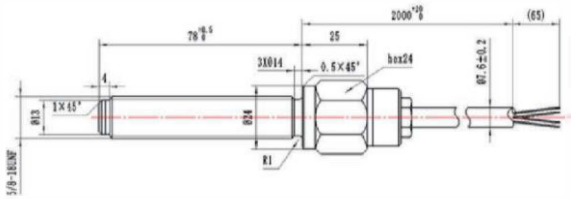
Input Voltage	15V(DC)~32V(DC)
Voltage Signal Output	5V±1.23V
Accuracy	±5%
Maximum Output Current	5mA
Measurement Range	±2G
Frequency Response	0~30HZ（-3dB）
Withstand Voltage Test	AC 4kV/50Hz, <5mA
Protection	IP68



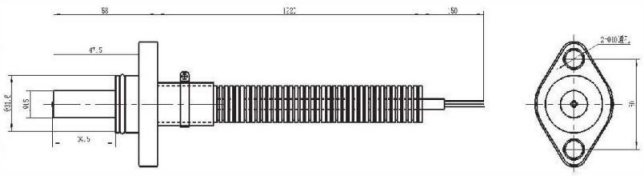
Overview

The SGIDSS locomotive speed sensor employs the Hall effect or electromagnetic induction principle and can be directly connected to control instruments, intelligent meters, and other devices. It features a wide frequency response, good stability, high sensitivity, and strong reliability, making it suitable for operation in vibrating environments.

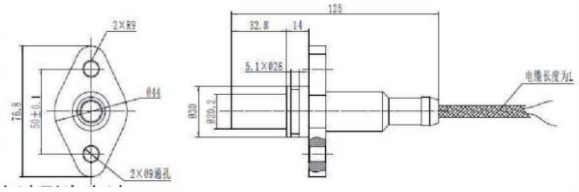
Operation Voltage	8VDC~32VDC
Measurement Range	OHz~10KHz
Measurement Distance	0mm~2mm
Environment Temp.	-40℃~125℃
Output Signal	Output Dual-channel pulse output (rectangular wave)
Protection Functions	Short-circuit protection, transient overvoltage protection, and reverse polarity protection.



Operation Voltage	(15～24)VDC
Measurement Range	0Hz~10KHz
Measurement Distance	0.1mm~1.5mm
Current Consumption	No-Load Current<35mA
Load Resistance	>1kΩ
Signal Duty Cycle	25-75%
Environment Temp.	-40℃~85℃
Output Signal	Single-output pulse voltage (square wave)
Output Level	Uhigh >0.8times the supply voltage, Ulow<2V
Protection Functions	Output short-circuit protection, transient overvoltage protection, and power supply reverse polarity protection.
Trigger Indicator	Φ3 Light LED



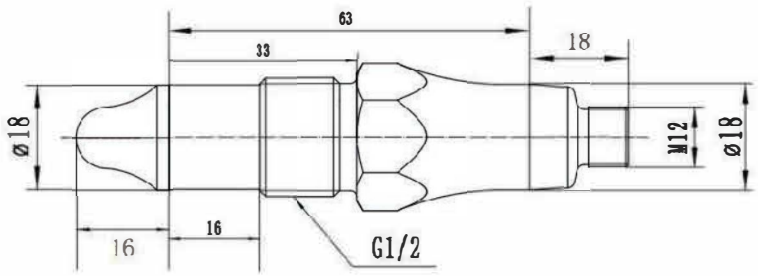
Measurement Range	(50~3000)Hz
Output	Quasi-Sine Wave
Power Supply	Passive
Load Resistance	10kQ
Measurement Distance	(0.3~1.5)mm

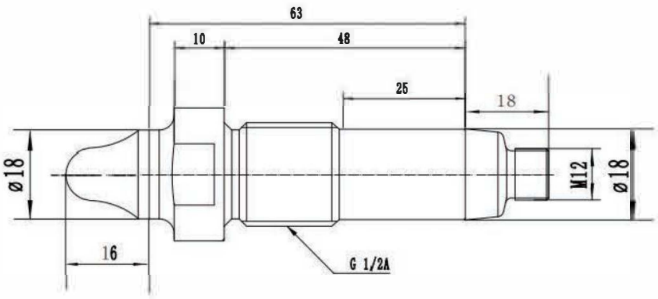


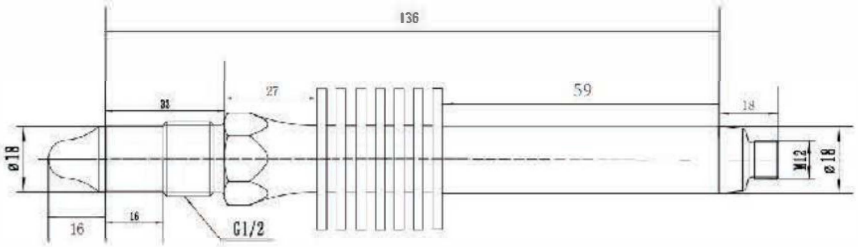
Overview

The capacitive level switch is designed to measure the liquid level height in the waste tank of the vacuum toilet system for high-speed train sets. This product features an ingenious structural design, accurate detection, stable performance, convenient installation and maintenance, and strong resistance to interference. The housing is made of stainless steel and high-strength, corrosion-resistant PEEK plastic, with high-performance potting compound inside to achieve a fully sealed structure. It can operate underwater for extended periods, meeting the requirements for waterproofing and corrosion resistance in harsh working conditions.

The product is suitable for liquid level measurement in high-speed train sets, aircraft, intelligent manufacturing, food and pharmaceutical industries, as well as for industrial process control.







Vibration & Temperature Composite Sensors

Overview

The sensitive elements of the SGTIS533-833 series vibration and temperature composite sensors utilize a core based on the micro-electro-mechanical piezoelectric induction principle, converting vibration values into voltage signals and outputting them through an IEPE interface circuit. The sensors are primarily used for detecting vibration values in one channel (with the temperature probe in parallel) and simultaneously provide two channels of PT100 or PT1000 temperature resistance outputs. These sensors are used for monitoring gearboxes, motors, and axle boxes in train running gear.

Specifications

Operation Range	±500g(Vertical)
Power Supply	24VDC(Constant Current Source)
Constant Current Supply	2~10mA(4mA Typically)
Zero Output	DC 8~14V
Output Sensitivity	10mv/g±0.5mv/g
Amplitude Nonlinearity	≤±1
Vibration Frequency Response Range	0.5-8000 Hz(-3dB)
Temperature Platinum Resistor	PT100 or Pt1000
Shock Resistance	2000g
Withstand Voltage Test	AC4000v,50Hz/min
Protection Rating	IP68(Sensor Body)

SGPPT943

Pressure Transmitter

Overview

Constructed using glass technology and precision digital compensation and amplification circuits. Both the pressure port and the housing are made of stainless steel, offering excellent corrosion resistance and long-term stability. Widely used in construction machinery, industrial process control systems, aviation, aerospace, hydraulic systems, automotive, refrigeration, medical equipment, and other fields.

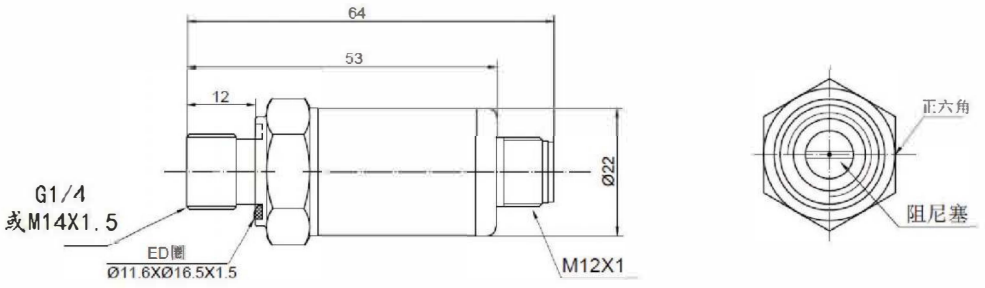
Features

- Measurement Range: 0.1 MPa to 200 MPa
- 17-4PH Stainless Steel Isolation: Full stainless steel construction
- Pressure Port: No O-rings, no welding, no silicone oil, and no potential for leakage
- High Reliability
- Diverse Structural Design

Specifications

Pressure Range	0~1MPa, 1.6MPa, 2.5MPa, 4MPa, 6MPa, 10MPa, 16MPa, 25MPa, 40MPa, 60MPa, 100MPa, 160MPa, 200MPa(Other ranges available on request)
Accuracy	±0.5%FS(BFSL)
Medium Compatibility	17-4PH stainless steel
Overload Pressure	2 times the rated pressure (higher overload pressure available on request)
Bursting Pressure	5 times the rated pressure

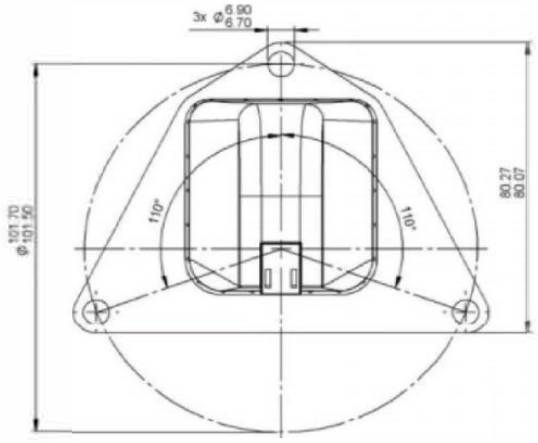
Outline Structure (Unit: mm)



Overview

This product is a dual-axis inclinometer specifically designed for industrial field control applications. It features the latest MEMS (Micro-Electro-Mechanical Systems) manufacturing processes for the inclinometer unit and a high-precision differential converter. Utilizing multi-stage filtering algorithms, it achieves high-precision measurement of the sensor's tilt and pitch angles relative to the horizontal plane.

Outline Structure (Unit: mm)



Specifications

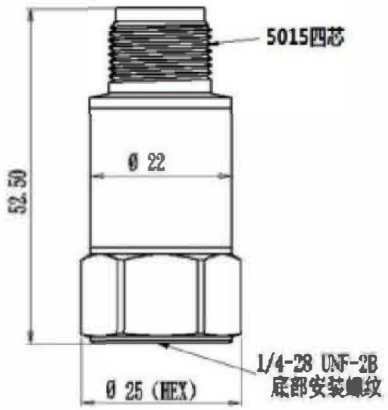
Measuring Angle	Two Axes. Each Axis Is 30
Supply Voltage	6-48Vdc
Supply Current	<40mA for 12Vdc power supply
Source Reverse Protection	Up to 48Vdc
Over Voltage Protection	Up to 60Vdc
Resolution	16bit
Output Noise	±2bit
Output	CANJ1939, Source Address, OXE2 Bit Rate250Kbit/s, Frame Rate100ms
Repeatability	≤2%FS
Linearity	<+1.80%
Maximum Measurement Speed	250°/s
Weight	150g
Operation Temp.	-40°℃~+85°℃
Protection	IP67
Temperature Drift	<0.75°

Integrated Vibration/Temperature Transmitter

Overview

This series of accelerometers is a dual-output composite sensor for vibration and temperature, featuring a stainless steel housing and laser-welded sealing. It offers high reliability and robust interference resistance due to its double-layer shielding. Suitable for long-term reliable operation in harsh environments, it is designed for dual-parameter monitoring of vibration and temperature in gears, bearings, and drive shafts of transmission systems in industrial rotating machinery, rail transit, and intelligent marine vessels.

Outline Structure (Unit: mm)



Specifications

Model		AT211D100	AT212D100	AT213D100	AT214D100
Type of Temperature Sensor		Analog Chip	Analog Chip	DS18B20	Pt100
Temperature Measurement Range	℃	0-100	-40-+120	-55-+125	-40-+120
Temperature Output Sensitivity	mV/℃	10	10	10	1
Temperature Measurement Error	℃	±2	±4	±4	±2
Acceleration Range	g	±50	±50	±50	±50
Sensitivity	mV/g	100	100	100	100
Frequency Response (±10%)	Hz	2-5000	2-5000	2-5000	2-5000
Operation Voltage (Constant Current Source)	VDC	18-28	18-28	18-28	18-28
Operation Current	mA	2-10	2-10	2-10	2-10
Output Resistance	Q	<100	<100	<100	<100
Operation Temp.	℃	-40-+120	-40-+120	-40-+120	-40-+120
Insulation to Ground (during installation)	Q	≥108	≥108	≥108	≥108
Shell		Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel

Magnetostrictive Displacement Sensor

Overview

The product utilizes the magnetostrictive principle with an external mounting configuration, suitable for applications requiring liquid level height measurement, such as fuel tanks, oil reservoirs, water tanks, and boilers. It features high measurement accuracy and strong resistance to interference, with a fully sealed stainless steel enclosure. The sensor is capable of real-time monitoring of liquid level height, including stage/interface height or continuous level measurement.

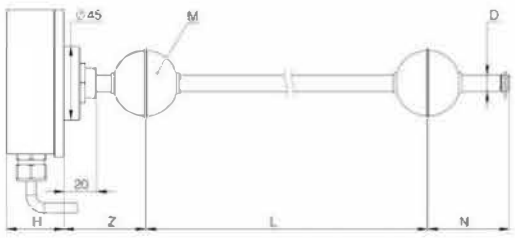
Features

- Fully enclosed electronics housing with strong interference resistance.
- Supports synchronous detection of multiple liquid levels.
- High accuracy, high resolution, and excellent stability.
- Non-contact measurement, eliminating wear and extending service life.
- Fast response, linear measurement, and absolute position output.
- High protection rating.

Specifications

Power Source	12V DC/24V DC
Shell	Aluminum Alloy
Stroke Range	100mm~5000mm
Output Signal	Analog Voltage/Analog Current/RS485
Resolution	16bit DA/Maximum 0.5um
Nonlinearity	≤±0.05%F.S.
Repeatability	≤±0.002%F.S.
Operation Temp.	-40℃~85℃
Housing Protection Rating	IP68

Outline Structure (Unit: mm)



代号	含义	模拟输出	数字输出
H	电子仓高度	35mm	
Z	首端盲区	50mm	
L	可选量程	100mm～5000mm	
N	末端盲区	50mm	
D	测杆直径	10mm	
M	浮球规格	选配型号	

Magnetostrictive Linear Position Sensor

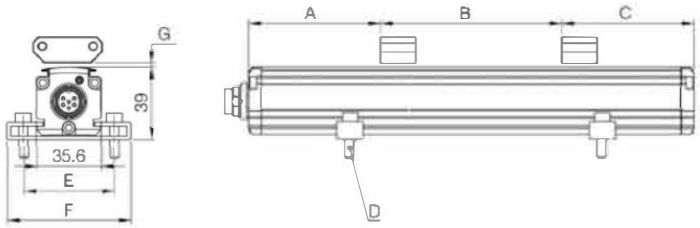
Overview

The sensor employs the magnetostrictive principle with an external mounting configuration and is widely used in processing equipment such as forging presses, CNC punch presses, aluminum extrusion machines, CNC machining centers, die-casting machines, hydraulic presses, forming machines, and injection molding machines. It features high measurement accuracy and strong resistance to interference, with an aluminum alloy housing that enables operation in harsh and dusty environments. The non-contact floating measurement method, combined with a clamping mechanism for flexible and convenient installation, makes it an ideal choice for demanding industrial applications.

Specifications

Power Source	12V DC/24V DC
Shell	Aluminum Alloy
Stroke Range	100mm~3810mm
Output Signal	Analog Voltage/Analog Current/SSI/RS485/Profibus/CANbus
Resolution	16bit DA/Maximum 0.5um
Nonlinearity	≤±0.05%F.S.
Repeatability	≤±0.002%F.S.
Operation Temp.	-40℃~85℃
Housing Protection Rating	IP54

Outline Structure (Unit: mm)



代号	含义	模拟输出	数字输出
A	首端盲区	73mm	78mm
B	可选量程	100mm～3810mm	
C	末端盲区	73mm	
D	固定螺钉	M5×20/M4×20	
E	定位孔间距	50mm/42.5mm	
F	垂直间距	1mm～12mm可选	
H	可选磁块	选配型号	

Magnetoresistive Displacement Sensor

Overview

The sensor is designed based on magnetoresistive technology, offering a high-precision, high-frequency-response, and EMI-resistant non-contact linear displacement sensing solution. This product delivers high reliability, long service life, excellent immunity to external electromagnetic interference, and robust performance in harsh environments. It is widely applicable in industrial automation fields such as automotive manufacturing, mechanical equipment, transmission systems, various measurement systems, and liquid level detection.

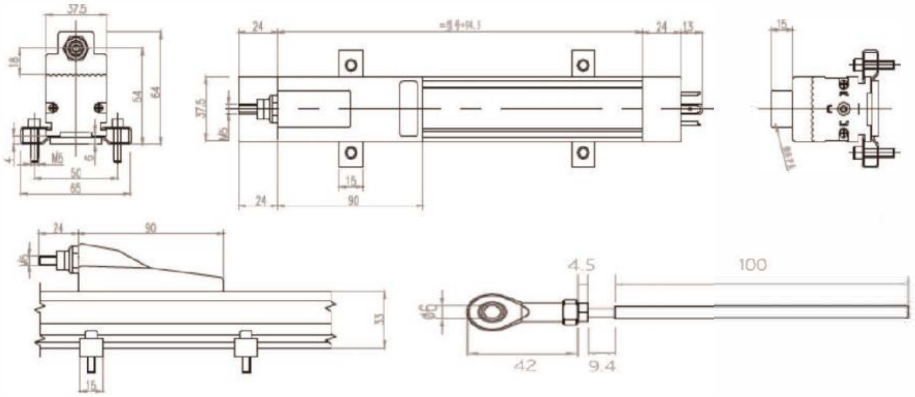
Features

- High resolution, high repeatability, and high-frequency response
- Non-contact measurement, ensuring long service life
- Superior resistance to external electromagnetic interference
- Strong resistance to vibration

Specifications

Power Source	12VDC/24V DC
Scale Range	10mm~2000mm(Customizable)
Output Signal	Analog Voltage/Analog Current/SSI/RS485/CANbus
Response Frequency	4000Hz
Linear Accuracy	≤±0.05%F.S.
Repeatability	100um
Maximum Load Capacity of the Rod	40kg
Operation Temp.	-25℃~85℃

Outline Structure (Unit: mm)



Temperature/Humidity Sensor

Features

- Good shock resistance, temperature tolerance, and electromagnetic compatibility.
- The sensitive elements in the sensor employ MEMS (Micro-Electro-Mechanical Systems) technology.
- The signal conditioning circuit amplifies the output signal while providing temperature compensation and non-linearity correction.
- Easy installation and wide measurement range.

Application

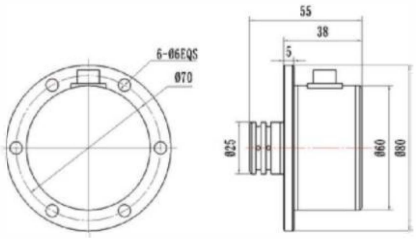
Environmental measurements in indoor workplaces such as coal mine machinery, factory workshops, warehouses, and buildings.

Environmental temperature and humidity measurements in outdoor areas such as farmland, arable land, and vegetable greenhouses.

Specifications

Temperature Range	-40～+135℃	**Humidity Range**	0%～100%RH
Temperature Output Signal	4～20mA	**Humidity Output Signal**	4～20mA
Temperature Measurement Accuracy	±2℃	**Humidity Measurement Accuracy**	±4%
Operation Power	24VDC	**Insulation Resistance DC**	20MQ/250V

Outline Structure (Unit: mm)



Electrical connection

Function	Power Positive (+)	Temperature Current Output	Humidity Current Output
Conductor	Red	Green	Yellow

Installation

(1) Select a location that is easy to operate and maintain for installation.

(2) Install as far away from vibration sources as possible.

(3) Install away from heat sources.

(4) Use flange mounting.

Overview

The SGDISEC series eddy current sensor is a non-contact measurement sensor capable of accurately measuring the relative position between the measured object (which must be a metallic conductor) and the probe face. The voltage signal output by the sensor is proportional to the distance between the probe tip and the measured conductor. It can perform both static (displacement) and dynamic (vibration) measurements. Primarily used for measuring parameters such as shaft displacement, shaft vibration, and shaft rotational speed in rotating machinery, it provides effective monitoring and protection of equipment.

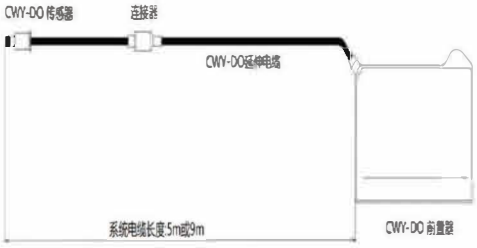
Specifications

Model	401	402	404	410-18	410-25
Parameter	Φ5	Φ8	Φ11	Φ18	Φ25
Measurement Range	0.25-1.75mm	0.5-2.5mm	1-5mm	0.5-10.5mm	1-11mm
Max Custom Range	2mm	2mm	6mm	10mm	16mm
Sensitivity (mV/μm)	8	8	4	0.8	0.8
Nonlinearity	<1%	<1.5%	<1%	<1%	<1%
Resolution	±1μm	±1μm	±2μm	±10μm	±10μm
Freq. Response	DC-10kHz	DC-3kHz	DC-1kHz	DC-1kHz	DC-1kHz
Output Voltage Range	-2~-14V	-2~-18V	-2~-18V	-2~-10V	-2~-10V
Probe Ø (mm)	5.5	8.4	11	16.7	25
Thread Option	M8/M10	M10	M14	M20/M18	M30
Temp. Range (Probe)	-40~+170°C (all models)				
Weight	500g	700g	700g	700g	700g

Common Spec:

Principle	Eddy Current (45# Steel calibration)	**Cable**	5/9m FEP coaxial (30mm bend radius)
Protection	Probe IP68 / Pre-amp IP40	**EMC**	EN61000-6-2/4
Power	-24VDC±10%, ≤20mA	**Housing**	Φ5/8-PPS, Φ11+-PEEK

Outline Structure (Unit: mm)



Digital Display Industrial Pressure Transmitter

Overview

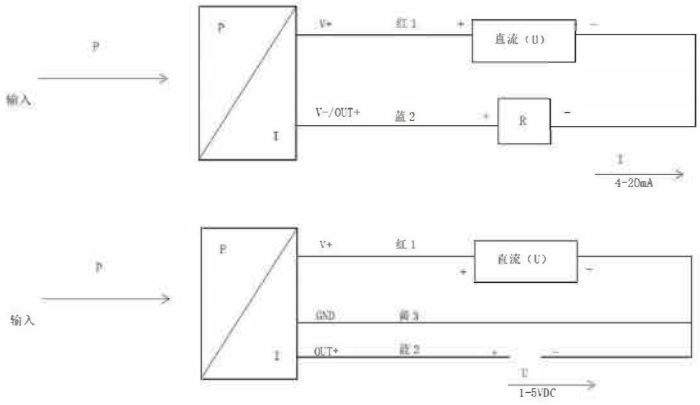
The SGPPT753 series intelligent pressure transmitter features a 4-digit LED pressure display and a fully sealed enclosure designed to meet stringent environmental requirements, including protection against moisture, explosion, corrosion, and dust. It offers excellent interchangeability in the field and can be customized for OEM customers. This series is suitable for a wide range of industries, including hydropower, metallurgy, petroleum, and chemical processing.

Specifications

Measuring Medium	Gas or liquid compatible with ceramic
Range	-0.1～4MPa
Power Source	10-36VDC (typically 24VDC)
Output Signal	Two-Wire System 4～20mA HART
Accuracy	+0.25%FS
Medium Temperature	-40℃-85℃
Temperature Drift	Better than +0.02%FS/℃
Process Connection	G1-1/2 external thread
Protection	IP67
Electrical Connection	2-meter shielded cable, wiring details: POWER+:V+; POWER-:V-/OUT+

Connection Methods for Intelligent Pressure Transmitters

Conductor	Pin/Terminal	Two-Wire System (4-20mA)	Three-Wire System (1-5VDC/0-5V DC)
Red	1	Power Positive (+):V+	Power Positive (+):V+
Blue	2	Power Negative (-)/Output Positive (+):V-0UT+	Output Positive：0UT+
Yellow	3	Not Connected	Common Terminal: GND
Black	⏚	Ensure Reliable Grounding in High-Interference Environments	Ensure Reliable Grounding in High-Interference Environments



Outline Structure (Unit: mm)