

Full range temperature supplement pressure transmitter

Ultra-wide range temperature compensation is suitable for applications where the medium temperature varies greatly

MODEL SUP621

(GAILIN) DATA SUP621.11



APPLICATION

- Mechanical manufacturing
- Hydraulic and pneumatic technology
- Pump and pump station
- Process pressure monitoring of industrial and mining enterprises
- HVAC equipment
- Environmental protection water treatment industry
- Machinery and equipment manufacturing

FUNCTION FEATURES

- Diffused silicon sensor, through -10... 70°C multi-point temperature compensation
- The sensor is completely welded and sealed, making it safer and more reliable
- Measuring pressure up to 6 Mpa
- Long service life, reduce the cost of repeated calibration
- Multiple process interfaces are available
- Multiple electrical interfaces are optional



SUP621 series

DESCRIBE

Suitable for general industrial applications

The SUP621 series full range temperature supplement pressure transmitter is the ideal solution for users with high measurement requirements. This type of transmitter has a very good accuracy, not only rugged and has a variety of versions, can meet a variety of application requirements.

High accuracy

This type of pressure transmitter can maintain long-term high stability, with extremely high accuracy, measuring range up to 0... 6 MPa, and users can choose a higher accuracy (0.25%) version.

Strong anti-interference ability

The SUP621 series full range temperature supplement pressure transmitter offers superior electromagnetic interference (EMC) resistance, making it easier to cope with harsh environments.

Function

Based on the company's years of production experience combined with field application experience, the product can be offered from 0... 0.04 to 0... 6 MPa measuring range, support for all common pressure units. These measuring ranges can be combined in almost any manner with all standard industrial output signals, international process connectors, and various electrical interfaces.

In addition, the transmitter offers a variety of options such as different integrated accuracy, extended temperature range, and custom pin assignment.

Service

We can supply all versions of transmitters listed in this selection table and can complete delivery in a short time. In addition, we have sufficient inventory to achieve delivery in the first time to meet the urgent application requirements of our customers.

We provide technical services before, during and after sale. In specific applications, the application engineers of our company will choose the corresponding products according to the actual application environment of users, and develop the solutions that meet the application requirements.

RANGE OF MEASUREMENT

Relative pressure									
	G1	G2	G3	G4	G5	G6	G7	G8	G9
Range of measurement	0.4 bar	1 bar	3 bar	6 bar	10 bar	16 bar	25 bar	40 bar	60 bar
Excess pressure limit	0.8 bar	2 bar	6 bar	12 bar	20 bar	32 bar	50 bar	80 bar	120 bar
Burst pressure	1.2 bar	3 bar	9 bar	18 bar	30 bar	48 bar	75 bar	120 bar	180 bar

(1) The measurement range can also be expressed in psi, kg/cm², kPa and MPa units.

(2) The actual range cannot reach the absolute zero value and can only approximate 0 bar.

(3) We can provide the instrument with special measuring range according to customer's request, as shown in the table above 0... 6 MPa measurement range.

(4) Service life ≥ 106 times of pressure, the specific service life of the instrument depends on the actual application of pressure distribution.

OUTPUT SIGNAL

Type of signal	Signal	Wiring	Capacity of load
Pattern of current	4 ... 20 mA	Two wire system	$\leq (\text{power supply voltage} - 9 \text{ V}) / 0.02 \text{ A}$

Other output signals can be provided according to customer requirements.

POWER SUPPLY POWER

The power supply

The power required depends on the output signal selected

■ 4... 20 mA: 9... 30 V DC

Source of current

■ Current output (2-wire system) : Current signal, up to 35 mA

ACCURACY OF MEASUREMENT

Accuracy under reference conditions includes nonlinear errors, hysteresis/backslip, zero offset and final value deviation (equivalent to measurement errors and in accordance with IEC 61298-2).

Accuracy 0.5% (higher accuracy 0.25% version can be customized)

- Nonlinear error: 0.1% FS
- Hysteresis/lag: 0.2% FS
- Zero offset: 0.15% FS
- Final offset: 0.05% FS

Medium temperature 0... Temperature error at 80°C

- Usually: $\leq \pm 1.0\%$ of the measuring range
- Under normal circumstances: $\leq \pm 2.0\%$ of measuring range (special measuring range)
- Maximum: $\leq \pm 2.5\%$ of measuring range

Long-term stability under reference conditions

- $\leq 0.1\%$ of measuring range/year
- $\leq 0.2\%$ of measuring range/year (special measuring range)

REFERENCE ENVIRONMENT

(in accordance with IEC 61298-1)

■ Ambient temperature: 15... 25 °C

■ Atmospheric pressure: 86... 106 kPa

■ Relative humidity: 45... 75%

■ Power supply voltage: 24 V DC

■ Installation position:

Meter is calibrated in vertical mounting position with pressure fitting facing down.

WORKING CONDITIONS

Protection level (according to IEC 60529)

For details about the protection level, see "Electrical Connection".

To achieve the level of protection described in this manual, it is necessary to use matching joints that meet the corresponding level of protection.

Anti-vibration stability (according to IEC 60068-2-6)
0.35 mm (10... 55 Hz)

Impact stability (in accordance with IEC 60068-2-27)
100 g (2.4ms)

The temperature

- Medium temperature: -40... + 80 °C
- Ambient temperature: -20... + 70 °C
- Storage temperature: -20... + 60 °C

RESPONSE TIME

Response time

■ Current output: < 2 ms

Preheating time

< 10 minutes

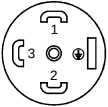
The MATERIAL

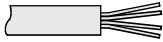
Liquid receiving unit

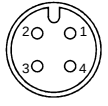
- Process connector: 304 stainless steel
- Sensor: 316L stainless steel

ELECTRICAL CHARACTERISTICS

Electrical connection

Hersman connector, according to DIN 175301-803 A			
	define		2 wire system
	1	⊕	1
	2	⊖	2
	3	—	—
	4	—	—

The cable exits directly			
	define		2 wire system
	brown	⊕	brown
	yellow	—	—
	blue	⊖	blue
	black	—	—

M12 x 1 Round Connector (4 cores)			
	define		2 wire system
	1	⊕	1
	2	⊖	2
	3	—	—
	4	—	—

Definition Description

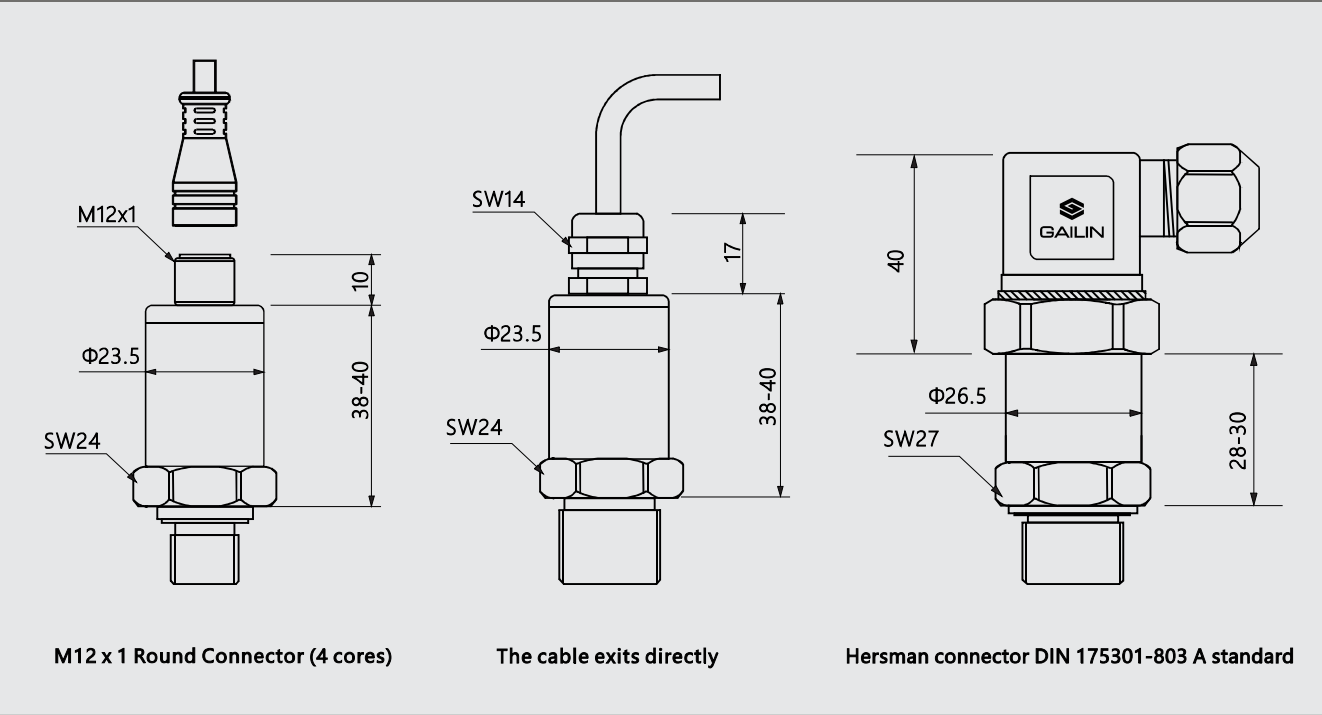
- ⊕ : Positive terminal of power supply
- ⊖ : Reference potential

Electrical specifications

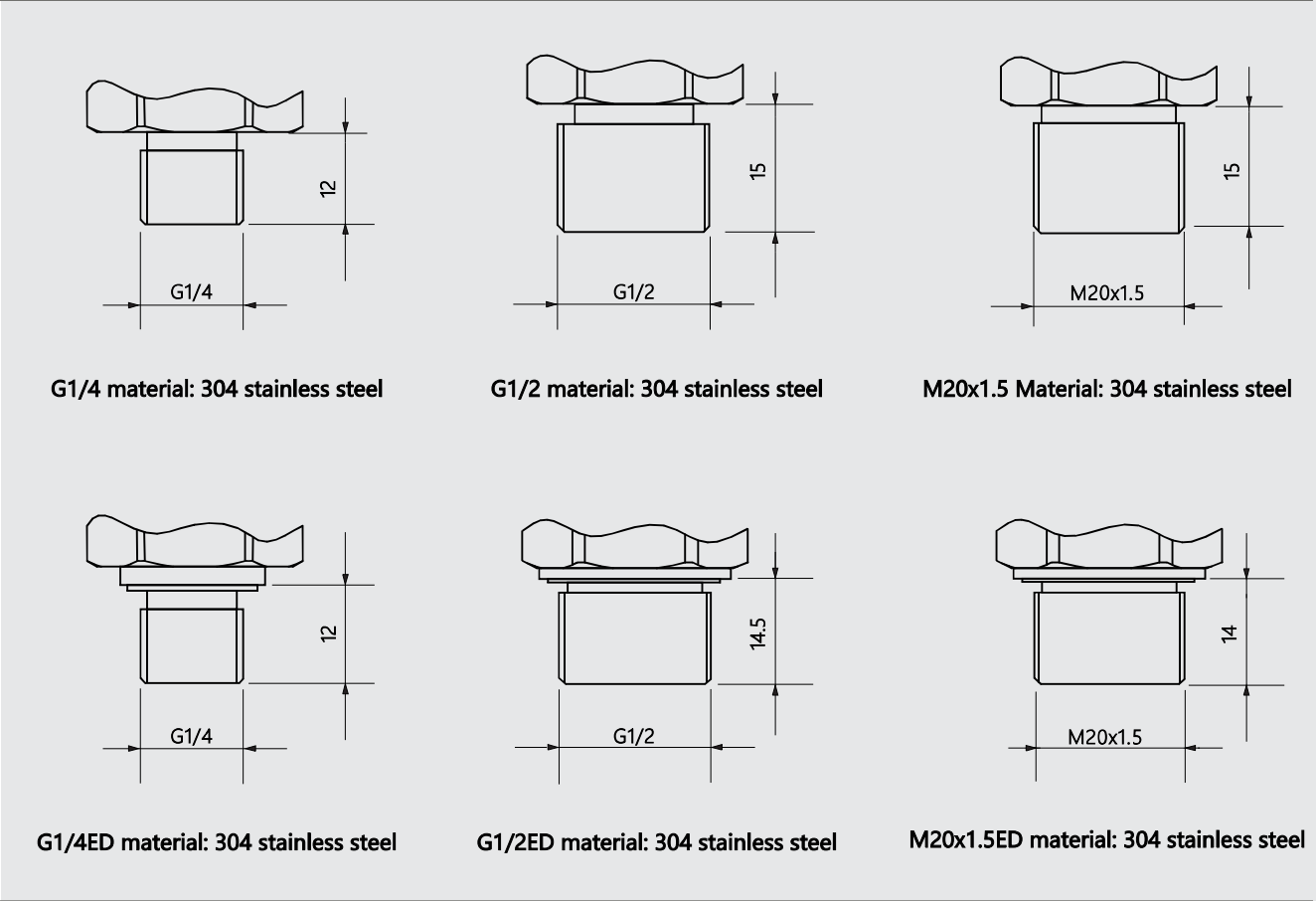
- Polarity reverse connection protection: ⊕ vs.⊖
- Overvoltage protection: 36 V DC
- Insulation voltage: 500 V DC
- Anti-pulse group: Level 2

MECHANICAL PROPERTIES

Electrical connection



CONNECTION OF PROCESSES



Supports customization of other connection modes

SELECTION TABLE

SUP621 series		Selection examples : SUP621- G 1 1 D 1 N 5 D 0 0 1 0 0													
Type of pressure	Relative pressure	G													
Output signal	4... 20 mA 2-wire system		1												
Connection of processes	External thread G1/4 ED	DIN 3852-E		1											
	External thread G1/2 ED	DIN 3852-E		2											
	External thread M20 x 1.5ED	DIN 3852-E		3											
	External thread G1/4			4											
	External thread G1/2			5											
	External thread M20 x 1.5			6											
	Special Specifications			X											
Sealing material (Internal O-ring)	NBR Nitrile butadiene rubber	-25...85°C				D									
	FKM Fluorine rubber	-15...125°C				F									
Electrical connection	Hersman connector according to DIN 175301-803 A (Protection class Ip65)					1									
	M12 x 1 Round Connector (4-core) (Protection Class Ip67)					2									
	Direct cable outlet (default cable length 2 m) (Protection class Ip67)					3									
	Special Specifications					X									
Display screen	No display						N								
	LCD						C								
	LED						E								
Precision	0.50%							5							
	0.25%							2							
	0.10%							1							
Process sealing	NBR Nitrile butadiene rubber	-25...85°C							D						
	FKM Fluorine rubber	-15...125°C							F						
	None								N						
Range of measurement	0 ... 0.4 bar									0	0	0	0	4	
	0 ... 1 bar									0	0	0	1	0	
	0 ... 3 bar									0	0	0	3	0	
	0 ... 6 bar									0	0	0	6	0	
	0 ... 10 bar									0	0	1	0	0	
	0 ... 16 bar									0	0	1	6	0	
	0 ... 25 bar									0	0	2	5	0	
	0 ... 40 bar									0	0	4	0	0	
	0 ... 60 bar									0	0	6	0	0	
	Special Specifications									X	X	X	X	X	

When selecting special specifications, please indicate when ordering

It is recommended that the high-temperature environment can be completed by structural parts