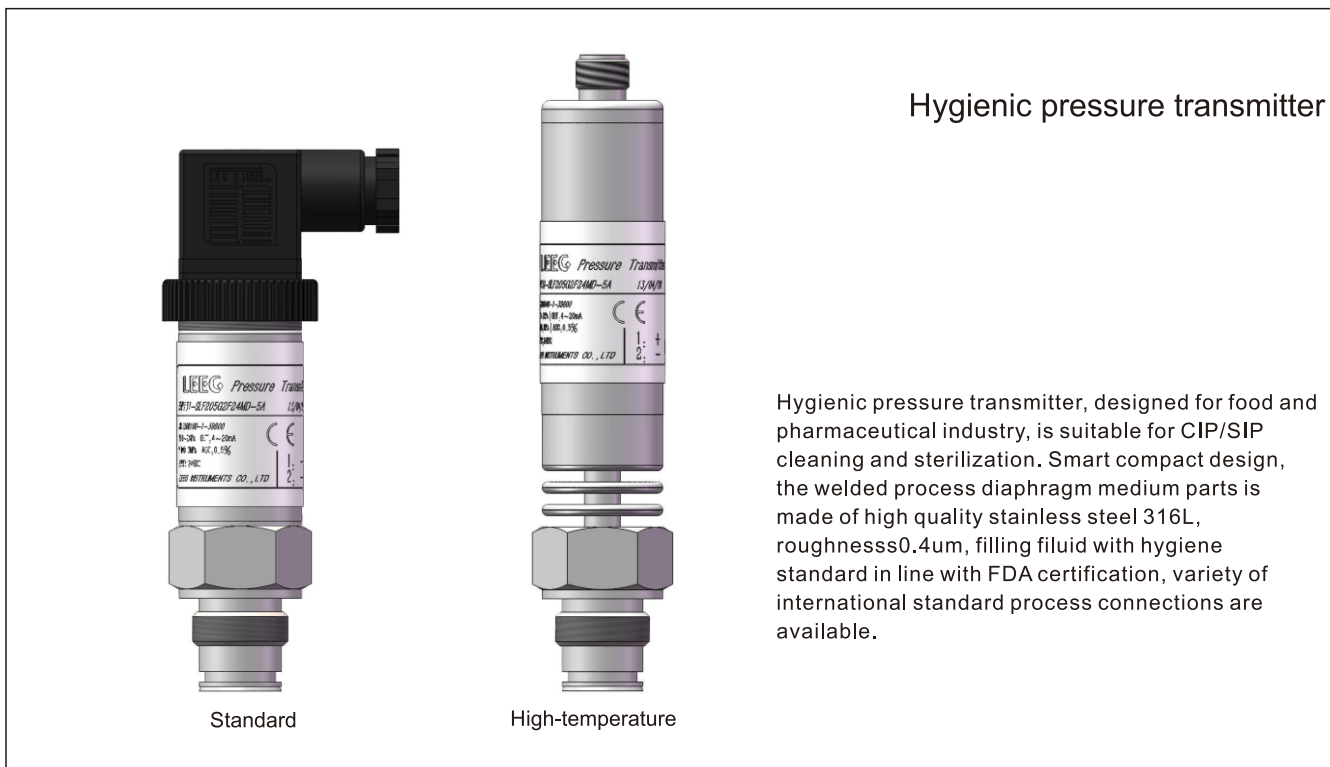


Product introduction

Description



Main parameters

Pressure types	Gauge pressure
Measuring range	10kPa-40MPa, please refer to the ordering information chapter
Output signal	4-20mA, 4-20mA+HART, 0.5-4.5VDC, Modbus-RTU/RS485, customer
Reference accuracy	±0.2% URL, ±0.5% URL, customer

Field of application

Pressure, level

Approvals



Measuring medium

Viscous, paste-like, adhesive, crystallising, particulates containing and contaminated media

Technical specifications

Measuring range and limit

Nominal value	Smallest calibratable span	Lower range limit (LRL)	Upper range limit (URL)	Overpressure limit *
20kPa	10kPa	-20kPa	20kPa	30kPa
35kPa	20kPa	-35kPa	35kPa	52.5kPa
100kPa	35kPa	-100kPa	100kPa	150kPa
200kPa	100kPa	-100kPa	200kPa	300kPa
700kPa	200kPa	-100kPa	700kPa	1050kPa
1MPa	500kPa	-100kPa	1MPa	1.5MPa
1.7MPa	1MPa	-100kPa	1.7MPa	2.55MPa
3.5MPa	1.7MPa	-100kPa	3.5MPa	5.25MPa
7MPa	3.5MPa	-0.1MPa	7MPa	10.5MPa
17MPa	7MPa	-0.1MPa	17MPa	25.5MPa
35MPa	17MPa	-0.1MPa	35MPa	52.5MPa
40MPa	20MPa	-0.1MPa	40MPa	60MPa

The unit of the measuring range above can be converted into kg/cm², MPa and kPa. Provide other measuring range according to requirements. Adjust requirements: lower range value (LRV) and upper range value (URV) can be adjusted within the scope of the upper and lower range limit, minimum measuring range ≤ |URV - LRV| ≤ maximum measuring range.

*Limit value of over pressure: depends on the pressure value of the parts with lowest pressure capacity

Standard specifications and reference conditions

Test standard: GB/T28474/IEC60770; Zero based-calibration span, Linear output, Silicone oil filling, 316L stainless steel isolation diaphragm, 4-20mA analog output

Performance specifications

The overall performance including but not limited to 【reference accuracy】, 【environment temperature effects】 and other comprehensive error

Typical accuracy: ±0.2URL

Stability: ±0.2% URL/ year

Reference accuracy

Including linearity, hysteresis and repeatability. calibration temperature: 20°C±5°C

Linear output accuracy	Typical	±0.2%URL	Nominal value: 20kPa, 35kPa, 100kPa 200kPa, 700kPa, 1MPa 1.7MPa, 3.5MPa, 7MPa 17MPa, 35MPa, 40MPa
	Max value	±0.5%URL	

Ambient temperature effects(Typical)

Within the range - 20-80°C total impact ±0.2%URL/10k

Power supply effects

Zero and span change should not be more than ± 0.005% URL/V when power supply changes in 10.5/16.5-55VDC

Loading effects

Zero and span change should not be more than ± 0.05% URL/kΩ

Vibration effects

Vibration resistance	According to IEC60068-2-6 , 10g RMS (25-2000HZ)
Impact resistance	According to IEC60068-2-27 , 500g/1ms

Technical specifications

Output signal

Signal	Type	Output
4-20mA	Linearity	Two wire
4-20mA+HART	Linearity	Two wire
0.5-4.5VDC	Linearity	Three wire
Modbus-RTU/RS485	Linearity	Four wire

Damping time

Total damping time constant: equal to the sum of damping time of amplifier and sensor capsule
Damping time of amplifier : 0-100S adjustable
Diaphragm capsule (isolation sensor diaphragm and silicon oil filling) damping time: $\leq 0.2S$
Startup after power off : $\leq 3S$ (with HART communication: $\leq 0.2S$)
Normal services after data recovery: $\leq 4S$ (with HART communication: $\leq 31S$)

Insulation resistance

$\geq 20M\Omega$ @, 100VDC

Environment condition

Items	Operational condition
Working temperature	-40-85°C
Storage temperature	-40-100°C
Media temperature	Standard connection: -25-85°C* cooling elements connector*
Working humidity	0-95%RH
Protection class	IP67
Dangerous condition	ExiaIICT4(GYB16.1965X)**
*Using heat exchange connector may lead to zero offset and temperature drift. The degree depends on mounting position and filling fluid **Please contact the engineer for further information	

Technical specifications

Signal output	4-20mA	4-20mA+HART*	0.5-4.5VDC	0.5-4.5VDC(ratiometric output)	RS485
Power supply voltage	10-30VDC	10.5/16.5-55VDC	6-15VDC	5VDC	5-32VDC
Electric current	$\leq 20.8mA$		$\leq 3.5mA$		$\leq 7mA$
Load resistance(Ω)	$< (U-10)/0.0208$	$< (U-10.5)/0.0208^{**}$	$\geq 5k$, recommend 100k		/
Transmission distance	$< 1000m$		$< 5m$		$< 1200m$
Power consumption	$\leq 500mW(20.8mA \text{ output}@24VDC)$		$\leq 42mW(0.5-4.5VDC \text{ output,}@24VDC)$		$\leq 168mW(RS485 \text{ output}@24VDC)$

*For this output type, the load resistance value in communication is 250 Ω

**The load resistance value 0-2119 Ω is in nominal working condition, 250-600 Ω is HART communication

Technical specifications

EMC environment(not RS485 signal output)

NO.	Test items	Basic standards	Test conditions	Performance level
1	Radiated interference	GB/T 9254/CISPR22	30MHz-1000MHz	OK
2	Conducted interference (DC power port)	GB/T 9254/CISPR22	0.15MHz-30MHz	OK
3	Electrostatic discharge immunity test (ESD)	GB/T 17626.2/IEC61000-4-2	4kV(Contact),8kV(Air)	B(Note2)
4	Immunity to radio frequency EM-fields	GB/T 17626.3/IEC61000-4-3	10V/m(80MHz-1GHz)	A(Note1)
5	Power frequency magnetic field Immunity test	GB/T 17626.8/IEC61000-4-8	30A/m	A(Note1)
6	Electrical fast transient / Burst Immunity test	GB/T 17626.4/IEC61000-4-4	2kV(5/50ns,100kHz)	B(Note2)
7	Surge immunity requirements	GB/T 17626.5/IEC61000-4-5	1kV(Line to line) 2kV(Line to ground) (1.2us/50us)	B(Note2)
8	Immunity to conducted disturbances induced by radio frequency fields	GB/T 17626.6/IEC61000-4-6	3V(150kHz-80MHz)	A(Note1)

(Note 1)Performance level A: The preformance within the limits of normal technical specifications.

(Note 2)Performance level B: Temporary reduction or loss of functionality or preformance, it can restore itself. The actual operating conditions, storage and data will not be changed.

Product selection instruction
Sensor select instruction

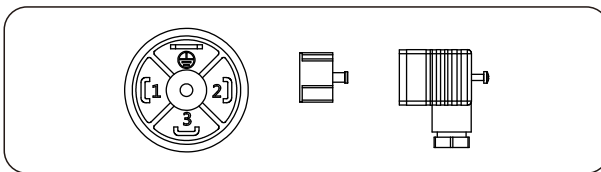
Code	Nominal value	Description
L203G	20kPa	Range -20kPa-20kPa, smallest calibratable span 10kPa
L353G	35kPa	Range -35kPa-35kPa, smallest calibratable span 20kPa
L104G	100kPa	Range -100kPa-100kPa, smallest calibratable span 35kPa
L204G	200kPa	Range -100kPa-200kPa, smallest calibratable span 100kPa
L704G	700kPa	Range -100kPa-700kPa, smallest calibratable span 200kPa
L105G	1MPa	Range -100kPa-1MPa, smallest calibratable span 500kPa
L175G	1.7MPa	Range -100kPa-1.7MPa, smallest calibratable span 1MPa
L355G	3.5MPa	Range -100kPa-3.5MPa, smallest calibratable span 1.7MPa
L705S	7MPa	Range -100kPa-7MPa, smallest calibratable span 3.5MPa
L176S	17MPa	Range -100kPa-17MPa, smallest calibratable span 7MPa
S356S	35MPa	Range -100kPa-35MPa, smallest calibratable span 17MPa
S406S	40MPa	Range -100kPa-40MPa, smallest calibratable span 40MPa
Adjust requirements: lower range value (LRV) and upper range value (URV) can be adjusted within the scope of the upper and lower range limit, minimum measuring range≤ URV - LRV ≤maximum measuring range		

Code	Position	Instruction
F	Sensor seal	Stainless steel welding seal

Electrical connection

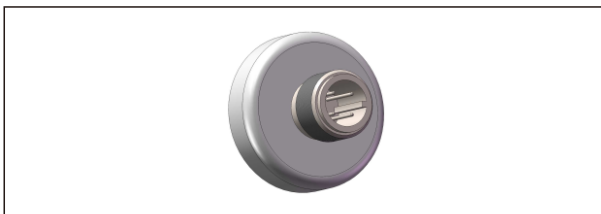
Code	Description
D1	DIN43650 connectors, IP65
H1	Aviation plugs, M12*1(4 pin)IP67

DIN43650(D1)

Electrical connection
DIN43650(D1)


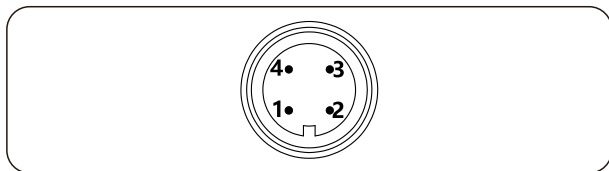
Label	Two wires	Three wires	Four wires	Modbus-RTU/RS485
1	Power+	Power+	Power+	Power+
2	Power+	Power-	Power-	Power-
3	Key-z	Signal+	Signal+	A+
4			Signal-	B-

Note: Key-z is modified zero pressure

M12*1, 4pin,aviation plugs(H1)


Product selection instruction

M12*1, 4pin , Aviation plugs(H1)

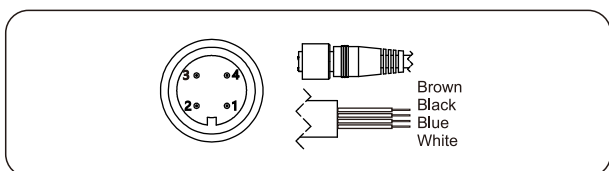


Label	Two wires	Three wires	Four wires	Modbus-RTU/RS485
1	Power+	Power+	Power+	Power+
2			Signal -	B-
3	Key-z	Signal +	Signal +	A+
4	Power -	Power -	Power -	Power-

Note: Key-z is modified zero pressure

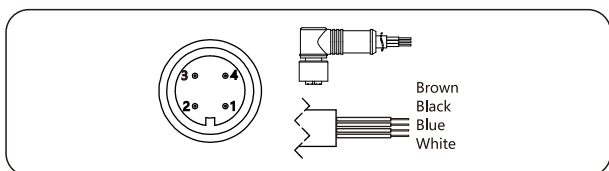
Electrical connection accessory

Aviation plug straighter(J1)



Label	Two wires	Three wires	Four wires	Modbus-TRU/RS485
1/Brown	Power +	Power +	Power +	Power +
2/White			Power -	B-
3/Blue	Key-z	Signal +	Signal +	A+
4/Black	Power -	Power -	Power -	Power -

Aviation plug elbow (J2)

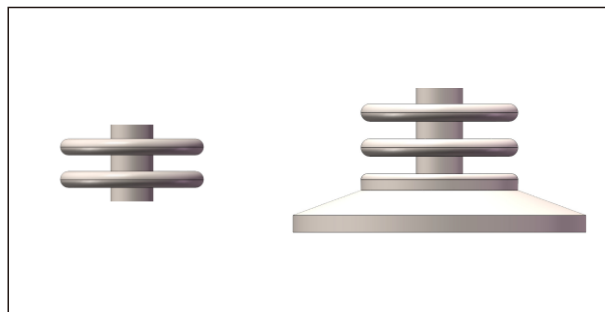


Label	Two wires	Three wires	Four wires	Modbus-TRU/RS485
1/Brown	Power +	Power +	Power +	Power +
2/White			Signal -	B-
3/Blue	Key-z	Signal +	Signal +	A+
4/Black	Power -	Power -	Power -	Power -

Transmission module

Code	Description
F	4-20mA two wire, power supply: 10-30VDC
H	4-20mA+HART two wire, power supply: 16.5-55VDC
R	Modbus-RTU/RS485 5-32VDC
5	0.5-4.5VDC three wire, power supply: 6-15VDC
6	0.5-4.5VDC three wire, proportional output power supply: 5VDC
A	4-20mA two wire, intrinsic safety, power supply: 10-30VDC

Cooling element connector (HT)

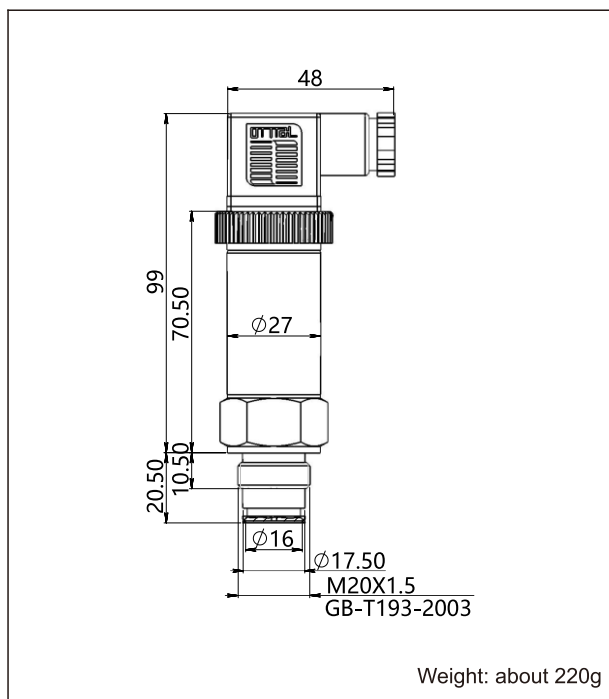


Process connection select instruction

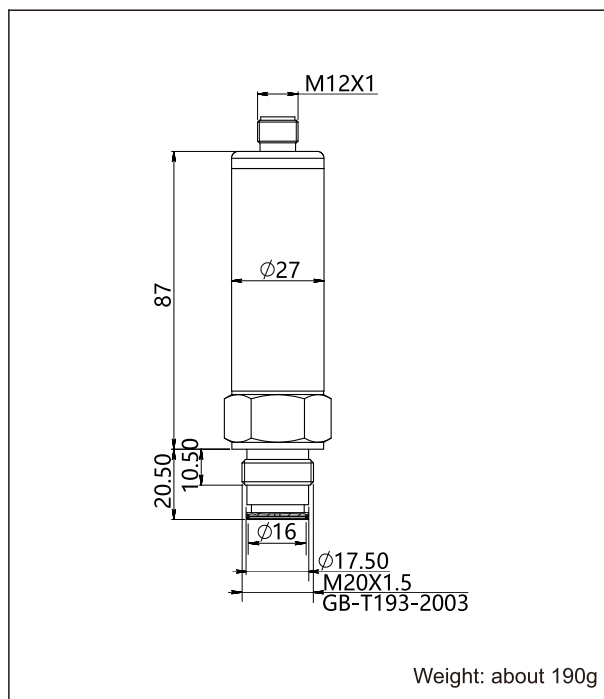
Code	Items	Description
4	Process connector material	Stainless steel, SUS304
6		Stainless steel, SUS316
NT	Connection type	Standard connection, medium temperature: -25-85°C
HT		Cooling element connector, medium temperature: -40-150°C
F	Isolation fluid filling	Sanitary fluid filling, Neobee M-20, suitable medium temperature: -10-180°C
S		Silicon oil filling, suitable medium temperature: -45-205°C
S	Isolation diaphragm material	SUS316L
H		Hastelloy C
M01	Process connection specifications	M20*1.5 male, GB/T193-2003, ISO261
G02		G1/2 male, GB/T7307, ISO228, BS2779
G03		G1 male, GB/T7307, ISO228, BS2780
G07		G1-1/2 male, GB/T7307, ISO228, BS2781

Product drawing and dimension

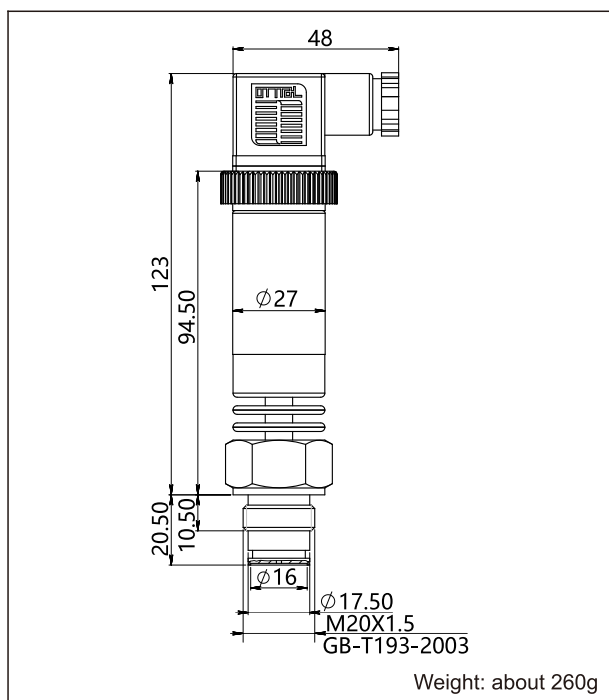
Standard drawing and dimension with DIN43650 (D1)
(unit:mm)



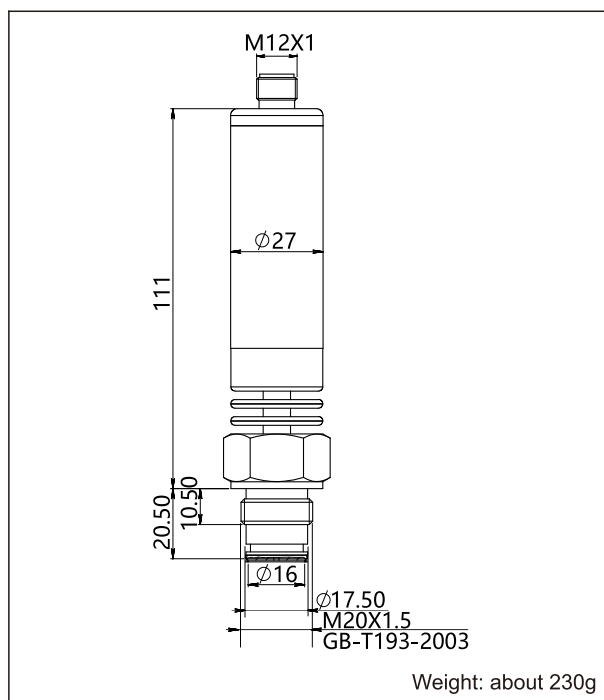
Standard drawing and dimension with Aviation plugs (H1)
(unit:mm)



High-temperature drawing and dimension with DIN43650
(D1) (unit:mm)

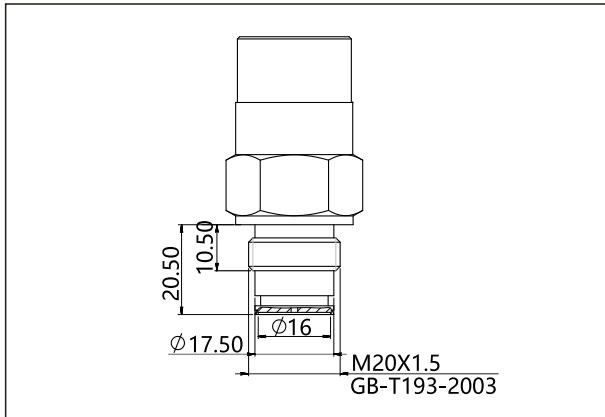


High-temperature drawing and dimension with Aviation
plugs (H1) (unit:mm)

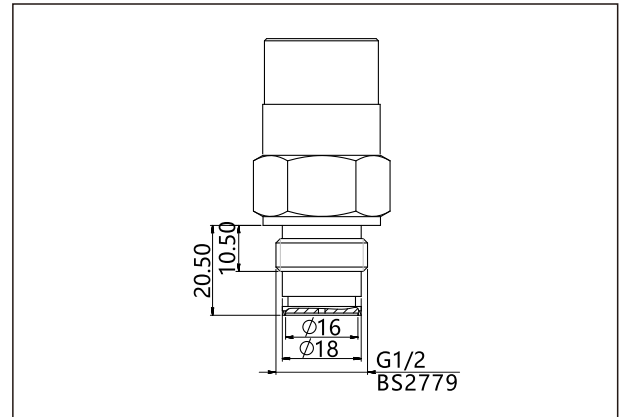


Product drawing and dimension

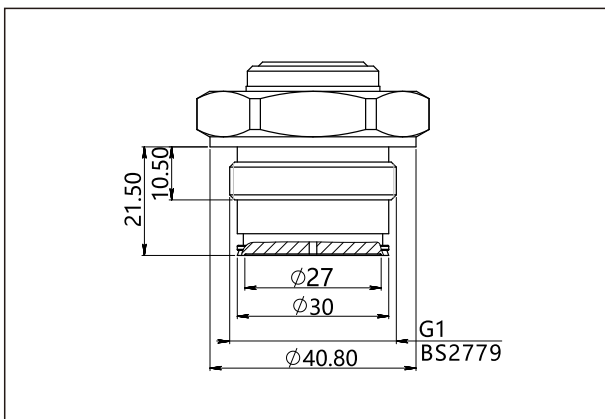
Process connection (M01)(unit: mm)



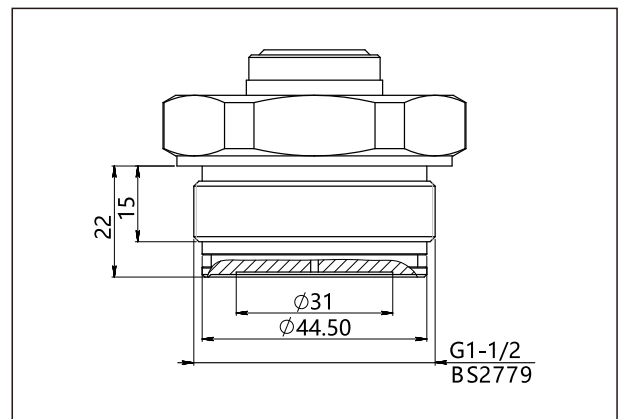
Process connection (G01)(unit: mm)



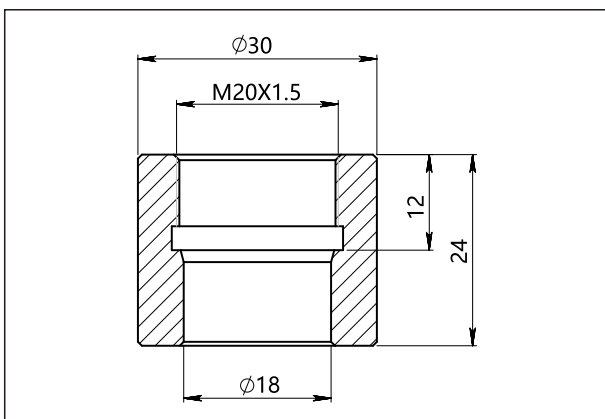
Process connection (G03)(unit: mm)



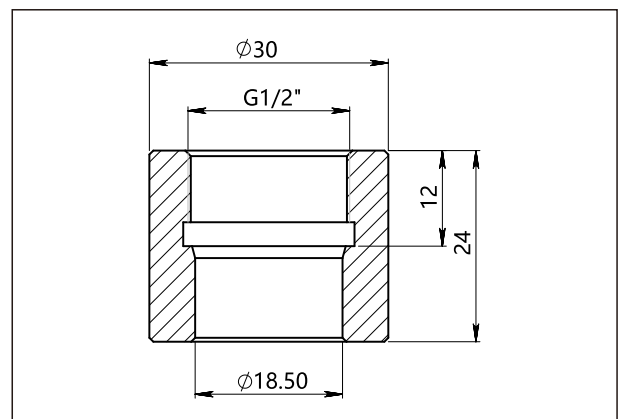
Process connection (G07)(unit: mm)



Welding adaptor(Z3)(unit:mm)



Welding adaptor(Z4)(unit:mm)



Ordering information chapter

Item	Parameters	Code	Instruction	(*)Fast delivery available
	Model	SMP858-TLD	Piezoresistive silicon gauge pressure transmitter	
		SMP858-TLH	Piezoresistive silicon gauge pressure transmitter	
Sensor	Separator	-	Detailed specifications as following	
	Pressure range code	L203G	Nominal value(URL): 20kPa	
		L353G	Nominal value(URL): 35kPa	
		L104G	Nominal value(URL): 100kPa	*
		L204G	Nominal value(URL): 200kPa	*
		L704G	Nominal value(URL): 700kPa	*
		L105G	Nominal value(URL): 1MPa	*
		L175G	Nominal value(URL): 1.7MPa	*
		L355G	Nominal value(URL): 3.5MPa	
		L705S	Nominal value(URL): 7MPa	
		L176S	Nominal value(URL): 17MPa	
		L356S	Nominal value(URL): 35MPa	
		L406S	Nominal value(URL): 40MPa	
	Sensor seal	F	Stainless steel welding seal	
Electrical connection	Separator	-	Detailed specifications as following	
	Electrical connection	D1	DIN43650 connector, IP65	*
		H1	M12*1, 4pin , Aviation plugs, IP67	
	Cable entry protector	R0	None	
Output	Separator	-	Detailed specifications as following	
	Output signal	F	4-20mA two wire, power supply: 10-30VDC	*
		H	4-20mA+HART two wire, power supply: 16.5-55VDC	*
		R	Modbus-RTU/RS485 5-32VDC	
		5	0.5-4.5VDC three wire, power supply: 6-15VDC	
		6	0.5-4.5VDC three wire, ratiometric output, power supply: 5VDC	
		A	4-20mA two wire, intrinsic safety, power supply: 12-30VDC	
Body tube	Separator	-	Detailed specifications as following	
	Tube	65	Stainless steel tube length: 65mm	*
		85	Stainless steel tube length: 85mm	
Process connection	Separator	-	Detailed specifications as following	
	Process connector material	4	Stainless steel, SUS304	*
		6	Stainless steel, SUS316	
	Connection type	NT	Standard connection, medium temperature: -25-85℃	*
		HT	Cooling element connector, medium temperature: -40-150℃	*

Disclaimer: all the data used in the product description is not legally binding. Relevant technical details may be changed due to further improve

Ordering information chapter

	Isolation fluid filling	F	Sanitary fluid filling, Neobee M-20, suitable medium temperature: -10-180°C	*
		S	Silicon oil filling, suitable medium temperature: -45-205°C	*
	Isolation diaphragm material	S	SUS316L	*
		H	Hastelloy C	
	Process connection specifications	M01	M20*1.5 male, GB/T193-2003, ISO261, measuring range 250kPa-40MPa	
		G02	G1/2 male, GB/T7307, ISO228, BS2779, measuring range 250kPa-40MPa	
		G03	G1 male, GB/T7307, ISO228, BS2780, measuring range 20kPa-10MPa	
		G07	G1-1/2 male, GB/T7307, ISO228, BS2781, measuring range 20kPa-5MPa	
Additional options	Separator	-	Detailed specifications as following	
	Process connection accessory	/Z3	Welding connector, M20*1.5 female	*
		/Z4	Welding connector, G1/2 female	*
	Electrical connection accessory	/J1	Aviation female plug (straighter) with 2m cable, 4 pin, M12*1, IP67	
		/J2	Aviation female plug (elbow) with 2m cable, 4 pin, M12*1, IP67	
		/J4	Aviation female plug (straighter) without cable, 4 pin, M12*1, IP67	
		/J5	Aviation female plug (elbow) without cable, 4 pin, M12*1, IP67	
	Calibration report	/Q1	Calibration report provided by our company	*
	Approvals (multiple)	/I1	Intrinsic safety certificate, ExiaIICT4, NEPSI	*
		/F3	CE certificate	*
	Wetted parts treatments	/G1	Degrease treatment	
		/G2	Electropolishing	

Approvals
Factory certificate

Certification organization	Intertek
Quality management system	ISO9001-2015
Scope of certification	Design and production of pressure transmitter
Registration number	110804039

CE

Certificate organization	ISET
License scope	SMP858 series pressure transmitter
Mark	CE
EMC instruction	2014/30/EU
Standard	EN61326-1: 2013
Registered number	IT051353LG161207

Intrinsic safety certificate

Certification organization name	NEPSI
Licenses range	SMP series pressure transmitter
Explosion-proof mark	ExiaIICT4
Ambient temperature	-40-+60°C
Medium maximum temperature	+120°C
Registration number	GYB13.1965X
Intrinsically safe parameter description	Maximum input voltage:28VDC
	Maximum input current:100mA
	Maximum input power:0.7w
	Maximum internal equivalent parametersCi(nF):0
	Maximum internal equivalent parametersLi(mH):0



scan & follow LEEG wechat



check website for more info