

The selection is detailed on page 6



S75

Dual Diaphragm Differential Pressure Gauge

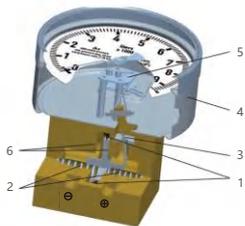
Working principle

The pressures p_1 and p_2 act on the medium chambers + and -, which are separated by an elastic diaphragm (1).

The pressure difference ($\Delta p = p_1 - p_2$) causes the diaphragm to be in the measured range of the axial deflection spring (2).

The deflection proportional to the pressure difference is transmitted to the movement (5) in the indicator box (4) by a low pressure, low friction lever mechanism (3).

A metal support (6) resting on an elastic diaphragm provides overload safety.



Product description

These high-quality differential pressure gauges are known for their compact yet robust design and are primarily used for liquid gas tank level measurement. With 6 different measuring units, all conventional tank sizes in refrigeration technology are covered. The measuring range of the measuring unit has a large overlap, so it is possible to set gas types such as Ar, O₂, N₂ or CO₂ in the range of the entire Angle of 270 degrees. Span adjustments are externally accessible and do not affect zero points.

Mechanical display and integrated transmitter with 4... 20mA output signal (optional) for simultaneous and easy calibration. Optional valve sets for flange mounting allow central level measurement and working pressure indication on a single instrument. Switch contacts for level and working pressure and transmitters for working pressure can be modified on site.

With the flange mounting adapter, the standard center distance between process connections can be set to 37mm to accommodate a custom center distance of 31mm or 54mm.

Product application

Liquid level measurement in closed tanks, especially in refrigeration technology

Filter monitoring

Pump monitoring

Suitable for those with low viscosity or crystallinity and no suspended solids

Gaseous and liquid media

Functional characteristics

Differential pressure measurement ranges from 0... 40mbar to 0... 1,600 mbar

High working pressure of 50 bar (static pressure)

Overpressure safety up to 50 bar on either side

Scalable measuring range (maximum range ratio 1:3.5)

Compact valve manifold with working pressure indication (optional)

Technical parameter

design	Meets the EN837-3 standard
Standard size (mm)	100
Precision class	NS 100: 1.0/1.6
Zero setting	Adjustable pointer
Overload safety and maximum working pressure	Maximum 50 bar on both sides
Installation mode	Lower mounting (radial)
Process connection	2 X G ¼, internal thread, center distance 37mm 2x ¼ NPT, internal thread, center distance 37 mm
Measure the cavity material	Copper alloy/Stainless steel 316L
Compression spring	Stainless steel 1.4310
Separator diaphragm	rubber
Driving member	Stainless steel 1.4301 and 1.4305
Case material	Stainless steel
Change disk color	Aluminium white
pointer	Adjustable pointer, black glow
Dial glass	Polycarbonate Fiber (PC)
Meets the IEC/EN 60529 protection rating	IP65

Allowable temperature

type	Non-explosion-proof version: Model S75	Explosion-proof version: Model S75
environment	- Forty... +60 °C oxygen - Forty... +80 °C	-40 ... +60 °C -40 ... +80 °C
medium	- Forty... +60 °C oxygen - Forty... +80 °C	-40 ... +60 °C -40 ... +60 °C -40 ... +80 °C

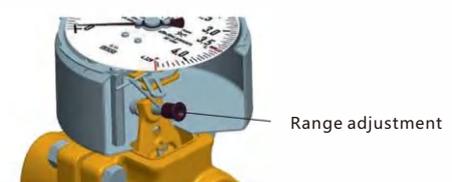
Range adjustment

The measuring range of the differential pressure gauge can be adjusted according to the measuring unit in the setting range specified on the left. Ideally, the range of Settings should be adjusted on the test bench, but also at the measuring point using a manual test pump.

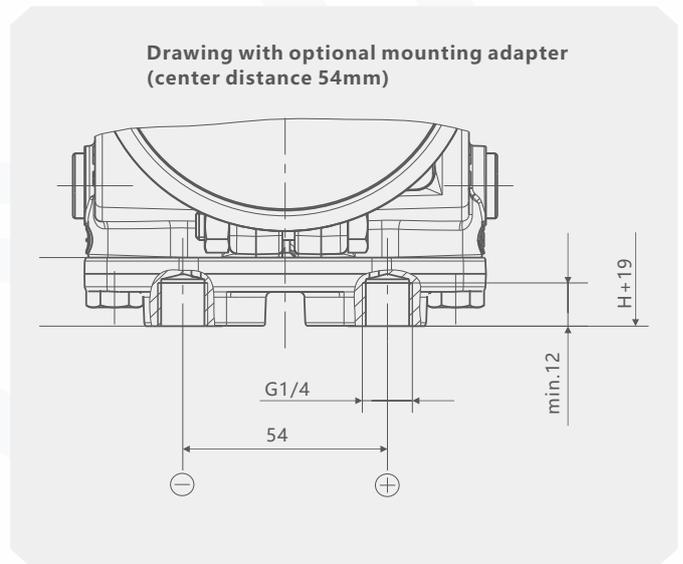
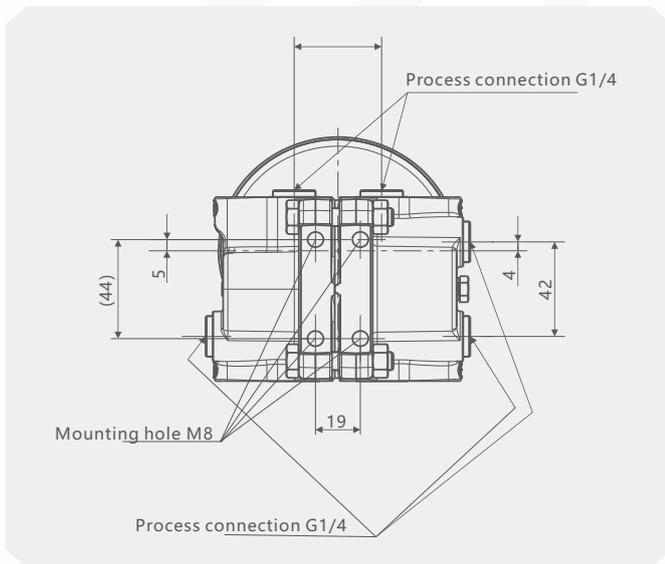
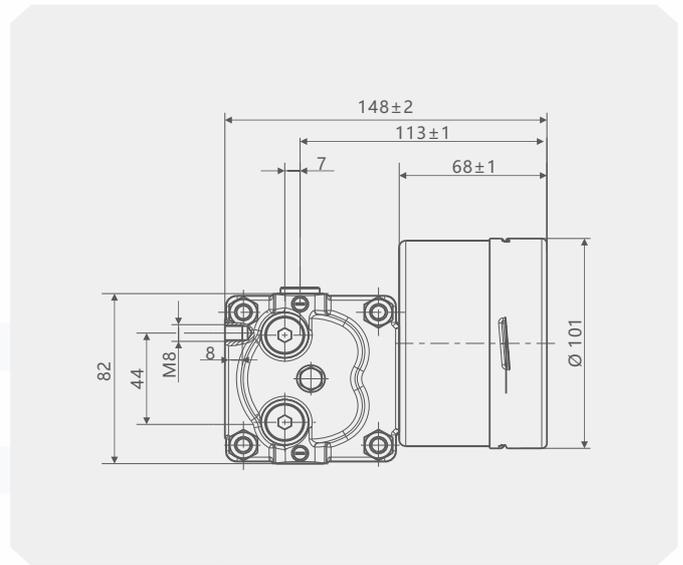
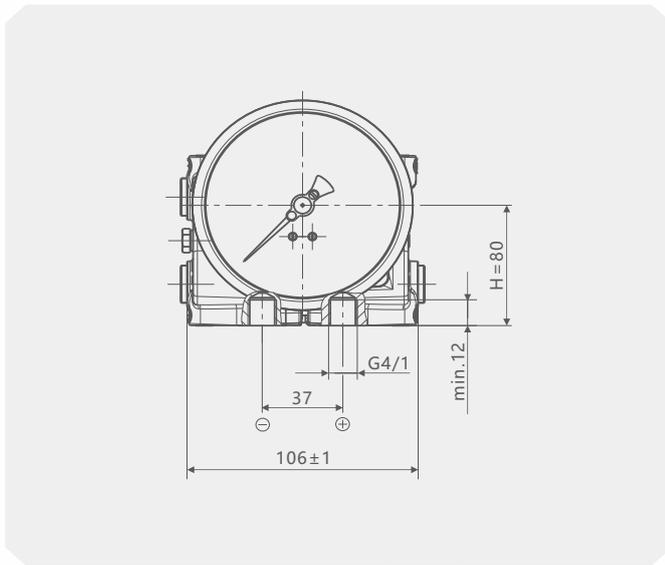
The range adjustment is located at 4 points around the circumference of the case and can be adjusted by removing the seal cover. Apply pressure to the instrument with the desired nominal pressure, then insert a hex screwdriver (SW3 mm) into the funnel guide and adjust the needle to the final value by either clockwise (smaller measuring range) or counterclockwise (larger measuring range). If the instrument is equipped with a transmitter, this step will also adjust the output signal to the new measurement range. The instrument will then be fully adjusted to the desired measurement range. After the adjustment is complete, the instrument should be resealed with a seal cover.

Scale adjustment

The dials can be made according to customer's requirements, or a variety of scales can be used. All common units can be printed on it, such as kg, liter, m³, mmH₂O, inchH₂O, %, etc. The maximum amount of fill for red marks, customer logos and other custom printing is also feasible. If necessary, we can calculate the fuel level from the fuel tank geometry and then formulate the appropriate ratio.

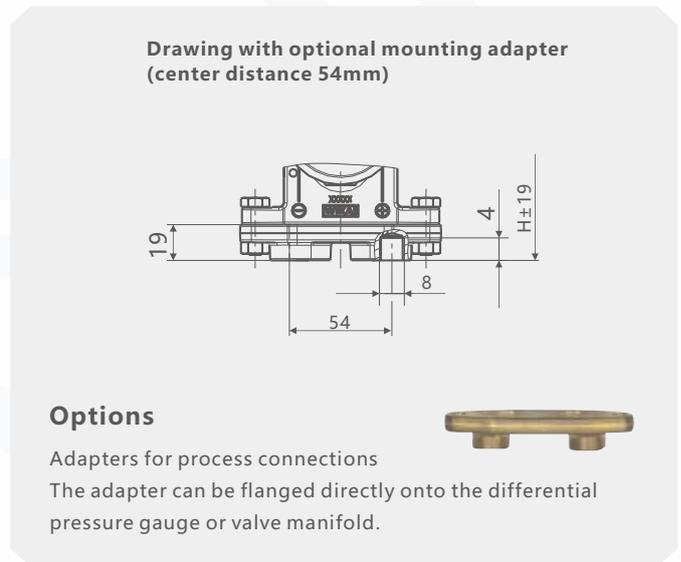
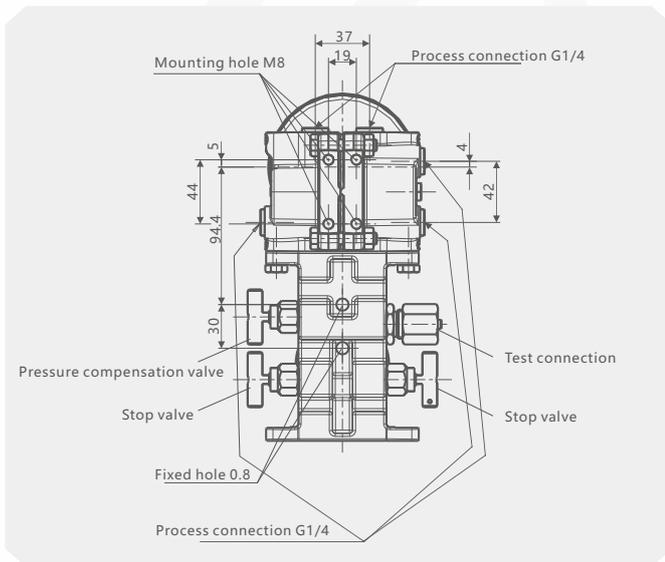
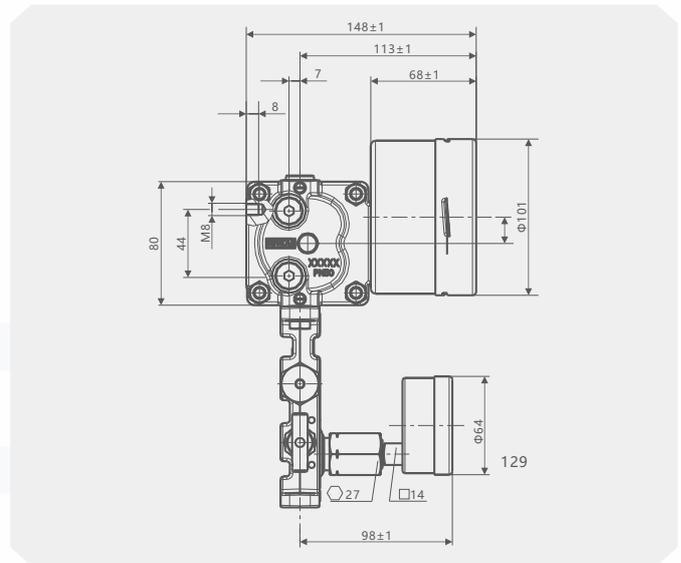
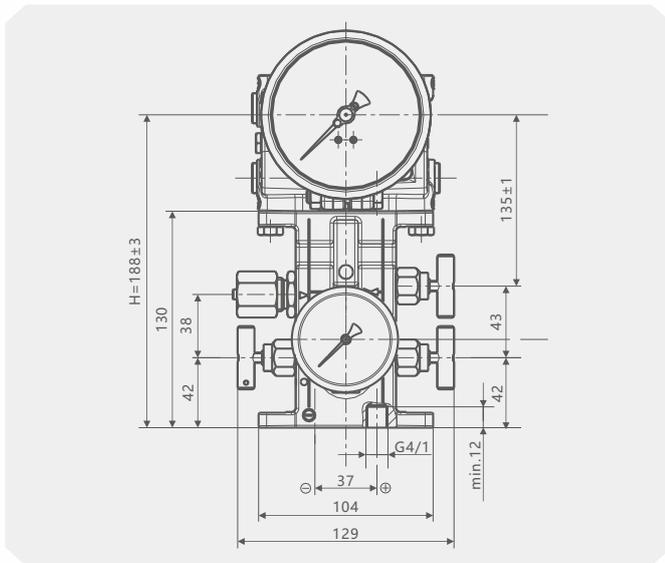


Size mm



Optional valve	2 x stop valve, 1 x pressure compensation valve
Process connection	M20 x 1.5 with seal cover (DIN 16287-A)
Instrument material	Copper alloy
Liquid material	316L stainless steel
Joint material	Copper alloy 316L stainless steel
Sealing material	NBR/Teflon With the valve fully open, the spindle area is isolated from the process by a metal seal, the packing is not filled, and the spindle thread is not in contact with the measured medium.
Working pressure indicate	Differential pressure gauge, stainless steel, Differential pressure gauge, stainless steel, Differential pressure gauge, copper alloy;

Size mm

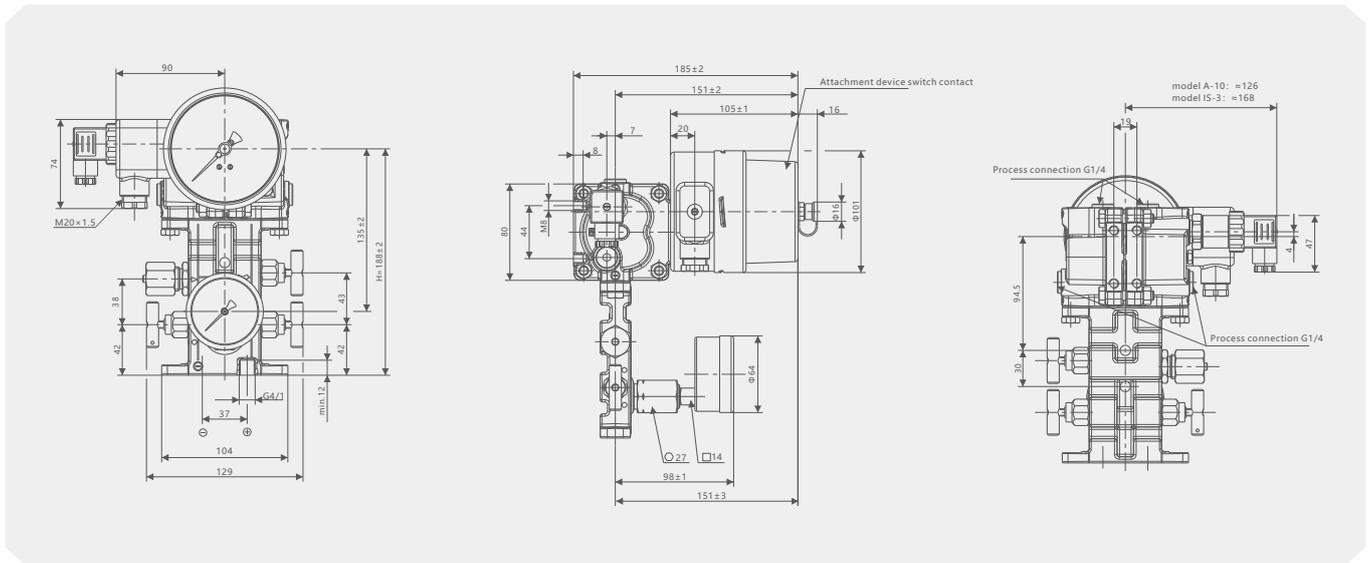


Materials	Copper alloy
	Stainless steel 316L
Process connection	2 x G ¼ internal thread with 31 mm or 54 mm center or 2 x ¼ NPT internal thread with 31 mm or 54 mm center

All parts required for installation are included in the scope of supply:

- 2 hex screws M8 x 16
- 2 hex screws M8 x 28
- 2 M8 nuts
- 2 O ring seals

Size mm

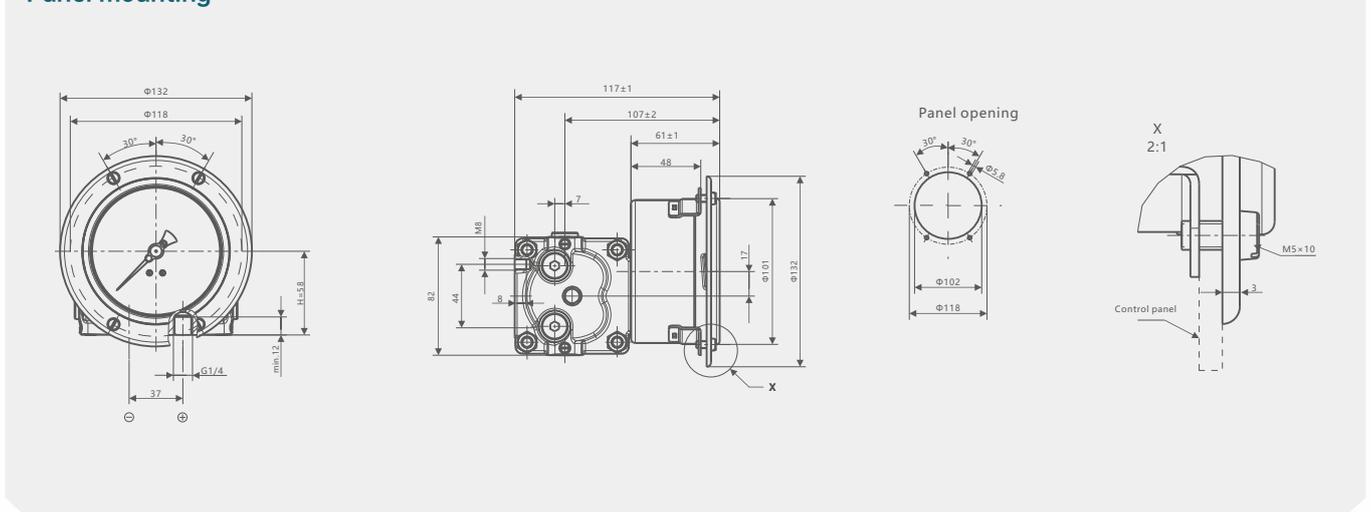


Model S75, with options:

- Valve block with working pressure indication
- Working pressure Pressure sensor
- Switch contact

Options

Panel mounting



Range table

Positive pressure	code	MPa	code	Bar	code	kPa	code	kg/cm ²	code	Psi
	MP001	0/0.1	BP001	0/1	KP001	0/100	GP001	0/1	PP1E5	0/15
MP1E6	0/0.16	BP1E6	0/1.6	KP1E6	0/160	GP1E6	0/1.6	PP003	0/30	
MP2E5	0/0.25	BP2E5	0/2.5	KP2E5	0/250	GP2E5	0/2.5	PP006	0/60	
MP004	0/0.4	BP004	0/4	KP004	0/400	GP004	0/4	PP010	0/100	

S75-Selection composition

Selection example **S75**

1	A	2	C	3	F	4	MP001	5	N	6	P	7	U	8	B	9	S
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1.Dial diameter mm	A	100
2.Precision class	B	1.0
	C	1.6
3.liquid-filled	E	Glycerin
	F	Silicone oil
	N	without
4.Measuring range	-	See range table (page 3)
5.Second range unit	G	MPa
	H	bar
	I	KPa
	J	kg/cm ²
	K	Psi
	N	without
6.Process connection	P	1/4NPT
	Q	M10*1.0
	R	M14*1.5
	S	G1/4B
	T ()	Other specifications
7.Installation mode	U	Radial direction
8.Watch glass	A	PC plastic
	B	Safety glass
9.material	S	304SS
	L	316L
	T ()	Other materials
10.Special requirements	X	Degrease
	Y	Oxygen application ≤160bar
	Z	without
11.certificate	A	2.1 Measurement report
	B	3.7 Inspection certificate
	N	without
12.Additional description	Z	There are
	N	without

Instructions:

It indicates that the dial diameter of the S75 differential pressure gauge is 100mm, the accuracy level is 1.6%, the shockproof silicone oil is filled, the measuring range is 0~0.1MPa, there is no second measuring range unit, the process connection is 1/4NPT, the radial installation, the safety glass, the body material is 304SS. Items 10/11/12 in the above table are not required

Product Certification

Compliance and approval; Rodewieg pressure meets key standards and certifications for process measurement technology; Thus guaranteeing the highest reliability in such Settings;

