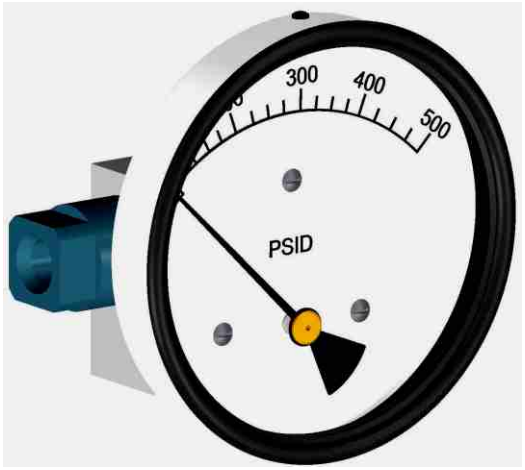
PISTON INSTRUMENTS



200 DPG HIGH RANGE

Piston Instruments with dp range up to 70 bar.

Salient features

- **Compact and cost effective.**
- **Differential pressure range up to 70 bar/1000 psi.**
- **With all the features of the standard piston Instrument model 200 DPG.**

Ambit Instruments manufactures quality differential pressure instruments designed to measure the difference in pressure between two points in a system and show it on a single dial instrument. A magnetic movement senses the differential pressure.

These high range piston instruments, because of their typical design, can indicate very high values of differential pressure. They provide instantaneous and continuous information regarding system conditions helping in eliminating premature servicing of equipment, avoid unscheduled down time of costly processes and detect abnormal system conditions.

Switching Facility : Instruments can be supplied with reed switches to initiate alarms, activate other equipment, or shut the system down. Two switches are used when high and low limits are desired. Gauge-switch models provide the user with both, gauge readout and switch operation.

APPLICATIONS :

Filters in hydraulic systems, water treatment plants, pump performance monitoring.

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MAGNETIC PRINCIPLE

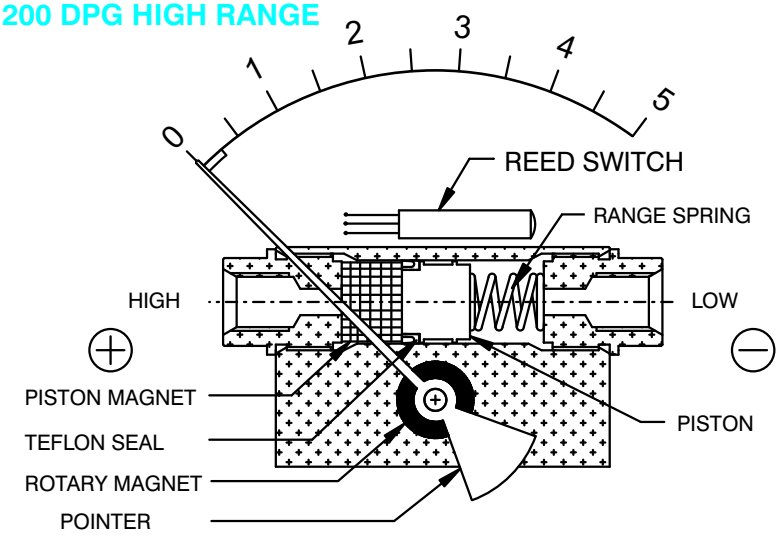
OPERATING PRINCIPLE

High and Low pressures are separated by a sensor assembly consisting of a magnet, piston, Teflon seal and a range spring. The difference in pressure causes the sensor assembly to move in proportion to the change against a range spring.

A rotary magnet, located in a separate body cavity and isolated from the acting pressures, is rotated by magnetic coupling as per the linear movement of the sensor assembly. A pointer attached to the rotary magnet indicates differential pressure on the dial.

Switch : Reed switches are located adjacent to the pressure chamber and are activated by the magnetic field of the sensor assembly.

200 DPG HIGH RANGE



TECHNICAL DATA

Specifications

Accuracy	: ±2% of the FSD (Ascending)
Migration	: Minor from high to low port
Range	: 0-14 to 0-70 bar or equivalent range in other units
First marking on the scale	: 20% of the FSD
Sensing element	: Piston
Wetted parts	: Body material, SS 302 spring & ceramic magnet
Case material	: Stainless steel (SS 304)
Dial size in inch /mm	: 3.5”, 4”, 4.5”, 6”/ 80, 100, 115, 150
Mounting	: Direct, front flange & 2” pipe mounting
Max. working pressure	: 200/400 bar. 200 bar for Alu, Brass & 400 bar for SS body & Monel
Max process temperature	: 80° C / 175° F
Body material	: Aluminum, SS 316
Seals	: Buna-N, Viton ‘O’ rings, EPDM
Window	: Float glass(Std.), toughened glass , acrylic & Safety Glass on request.,
Connection	: 1/4” NPT(F) Std. optional 1/4” BSP(F)
Porting	: In-line, rear, bottom, inline & bottom.
Over range protection	: Up to the max. working pressure from high & low side
Protection for gauge & switch	: IP 65 / NEMA-4

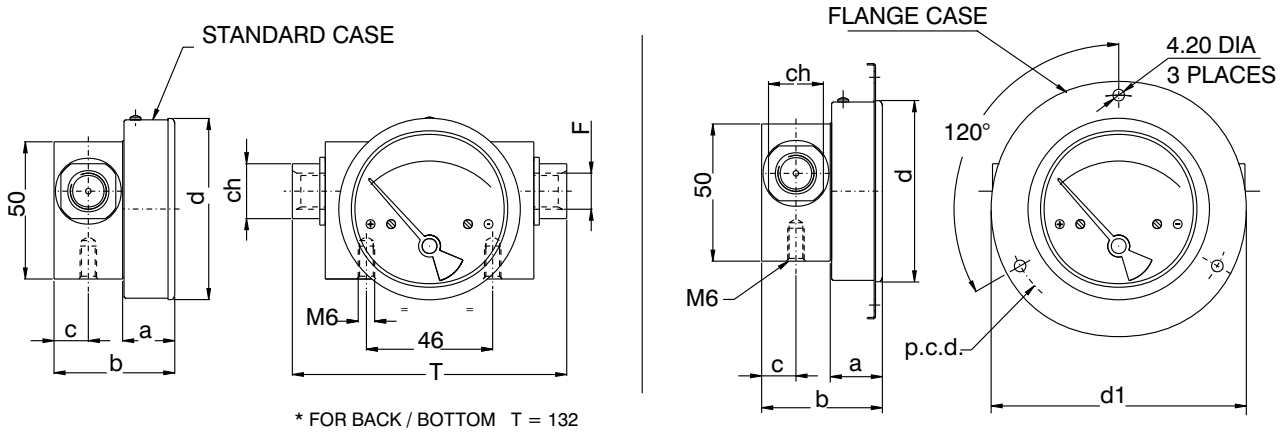
Options

Glycerine filling
Red follower pointer (except 2" & 6")
Customer logo
Dual scale
Colour band
Filter mesh in (+) connection
Reverse port (Pointer moves from right to left)
Descending calibration

Switches (Adjustable in 20-100% of FSD)

1 or 2 SPSTs with a DIN plug
1 or 2 SPSTs with a terminal strip
1 or 2 SPSTs with a built in relay
1 or 2 SPDTs with a terminal strip
1 or 2 SPDTs with a DIN plug

STANDARD DIMENSIONS (MODEL 200 DPG HIGH RANGE)

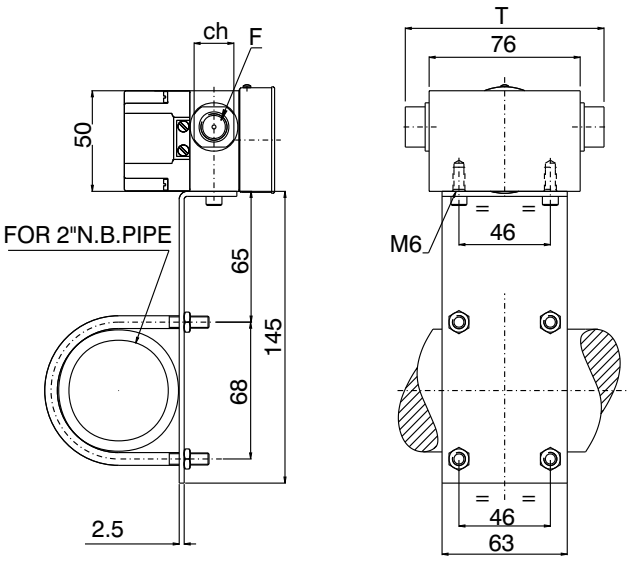


* FOR BACK / BOTTOM T = 132

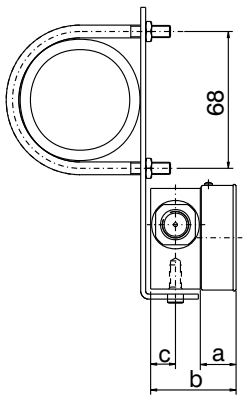
DIAL Ø	F	a	b	c	d	d1	T	ch	p.c.d.
50 (2")	1/4"BSP - 1/4"NPT	18	43	12.5	53	79	126	20	69
63 (2.5")	1/4"BSP - 1/4"NPT	19	44	12.5	66	93	126	20	83
80 (3.5")	1/4"BSP - 1/4"NPT	19	44	12.5	83	109	126	20	99
100 (4")	1/4"BSP - 1/4"NPT	19	44	12.5	104.3	131	126	20	121
115 (4.5")	1/4"BSP - 1/4"NPT	19	44	12.5	119.7	146	126	20	136
150 (6")	1/4"BSP - 1/4"NPT	19	44	12.5	154.3	181	126	20	171

* PANEL CUT OUT = d+ 1

MOUNTING BRACKETS (MODEL 200 DPG HIGH RANGE)



BRACKET MOUNTING FOR GAUGE+ SWITCH



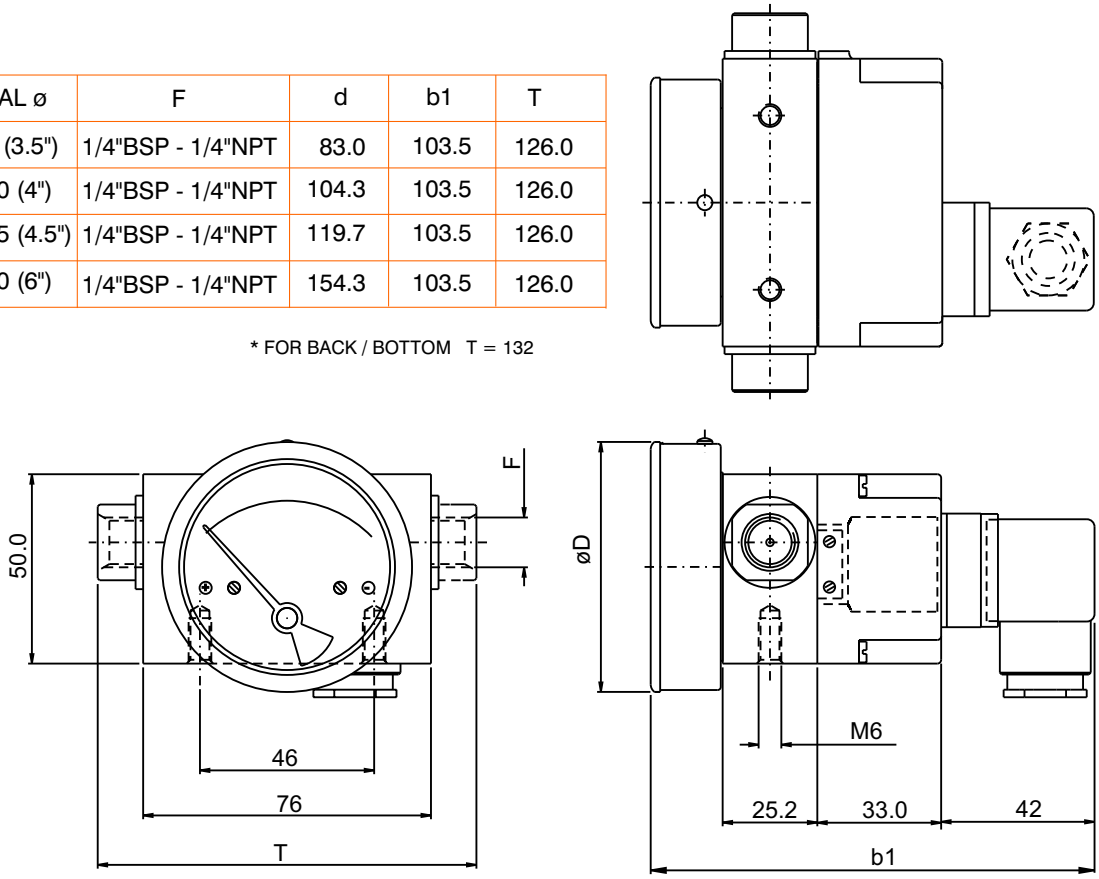
BRACKET MOUNTING FOR GAUGE

DIAL Ø	F	a	b	c	T	ch
50 (2")	1/4"BSP - 1/4"NPT	18	43	12.5	100	20
63 (2.5")	1/4"BSP - 1/4"NPT	19	44	12.5	100	20
80 (3.5")	1/4"BSP - 1/4"NPT	19	44	12.5	100	20
100 (4")	1/4"BSP - 1/4"NPT	19	44	12.5	100	20
115 (4.5")	1/4"BSP - 1/4"NPT	19	44	12.5	100	20
150 (6")	1/4"BSP - 1/4"NPT	19	44	12.5	100	20

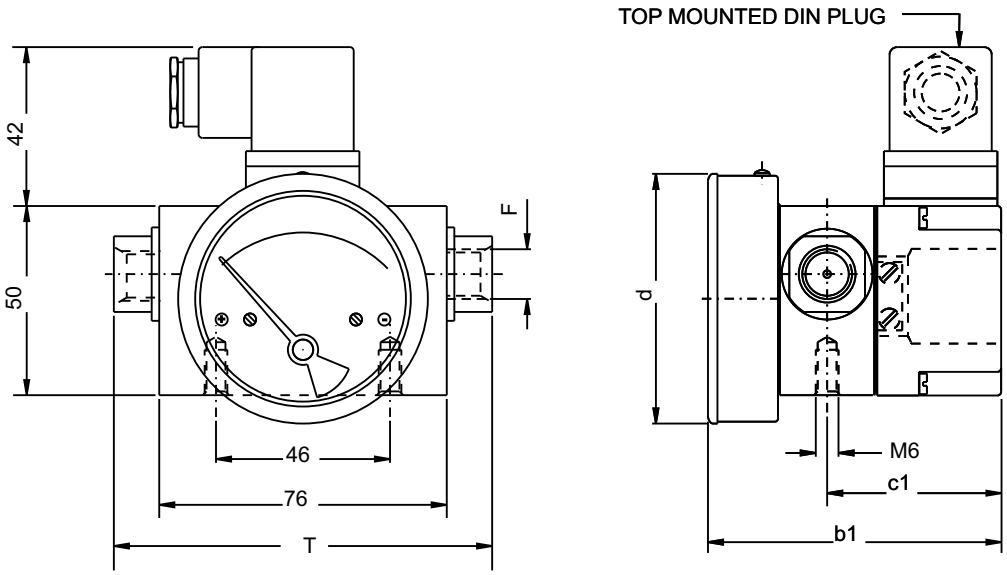
GAUGE + SWITCH WITH REED CONTACTS WITH DIN PLUG AT BACK (MODEL 200 DPG HIGH RANGE)

DIAL ø	F	d	b1	T
80 (3.5")	1/4"BSP - 1/4"NPT	83.0	103.5	126.0
100 (4")	1/4"BSP - 1/4"NPT	104.3	103.5	126.0
115 (4.5")	1/4"BSP - 1/4"NPT	119.7	103.5	126.0
150 (6")	1/4"BSP - 1/4"NPT	154.3	103.5	126.0

* FOR BACK / BOTTOM T = 132



GAUGE + SWITCH WITH REED CONTACTS WITH DIN PLUG ON TOP (MODEL 200 DPG HIGH RANGE)

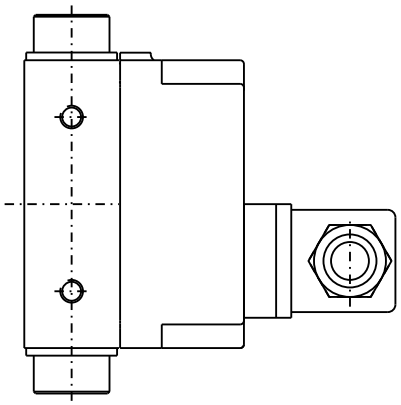


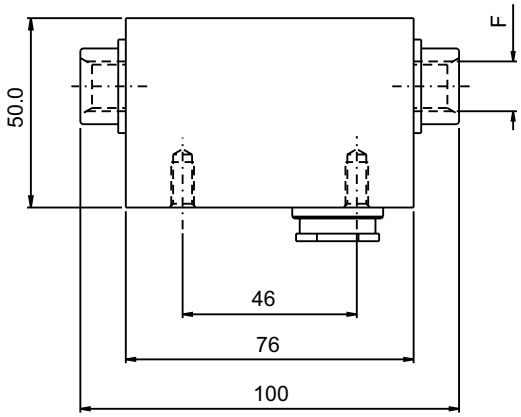
DIAL ø	F	b1	c1	d	T
80 (3.5")	1/4"BSP - 1/4"NPT	79	47.5	83.0	126.0
100 (4")	1/4"BSP - 1/4"NPT	79	47.5	104.3	126.0
115 (4.5")	1/4"BSP - 1/4"NPT	79	47.5	119.7	126.0
150 (6")	1/4"BSP - 1/4"NPT	79	47.5	154.3	126.0

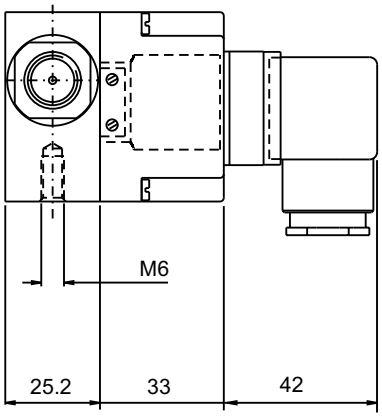
* FOR BACK / BOTTOM T = 132

SWITCH WITH DIN PLUG AT BACK (MODEL 200 DPG HIGH RANGE)

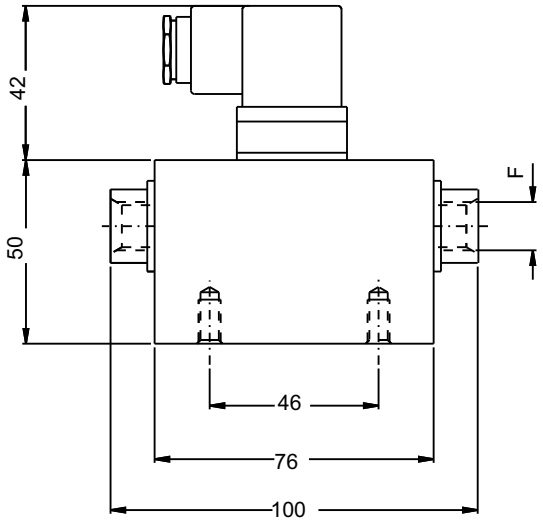
F=¼”NPT - ¼”BSP

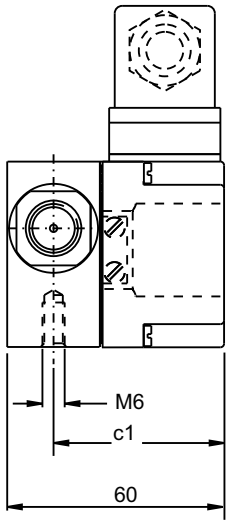






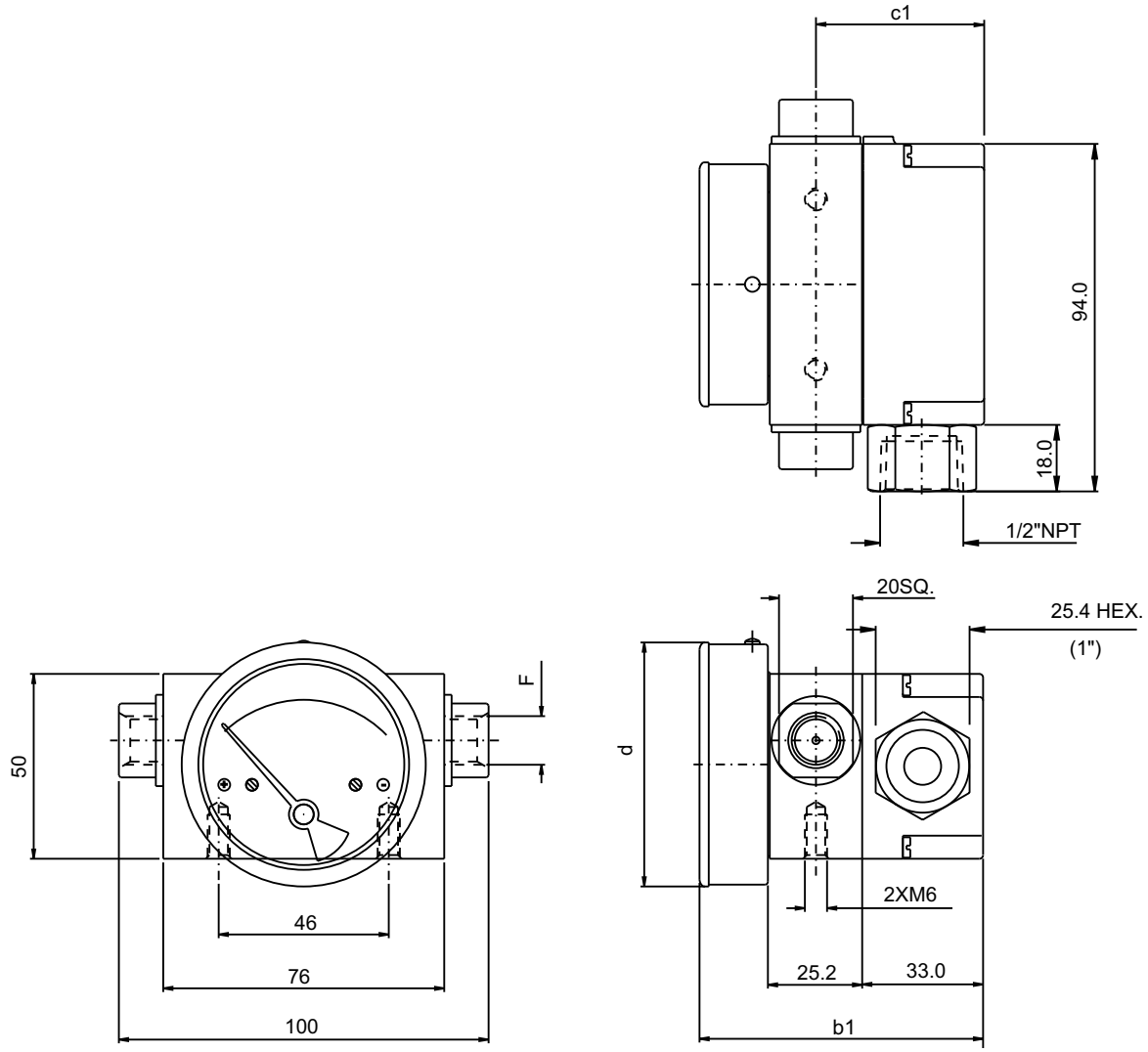
SWITCH WITH DIN PLUG ON TOP (MODEL 200 DPG HIGH RANGE)





F=¼”NPT - ¼”BSP , C1=47.5

GAUGE + SWITCH WITH REED CONTACTS WITH TERMINAL STRIP & 1/2” NPT CONDUIT CONNECTION (MODEL 200 DPG HIGH RANGE)



DIAL ø	F	b1	c1	d
50 (2")	1/4"BSP - 1/4"NPT	78	47.5	53
63 (2.5")	1/4"BSP - 1/4"NPT	79	47.5	66
80 (3.5")	1/4"BSP - 1/4"NPT	79	47.5	83
100 (4")	1/4"BSP - 1/4"NPT	79	47.5	104.3
115 (4.5")	1/4"BSP - 1/4"NPT	79	47.5	119.7
150 (6")	1/4"BSP - 1/4"NPT	79	47.5	154.3

HOW TO ORDER A DIFFERENTIAL PRESSURE INSTRUMENT, MODEL 200 DPG HIGH RANGE

	Example	Code	Descriptions
Series	H-200 DPG		
Type	GS	G	Gauge
		S	Switch
		GS	Gauge + Switch
Body material	A	A	Aluminium *(anodized)*
		S	SS-316
Dial size	3.5	3.5	3.5” (80 mm)
		4.0	4.0” (100mm)
		4.5	4.5” (115 mm)
		6.0	6.0” (150 mm)
Connection	4N	4B	¼” BSP (Female)
		4N	¼” NPT (Female)
		ZZ	Special connection sizes using adaptor
Porting	1	1	In-line
		2	Rear / Back
		3	Bottom
		6	In-line & Bottom
Case type	SS	SS	SS 304 with a rubber ring (standard)
		SF	SS 304 flange with a rubber ring (standard flange)
Window	A	F	Glass (standard)
		A	Acrylic
		T	Toughened glass
		L	Safety glass
Seal	B	B	Buna-N (standard)
		V	Viton
Switch	3		One SPST, with a DIN plug †
			One SPST, with a terminal strip
			One SPST, with built in relay
			Two SPSTs, with a DIN plug †
			Two SPSTs, with a terminal strip

+

1 (Standard)	2	3
10 VA	40 VA	100 VA
100 V	230 V	300 V
0.5 Amp	1 Amp	1 Amp
Adjustable	Adjustable	Adjustable

5	One SPDT, with a DIN plug †
6	One SPDT, with a terminal strip
7	Two SPDTs, with two DIN plugs †
8	Two SPDTs, with a terminal strip

+

SPDT Specifications (AC/DC max)

1 (Standard)	2	3	4
3 VA	5 VA	5 VA	60 VA
30 V	125 V	175 V	400 V
0.3 Amp	0.25 Amp	0.25 Amp	1 Amp
Adjustable	Adjustable	Adjustable	Factory set

† DIN plug mounted on the top.

Standard Ranges	0-200 psi

Kg/cm²	14	30	40	50	60	70
Bar	14	30	40	50	60	70
psi	200	450	600	750	900	1000
Mpa	1.4	3.0	4.0	5.0	6.0	7.0

Other ranges on request

Options	BC	0	None

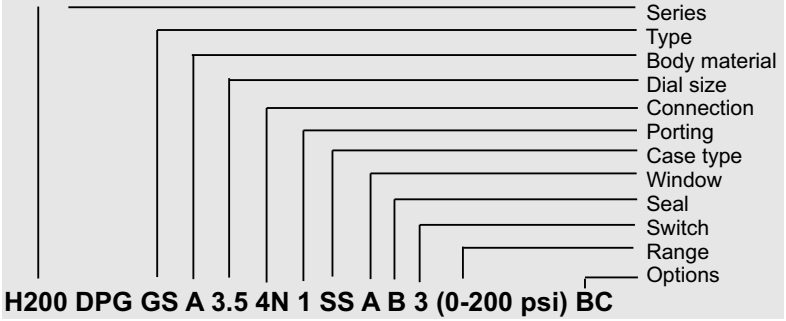
A Glycerine*
B Red follower pointer on acrylic window *
C Customer Logo
D Dual scale
E Colour band
F Filter mesh in (+) connection
G Reverse Port**
H Descending calibration (long delivery time)

N NACE
S Silicone oil*
I Oxygen service (Contact factory)
K 32mm thick body
P DIN plug at back on plastic switch cover
M1 2” horizontal pipe mounting bracket
M2 Surface mounting bracket
M3 2” vertical pipe mounting bracket

NOTE : These instruments are made to order and require longer delivery time.

* Affects accuracy

Ordering Sequence Code (Example)



H200 DPG GS A 3.5 4N 1 SS A B 3 (0-200 psi) BC

Limitations for making combinations:

- Glycerine filling will not have follower pointer.
- No follower pointer available in 6” (150 mm).

Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing, modifications may take place and materials specified may be replaced by others without prior notice.