Pressure Gauge with In-built Transmitter

MODEL : **BSPGTX** (Open Front Type)
SF BSPGTX (Solid Front Type)

Features

- Gauge Design as per EN-837 standard
- Local Indication & signal transmission to the control room
- Transmission of process values 4 to 20 mA
- Easy-to-read, analogue on-site display. No need of external power supply
- "Plug and play" with no configuration necessary
- Signal transmission as per NAMUR
- Measuring ranges (-)1-0, 0-1 to 0-1000 kg/cm2.g/ bar.g
- Nominal Dial Size of 100 or 150 mm

Working Principle

Wherever the process pressure has to be indicated locally, and a signal is wanted to be transmitted to a central controller or remote control room at the same time, BSPGTX can be used. It is a combination of a mechanical measuring system and precise electronic signal processing. The process pressure can be read securely, even in the absence of power supply, if the supply is lost.

BSPGTX is of high-quality, stainless steel Pressure Gauge with a nominal size of 100 or 150 mm, which is manufactured in accordance with EN 837-1 standard. The Bourdon tube measuring system produces a pointer rotation that is proportional to the applied pressure. An electronic angle encoder, determines the position of the pointer shaft. It is a non-contact sensor, hence completely free from wear & tear and friction. From this, the electrical output signal proportional to the pressure, 4 to 20 mA is produced.

BSPGTX, integrated into the high-quality mechanical pressure gauge, combines the advantages of electrical signal transmission as well as local mechanical display. The measuring span (electrical output signal) is set automatically along with the mechanical display, i.e. the scale over the full display range corresponds to 4 to 20 mA. It is possible to set the electrical zero point manually.

Ranges

Gauge	bar, kg/cm2	Least count
Vacuum	(-)1 to 0	0.02
	-760 to 0mmHg	20
Compound	(-)1 to 0.6	0.05
	(-)1 to 1.5	0.05
	(-)1 to 3	0.10
	(-) 1 to 5	0.10
	(-)1 to 9	0.20
	(-)1 to 15	0.50
	(-)1 to 24	0.50
	(-)1 to 39	1.0

Gauge	bar, kg/cm2	Least count
Pressure	0 to 0.6	0.01
Gauge	0 to 1	0.02
('C' shaped	0 to 1.6	0.05
Bourdon)	0 to 2.5	0.05
	0 to 4	0.10
	0 to 6	0.10
	0 to 10	0.20
	0 to 16	0.50
	0 to 25	0.50
	0 to 40	1.0
	0 to 60	1.0

Gauge	bar, kg/cm2	Least count
Pressure	0 to 100	2.0
Gauge	0 to 160	5.0
Coil type	0 to 250	5.0
Bourdon	0 to 400	10.0
	0 to 600	10.0
	0 to 800	20.0
	0 to 1000	20.0

The parameters mentioned here are the standard specifications/ values generally used for most of the process applications. Any other specification not appearing here also can be provided as per customer requirement. For higher temperature services above 100°C, we recommend to provide suitable cooling arrangement (Syphon, Cooling Tower, Impulse Tubing, Diaphragm Seal etc.)

Under Technical Collaboration with M/s. Gauges Bourdon, France

Specifications

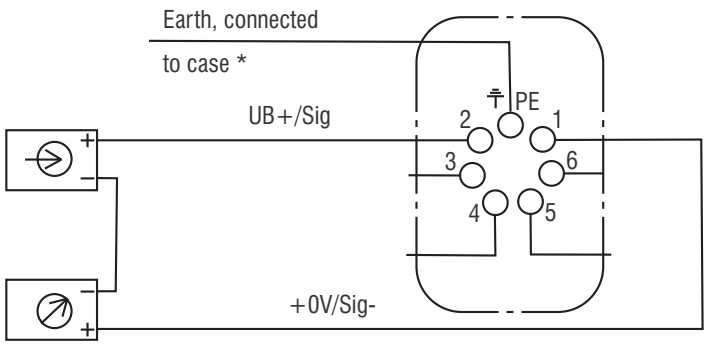
(A) Mechanical Data

Ref. Standard	EN-837
Dial	100 mm / 150 mm in Aluminium, white background, black markings
Case	SS304 / SS316 with bayonet bezel
Protection	IP-66 (IS:13947 par t I / IEC:60529)
Window	Safety glass (Shatter proof / Toughened glass)
Bourdon	SS316, SS316 Ti, SS316L, Monel
Socket	22mm Square in SS316, SS316 Ti, SS316L, Monel
Movement	SS304 / SS316
Range	As per EN 837 (refer table) minimum span 1 kg/cm2, maximum 1000 kg/cm2
Connection	1/2" NPT(M) as standard (other optional)
Accuracy	±1% FSD as standard (0.5% FSD on request)
Over range	As per EN 837
Zero adjustment	Micrometer Pointer
Blow out disc	Provided (on top)
Temperature suitability	Ambient (-)20°C to 60°C, Media 200°C
Temperature Effect	Within ±0.4% FSD/10°C, when temperature changes from reference temperature of 20°C (as per EN-837 standard)
Optional	Safety design with Solid Front NACE compliance Built in Snubber Diaphragm seals (Refer Catalogue for Diaphragm Seal)

(B) Electrical Data

Power supply U_B	Between 12 & 24	DC V
Supply voltage effect	⩽ 0.1	% v FS/10 V
Permissible residual ripple	⩽ 10	% ss
Output signal	4 to 20 mA, 2-wire	
Permissible Max Load R_A	R_A ⩽ (U_B - 12 V)/0.02 A with R_A in Ohm and U_B in Volt, however max. 600 Ω	
Effect of load	⩽ 0.1	%FS
Electrical zero point	Through a jumper across terminals 5 and 6	
Long-term stability of electronics	<0.5	% FS/a
Electrical output signal	⩽ 1 % of the measuring span	
Linearity	⩽ 1 % (Limit point calibration)	% of span
Power supply	12 to 24	DC V
Short circuit rating	100	mA
Rating	1000	mW
Wiring	L- plug Connector, 180° rotatable, Max 1.5mm2, wire protector, Cable gland M20 x 1.5, Ext cable diameter 7 - 13 mm, incl strain relief	
Wiring protection	IP-66 as per IEC-60529	

Wiring Details **As shown below**



Terminals 3,4,5 and 6: Only for internal use

* This connection must not be used for equipotential bonding. The instrument must be incorporated in the equipotential bonding via the process connection

11/17 REV.: 01

Ordering Information

MODEL

BASIC MODEL CODE

BSPGTX	Open Front Type
SF BSPGTX	Solid Front Type

MOUNTING

V	Bottom Entry, Local Mounting
S	Bottom Entry, Surface Mounting
Y	Bottom Entry, 2" Pipe Mounting
C	Back Entry, Local Mounting
P	Back Entry, Flush Panel Mounting

DIAL SIZE

100 - 100 mm **150** - 150 mm

CASE

S4S	SS 304
S6S	SS 316

BOURDON

S6S	SS 316
S6L	SS 316L
S6T	SS 316Ti
MN4	Monel

SOCKET

S6S	SS 316
S6L	SS 316L
S6T	SS 316Ti
MN4	Monel

MOVEMENT

S4S	SS 304
S6S	SS 316

CONNECTION

Conn	Code	Size	Code	Type	Code	Male/ Female	Code
Thread	T	1/4"	**06**	NPS	**NS**	Male	**M**
		3/8"	**10**	NPT	**NT**	Female	**F**
		1/2"	**15**	BSP	**BP**		
		3/4"	**20**	BSPT	**BT**		
		1"	**25**	JIS-PF	**PF**		
		M20	**M20**	JIS-PT	**PT**		
				Gas	**GS**		
				R	**RR**		
				Rp	**RP**		
				Pitch 1.5	**C**		

e.g. For 1/2"NPT(M), Code: **T15NTM**
For M20x1.5 (F), Code: **TM20CF**

OPTION

A05	Accuracy ±0.5%FSD
BOB	Blow out disc at back
BSN	Built In Snubber
CLB	Colour Band
DUS	Dual Scale
NAC	NACE
OXY	O2 Cleaning
PHD	Phenolic / Plastic Dial
S4D	SS DIAL (SS304)
S6D	SS DIAL (SS316)
VCP	Vacuum Protection
L	Nil
CSU	Chemical Seal
ACC	Accessory
XXX	Other

UNIT

KSC	kg/cm2(g)
BAR	bar(g)
PSI	psi(g)
KPA	kPa(g)
MPA	MPa(g)
MBR	mbar(g)
MMW	mm WC(g)
CMW	cm WC(g)
MWC	m WC(g)
INW	inch WC(g)
MMH	mm Hg(g)
CMH	cm Hg(g)
INH	inch Hg(g)
XXX	Other (Please specify)

RANGE

Please select from Table

Sample Model Code: BSPGTX-V-150-S4S-S6S-S6S-S4S-T15NTM-(0-10)-BAR-L