

## 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/cm<sup>2</sup>.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/cm <sup>2</sup>	Least count	Gauge	bar, kg/cm <sup>2</sup>	Least count	Gauge	bar, kg/cm <sup>2</sup>	Least count
Vacuum	(-)1 to 0	0.02	Pressure Gauge	0 to 0.6	0.01	Pressure Gauge	0 to 100	2.0
	-760 to 0mmHg	20		0 to 1	0.02		0 to 160	5.0
Compound	(-)1 to 0.6	0.05	('C' shaped Bourdon)	0 to 1.6	0.05	Coil type Bourdon	0 to 250	5.0
	(-)1 to 1.5	0.05		0 to 2.5	0.05		0 to 400	10.0
	(-)1 to 3	0.10		0 to 4	0.10		0 to 600	10.0
	(-)1 to 5	0.10		0 to 6	0.10		0 to 800	20.0
	(-)1 to 9	0.20		0 to 10	0.20		0 to 1000	20.0
	(-)1 to 15	0.50		0 to 16	0.50			
	(-)1 to 24	0.50		0 to 25	0.50			
	(-)1 to 39	1.0		0 to 40	1.0			
				0 to 60	1.0			

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

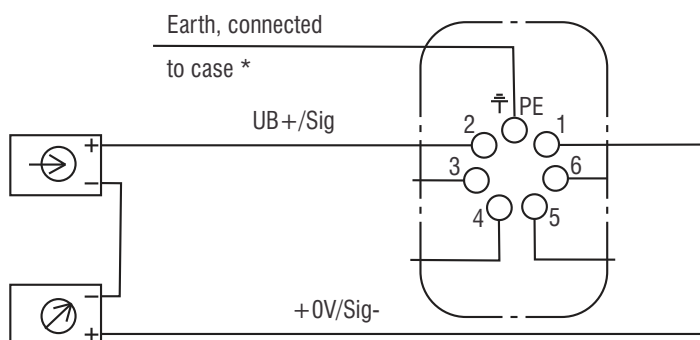
<b>Ref. Standard</b>	EN-837
<b>Dial</b>	100 mm / 150 mm in Aluminium, white background, black markings
<b>Case</b>	SS304 / SS316 with bayonet bezel
<b>Protection</b>	IP-66 (IS:13947 par t I / IEC:60529)
<b>Window</b>	Safety glass (Shatter proof / Toughened glass)
<b>Bourdon</b>	SS316, SS316 Ti, SS316L, Monel
<b>Socket</b>	22mm Square in SS316, SS316 Ti, SS316L, Monel
<b>Movement</b>	SS304 / SS316
<b>Range</b>	As per EN 837 (refer table) minimum span 1 kg/cm <sup>2</sup> , maximum 1000 kg/cm <sup>2</sup>
<b>Connection</b>	1/2" NPT(M) as standard (other optional)
<b>Accuracy</b>	±1% FSD as standard (0.5% FSD on request)
<b>Over range</b>	As per EN 837
<b>Zero adjustment</b>	Micrometer Pointer
<b>Blow out disc</b>	Provided (on top)
<b>Temperature suitability</b>	Ambient (-)20°C to 60°C, Media 200°C
<b>Temperature Effect</b>	Within ±0.4% FSD/10°C, when temperature changes from reference temperature of 20°C (as per EN-837 standard)
<b>Optional</b>	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	$\leq 0.1$	% v FS/10 V
Permissible residual ripple	$\leq 10$	% ss
Output signal	4 to 20 mA, 2-wire	
Permissible Max Load $R_A$	$R_A \leq (U_B - 12 V)/0.02 A$ with $R_A$ in Ohm and $U_B$ in Volt, however max. 600 $\Omega$	
Effect of load	$\leq 0.1$	%FS
Electrical zero point	Through a jumper across terminals 5 and 6	
Long-term stability of electronics	$< 0.5$	% FS/a
Electrical output signal	$\leq 1\%$ of the measuring span	
Linearity	$\leq 1\%$ (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 1.5mm <sup>2</sup> , 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

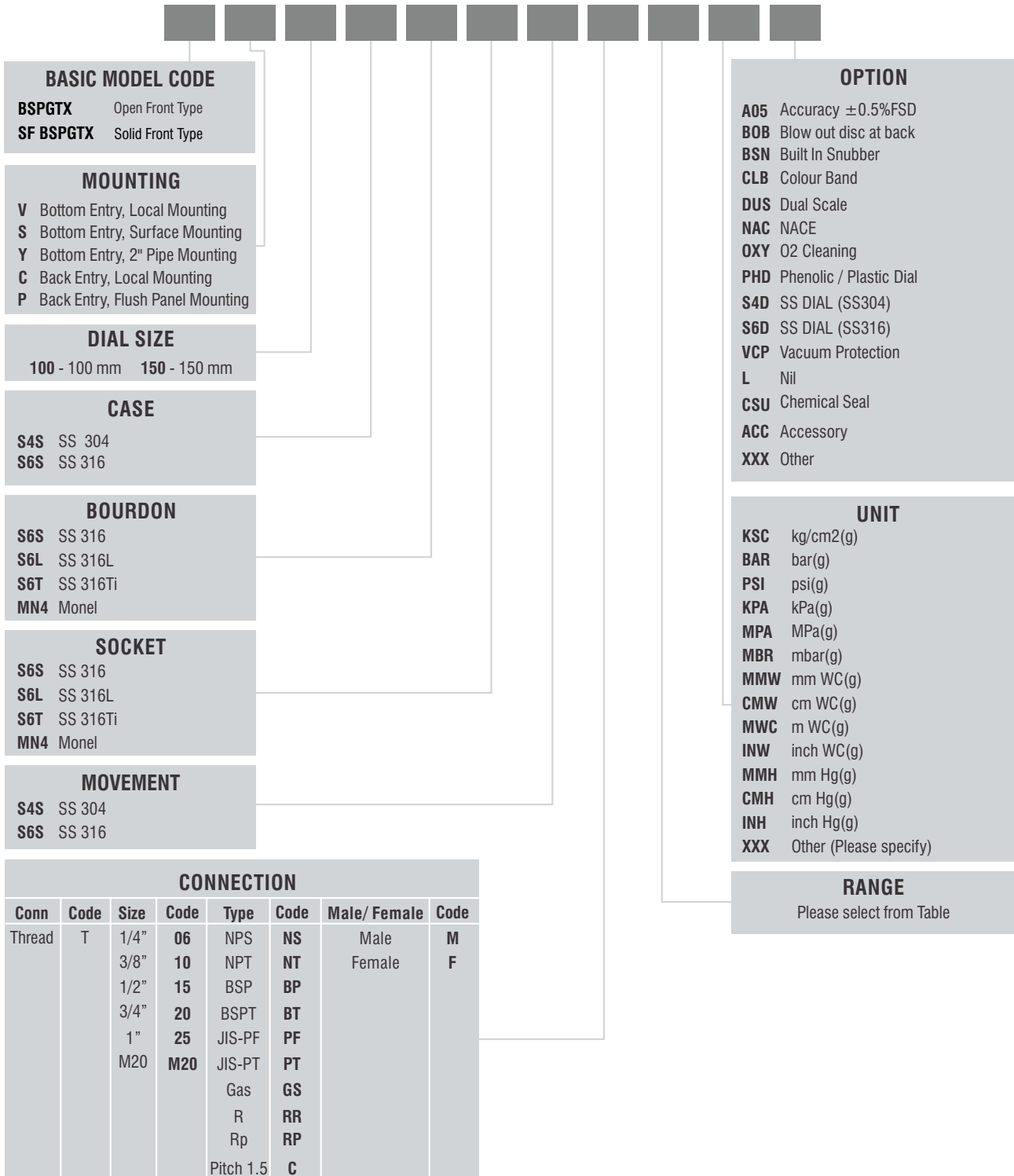


Terminals 3,4,5 and 6: Only for internal use

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

# Ordering Information

## MODEL



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

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