

## 50T Series Transmitters Model 54G/A gauge/absolute pressure transmitter for sanitary use

Ranges : - 100 to 4000 kPa  
- 1 to 40 bar  
- 14.5 to 600 psi

- **Base accuracy :  $\leq 0.2\%$ (BFSL)**
- **Piezoresistive thick film technology**
- **Wide choice of process connection**  
- optimum flexibility to meet plant requirements
- **"Hygienic" design for food industries**
- **Good overpressure performance without calibration change**
- **High temperature version available**
- **Local zero adjustment**  
- allows easy on site calibration
- **CE - conformity**



***50T Series transmitters  
Reliable sensors for pressure  
measurements***

## 54G/A PRESSURE TRANSMITTER SPECIFICATIONS

The hygiene flush diaphragm transmitters are ideally suited to fulfill the pressure measurement requirements of the food, dairy and pharmaceutical industries among others.

The cleaning requirements of the food processing industry have dictated the "hygienic" design of these transmitters. They can also withstand without damage the various cleaning phases specific to these industries: sterilizing cycles, autoclaving and steam flushing.

### FUNCTIONAL SPECIFICATIONS

**Service :**

Food, dairy, pharmaceutical applications

METRIC RANGES						
Compound ranges (kPa / bar)	Gauge ranges (kPa / bar)	Absolute ranges (kPa / bar)	Overpressure		Burst pressure	
			MPa	bar	MPa	bar
	0 to 100 / 0 to 1 <sup>(1)</sup>	0 to 100 / 0 to 1 <sup>(1)</sup>	0.3	3	0.6	6
	0 to 160 / 0 to 1.6 <sup>(1)</sup>	0 to 160 / 0 to 1.6 <sup>(1)</sup>	0.3	3	0.6	6
-100 to 150 / -1 to 1.5 <sup>(1)</sup>	0 to 250 / 0 to 2.5 <sup>(1)</sup>	0 to 250 / 0 to 2.5 <sup>(1)</sup>	0.5	5	0.7	7
-100 to 300 / -1 to 3	0 to 400 / 0 to 4	0 to 400 / 0 to 4	0.8	8	1.2	12
-100 to 500 / -1 to 5	0 to 600 / 0 to 6	0 to 600 / 0 to 6	1.2	12	1.8	18
-100 to 900 / -1 to 9	0 to 1000 / 0 to 10	0 to 1000 / 0 to 10	2	20	3	30
-100 to 1500 / -1 to 15	0 to 1600 / 0 to 16	0 to 1600 / 0 to 16	3.2	32	4.8	48
-100 to 2400 / -1 to 24	0 to 2500 / 0 to 25	0 to 2500 / 0 to 25	5	50	7.5	75
-100 to 3900 / -1 to 39 <sup>(2)</sup>	0 to 4000 / 0 to 40 <sup>(2)</sup>	0 to 4000 / 0 to 40 <sup>(2)</sup>	8	80	12	120

IMPERIAL RANGES				
Compound ranges (psi)	Gauge ranges (psi)	Absolute ranges (psi)	Overpressure (psi)	Burst pressure (psi)
	0 to 20 psi <sup>(1)</sup>	0 to 20 psi <sup>(1)</sup>	43.5	87
	0 to 30 psi <sup>(1)</sup>	0 to 30 psi <sup>(1)</sup>	72.5	100
-14.5 to 30 psi <sup>(1)</sup>	0 to 40 psi <sup>(1)</sup>	0 to 40 psi <sup>(1)</sup>	72.5	100
-14.5 to 60 psi	0 to 60 psi	0 to 60 psi <sup>(1)</sup>	116	174
-14.5 to 100 psi	0 to 100 psi	0 to 100 psi	174	261
	0 to 150 psi	0 to 150 psi	290	435
-14.5 to 200 psi	0 to 200 psi	0 to 200 psi	464	696
-14.5 to 300 psi	0 to 300 psi	0 to 300 psi	725	1087
	0 to 400 psi	0 to 400 psi	725	1087
	0 to 600 psi <sup>(2)</sup>	0 to 600 psi <sup>(2)</sup>	1160	1740

<sup>(1)</sup> Not available with CLAMP DN 25

<sup>(2)</sup> Not available with CLAMP (all versions)

**Zero adjustment :**  
± 15% of full scale

**Temperature limits :**

**Ambient** -25 and +85°C (-13 and +185°F)  
(can be limited by intrinsically safe application )

**Process**

• Standard version -25 and +100°C (-13 and +210°F)  
for ambient ≤ +50°C (≤ +120°F)

• High Temperature version :  
-25° and +130°C (-13 and +266°F)  
for ambient ≤ +50°C (≤ +120°F)  
-25° and +180°C (-13 and +356°F)  
for ambient ≤ +30°C (≤ +86°F)

**Compensated :** -10 and +70°C (+14 and +160°F)  
**Sterilizing temperature :** 140°C (284°F) max. for 30 minutes

**Response time :**  
≤ 3 ms

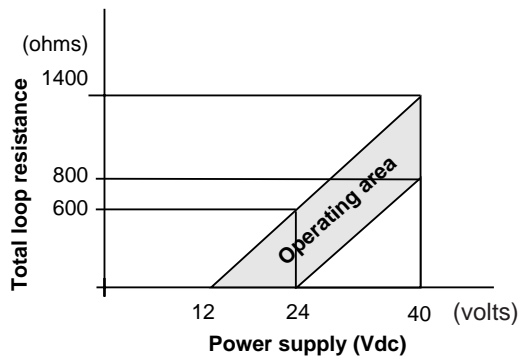
**Power supply :**

The transmitter operates from 12 up to 40Vdc and is protected against reverse polarity connection. (see drawing below for load limitation).

For intrinsically safe application power supply must not exceed 28 Vdc.

**Load limitations - total loop resistance :**

$$R(\Omega) = \frac{\text{Supply voltage} - 12}{0.02}$$



**Fatigue life :**

greater than 10 million cycles  
(pressure reversal, 20 to 80% of range; f = 1 Hz)

**Optional surge protection :**

Meets CEI 10000-4-5

**Insulation resistance :**

> 100 MΩ @ 250 Vdc

**Output signal :**

4 to 20 mA dc

**PERFORMANCE SPECIFICATIONS**

Unless otherwise specified, errors are quoted as % of full scale

**Accuracy**

**Accuracy rating (\*) :**

≤ 0.2% of BFSL

(\*) including combined effects of linearity, hysteresis and repeatability

**Operating influences**

**Ambient temperature** per °C (1.8°F) change between the limits of -10°C to +70°C (+14 to +160°F)

- Zero error :  
± 0.015%  
± 0.025% (for 100 kPa, 1 bar, 15 psi ranges)
- Span error :  
± 0.01%

**EMI/RFI :**

Meets EN50081 for emission and EN50082 for immunity

**Stability :**

< 0.20% over a twelve-month period

**Vibrations effect (meets IEC 68-2-6) :**

Total effect : ± 0.1% from 10 to 2000 Hz and acceleration up to 200 m/s<sup>2</sup> (20g) in any axis.

**PHYSICAL SPECIFICATIONS**

**Materials**

**Process wetted parts :**

**Flush diaphragm :** AISI 316L (1.4404) Stainless steel

**Housing :**

AISI 304 (1.4301) stainless steel

**Tagging :**

Aluminium data plate stucked to the housing

**Filling :**

Filling oil : codex

**Environmental protection**

The transmitter is dust and sand tight.

**Enclosure class :**

- IP 65 (with 4 pin DIN 43650 connector)
- IP 67 with cable outlet

**Hazardous atmospheres :**

Intrinsically safe version,  
EEx ia IIC T5 (T<sub>amb</sub> -25 to +70°C)/T6 (T<sub>amb</sub> -25 to +40°C)

**Process connections**

- CLAMP ISO 2852 DN 25
- CLAMP ISO 2852 DN 38
- CLAMP ISO 2852 DN 51
- SMS 1145 FF DN 38
- SMS 1145 FF DN 51
- SMS 1145 FL DN 38 + bolt
- SMS 1145 FL DN 51 + bolt
- DIN 11851 FF DN 32
- DIN 11851 FF DN 40
- DIN 11851 FF DN 50
- DIN 11851 FL DN 32 + bolt
- DIN 11851 FL DN 40 + bolt
- DIN 11851 FL DN 50 + bolt

**Electrical connections**

- 4-pin connector ISO4400/DIN 43650
- Cable gland (PG 9) + 1.5 m cable

**Mass**

- 4-pin connector ISO 4400/DIN 43650:  
from 0.410 kg to 0.810 kg
- PVC Cable (1.5 m) + cable gland (PG 9): add 60g to the above

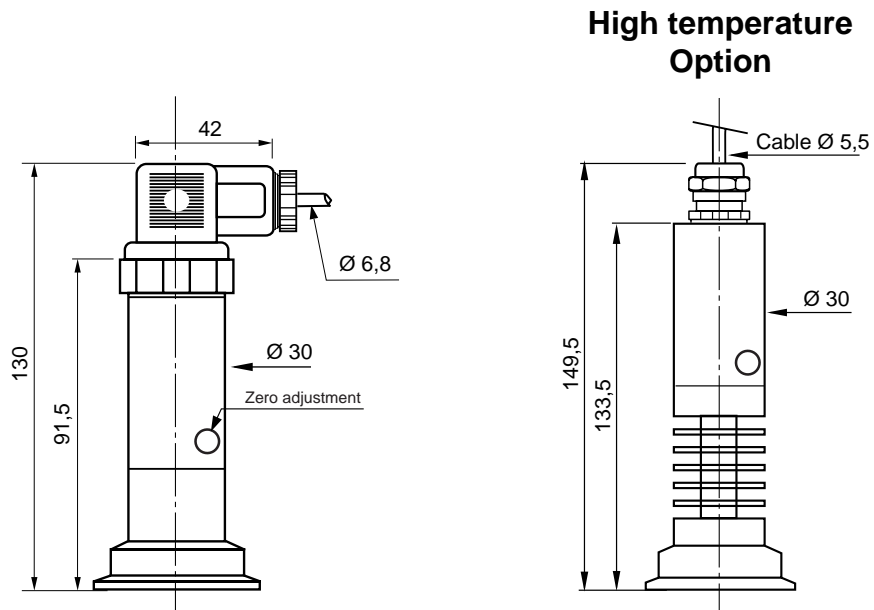
**Packing**

Carton 14.5 x 6.5 x 4 cm approx. (5.5 x 2.5 x 1.6 in)

**Options**

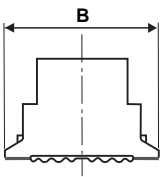
- Surge protection

## MOUNTING DIMENSIONS



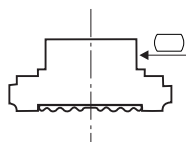
### Fittings

**CLAMP  
ISO 2852**



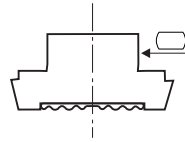
CLAMP ISO 2852	B
DN 25	50.5
DN 38	50.5
DN 51	64

**SMS 1145 FL  
with nut**

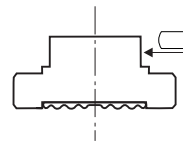


SMS 1145 FL	DIN 11851 FL	
-	DN 32	27
DN 38	DN 40	27
DN 51	DN 50	27

**DIN 11851 FL  
with nut**

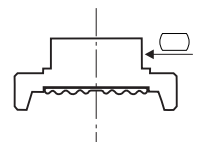


**SMS 1145 FF  
with male thread**



SMS 1145 FF	DIN 11851 FF	
-	DN 32	27
DN 38	DN 40	27
DN 51	DN 50	27

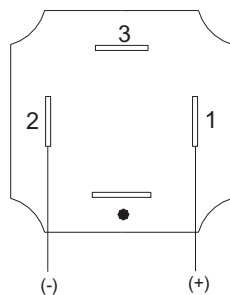
**DIN 11851 FF  
with male thread**



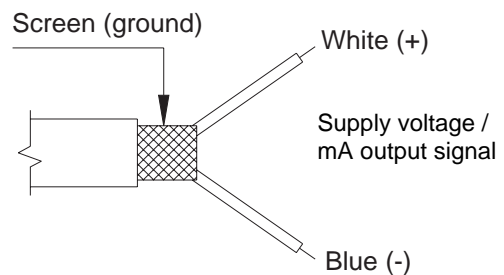
## ELECTRICAL CONNECTIONS

ISO 4400 / DIN 43650 Connector :

	4-20 mA
1	+ supply
2	- supply
3	NC
	ground

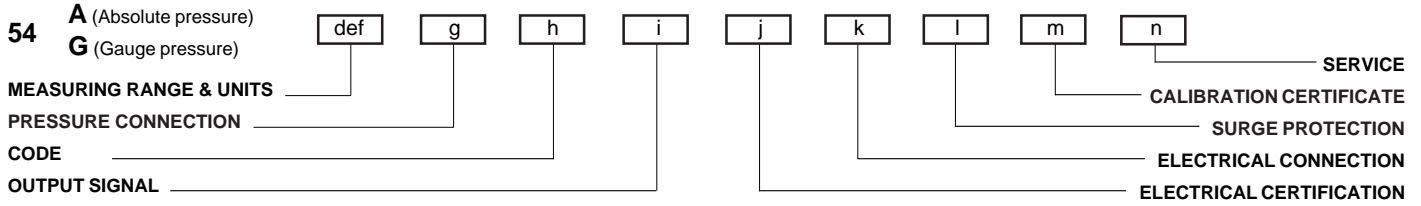


Cable outlet :



# ORDERING CODE

Select one set of characters from each category and specify complete catalog number



BASE MODEL		Code
abc	Fixed range gauge pressure transmitter	54G
	Fixed range absolute pressure transmitter	54A

MEASURING RANGE & UNITS						
	Code		Code		Code	
def	* - 100 to 150 kPa <sup>(1)</sup>	K13	* - 1 to 1.5 bar <sup>(1)</sup>	B13	* - 14.5 to 30 psi <sup>(1)</sup>	E13
	* - 100 to 300 kPa	K14	* - 1 to 3 bar	B14	* - 14.5 to 60 psi	E14
	* - 100 to 500 kPa	K15	* - 1 to 5 bar	B15	* - 14.5 to 100 psi	E15
	* - 100 to 900 kPa	K16	* - 1 to 9 bar	B16	* - 14.5 to 200 psi	E16
	* - 100 to 1500 kPa	K17	* - 1 to 15 bar	B17	* - 14.5 to 300 psi	E17
	* - 100 to 2400 kPa	K18	* - 1 to 24 bar	B18	0 to 15 psi <sup>(1)</sup>	E21
	* - 100 to 3900 kPa <sup>(2)</sup>	K19	* - 1 to 39 bar <sup>(2)</sup>	B19	0 to 20 psi <sup>(1)</sup>	E22
	0 to 100 kPa <sup>(1)</sup>	K24	0 to 1 bar <sup>(1)</sup>	B24	0 to 30 psi <sup>(1)</sup>	E23
	0 to 160 kPa <sup>(1)</sup>	K25	0 to 1.6 bar <sup>(1)</sup>	B25	0 to 40 psi <sup>(1)</sup>	E24
	0 to 250 kPa <sup>(1)</sup>	K26	0 to 2.5 bar <sup>(1)</sup>	B26	0 to 60 psi	E25
	0 to 400 kPa	K27	0 to 4 bar	B27	0 to 100 psi	E26
	0 to 600 kPa	K28	0 to 6 bar	B28	0 to 150 psi	E27
	0 to 1000 kPa	K29	0 to 10 bar	B29	0 to 200 psi	E28
	0 to 1600 kPa	K31	0 to 16 bar	B31	0 to 300 psi	E29
	0 to 2500 kPa	K32	0 to 25 bar	B32	0 to 400 psi	E31
	0 to 4000 kPa <sup>(2)</sup>	K33	0 to 40 bar <sup>(2)</sup>	B33	0 to 600 psi <sup>(2)</sup>	E32

\* Not available with code 54A at position "abc"  
<sup>(1)</sup> Not available with CLAMP DN 25 code F at position "g"  
<sup>(2)</sup> Not available with CLAMP (all versions) code F, G or J at position "g"

PRESSURE CONNECTION		
g	CLAMP ISO DN 25	F
	CLAMP ISO DN 38	G
	CLAMP ISO DN 51	J
	SMS FF DN 38	L
	SMS FF DN 51	M
	SMS FL DN 38 + bolt	P
	SMS FL DN 51 + bolt	Q
	DIN FF DN 32	R
	DIN FF DN 40	S
	DIN FF DN 50	T
	DIN FL DN 32 + bolt	U
	DIN FL DN 40 + bolt	V
	DIN FL DN 50 + bolt	Z

CODE		
h	Code	2

OUTPUT SIGNAL		
i	4 - 20 mA	3

ELECTRICAL CERTIFICATION		
j	General purpose	1
	Intrinsic Safety (pending)	2

ELECTRICAL CONNECTION		
k	Cable gland + 1.5 meter cable	2
	4-pin connector ISO 4400/DIN 43650	4

SURGE PROTECTION		
l	None	1
	Yes	2

CALIBRATION CERTIFICATE		
m	Not required	1
	Yes	2

SERVICE		
n	Standard	2
	High temperature version	4



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