

# Electronic Pressure Transmitter

**SERIES SET 45**



## ELECTRONIC PRESSURE TRANSMITTERS SERIES SET45

### Measuring range and span limits

REF.	NOMINAL RANGE bar	SPAN min. (bar ) max.	RANGE LIMITS min. (bar) max.	OVERPRESSURE bar g
F	0/2	0.8/3,3	-1/2,3	7
G	0/5	2/6,75	-1/5,75	12
H	0/10	4/12,5	-1/11,5	25
K	0/20	8/24	-1/23	50
L	0/50	20/58,5	-1/57,5	120
M	0/100	40/116	-1/115	250
N	0/200	80/231	-1/230	500
P	0/400	160/461	-1/460	600
1	0/2 abs	0,8/2,3	0/2,3	7
2	0/5 abs	2/5,75	0/5,75	12
3	0/10abs	4/11,5	0/11,5	25

The SET45 is a series of two-wire microprocessor-based, 4-20 mA instrument. The thick film ceramic sensor can measure gauge or absolute pressure with ranges of 0,8 to 460 bar. Electronics provide automatic temperature compensation, software linearisation, and displays the sensor temperature..

parameters can be adjusted digitally. The 4 digit LCD indicator displays the measured reading, either in engineering units (bar or psi) or percentage.

### FUNCTIONAL DATA

Measuring range and span : See table,  
 Span adjustment : by means of push buttons  
 Zero adjustment : by means of push buttons  
 Digital damping : by means of push buttons (from 0 to. 51 sec.),  
 Overrange limits : See table.  
 Power supply : 10 - 30 V dc, with no foa<i,

Relation between supply voltage and permissible load:

- 0/250 ohm per 16,7 V d.c.
- 0/700 ohm per 24 V d.c.
- 0/1000 ohm per 30 V d.c.

Output signal : 4/20 mA - 2 wire system.

LCD display reading: -10 - +65°C.

4 digits LCD display, 4 symbols (*bar*, *mbar*, *%*, *sec*)

Settling time: 150 ms (at 27°C)

### OPERATING CONDITIONS

Temperature.

Housing : -20 - +80°C

Process fluid : -20 - +80/130°C,

Handling and Storage: -20 - +90°C.

Relative humidity : 0 - 100%

### PERFORMANCES

Unless otherwise stated performance specifications are given at following conditions:

ambient temperature = 20°C nominal range

Unless otherwise stated, all errors are given as percentages of nominal range.

**Accuracy rating**

Non linearity :  $\leq \pm 0.15\%$ .

Repeatability :  $< 0.10\%$

Hysteresis :  $< 0.10\%$ ,

**OPERATING INFLUENCES.**

**Thermal drift:** it is referred to 0 to +60°C

Zero:  $\pm 0.2\%/10^\circ\text{K}$ , Span:  $\pm 0.2\%/10^\circ\text{K}$  at nominal range

Power Supply effect: Negligible between 10 and 30 V d.c.

**PHYSICAL SPECIFICATIONS**

**Materials:**

**Housing:** Die cast aluminium alloy AL UNI 4514 finished with epoxy resin powder (RAL 5014). **covers:**

Reinforced technopolymer,

Covers O-ring: Buna N,

**identification tags:** SS Permanently mounted on the instrument.

**Wetted parts\*** alumina oxide, AISI 316, Viton/kalrez.

**Calibration**

Standard : at nominal range,

optional : at specified span (see table),

**Optional:**

Bracket.- for 2 inch pipe mounting.

**Environmental protection:**

The transmitter is dust and sand tight and protected against sea waves effect as defined by IEC IP 66 - Suitable for tropical climate operation as defined in DIN 50.015.

**Process connections.**

See ordering information table.

**Electrical connections.,**

Two cables entries on electronic housing  $\frac{1}{2}$ " NPT and cable gland PG 13,5 for 7 to 12 mm diameter cable.

**Terminal board.**

Standard: two terminals for Signal wiring up to  $1.5 \text{ mm}^2$ -14 AWG, Earth connection for shield of cable.

**Mounting:**

Direct on pressure connection. Net weight: 0,85 Kg.

**EXPLOSION PROTECTION**

Classification

Types: intrinsic safety EEx !a IIB, T6, T5, T4 to EN 50,014 and EN 50,020 suitable for Zone 0 groups IIA, IIB.

certificate CESI EX 98.D.046

**Max. ambient temperature:**

40°C for T6, 55°C for T5 and 80°C for T4.

**Condition A**

No load Voltages:  $\leq 30$  V dc.  
Short circuit current:  $\leq 120$  mA.  
Max transferred power: 0,75 W.

**Condition B**

No load Voltages:  $\leq 25,2$  V dc.  
Short circuit current:  $\leq 120$  mA.  
Max transferred power: 0,95 W.

**Electromagnetic compatibility**

confirms to the standard EM 50081-2 In accordance with EM 50082-2 89/336/EEC and following modifications.

**Orderation information**

**Example : SET45A1G010**

Code number	SET45	A						
Electronic Pressure Transmitter		↑ A						
<b>Pressure Connection</b>			↑					
G1/2 UNI/ISO 228/1 (max 80°C)			1					
1/2" ANSI B2.1 (NPT) (max 80°C)			2					
G1 UNI/ISO 228/1 (max 80°C)			3					
G1 UNI/ISO 228/1 (max 130°C)			4					
Union nut 65x1/6 (max 130°C) *			5					
Union nut 78x1/6 (max 130°C) *			6					
Clamp 1 1/2" (max 130°C) *			7					
Clamp 2" (max 130°C) *			8					
<b>Nominal Range</b>				↑				
0 - 2 bar				F				
0 - 5 bar				G				
0 - 10 bar				H				
0 - 20 bar				K				
0 - 50 bar				L				
0 - 100 bar				M				
0 - 200 bar				N				
0 - 400 bar				P				
0 - 2 bar abs.				1				
0 - 5 bar abs.				2				
0 - 10 bar abs.				3				
with viton sealing					↑			
with kalrez sealing					0			
					1			
<b>Calibration</b>						↑		
Nominal Range (standard)						1		
Optional: T. Amb.... Span.... Suppr..... Elev.....						2		
<b>Options</b>							↑	
Without							0	
Bracket for 2 inch pipe mounting							1	
* For nominal range $\leq 50$ bar								

Dimension drawings (mm)

