



# Portable electronic pressure gauge

## Standard **BARFLEX®4**

### Intrinsically safe **BARFLEX®4Y**

The BARFLEX®4 portable electronic pressure gauge is a self-contained instrument which is ideal for measurements in the field: it has a very rugged case (epoxy-painted aluminium), is sealed against running water, and the sensor (TRANSBAR® technology) is compatible with the majority of corrosive fluids.

By conforming to CE requirements, the BARFLEX®4 guarantees immunity to electromagnetic interference (walkie-talkies, portable telephones, power switching devices, etc.).

In addition to use as a portable device, this instrument may be used as a fixed unit by means of a special adapter coupling.

- Very simple to use
- Compact, rugged and sealed (IP 65)
- Accuracy:  $\pm 0.25\%$  of measurement range  $\pm 1$  display point
- Compatible with most corrosive fluids
- Range of measurement from 1 to 400 bar (gauge or absolute)
- Available units: bar, psi, kPa, kg/cm<sup>2</sup>, mbar, MPa
- Quick process connection
- Conforms to CE requirements (Directive 89/336/CEE)
- 3 versions: portable, fixed unit, console only
- Intrinsically safe version BARFLEX®4Y : LCIE 99-E6094X; EEx ia IIC T6 approval



## Typical applications

- Calibration of installed devices and checking their correct operation
- Testing hydraulic and pneumatic systems
- Verification of the settings of pressure switches, transmitters, etc.
- Leakage detection

## Specifications (20°C)

### Measurement ranges :

From 0 +1 to 0 +400 bar A/G and from -1 +0.6 to -1 +24 bar G  
 From 0 +20 to 0 +6000 psi A/G  
 From 0 +100 to 0 +40000 kPa  
 From 0 +1 to 0 +400 kg/cm<sup>2</sup>

### Power supply :

By standard 9 volt battery (type IEC 6LR61, not supplied)  
 Autonomy greater than 400 hours at 20°C (200 hours BARFLEX®4Y)  
 Indication of discharge by BATT symbol on display  
 Automatic switch off after 30 minutes

### Total error at 20°C (including non-linearity, hysteresis, non-repeatability, gain adjustment) :

$\pm 0.25\%$  of FS  $\pm 1$  display point (gauge version)  
 $\pm 0.5\%$  of FS  $\pm 1$  display point (absolute version)

### Zero reset (gauge version only) :

Reset to zero is effected by a prolonged press on the ON/OFF key

### Operating temperature :

-10° to +60°C BARFLEX®4  
 -10° to +40°C BARFLEX®4Y (T6)

### Thermal drift :

Gain :  $\leq \pm 0.015\%/^{\circ}\text{C}$  max.  
 Zero :  $\leq \pm 0.015\%$  FS/ $^{\circ}\text{C}$  max.

### Storage temperature :

-20 to +70°C

### Process fluid temperature :

Portable version: -20 to +85°C  
 Fixed/console version: -20 to +85°C

### Shock resistance (IEC 68-2-32) :

25 impacts from 1 m onto concrete

### Vibration resistance (IEC 68-2-6) :

0.75 mm (10–55 Hz); 10 g (55 Hz to 2 kHz)


### Materials in contact with the fluid :

Fixed/console version: ceramic (AL<sub>2</sub>O<sub>3</sub>), NBR seal, stainless steel 1.4404 (AISI 316L)  
 Portable version: ceramic (AL<sub>2</sub>O<sub>3</sub>), NBR seal, stainless steel 1.4404 (316L), flexible cable (polyamide), process connection (steel 1.0718)

### Display :

Backlight liquid crystal display (LCD) as standard  
 Display range:  $\pm 9999$   
 Overpressure indicated by "Pres" (110% of FS)

### Backlight :

Press on the  key on the front panel  
 Switching off: press the same key and then release it  
 Automatic switch off after 5 minutes

### Definition of units and measurement range (preset in factory) :

On the front panel (indelible)

### Degree of protection (EN 60529) : IP 65

### Pressure connection :

- portable version: supplied with a 1 m cable fitted on the BARFLEX®4 end with a nut which seals with hand tightening, and on the process end with a threaded end fitting (M16/2) for accepting an intermediate coupling with a valve (option).
- fixed unit version: supplied with a special intermediate coupling (G1/2A or 1/2 NPT on the process end), compatible with the BARFLEX®4 end fitting (M12 x 1.5)
- console only: M12 x 1.5 DIN 2353

### CE electromagnetic compatibility :

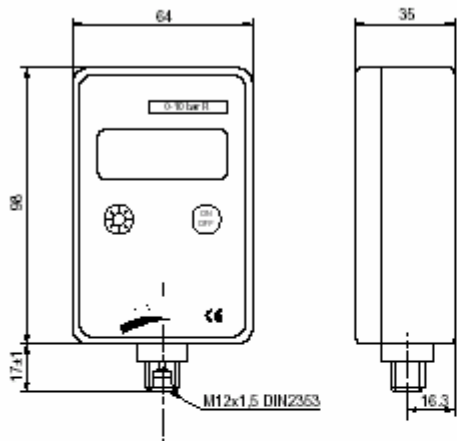
- standards EN 50082-1 and -2 (immunity)
- standards EN 50081-1 and -2 (emission)

### Uncoded options available (to be specified in full) :

- Portable version: supplied with a different process connection at the end of the cable: M16x1.5; M12x1.5; G1/4 female; G1/2 female
- Intermediate couplings incorporating a safety valve, versions available: M16x2 for G1/4, 1/4 NPT, 7/16-20 UNF other versions: M16x1.5 and M12x1.5 for G1/4, 1/4 NPT, 7/16-20UNF
- Capsule seals: Viton®, EPDM
- All stainless capillary and connector (please refer to us)
- Oxygen quality cleanliness except portable version with connector (M16x2, M16x1.5 and M12x1.5)
- Protective case
- G1/2 male connector for dead weight tester and pressure generator applications. Ref 70744-01-A01



## Dimensions (mm), measurement ranges, connections



### Standard versions available

- **PORTABLE:** supplied with 1 m cable (1) fitted with a screw coupling (M16x2) (2) on the process end and a carrying case. Weight : 400 g
- **FIXED UNIT:** supplied with a special adapter coupling to the M12x1.5 DIN 2353 connector. Process end threaded G1/2A or 1/2 NPT. Weight: 390 g
- **CONSOLE only:** coupling: M12x1.5 DIN 2353. Weight: 300 g

Tapping	a	b	d1	d2	k	t
G 1/4	1,5	12	20			18,5
1/4 NPT						16,5
7/16-20 UNF		11,5	21	12,4	2,4	14

BARFLEX<sup>®</sup>4 end (M12X1,5)



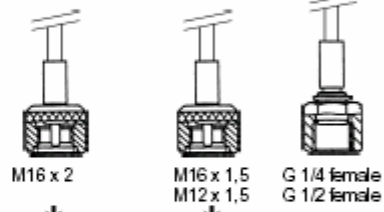
### Pressure connections

#### portable version

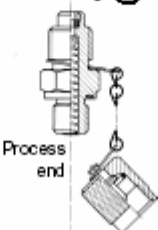
Connections available at the process end of the cable (2)

#### Standard

#### Option



To cable end fitting (2)

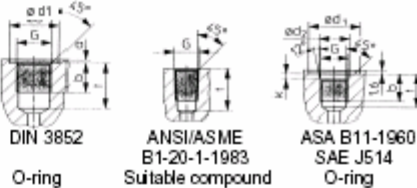


### Intermediate couplings with valve (option)



Tapping/standard:

Sealing:



Measurement ranges (bar) A/G	-1+0,6	-1+1,6	-1+3	-1+10	-1+24	0+1	0+2	0+5	0+10	0+20	0+50	0+100	0+200	0+400
Permissible overrange (bar)	3	3	6	15	38	3	3	10	15	30	80	150	300	550
Burst pressure	7	7	12	30	75	7	7	18	30	75	180	300	600	600
Display at max. range	-1.000+600	-1.000+1600	-1.000+3.000	-1.00+10.00	-1.00+24.00	1000	2000	5.000	10.00	20.00	50.00	100.0	200.0	400.0

## Codification

**BARFLEX** **4** **00** **00** **00** **00** **00** **\***

Type :

BARFLEX<sup>®</sup>4

BARFLEX<sup>®</sup>4Y (complete only in case of intrinsically safe version) Y

Standard \_\_\_\_\_

00

Pressure mode:

Absolute Gauge

A

R

Units of measurement :

bar \_\_\_\_\_

kpa \_\_\_\_\_

Mpa \_\_\_\_\_

Kg/cm<sup>2</sup> \_\_\_\_\_

psi \_\_\_\_\_

mbar \_\_\_\_\_

Viton<sup>®</sup> is registered trademark of DuPont Dow Elastomers

BARFLEX<sup>®</sup>4 is registered trademark of BOURDON SEDEME

\* Uncoded options have to be listed after the coded number

B  
D  
E  
F  
H  
N

code	Measurement ranges	
	bar	psi
72	-1 + 0,6 R	
20	-1 + 1,6 R	
76	-1 + 3 R	
20	-1 + 10 R	
82	-1 + 24 R	
15	0 + 1 A/R	
10		0 + 20 A/R
17	0 + 2 A/R	
88	0 + 5 A/R	
21		0 + 100 A/R
22	0 + 10 A/R	
23		0 + 200 A/R
25	0 + 20 A/R	
28	0 + 50 A/R	
30		0 + 1000 A/R
31	0 + 100 A/R	
32		0 + 2000 A/R
34	0 + 200 A/R	0 + 3000 A/R
38	0 + 400 A/R	0 + 6000 A/R