

BARFLEX® 4 and 4Y (ATEX) - Portable electronic pressure gauge

Accuracy: FS ± 1 digit display
Version EA4 : $\pm 0.25\%$
Version EA5 : $\pm 0.1\%$

**Range of measurement from 1 to 400 bar gauge or absolute
(up to 1000 bar available on request)**

Available units : bar, psi, kPa, kg/cm², mbar, MPa

Conforms to CE (directives 2004/108/CE and 97/23/CE)

Leak test

Stores MIN and MAX pressures.

**Options: Acquisition of data and infrared transfer to the PC
Measurement of barometric pressure
Use in explosive atmospheres ATEX : Intrinsically
safe version**

LCIE 02 ATEX 6220X

CE 0081



**II 1 G
Ex ia IIC T6**

Dangerous zones: Zone 0, 1, 2



Description

The BARFLEX® is an electronic digital pressure gauge ideal for field measurements.

- Pressure display
- Stores MIN and MAX pressures from the start of operation
- Measurement of the pressure deviation in a given time interval (leak test)

The BARFLEX® allows :

- Calibration and verification of correct operation of the installed devices
- Verification of the pressostat adjustments, transmitters...

Options :

Barometer : provides the atmospheric pressure from 200 to 1150 hPa to $\pm 0,1\%$.

Data acquisition : records the pressure values regularly and exports them to a PC.

The Barflex® 4 was developed, manufactured and checked in accordance with the following directives:

- 2004/108/CE and the standards EN61000-6-2, EN61000-6-3, EN61000-6-4, EN61326-1 relative to EMC.
- 97/23/CE pressure equipment (article 3.3 for the operating pressures OP ≤ 200 bar and category 1 for OP > 200 bar).

There are also the following characteristics :

- Immunity against electromagnetic interference (walkie-talkie, mobile phone, power switches, etc...)
- Very robust box (epoxy-painted aluminium)
- IP 65 splash water-proof
- Compatibility of the sensor with most aggressive fluids.
- Quick connection, manual locking
- 3 versions : portable, fixed station, console only

Characteristics

Measurement range	0...1 bar to 0...400 bar A/R -1...0.6 bar to -1...24 bar R
Power supply	With standard 9 volt battery (type IEC 6LR61, not supplied) Capacity of more than 150 hours at 20°C Indication of the discharge by BATT Automatic switch off (10 minutes by default)
Total error at 20°C	± 0.25% of FS ±1 point (gauge version) ± 0.5% of FS ±1 point (absolute version) (including non linearity, hysteresis, non repeatability, gain adjustment)
Zero reset (relative version only)	Zeroing is made by pressing the ON/OFF button for a long time
Leak measurement time	from 10 to 3600 seconds
Operating temperature	Barflex®4: -10...+60°C
Thermal drifts	Gain : ≤ ±0.015% /°C max. Zero : ≤ ±0.015% FS/°C max.
Storage temperature	-20...+70°C
Temperature of fluid	-20...+85°C
Shock resistance (IEC 68-2-32)	25 shocks of 1 m on a concrete floor
Vibration resistance (IEC 68-2-6)	0.75 mm (10 - 55 Hz), 10 g (55 Hz - 2 kHz)
Materials in contact the fluid	Portable version: ceramic (Al ₂ O ₃), NBR joint, with stainless steels 1.4404 (316 L) - 1.4542, flexible (polyamide), process connection (steel 1.0718) Fixed station/console version: ceramic (Al ₂ O ₃), NBR joint, stainless steel 1.4404 (AISI 316L) - 1.4542.
Display	Liquid crystal display (LCD) Display range : see table on page 3 Overpressure indicated by "PPPP" (110% of FS)
Backlighting	Lighting / switching off: press twice on the "F" button Automatic switch off after 5 minutes
Degree of protection (EN 60529)	IP 65
Pressure connection	Portable version: supplied with a flexible 1 m hose, fitted with a manual blocking screw for sealing on the BARFLEX® side, and a threaded end on the process end (M16/2). Fixed station version: supplied with a specific intermediate connection (G1/2 process end) , compatible with the BARFLEX® (M12 x 1.5) end fitting Console : coupling M12x1.5 DIN 2353


ATEX (Barflex®4Y) version

The Barflex®4Y meets the intrinsic safety needs as per the CE test certificate of type LCIE 02 ATEX 6220X and meets the 94/9/CE directive (standards EN60079-0 (2006) / EN60079-11 (2007)).

Operating temperature: -10... 40°C (T6)

ATEX marking:

- Logo BAUMER BOURDON-HAENNI as well as the address
- Type : YA4A
- The registration number
- The code date and the year
- The CE0081 logo and homologation references LCIE 02 ATEX 6220X

-  II 1 G Ex ia IIC T6 ambient T° max. : -25+40°C

- **Don't change the battery in a dangerous zone, only Duracell**

MN1604, Energizer 6AM6

Option 0.1% (EA5)

Total error	± 0.1% of FS ±1 digit (including mechanical and thermal errors in the compensated temperature range -10...+60°C)
Zero reset	Zeroing is made by pressing the ON/OFF button for a long time. Measurement of absolute pressure by separate atmospheric referencing.
Display	Display range : ± 19999
Other characteristics identical to the standard version	

Uncoded options available (to be specified clearly)

Portable version delivered with another process connection at the end of a flexible hose : M16x1.5 ; M12x1.5 ; G1/4 female ; G 1/2 female.

Intermediate connections with an integrated 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, 7/16-20 UNF.

All stainless steel capillary and connection (contact us).

Oxygen purity except portable version with connection (M16x2, M16x1.5, M12x1.5).

Protective case

G1/2 male adapter for using on scales and compressors Ref 70744-01-A01

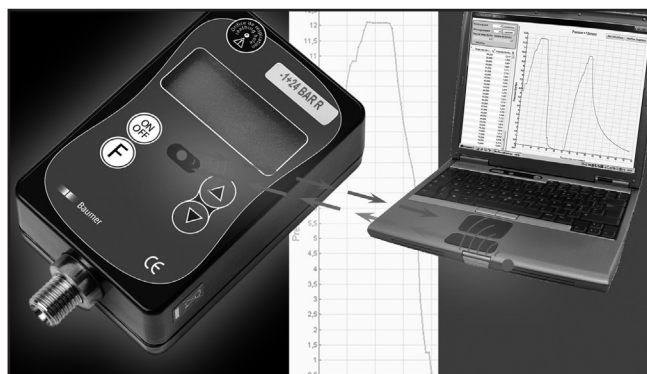
1/2 NPT connection on the process end for fixed station.

Options

Data acquisition **Code 0585**

Recording: up to 16 000 points, period 0.5 to 3600 s.

Export to PC via infrared connection (IrDA V1.1) : Supplied software interface, compatible with Windows 98/2K/XP/Vista 32



USB adaptor / IrDA **Code 0588**

Allows to add an IrDA port (infrared) to any PC which has an USB port on Windows 98/2K/XP/Vista 32

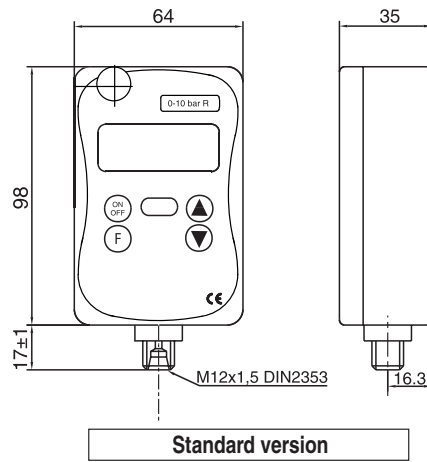
Barometer **Code 0586**

Display hPa Abs
Accuracy +/- 1 hPa
Resolution 0,1 hPa

Menu in English **Code 0587**

(French by default)

Dimensions (mm), measurement range, connections



PORTABLE (code P) :

P ≤ 400 bar : supplied with a flexible 1 m hose (1) fitted with a screw connection on the process side (2) and a carrying bag. **Weight: 400 g**

FIXED STATION (code F) :

P ≤ 400 bar : supplied with connection adapter specifically for the connection M12x1.5 DIN 2353. Thread on the process end G1/2 (option G1/4). **Weight: 390 g**

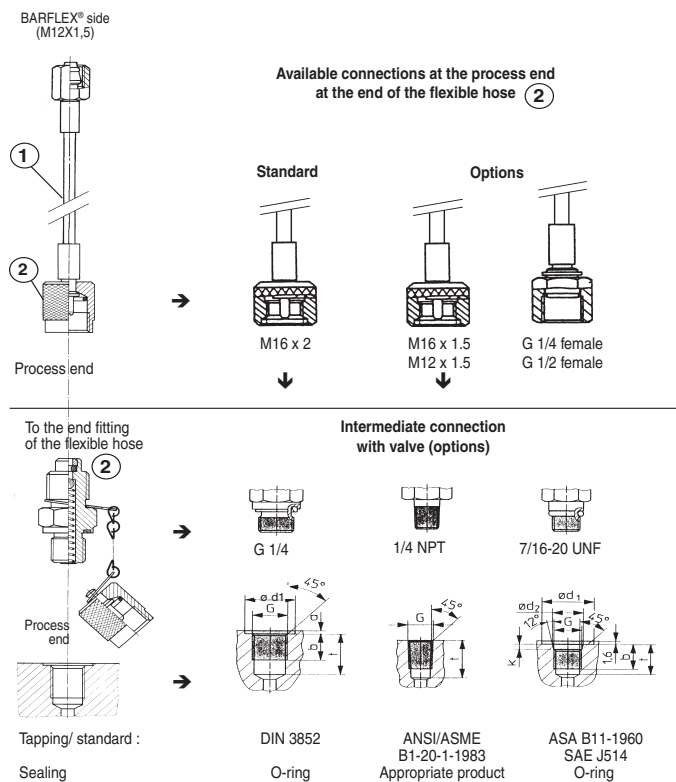
P > 400 bar : Same as console

CONSOLE only (code C) :

P ≤ 400 bar : connection M12x1,5 DIN 2353. **Weight: 300 g**

P > 400 bar : connection G/2 (option G1/4)

portable version pressure connections



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®															
Measurement ranges (bar)	-1+0.6	-1+1.6	-1+3	-1+10	-1+15	-1+24	0+1	0+2	0+5	0+10	0+20	0+50	0+100	0+200	0+400
Permissible overpressure (bar)	3	3	6	15	32	38	3	3	10	15	30	80	150	300	550
Burst pressure	7	7	12	30	48	75	7	7	18	30	75	180	300	600	600
Display of the measurement range	-1.000/+0.600	-1.000/+1.600	-1.000/+3.000	-1.000/+10.000	-1.000/+15.00	-1.000/+24.00	1.0000	2.000	5.000	10.000	20.00	50.00	100.00	200.0	400.0

OPTION 0.1%										
Measurement ranges (bar)	-1+10	-1+15	0+10	0+20	0+50	0+100	0+200	0+400	0+600	0+1000
Permissible overpressure (bar)	20	32	20	40	80	200	400	550	1200	2000
Burst pressure	60	48	60	120	200	500	600	600	2500	2500
Display of the measurement range	-1.000/+10.000	-1.000/+15.000	10.000	19.999	50.00	100.00	199.99	400.0	600.0	1000.0

Coding

EAxxxxxxx	
Family	1' ... 2' digit
Electronic pressure gauge	EA
Version	3' digit
0.25% relative version (or 0.5% absolute version)	4
0.1%	5
Type	4' digit
Standard	A
Intrinsic safety	Y
Presentation	5' digit
Portable*	P
Fixed	F
Console	C
Capsule seal	6' digit
NBR (Nitrile) standard	3
EPDM (P ≥ 250 mbar)	5
Kalrez® (P ≥ 1 bar)	7
FKM (Viton®)	9
Without O-ring (0.1% version)	0
<small>Kalrez® and Viton® are registered trade marks of DuPont Dow Elastomers BARFLEX® is a registered trade mark of BAUMER</small>	
Measurement unit	7' digit
bar	B
kpa	D
Mpa	E
Kg/cm²	F
psi	H
mbar	N
Measurement range	8' ... 9' digit
See table	xx
Pressure mode	10' digit
Absolute	A
Gauge	R

Code	Measurement ranges	
	bar	psi
72	-1 + 0.6	
2V	-1 + 1.6	
76	-1 + 3	R
2D	-1 + 10	R
B1	-1 + 15	R
81	-1 + 15	R
82	-1 + 24	A
15	0 + 1	A/R
1C		0 + 20 A/R
17	0 + 2	A/R
98	0 + 5	
21		A/R 0 + 100 A/R
22	0 + 10	A/R
23		0 + 200 A/R
25	0 + 20	A/R
28	0 + 50	
30		A/R 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
39	0 + 600	A/R 0 + 9000 A/R
41	0 + 1000	A/R 0 + 15000 A/R

* Portable version : only P ≤ 400 bar

UK/10-2009 This data sheet must only be copied complete