Pressure transmitter UNIVERSAL

thin film DMS

Type series CB103./CB203.

Features

- Measuring ranges 0…40 bar up to 0…600 bar rel.
- Thin film sensor element
- Zero point and measuring span can be adjusted externally by means of a potentiometer
- Stainless steel housing as standard or field housing
- Degree of protection IP 65, optional IP 67
- Wetted parts of stainless steel, completely welded
- Output signal: 4...20 mA, option: 0...20 mA, 0...10 V DC

Options

- Approvals/Certificates
  - Explosion protection
- As per UKCA regulations

Application

The integrated pressure system does not contain any liquids and is therefore suitable for dry measurements, e.g. for oxygen. The area of application lies in general process measurement technology. There are two different designs of housings available: standard housing with right angle plug or stainless steel field housing for use in tough environments.

Application area

- Chemical and petrochemical industry
- Plant and mechanical engineering
- General process technology

Technical data

Constructional design / case

Design:	Standard housing with right angle plug	
	Silicon cover plate for trimming potentiometers	
Material:	Stainless steel mat.-no. 1.4301 (304)	
Degree of protection:	IP 65 per EN 60529	
Electrical connection:	Right angle plug EN 175301-803-A with cable gland M16x1.5 mm, for cable Ø 4…10 mm	
Design:	Field housing, solid design	
	Screwable cover ring with O-ring seal for the externally accessible trimming potentiometers	
	Screwable case cap for connection chamber with O-ring thread protection	
Material:	Stainless steel mat. no. 1.4301 (304)	
Degree of protection:	IP 67 per EN 60529	
Electrical connection:	Cable gland M16x1.5 for cable Ø 4.5…10 mm	
	Material: Polyamide	
	Connection terminals 4 mm²	
Weights:	Standard housing	approx. 300 g
	Field housing	approx. 750 g

Process connection

Design:	G 1/2 B per EN 837-1

Material wetted parts

Socket:	Stainless steel mat.-no. 1.4404 (316L)
Diaphragm:	Stainless steel mat.-no. 1.4542 (630)

Measuring system

Sensor:	Measuring bridge embedded in thin film on a stainless steel diaphragm.

Accuracy

Lin./hyst.:	≤ 0.3 % f.s. (limit point setting)
Adjustable range:	Zero point and measuring span approx. ± 10 %
Temperature influence:	On zero point and measuring span: ≤ 0.03 % of meas. span / K
Overload limit:	For short-time overload, Values see order details
Overload influence:	≤ 0.1 % f.s.

Output

Signal:	4...20 mA, 2-wire technology Further possibilities see order details
Test output: (only for field housing)	Non interruptible output current measurement via integrated LOC diode
Response time:	≤ 20 ms
Current limitation:	≤ 30 mA
Burden, R:	Current output (2-wire) standard: R ≤ (U-14V)/0.02 A [Ω] with explosion protection: R ≤ (U-15V)/0.02 A [Ω] U = supply voltage Voltage output A current of 20 mA can be obtained in the case of devices with current output.
Burden influence:	For 500 Ω burden of change: ≤ 0,1 % v.E.

Supply voltage

Standard version:

Nominal voltage	24 V DC
Function range:	2-wire technology: 14…30 V DC 3-wire technology: 16…30 V DC

Max. permissible operating voltage: 30 V DC

Ex-design

Function range:	2-wire technology: 15…30 V DC 3-wire technology: 16…30 V DC

Influence of supply voltage: ≤ 0.2 % f.s. / 10V

Temperature ranges

Rated temperature:	-10…70 °C
Limit temperature:	-25…70 °C
Storage temperature:	-25…80 °C

Tests and certificates

Ex approval

ATEX:	TÜV 02 ATEX 1971 X
	⟨Ex⟩ II 2G Ex ia IIC T4 Gb
	⟨Ex⟩ II 1/2G Ex ia IIC T4 Ga/Gb
IECEx:	IECEx TUN 04.0008X
	Ex ia IIC T4 Ga/Gb
	Ex ia IIC T4 Gb
	Ex ia I Ma

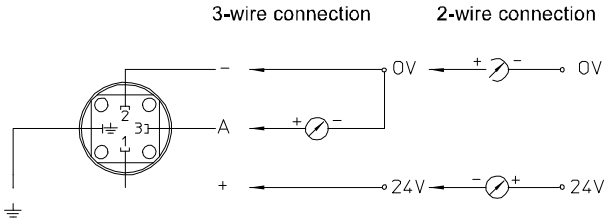
For further details to ambient temperatures, electrical datas and special conditions see Ex Instruction XA_007.

EMC:

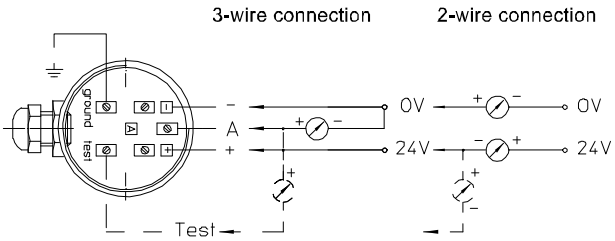
- Noise immunity as per EN 50082, section 2, March 95 issue for industry.
- Emitted interference as per EN 50081, section 1, 1993 issue for residential and industrial areas.

The device has no own emission.

Connection diagram

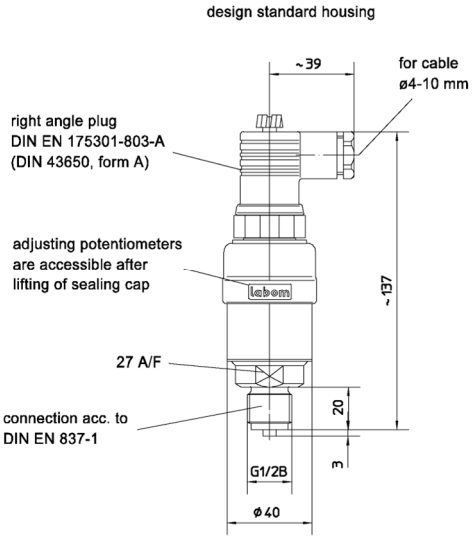


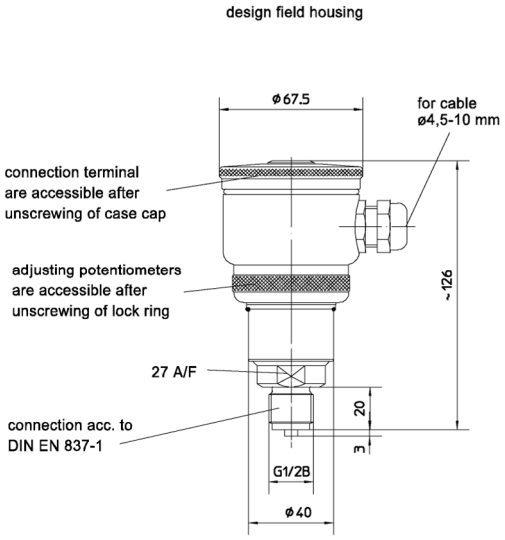
standard housing



field housing

Dimensions





Order details

Pressure transmitter UNIVERSAL thin film DMS		
CB103 .	design	standard housing
CB203 .		field housing
0	Ex-protection	without
1		type of Ex-protection s. below

		measuring range	overload limit [1]
A1060	standard measuring range	0...25 bar	80 bar
A1061		0...40 bar	80 bar
A1062		0...60 bar	200 bar
A1063		0...100 bar	200 bar
A1064		0...160 bar	500 bar
A1065		0...250 bar	500 bar
A1066		0...400 bar	800 bar
A1068		0...600 bar	1000 bar

H1	output signal	4...20 mA, 2-wire technology
H2		0...20 mA, 3-wire technology
H4		0...10 V, 3-wire technology
H6		0...5 V, 3-wire technology

Additional features (to be indicated if required)			
S69.1	type of Ex-protection	ATEX	Ⓔx II 2G Ex ia IIC T4 Gb
S62.1			Ⓔx II 1/2G Ex ia IIC T4 Ga/Gb
S76.1		IECEx	Ex ia IIC T4 Ga/Gb
			Ex ia IIC T4 Gb
			Ex ia I Ma
W2660	as per UKCA regulations		

Order code (example): CB1030 - A1061 - H4 - ...

[1] special overload protection (UE) upon request