

Pressure transmitter UNIVERSAL Heavy Duty Design

thin film sensor

Type series CB203. HDD



Application area

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

Features

- Measuring range
 - 0...25 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
- Degree of protection IP 66 per EN 60529
- Electronic unit completely encapsulated
- Wetted parts of stainless steel, completely welded
- Output signal: 4...20 mA, alternative: 0...20 mA, 0...10 V DC, 0...5 VDC

Options

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

Application

The pressure transmitter UNIVERSAL in Heavy-Duty Design is suited for measuring of pressure of gases, vapour and liquids. Because of their robust design, these transmitters are suitable for use in tough environments.

Technical data

Constructional design / case

Material:	Stainless steel W.-Nr. 1.4301 (304)
Degree of protection:	IP 66 per EN 60529
Electronic unit:	Completely encapsulated
Elec. connection:	- Externally accessible trimming potentiometers - Screwable case cap for connection chamber with O-ring thread protection - Connection terminals 4 mm² - M20 x 1.5 female thread - Cable gland M20 x 1.5 for cable Ø 7-13 mm, material: Polyamid - Cable gland M20 x 1.5 for cable Ø 8-13 mm, material: stainless steel

Process connection

Design:	G 1/2 B per EN 837-1
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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.
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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: ≤ 0.3 % /10K
Overload limit:	For short-time overload Values see order details
Overload influence:	≤ 0.1 % f.s..

For information on definitions of terms regarding the Pressure Equipment Directive, see Technical Instruction TA_068.

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:	<u>Current output (2-wire)</u> standard: $R \leq (U-14V)/0.02 \text{ A } [\Omega]$ with explosion protection: $R \leq (U-15V)/0.02 \text{ A } [\Omega]$ U = supply voltage <u>Voltage output</u> 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
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Influence of supply voltage: ≤ 0.2 % f.s. / 10V

Temperature ranges

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

Tests and certificates

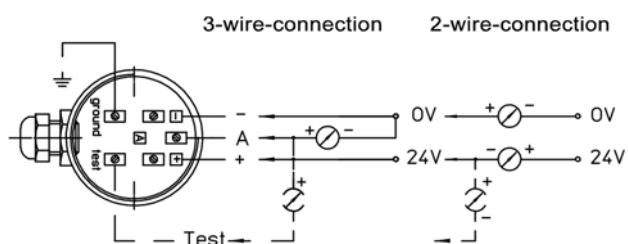
Ex approval

ATEX:	TÜV 02 ATEX 1971 X
	⊕ II 2G Ex ia IIC T4 Gb
	⊕ 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

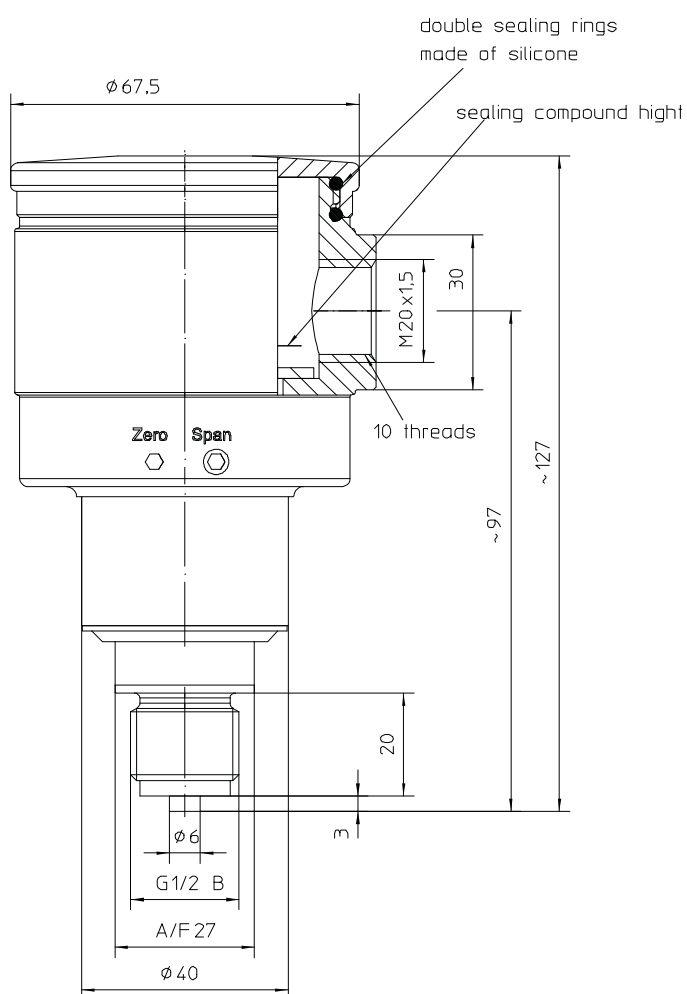
For further details to ambient temperatures, electrical datas and special conditions see Ex Instruction XA_007.

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



Dimensions



All dimensions are in mm

Order details

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CB2030 HDD	version	standard
CB2031 HDD		explosion protection, type of ex-protection s. below
	measuring range	overload limit
A1060	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
H2		0...20 mA, 3-wire
H4		0...10 V, 3-wire
H6		0...5 V, 3-wire
T5..	degree of protection	IP66 Heavy Duty Design (HDD)
00	Electrical connection	M20 x 1,5, female thread
10		cable gland M20 x 1,5 for cable Ø 7-13 mm, material: polyamide
11		cable gland M20 x 1,5 for cable Ø 8-13 mm, material: stainless steel

Additional features (to be indicated if required)

S69.1	Ex-proof design	ATEX	 II 2G Ex ia IIC T4/T5/T6 Gb
S62.1			 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): CB2030 HDD – A1061 – H4 – T500 - ...