

Measuring Ranges Vacuum to 400 PSI



Design

These pressure transmitters are designed to cover the majority of industrial applications in the field of industrial pressure measurement technology. High accuracy, compact design, robust construction and flexibility make these instruments universal and suitable for different measurement functions.

Wetted parts are made of stainless steel and completely welded. Internal seal elements, which could restrict the choice of measuring materials, are excluded. The standard process connection is 1/2" NPT.

The compact housing is also made of stainless steel and provides NEMA 4 protection.

Power supply is non-stabilized 10 – 30 VDC. Pressure transmitters are available with 4 – 20 mA 2-wire signal output.

The Type 8324 has been developed for hazardous area applications. This device is permitted with electronics according to EEx ia IIC T4 -T6 and therefore applicable with appropriate power supply units in such areas.

- Robust and compact construction in stainless steel
- Standardized electrical and mechanical connections
- Measuring ranges vacuum up to 400 PSI (relative)
- Standardized for hazardous areas

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Advantages / Benefits

- ▶ Measuring ranges up to 400 PSI for a broad area of application
- ▶ Housing and wetted parts in corrosion-resistant stainless steel
- ▶ Standard process-connection for simple process adaption
- ▶ Standard signal 4 - 20 mA for connection to process-automation-systems
- ▶ Electrical plug for quick installation and service
- ▶ NEMA 4 type of protection, Ex-version with protection "intrinsically safe"

▶ CE

Application

Media

All media like water, air, steam, light corrosive fluids and gases.
Flammable fluids and gases (version with Ex-Certificate).

Areas of Application

Pressure measurement and control both in process and utilities at industrial plants like distribution of water and gas.

Monitoring of pumps and filters through valve control.



Technical Data			
Sensing principle Measuring ranges	Hg Vac Inches Water Column PSI	Piezoresistive 30"-0" 50, 100	Thin-film strain gauge
Over pressure safety Burst pressure of sensor element Pressure reference	PSI PSI PSI	5 10 15 25 30 50 60 100 160 200 250 300 15 20 30 50 50 115 175 175 465 465 465 30 40 60 90 90 230 360 360 725 725 725 Gauge pressure (atmospheric)	400 725 1450 Gauge pressure (atmospheric)
Process connection Material Wetted parts Case Internal transmitting liquid		1/2" NPT CrNi-Stahl 1.4571 (and 1.4542 with 400 PSI) CrNi-Stahl 1.4301 Silicon oil (only for pressure ranges up to 300 PSI)	
Power supply U_B for non Ex -transmitters Signal output and maximum load R_A Response time ($\hat{10}$ -90%)	V DC ms	for Ex -transmitter Type 8324: see below in section Ex -protection! $10 < U_B \leq 30$ 4 - 20 mA, 2-wire system $R_A \leq (U_B - 10V) / 0,02A$ with R_A in Ohm and U_B in Volt	
Accuracy	% of FS % of FS	≤ 0.5 (2-point calibration) ¹⁾ ≤ 0.25 (Best fit calibration, BFSL) ¹⁾ ¹⁾ (calibrated in vertical mounting position with pressure connection bottom)	
Hysteresis Repeatability 1-year stability Permissible temperature of Medium Ambient Storage Compensated temp. range Temperature coefficient in compensated temp. range: mean T_C of zero mean T_C of span	% of FS % of FS % of FS °F °F °F °F % v. EW/10K % v. EW/10K	≤ 0.1 ≤ 0.05 ≤ 0.2 (at reference conditions) -22 to +212 - 4 to +176 -40 to +212 +32 to +176 ≤ 0.2 (<0.4 with pressure ranges 0 to 1.5 and 0 to 2.3 PSI) ≤ 0.2	
Ex -Protection Signal output Ex -Certification Conformity specifications Power supply Short circuit rating Power limitation Medium temperature Ambient temperature Storage temperature	 V DC mA W °F °F °F	Type 8324 4 - 20 mA, 2-wire system EEEx ia IIC T4 EEEx ia IIC T5 EEEx ia IIC T6 10 - 28 10 - 28 10 - 28 660 660 660 1.75 1.75 1.75 -4 to +212 -4 to +167 -4 to +140 -4 to +176 -4 to +167 -4 to +140 -4 to +176 -4 to +176 -4 to +176 See certification of conformity CENELEC BVS 96.D.2019 for additional data. FM/CSA Ex-Certification on request.	
CE - Sign		Generic Emission Standards EN 50 081-1 (March 93), EN 50 081-2 (March 94), EN 50 082-2 (March 95); Declaration of conformity on request.	
Electrical connection Electrical degree of protection Degree of protection EN 60 529/IEC 529 Weight Dimensions	 lbs.	4-pin L-plug per DIN 43 650 Protected against polarity crossing, overvoltage, and short circuiting; Ex -transmitters only with polarity crossing protection NEMA 4 approx. 0.44; Ex -transmitters approx. 0.77 see drawings	

Ordering Chart (Other Versions on Request)

Type 8323

Output Signal [mA]	Power Supply [V]	Measuring Ranges [PSI]	Item No.
4 - 20 mA	10 - 30 VDC	30"-0" Hg VAC	US06219
4 - 20 mA	10 - 30 VDC	0-50 IN WC	US65109
4 - 20 mA	10 - 30 VDC	0-100 IN WC	US62543
4 - 20 mA	10 - 30 VDC	5.0	417 744 V
4 - 20 mA	10 - 30 VDC	10.0	417 745 W
4 - 20 mA	10 - 30 VDC	15.0	417 746 X
4 - 20 mA	10 - 30 VDC	25.0	417 747 Y
4 - 20 mA	10 - 30 VDC	30.0	417 748 H
4 - 20 mA	10 - 30 VDC	50.0	417 749 A
4 - 20 mA	10 - 30 VDC	60.0	417 750 F
4 - 20 mA	10 - 30 VDC	100.0	417 751 U
4 - 20 mA	10 - 30 VDC	160.0	417 752 V
4 - 20 mA	10 - 30 VDC	200.0	417 753 W
4 - 20 mA	10 - 30 VDC	250.0	417 754 X
4 - 20 mA	10 - 30 VDC	300.0	417 755 Y
4 - 20 mA	10 - 30 VDC	400.0	417 756 Z

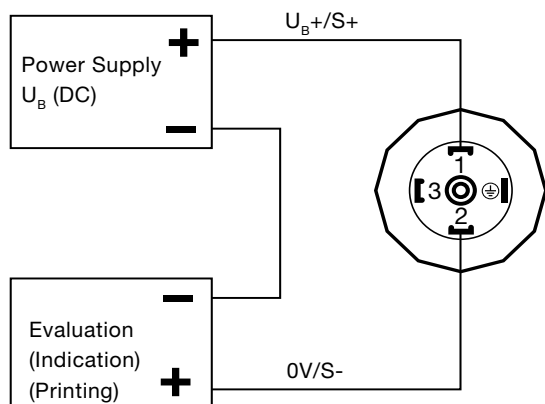
Ex Type 8324

Output Signal [mA]	Power Supply [V]	Measuring Ranges [PSI]	Ex-Certification	Item No.
4 - 20 mA	10 - 30 VDC	5.0	EEx ia IIC T4-T6	417 757 S
4 - 20 mA	10 - 30 VDC	10.0	EEx ia IIC T4-T6	417 758 B
4 - 20 mA	10 - 30 VDC	15.0	EEx ia IIC T4-T6	417 759 C
4 - 20 mA	10 - 30 VDC	25.0	EEx ia IIC T4-T6	417 760 H
4 - 20 mA	10 - 30 VDC	30.0	EEx ia IIC T4-T6	417 761 W
4 - 20 mA	10 - 30 VDC	50.0	EEx ia IIC T4-T6	417 762 X
4 - 20 mA	10 - 30 VDC	60.0	EEx ia IIC T4-T6	417 763 Y
4 - 20 mA	10 - 30 VDC	100.0	EEx ia IIC T4-T6	417 764 Z
4 - 20 mA	10 - 30 VDC	160.0	EEx ia IIC T4-T6	417 765 S
4 - 20 mA	10 - 30 VDC	200.0	EEx ia IIC T4-T6	417 766 T
4 - 20 mA	10 - 30 VDC	250.0	EEx ia IIC T4-T6	417 767 U
4 - 20 mA	10 - 30 VDC	300.0	EEx ia IIC T4-T6	417 768 D
4 - 20 mA	10 - 30 VDC	400.0	EEx ia IIC T4-T6	417 769 E

Type 8324 with FM/CSA Ex-Certification on request.

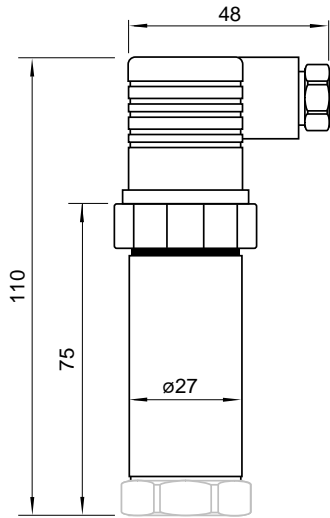
Electrical Connection

2-wire system (DIN 43 650 plug)

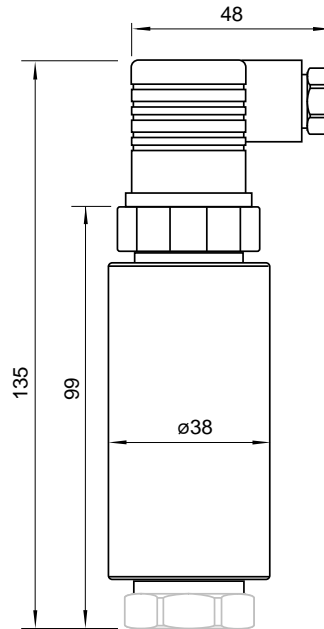


Dimensions [mm]

Type 8323

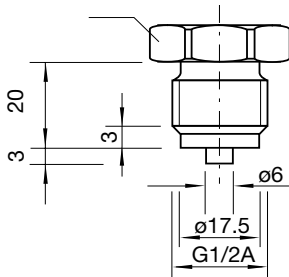


Ex Type 8324

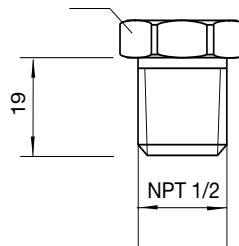


Pressure Connection

G 1/2 A

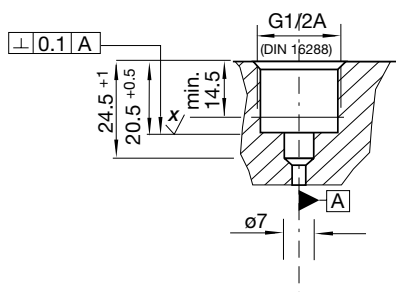


NPT 1/2



Socket for Pressure Connection

G 1/2 A



NPT 1/2

