



Application area

- Chemical industry
- Petrochemical industry

Technical Data

Case design

Designs

- field housing IP 65 or IP 67, with cable gland
- right-angle plug per DIN EN 175301-803-A (DIN 43650 Form A), IP 65
- cable connection, IP 67
- circular connector M12, IP 65
- case material stainless steel
- union nut: polyamide (with plug connector or cable connection for electr. connection)
- electronics encapsulated with silicone.
- Inner chamber aeration for measuring ranges < 16 bar over case thread or connection cable (depending on design)

Process connection

see page 3 and order code for variants material-Nr.: 1.4404 (316L) for the sleeves

Temperature ranges

ambient temperature range: -25...+70 °C
 storage temperature range: -10...+90 °C
 process temperature: see order details

Measuring ranges/overrange limits

see order details
 intermediate measuring ranges upon request

Response time

≤ 20 ms

Measuring accuracy

linearity error incl. hysteresis: <+ 0.2 % f.s.
 (<+ 0.3 % f.s. for measuring ranges ≤ 0...60 bar)
 fixed-point adjustment
 accuracy of adjustment: <± 0.2 % f.s.

temperature effect im compensated temperature range: 0...50°C

a) case

- zero point < 0.2 %/10 K f.s.
- span < 0.2 %/10 K f.s.

b) process connection (diaphragm seal) depending on design

diaphragm	seal zero error
flat diaphragm	
DN 25/1"	4.8 mbar/10 K
DN 32/1 1/2"	2.3 mbar/10 K
DN 40	1.6 mbar/10 K
DN 50/2"	0.6 mbar/10 K
inline diaphragm	seal zero error
DN 25/1"	9.5 mbar/10 K
DN 32/1 1/2"	4.1 mbar/10 K
DN 40	3.9 mbar/10 K
DN 50/2"	3.9 mbar/10 K

The specified zero error for the process connection is a guide value for a standard design. We can provide a detailed system calculation upon request. Systems with reduced diaphragm seal errors are also available.

Auxiliary energy supply

standard design:

- nominal voltage 24 V DC
- function range 6...30 V DC
- max. allowable operating voltage 30 V DC

Supply voltage influence

≤ 0.01 % f.s. / V

Output signal

- 4...20 mA, 2-wire technology
- 0...20 mA, 3-wire technology
- 4...20 mA, 3-wire technology
- 0...10 V, 3-wire technology

Current limitation in output signal

max. output current approx. 30 mA

Features

- Measuring ranges 0...250 mbar up to 0...400 bar
- Linearity error including hysteresis <+ 0.2 % f.s.
- Piezoresistive measuring system
- Separating foil from stainless steel or special materials
- Completely encapsulated electronics
- Stainless steel housing as standard or field housing
- Degree of protection IP 65, IP 67 option
- Various output signals
- Process temperature up to 200 °C

Options

- Explosion protection for gases
- Classification per SIL 2
- Inspection certificate: material certificate as per EN 10204-3.1

Application

The pressure transmitter COMPACT acts as a highly accurate converter of pressure measurements to load-independent current signals. Because of various variants of process connections and materials these transmitters are especially suited for pressure measurement with aggressive, highly viscous, solidifying or crystallizing media. The completely welded stainless steel housing can be designed up to protection type IP 67. The use of temperature decouplers means that the COMPACT pressure transmitter can be used for process temperatures up to 200 °C.

Adjusting range

approx. ± 5 % f.s.; zero point and measuring span separately adjustable

Burden

2-wire circuitry
 standard design $R_a = \frac{U_B - 6 V}{20 \text{ mA}}$ (KOhm)
 U_B = operating voltage
 R_a = max. permissible burden resistance (incl. lead)

Functional safety

EN 61508, classification per SIL 2,
 TÜV-Reg.-No. 44 799 13190204

Burden influence

for 500 ohm burden change: ≤ 0.1 % f.s.

Ex-approval

CENELEC approval according to ATEX
 TÜV 00 ATEX 1557 X
 marking:

II 2 G Ex ib IIC T6 Gb

- U_{max} ≤ 30 V DC
- I_{max} ≤ 150 mA
- P_{max} ≤ 1 W
- C_i ≤ 49 nF
- L_i ≤ 33 µH

Weights (without diaphragm seal)

- field housing: approx. 460 g
- case with connector: approx. 200 g

Installation position

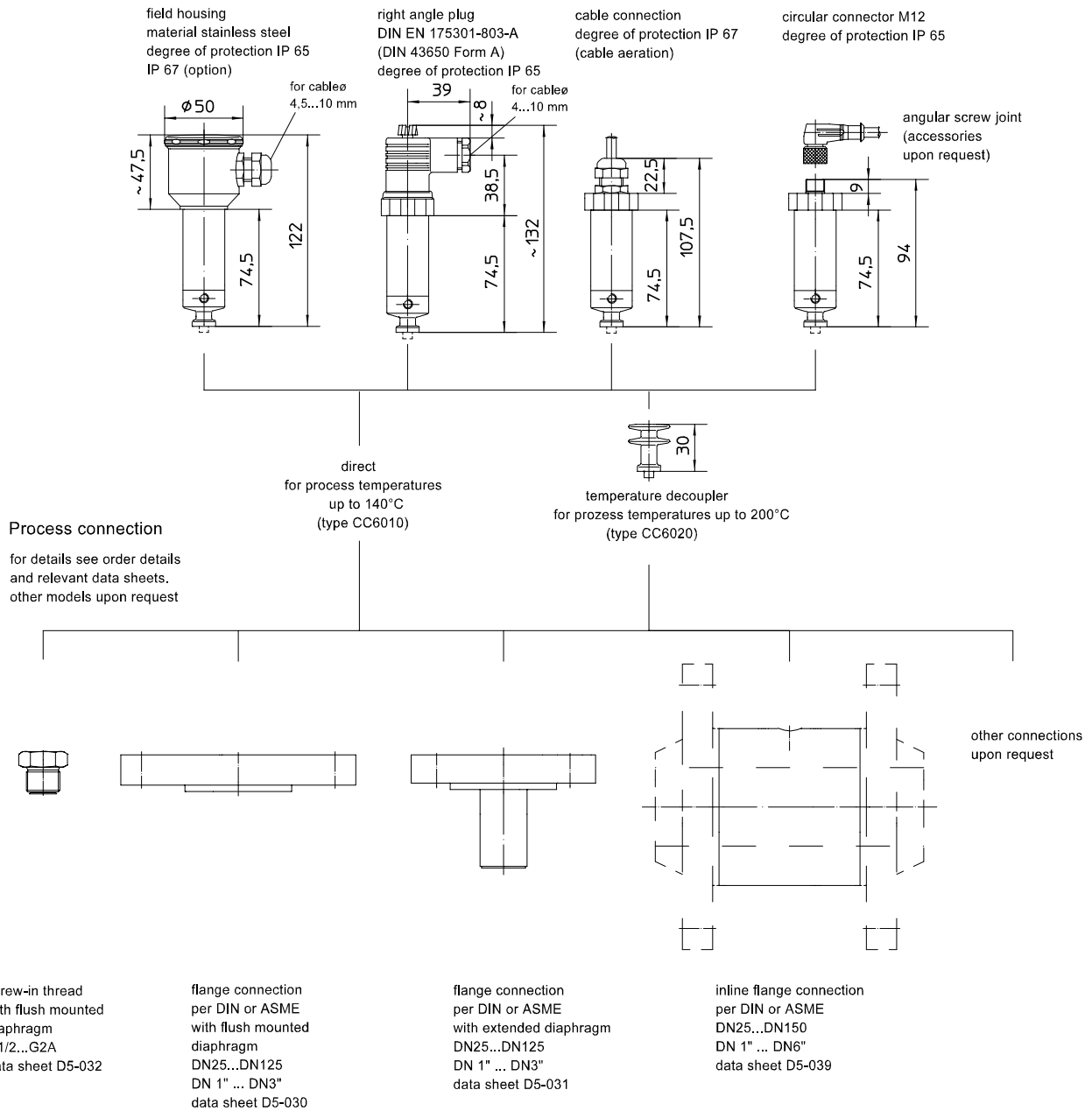
any

EMC test

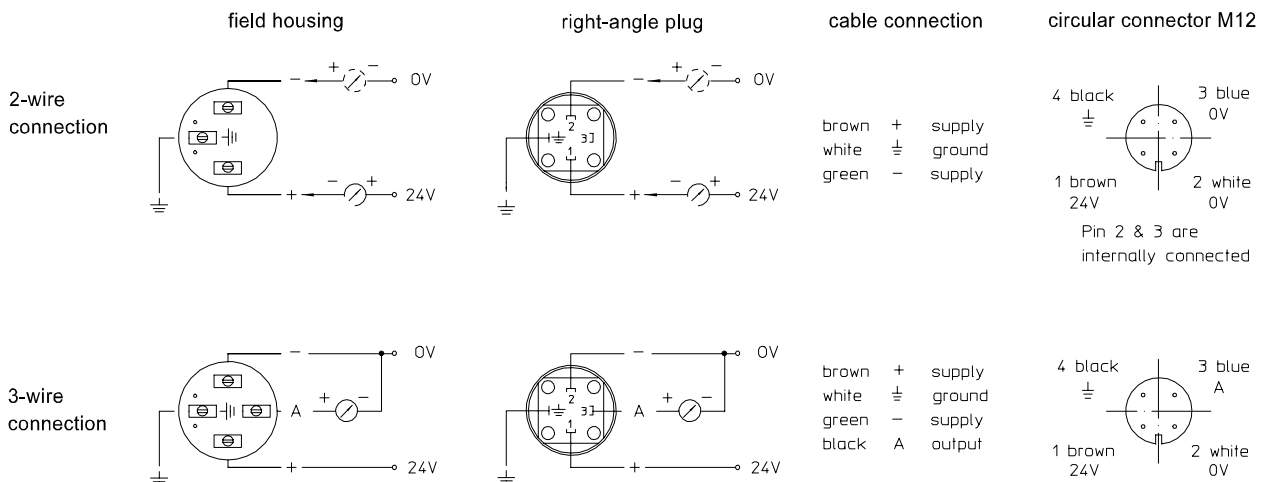
- noise immunity according to EN 50082 section 2, version March 1995 issue for industry
- emitted interference according to EN 50081 section 1, 1993 issue for residential and industrial areas

Device emits no radiation of its own

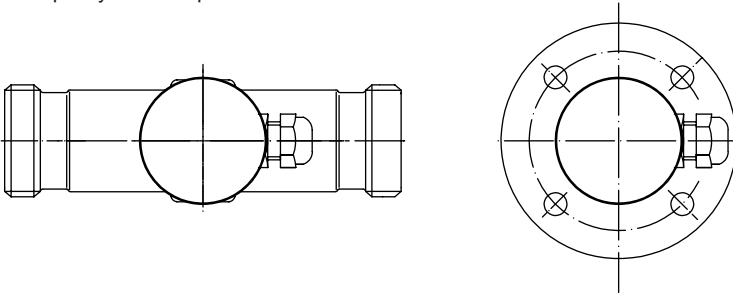
Dimensions/case/process connection




Connection diagram



Standard position of el. connections.
Pls. specify different position.



Order Details - please give additional specifications for models not listed -

Pressure transmitter COMPACT for chemical/petrochemical, type series CC6000-C					
design	· for process temperature to + 140 °C				CC601 .-C
	· for process temperature to + 200 °C				CC602 .-C
Ex protection	· without				0
	·  II 2 G Ex ib IIC T6 Gb				1
meas. range	meas. range	overload limit (bar)			
	0...250 mbar ³	1			A1010
	0...400 mbar	3			A1011
	0...0.6 bar	3			A1052
	0...1 bar	3			A1053
	0...1.6 bar	10			A1054
	0...2.5 bar	10			A1055
	0...4 bar	20			A1056
	0...6 bar	60			A1057
	0...10 bar	60			A1058
	0...16 bar	60			A1059
	0...25 bar	60			A1060
	0...40 bar	100			A1061
	0...60 bar	200			A1062
	0...100 bar	200			A1063
	0...160 bar	250			A1064
	0...250 bar	750			A1065
	0...400 bar	750			A1066
	-250...0 mbar ³	1			A1027
	-400...0 mbar ³	3			A1028
	-0.6...0 bar ¹	3			A1085
	-1...0 bar ¹	3			A1086
	-1...0.6 bar ¹	10			A1087
	-1...1.5 bar ¹	10			A1088
	-1...3 bar ¹	20			A1089
	-1...5 bar ¹	20			A1090
	-1...9 bar ¹	60			A1091
	-1...15 bar ¹	60			A1092
	0...1 bar abs	3			B1053
	0...1.6 bar abs	10			B1054
	0...2.5 bar abs	10			B1055
	0...4 bar abs	10			B1056
	0...6 bar abs	60			B1057
0...10 bar abs	60			B1058	
measuring range as in writing					A9999
output signal	· 4...20 mA, 2-wire technology, standard				H1
	· 0...20 mA, 3-wire technology				H2
	· 4...20 mA, 3-wire technology				H3
	· 0...10 V, 3-wire technology				H4
case/ electrical connections	· field housing of stainless steel, with cable gland	IP 65, measuring ranges ≤ 16 bar, only ⁴			T410
		IP 67			T420
	· right angle plug according to DIN EN 175301-803-A (DIN 43650 Form A), IP 65				
	cable connection IP 67	· 2 m cable length			T310
		· 5 m cable length			T311
		· 10 m cable length			T312
		· cable length as in writing			T319
· circular connector M12, IP 65 ²					T120

continued next page

¹ negative relative pressure ranges (e.g. -1...+1 bar) are adjusted at works to 0...100%, e.g. 4...20mA.

Long-term vacuum measurements at temperatures above +50°C may cause changes in the properties of the measurement device.

² vacuum-proof designs are available upon request

³ plug connector with cable see product group D6 (accessories)

⁴ low pressure ranges with increased temperature influence (zero point and span): max. = 0.4 %/10K

⁵ not valid for absolute pressure

