

DIGITAL PRESSURE TRANSMITTER AND PRESSURE SWITCH



DRUCK & TEMPERATUR

NS 100, Accuracy 1,0%

**with colour-change display
switchable pressure units**

The device has 2 independent switching points with many setting options. An analog signal output offers the possibility of spreading the characteristic curve. All parameters and measuring point protocols can be set via a PC interface (option).



Applications

Technical facility equipment (TGA)
Process engineering, environmental engineering
Environmental technology
Pump control, monitoring, level measurement

Type	3309		Options
Nominal size	100		NS 160
Accuracy	1,0%		0,5% (0...1,6 up to 0...16 bar)
Hysteresis	< 0,5% FS		
Curve deviation	1,0%, incl. none-linearity and hysteresis		0,5% (only certain measuring ranges)
Measuring ranges	0...1,6 bar up to 0...60 bar -1...0 bar up to -1...+24 bar, 0...-1 bar		
Materials	Case, bayonet ring 1.4301 Front plate Aluminium Cover PET Seal bayonet ring NBR Blowout FKM Diaphragm Ceramic Sealing FKM		Special materials for dirty or aggressive media on request
Process connection	G1/2B, 1.4404		G1/4B, 1/4NPT, 7/16UNF
Connection position	radial bottom		at 3, 9, 12 o'clock
Temperatures	Ambient: -10°C...+70°C Medium: -10°C...+70°C Storage: -20°C...+70°C		
Protection class	IP65 according to EN 60529		
Auxiliary energy	Rated Voltage: 24 V AC/DC Admissible operating voltage: $U_b = 12...32 V_{DC}$ $U_b = 16.5...32 V_{AC}$ Electrical connection: 5-pin M12 circular plug connector		
Analogue output 3-wire	Output signal 0...20 mA, 4...20 mA 0...10 V	Signal range 0,0...21,0 mA 0,0...11,0 V	Apparent ohmic resistance $R_L \leq 600 \Omega$ $R_L \geq 2 k\Omega$
Switching outputs switching function	<u>Relais</u> NO NC	<u>MOSFET</u> one-pin activator (NO) one-pin deactivator (NC)	
max. switching voltage	32 V AC/DC	3...32 V AC/DC	
max. switching current	2 A	0,25 A	
max. switching output	60 W (VA)	8W / 8 VA, $R_{on} \leq 1 \Omega$	
Display	4...6 digit LCD, full graphic, backlit in colour		
Accessories	see page 3		

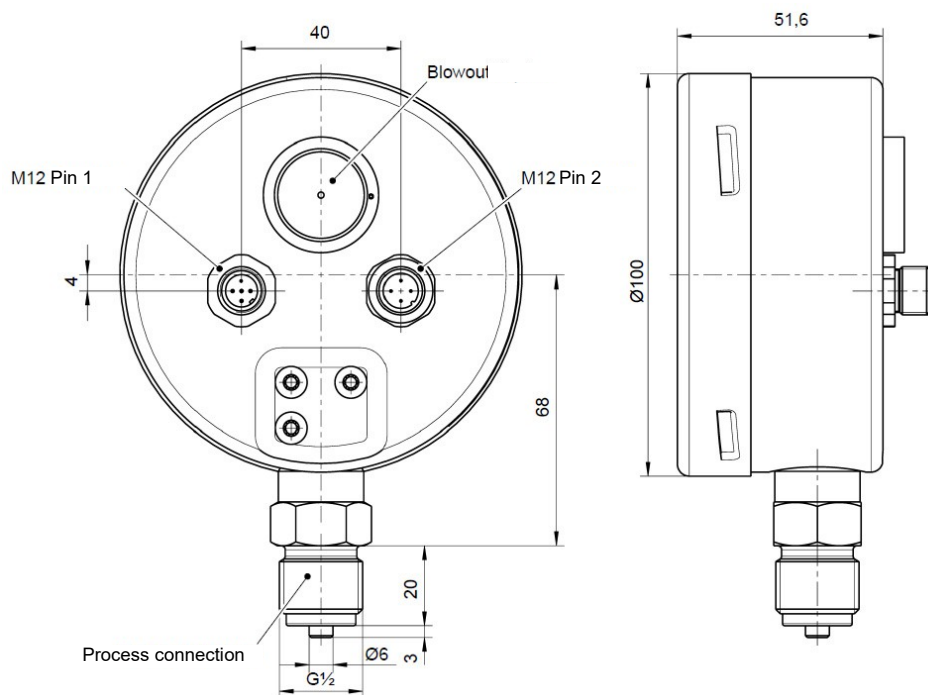
Type 3309

Dimensional drawings

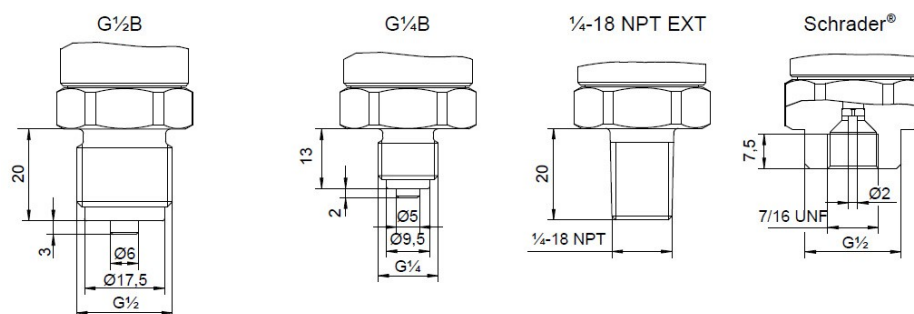
Dimensions in mm



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Process connection



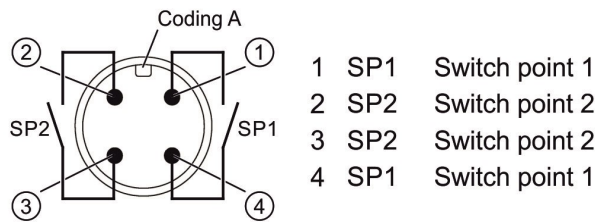
Input variables

Range	Overpressure	Burst pressure	Range	Overpressure	Burst pressure
0...1,6 bar	4 bar	7 bar	0 -1 bar	4 bar	7 bar
0...2,5 bar	10 bar	15 bar	-1...0 bar	4 bar	7 bar
0...4 bar	10 bar	15 bar	-1...0,6 bar	4 bar	7 bar
0...6 bar	20 bar	35 bar	-1...1,5 bar	4 bar	7 bar
0...10 bar	40 bar	70 bar	-1...3 bar	10 bar	15 bar
0...16 bar	40 bar	70 bar	-1...5 bar	20 bar	35 bar
0...25 bar	100 bar	150 bar	-1...9 bar	40 bar	70 bar
0...40 bar	100 bar	150 bar	-1...15 bar	40 bar	70 bar
0...60 bar	200 bar	250 bar	-1...24 bar	100 bar	150 bar

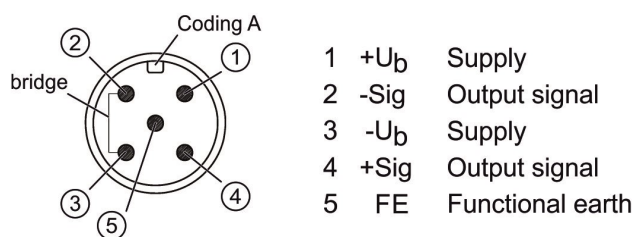
Type 3309

Electrical connection

Connector 1 - Supply and output



Connector 2 - switching output



Programming

Damping

0,0...100,0 s (step response 10/90%)

Switch output

Switch-off point, Switch-on point, delay (0...1800s),

Function (NC / NO contact)

Measuring range unit

bar, PSI, kPa, "free unit"

starting value, end value and decimal point for „free unit“

Output signal

User-definable

Adjustable within the basic measuring range

Zero-point stabilising

0...1/3 of the basic measuring range

Zero-point adjustment (offset)

± 1/3 of the basic measuring range

Implementation of characteristic curve

linear, square rooted, table with 3...30 support points

Password

001...999 (000 = no password protection)

Accessories

Connection cable for switching outputs with M12 connector; 2 or 5 m length

Connection cable for supply/signal with M12 connector; 2 or 5 m length

Transmitter PC Interface incl. PC-Software