

# INDUSTRIAL PRESSURE TRANSMITTER/SWITCH WITH DISPLAY

## PN20 SERIES

1/4" Male NPT Process Connection

2 Outputs:  
 OUT1 = Switching Output  
 OUT2 = Switching or Analog Output  
 4 to 20 mA / 0 to 10 V Output

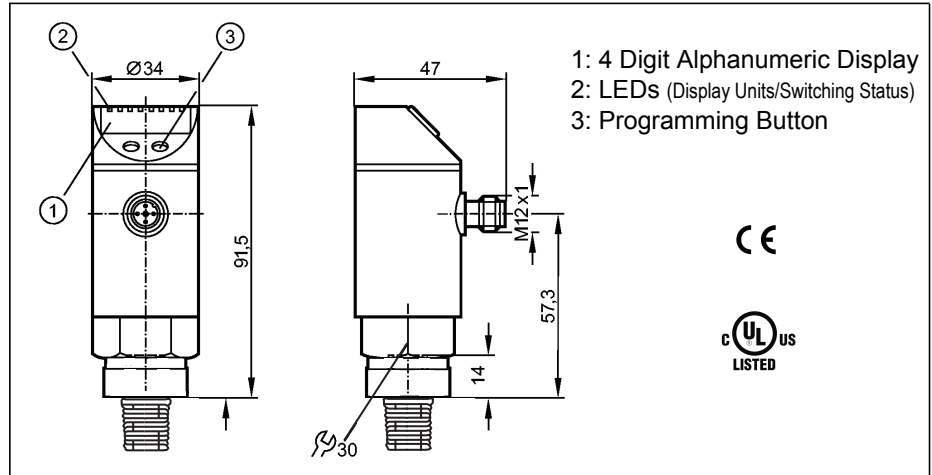
4 Digit LCD Display

Simple Pushbutton Set-Up

Zero & Span Adjustable

Quickly Connects with Water Tight Standard M12 Industrial Connector  
*(Cables and Connectors Sold Separately)*

Available in the following Ranges and % of Span with Field Selectable Scale



Model	PSI	BAR	MPa	"H2O	mBAR	kPa
PN2009	-14.50 to 14.50	--	--	-401.4 to 401.4	-1000 to 1000	--
PN2028	-00.18 to 3.630	--	--	-05.00 to 100.4	-12.50 to 250.0	-01.25 to 25.00
PN2027	-00.58 to 14.50	--	--	-20.07 to 401.4	-050.0 to 1000	-05.00 to 100.0
PN2026	-01.45 to 36.26	-00.13 to 02.50	--	--	--	-12.50 to 250.0
PN2024	-14.50 to 145.0	-01.00 to 10.00	--	--	--	-100.0 to 1000
PN2023	-14.50 to 362.5	-01.00 to 25.00	-00.10 to 02.50	--	--	--
PN2022	00.00 to 1450	00.00 to 100.0	00.00 to 10.00	--	--	--
PN2021	00.00 to 3630	00.00 to 250.0	00.00 to 25.00	--	--	--
PN2020	00.00 to 5800	00.00 to 400.0	00.00 to 40.00	--	--	--

Applications

Electrical Design

Output

Type of Pressure: Relative Pressure  
 Liquids and Gases  
 DC PNP/NPN

2 x Normally Open/Closed Programmable or 1 x Normally Open/Closed Programmable + 1 x Analog (4...20mA / 0 to 10 V; Programmable 1:4)

Operating Voltage [V]	20...30 Volts DC
Current Rating (mAmps)	2 x 250
Short-Circuit Protection	Yes (Non-Latching)
Reverse Polarity Protection	Yes
Overload Protection	Yes
Integrated Watchdog	Yes
Voltage Drop	< 2
Current Consumption (mAmp)	< 65
Analog Output	4... 20 mAmp / 0... 10 V
Load for Analog Output (ohms)	4...20 mAmp: max. (U <sub>b</sub> - 10 V) x 50 / 0...10 V: min. 2000
Pressure Rating (min)	1.5 x Pressure Rating
Bursting Pressure (min)	2.5 x Pressure Rating

Accuracy / Deviations (in % of span) Turn Down 1:1	
Switch Point Accuracy	< ± 0.5
Characteristics Deviation *)	< ± 0.25 (BFSL) ; / < ± 0.5 (LS)
Linearity	< ± 0.5
Hysteresis	< ± 0.1
Repeatability **)	< ± 0.1
Long-Term Stability ***)	< ± 0.1

Temperature Coefficients (TEMPCO) in the Temperature Range of 0...80°C (in % of the Span Per 10 K)	
Greatest TEMPCO of the Zero Point	< ± 0.1
Greatest TEMPCO of the Span	< ± 0.2



CHICAGO STAINLESS EQUIPMENT

# INDUSTRIAL PRESSURE TRANSMITTER/SWITCH WITH DISPLAY

Power-On Delay Time (sec)	0.2
Min. Switching Response Time (ms)	3
Switching Frequency (Hz)	≤ 160
Response Time Analog Output (ms)	3
Ambient Temperature (°C)	-25...80
Medium Temperature (°C)	-25...80
Storage Temperature (°C)	-40...100
Protection	IP65, III
Insulation Resistance (MΩ)	> 100 (500 V DC)
Shock Resistance	DIN IEC 68-2-27: 50 g (11ms)
Vibration Resistance	DIN IEC 68-2-6: 20 g (10... 2000Hz)
Switching Cycles min.	100 Million
EMC	EN61000-4-2 ESD: 4kV CD / 8 kV AD EN61000-4-3 HF Radiated: 10V/m EN61000-4-4 Burst: 2kV EN 61000-4-5 Surge: 0.5/1 kV EN61000-4-6 HF Conducted: 10 V
Housing Materials	Stainless Steel 304 & 316L/1.4404; PC (Makrolon); PBT (Pocan); PEI; FPM (Viton); PTFE
Materials Wetted Surfaces	Stainless Steel 303S22; Ceramics (99.9% Al2 O3); FPM (Viton)
Connection	M12 Connector; Gold-Plated Contacts
Remarks	The device shall be supplied from an isolating source and protected by an overcurrent device such that the limited voltage circuit requirements in accordance with UL 508 are met. *) BFSL = Best Fit Straight Line / LS = Limit Value Setting **) With Temperature Fluctuations < 10 K ***) In % of Span per Year

## Wiring

Programmin of the Output Function:

### OUT1/OUT2

Hno = Hysteresis / Normally Open

Hnc = Hysteresis / Normally Closed

Fno - Window Function / Normally Open

Fnc = Window Function / Normally Closed

Complementary Outputs:

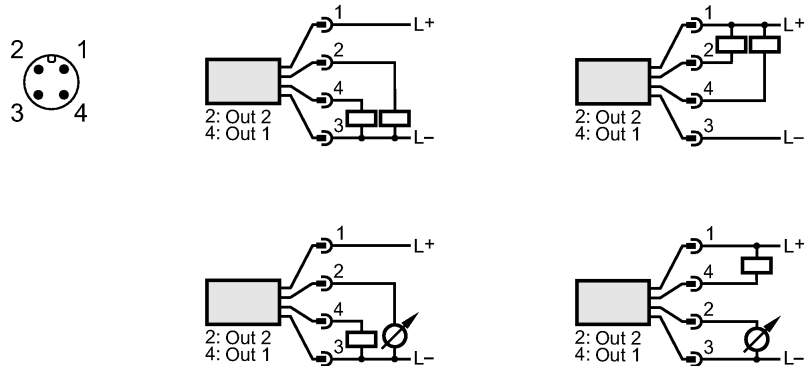
Output 1: = Hno, Output 2 = Hnc

(with same SP / rP)

Programming of the Analog Output (OUT2)

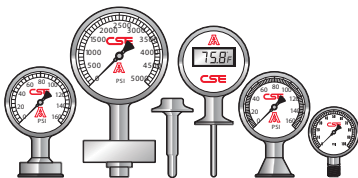
I = Current Output (4...20 mAmp)

U = Voltage Output (0...10 V)



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Chicago Stainless Equipment  
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www.chicagostainless.com  
pt@chicagostainless.com



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