

# SDP-5 dP Sensors

## 1. Definitions

- URL: Upper Range Limit (max. value)
- Zero: Lowest value of the dP-range
- Span: The difference between highest and lowest calibrated differential pressure
- Accuracy: Includes hysteresis, linearity, repeatability

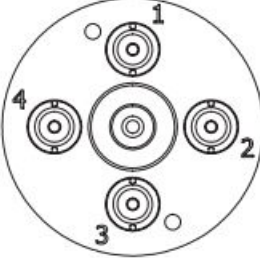
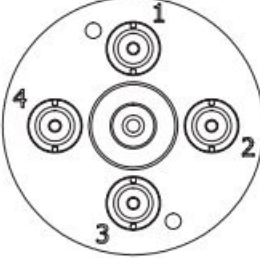
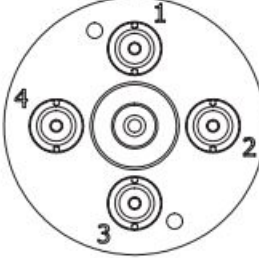
## Specifications

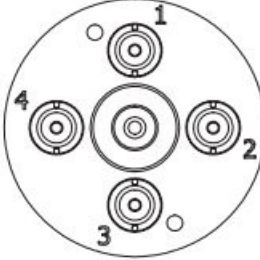
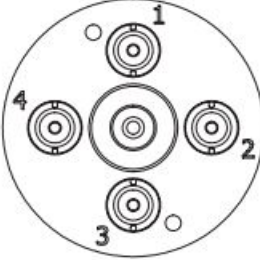
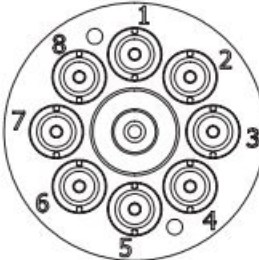
Description	Specifications	Note
Pressure		
Sensing element	Silicon	
Differential Pressure Range (URL)	0-0.32 bar / 0-1.3 bar / 0-5 bar / 0-30 bar	
Maximum Line Pressure	690 Bar (10000 PSI)	
Test pressure	1035 Bar (15000 PSI)	
Accuracy	± 0.065 % Span (CR)	Note 1
Stability (drift)	± 0.1% Of URL for 24 months	
Line pressure effect, Zero, 0-1035Bar	± 0.2% of URL/100 Bar	Note 2
Line pressure effect, Span, 0-1035 Bar	- 0.2% of cal. <u>Span(CR)</u> /100 Bar	Note 3
Temp. effect, 0-1035 Bar	± (0.25xSpan + 0.05xURL)/1400 [ <u>mBar/°C</u> ]	Note 4

Mechanical		Note
Process Interface:	Stud pipes, other on request Acc. to NACE MR-0175/API PSL3, NORSOK M-630	
Flange/Housing Material	Acc. to NACE MR-0175/API PSL3, NORSOK M-630 Wetted parts material Inconel 625/ <u>Hastell</u>	
Wetted parts material	Inconel 625/Hastelloy C276/S-Duplex/ Acc. to NACE MR-0175/API PSL3, NORSOK M-630	
EB Welding	According to ASME IX/ <u>Norsok M-601</u>	
General		
Ambient temperature	-20 to +50 °C (-4 to 122 °F)	
Operating temperature	-40 to 120°C (-40 to 248 °F)	Note 5
Storage temperature	-20 to + 30 °C (-4 to 86 °F)	
Design Lifetime	> 30 Year	
Shock	30 g, half sine 11 msec	
Vibration	± 5 g, 25 - 1000 Hz	
Hyperbaric pressure	3000 m ( <u>Cable assy</u> not included)	
High pressure containment		Note 6
Painting	According to NORSOK M501, System 7 (on request only) (others on request)	
Electrical/Protocols	See Item 2	

## Electrical Specifications

Description/Protocol	Specifications
<b>Analogue 4-20mA</b>	
Supply Voltage	24 VDC, (14 to 30 VDC), max 250Ω load resistor
Current Consumption	=< 20 mA @ 24VDC
Response time	Default 1 time/sec
<b>HART</b>	
Supply Voltage	24 VDC, (14 to 30 VDC), max 250Ω load resistor
Current Consumption	=< 20 mA @ 24VDC
Response time	Default 1 time/sec
<b>RS485 KOS</b>	
Supply Voltage	24 VDC (13 – 28 VDC)
Current Consumption	< 35 mA @ 24VDC
Speed	1200 baud
Response time	Default 1 time/sec
<b>CANopen * FT/HS</b>	
Supply Voltage	24 VDC (13 – 28 VDC)
Current Consumption	< 35 mA @ 24VDC
Speed	Default 50kbit/s, other on request
Response time	Default 1 time/sec
<b>RS485 Modbus RTU</b>	
Supply Voltage	24 VDC (13 – 28 VDC)
Current Consumption	< 35 mA @ 24VDC
No	Description
Note 1	For spans greater than 1/10 of URL for 0-1, 3, 0-15 and 0-30 Bar transmitter. For 0-0, 32 Bar type of transmitter no re-ranging available.
Note 2	Zero shift, if calibrated at actual line pressure the zero effect can be neglected.
Note 3	Span shift
Note 4	-40 to +85 °C < 500 Bar Line pressure Note
Note 5	Upper Operating Temp. Can be increased to +150 °C if temperature analysis proves that the temperature around the electronic board does not exceed +40 °C
Note 6	If Duplex - 345 Bar (5000 PSI) 4-20 mA HART RS485 KO

4-20 mA	HART	RS485 KOS
		
PIN 1: Power Supply 24 VDC +	PIN 1: Power Supply 24 VDC +	PIN 1: Power Supply 24 VDC +
PIN 2: Power Supply 24 VDC -	PIN 2: Power Supply 24 VDC -	PIN 2: Power Supply 24 VDC -
PIN 3: Not Connected	PIN 3: Not Connected	PIN 3: RS485 A
PIN 4: Not Connected	PIN 4: Not Connected	PIN 4: RS485 B

CANopen * FT/HS	RS 485 Modbus RTU	CANopen/Hart
		
PIN 1: Power Supply 24 VDC +	PIN 1: Power Supply 24 VDC +	PIN 1: Power Supply 24 VDC +
PIN 2: Power Supply 24 VDC -	PIN 2: Power Supply 24 VDC -	PIN 2: Power Supply 24 VDC -
PIN 3: CANH	PIN 3: RS485 A	PIN 3: CANH
PIN 4: CANL	PIN 4: RS485 B	PIN 4: CANL
		PIN 5: Hart +
		PIN 6: Hart -
		PIN 7: Not Connected
		PIN 8: Not Connected

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