



Ex-DNS3

## Ex - DNS / Ex - VNS

II 2G Ex d e IIC T6 Gb

II 1/2D Ex ta/tb IIIC T80 °C Da/Db

Pressure switches of the NDS series and suitable for monitoring and controlling pressures in chemical plants, process engineering and any situation where the pressure of aggressive liquid and gases must be monitored.

All components of the sensor system are made of high quality stainless steel (1.4571) and welded using the latest methods without filler metals. The pressure sensor is gasket free plasma welded.



SIL 2 according IEC 61508-2

### Technical data

#### Pressure connection

External thread G 1/2 (pressure gauge connection) according to DIN 16 288 and internal thread G 1/4 according to ISO 228 Part 1.

#### Switching device

Robust housing (700) made of seawater resistant die cast aluminium GD Al Si 12.

#### Protection class

IP 65

#### Pressure sensor materials

Pressure bellows and all parts in contact with medium. X 6 Cr Ni Mo Ti 17122 Material no. 1.4571

#### Mounting position

Vertically upright.

#### Max. ambient temperature at switching device

-20...+60 °C.

#### Max. medium temperature

The maximum medium temperature at the pressure sensor must not exceed the permitted ambient temperature at the switching device. Higher medium temperatures are possible provided the above limit values for the switching device are ensured by suitable measures (e.g. siphon).

#### Mounting

Directly on the pressure line (pressure gauge connection) or on a flat surface with two 4 mm Ø screws.

#### Switching pressure

Adjustable from outside with screw driver.

#### Contact arrangement

Single pole change over switch.

Switching capacity	250 VAC		250 VDC	
	(ohm)	(ind)	(ohm)	(ohm)
Ex-d	3 A	2 A	0.1 A	3 A

#### Plastic coating

The die cast aluminium housing in GD Al Si is chromated and stove enamelled with resistant plastic. Corrosion tests with 3% saline solution and 30 temperature changes from +10 to +80°C showed no surface changes after 20 days.

### Product Summary

Type	Setting range	Switching differential (mean values)	Max. permissible pressure	Dimensioned drawing
<b>Switching differential not adjustable</b>				<b>page 21 + 22</b>
Ex-VNS301	-250...+100 mbar	45 mbar	3 bar	
Ex-VNS111	-1*...+0.1 bar	50 mbar	6 bar	
Ex-DNS025	0.04...0.25 bar	30 mbar	6 bar	4 + 15
Ex-DNS06	0.1...0.6 bar	40 mbar	6 bar	
Ex-DNS1	0.2...1.6 bar	60 mbar	6 bar	
Ex-DNS3	0.2...2.5 bar	0.1 bar	16 bar	4 + 18
Ex-DNS6	0.5...6 bar	0.15 bar	16 bar	
Ex-DNS10	1...10 bar	0.3 bar	16 bar	4 + 16
Ex-DNS16	3...16 bar	0.5 bar	25 bar	

\* At very high vacuums, close to the theoretical maximum of -1 bar, the switch may not be usable in view of the special conditions of vacuum engineering. However, the pressure switch itself will not be damaged at maximum vacuum.

### Calibration

The Ex-DNS and Ex-VNS series are calibrated for falling pressure. This means that the adjustable switching pressure on the scale corresponds to the switching point at falling pressure. The reset point is higher by the amount of the switching differential. (See also page 23, 1. Calibration at lower switching point).