



DNS6-351

DNS/VNS

Pressure and vacuum switches with stainless steel sensors (1.4571)

Chemical version (switching housing with surface protection)

Pressure switches of the DNS series are suitable for monitoring and controlling pressures in chemical plants, process engineering and any situation where the pressure of aggressive

liquids and gases must be monitored. All components of the sensor system are made from highquality 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 (300) made of seawater-resistant die cast aluminium GD Al Si 12
Protection class	IP 65, in vertical position
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 and horizontal
Max. ambient temperature at switching device	-25 to +70 °C
Max. medium temperature	The maximum medium temperature at the pressure sensor must not exceed the permitted ambient temperature at the switching device. Temperatures may reach 85 °C for short periods. Higher medium temperatures are possible provided the upper limit at the switching device is ensured by suitable measures (e.g. siphon).
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
Contact arrangement	Single pole change over switch

Switching capacity	250 VAC (ohm)	250 VDC (ind)	250 VDC (ohm)	24 VDC (ohm)
Normal	8 A	5 A	0.3 A	8 A

Type	Setting range	Switching differential (mean value)	Max. permissible pressure	Dimensioned drawing
Hysteresis not adjustable				page 21 + 22
VNS301-351	-250...+100 mbar	45 mbar	3 bar	
VNS111-351	-1*...+0.1 bar	50 mbar	6 bar	
DNS025-351	0.04...0.25 bar	30 mbar	6 bar	2 + 15
DNS06-351	0.1...0.6 bar	40 mbar	6 bar	
DNS1-351	0.2...1.6 bar	60 mbar	6 bar	
DNS3-351	0.2...2.5 bar	0.1 bar	16 bar	2 + 18
DNS6-351	0.5...6 bar	0.15 bar	16 bar	
DNS10-351	1...10 bar	0.3 bar	16 bar	2 + 16
DNS16-351	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 **DNS** and **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).

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