



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.

Type	Setting range	Switching differential (Tolerance)	Max. permissible pressure	Dimensioned drawing
Hysteresis not adjustable				page 21 + 22
VNS301-351	-250...+100mbar	30 ... 60mbar	3bar	2 + 15
VNS111-351	-1*...+0,1bar	30 ... 70mbar	6bar	
DNS025-351	0,04...0,25bar	20 ... 40mbar	6bar	
DNS06-351	0,1...0,6bar	10 ... 50mbar	6bar	
DNS1-351	0,2...1,6bar	40 ... 80mbar	6bar	2 + 18
DNS3-351	0,2...2,5bar	60 ... 140mbar	16bar	
DNS6-351	0,5...6bar	0,07 ... 0,23bar	16bar	2 + 17
DNS10-351	1...10bar	0,2 ... 0,4bar	16bar	
DNS16-351	3...16bar	0,3 ... 0,7bar	25bar	

* 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).

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