

Pressure switch, group DS-W

The pressure switches comprising this Group are designed to be mounted on a wall. The switching element (changeover contact) is built into an air-tight, distortion-resistant plastic housing (conforming to UL specifications). When the switching pressure is reached it is actuated by a pin connected to a spring-loaded membrane. The switching pressure is set at the factory and is nonadjustable.

The pressure switch is available in three different plug versions. When inductive loads are switched off it is possible for protective circuits (RC elements or varistors) to limit voltage spikes and thus increase the life of the contacts (spark quenching).

Please note! An incorrectly dimensioned interference suppression circuit can cause greater wear than none at all. The following guideline value applies to the dimensioning: 1 µF per ampere of switching current for the capacitor C and resistor R, roughly equal to the DC resistance of the switched coil. However, it is always absolutely necessary to test the interference suppression circuit with measurements.

The DIN 43235 standards sheet provides information on the exact calculations to be performed for overvoltage limitation elements in DC networks.

When the pressure-switch signal is evaluated by external control systems (PLC or the like), pay attention to the limit values indicated for the switching contact. If the switch is to be operated out-side its limit values, please indicate the same when ordering.

Technical Data

Rated switching pressure	cf. table
Permissible operating pressure ¹⁾	45 bars
Contact load, max.	125 VA
Switching voltage, max.	250 V AC / 30 V DC
Switching current	2 mA min. / 300 mA max.
Operating temperature, max.	+60 °C
Type of contact	changeover
Switching frequency	30 1/min
Mechanical service life	5x10 ⁶ switching operations
Type of enclosure (with line socket)	IP 65
Housing material	PBT+PC (UL 94-V0)
Contact material/switch module	AuAg25Pt6
Material membrane	FKM (FPM)
Fluid	mineral oils, fluid grease, compressed air
Mounting position	any

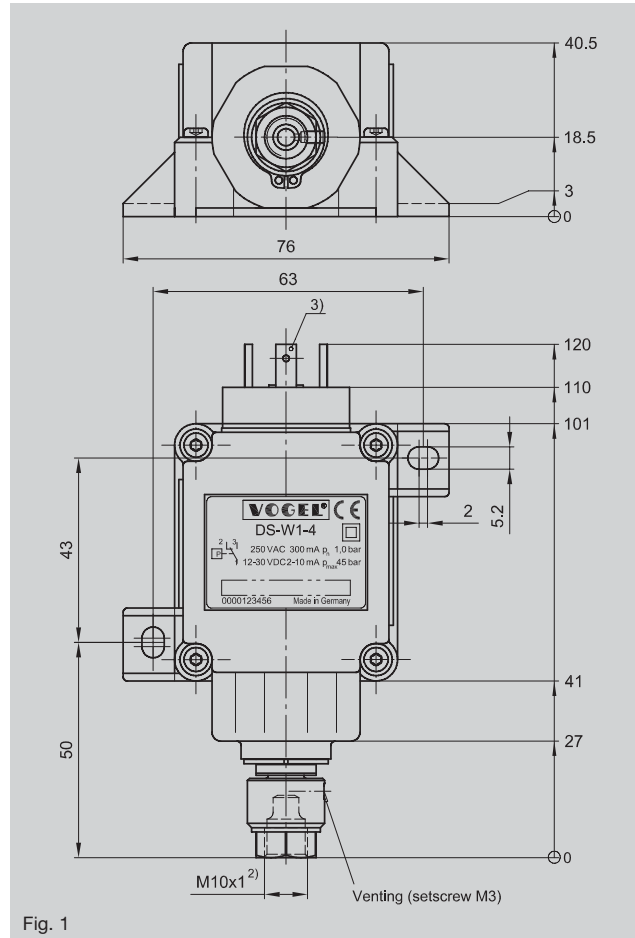


Fig. 1

Pressure switch with connector to DIN EN 175301-803
Illustration: (DS-W1-4)

- 1) A safety valve has to be provided for in the system to keep the maximum permissible pressure from being exceeded.
- 2) Ports tapped for solderless tube connection for tube diam. 6.
- 3) Für Druckschalter mit Anschlussstecker nach DIN EN 175301-803 (DS-W..-4) sind Kabel Dosen gesondert zu bestellen:
Cable socket, order No. 179-990-034
Cable socket with indication lamp for 220 V AC, order No. 179-990-110
Cable socket with indication lamp for 24 V DC, order No. 179-990-111

Attention: The connection of the pressure line and the fastening of the mounting screw may not introduce strain to the assembly.

DIN EN 175301-803 (cube plug) Order No.	Connector plug to DIN EN 175201-804 (6 pole machine plug) Order No.	ISO 60947-5-2 (4 pole sensor plug) Order No.	Rated switching pressure nonadjustable [bars]
DS-W1-4	DS-W1-4-S9	DS-W1-5	1 +0.3
DS-W2-4	DS-W2-4-S9	DS-W2-5	2 +0.5
DS-W3-4	DS-W3-4-S9	DS-W3-5	3 -0.5
DS-W5-4	DS-W5-4-S9	DS-W5-5	5 ±0.5
DS-W8-4	DS-W8-4-S9	DS-W8-5	8
DS-W12-4	DS-W12-4-S9	DS-W12-5	12
DS-W20-4	DS-W20-4-S9	DS-W20-5	20 +0.5 -1.5
DS-W25-4	DS-W25-4-S9	DS-W25-5	25
DS-W30-4	DS-W30-4-S9	DS-W30-5	30