

**Pneumatic Pressure Switches**

- Gold-plated contacts in microswitch
- High number of switching cycles
- Vibration resistant to 15g
- Microswitch approved by UL and CSA
- Intrinsically safe operation


**Technical Data**
**Fluid:**

Neutral, gaseous and liquid fluids

**Operation:**

Diaphragm

**Port size:**

G1/4 (BSPP), 1/4 NPT, Flange

**Operating Pressure:**

-1 to 30 bar

**Operating Temperature:**

-10 to + 80 °C

**Operating Viscosity:**

Up to 1000 mm<sup>2</sup>/s (±450ssn).

**Fluid Temperature:**

-20 to +80°C

**Maximum temperature at switching element:**

+80°C

**Repeatability:**

±3%, for vacuum ±4%

**Electrical Connection:**

Acc. to DIN 43650

**Switching Element:**

Microswitch

**Degree of Protection:**

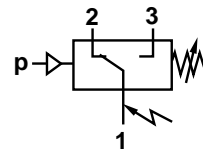
IP65

**Mounting:**

Optional

**Ordering Information**

To order, quote part number from table overleaf, e.g. a G1/4" ported switch with a pressure range of -1 to 0 bar is VH 0880100.


**Switching function:**

Microswitch SPDT

Terminals 1 - 3:

Contacts close on rising pressure.

Terminals 1 - 2:

Contacts open on rising pressure.



General Information

Part Number	Pressure Range (bar) ††	Switching Pressure Difference ** (bar) ††		Maximum Over Pressure * (bar) ††	Switching (Cycles per min)	Pressure Sensor Materials		Fluid Connection		Weight (kg)	Dimension Drawing No.
		Lower Range	Upper Range			Housing	Seal Dyn./Static	Type	Size		
VH 0880100	-1 – 0	0,15	0,18	80	100	AL	FKM †	Female	G1/4	0,2	01
VH 0880120	-1 – 0	0,15	0,18	80	100	AL	FKM †	Female	1/4 NPT	0,2	02
VH 0880126 Δ	-1 – 0	0,15	0,18	80	100	AL	FKM †	Female	G1/4	0,2	03
VH 0881100	-1 – 0	0,15	0,18	80	100	AL	FKM †	Flange	-	0,2	03
VH 0880200	0,2 – 2	0,15	0,27	80	100	AL	FKM †	Female	G1/4	0,3	02
VH 0880220	0,2 – 2	0,15	0,27	80	100	AL	FKM	Female	1/4 NPT	0,2	02
VH 0880226 Δ	0,2 – 2	0,15	0,27	80	100	AL	FKM	Female	G1/4	0,2	04
VH 0881200	0,2 – 2	0,15	0,27	80	100	AL	NBR	Flange	-	0,2	04
VH 0880300	0,5 – 8	0,25	0,65	80	100	AL	NBR	Female	G1/4	0,2	01
VH 0880320	0,5 – 8	0,25	0,65	80	100	AL	NBR	Female	1/4 NPT	0,2	02
VH 0880326 Δ	0,5 – 8	0,25	0,65	80	100	AL	NBR	Female	G1/4	0,2	02
VH 0881300	0,5 – 8	0,25	0,65	80	100	AL	NBR	Flange	-	0,2	01
VH 0880400	1 – 16	0,30	0,90	80	100	AL	NBR	Female	G1/4	0,2	02
VH 0880420	1 – 16	0,30	0,90	80	100	AL	NBR	Female	1/4 NPT	0,2	01
VH 0880426 Δ	1 – 16	0,30	0,90	80	100	AL	NBR	Female	G1/4	0,2	02
VH 0881400	1 – 16	0,30	0,90	80	100	AL	NBR	Flange	-	0,2	01
VH 0880600	1 – 30	1,0	5,00	80	100	AL	NBR	Female	G1/4	0,2	02
VH 0880620	1 – 30	1,0	5,00	80	100	AL	NBR	Female	1/4 NPT	0,2	02

\* Observe switching range. Do not subject switch to max. allowable pressure during normal operation. Even short pressure peaks must not exceed this value.

\*\* Max. values.

† Static seal: O-ring (NBR)

†† 1 bar = 14.503 psi.

Δ Free of laquer impairing substances.

Key to materials: AI = Aluminium  
NBR = Perbunan  
FKM = Viton

Making and/or breaking capacity

Change-over switch with gold-plated contacts

Load Level	Type of Current	Type of Load	U <sub>min</sub> [V]	Maximum Permanent Current I <sub>max</sub> [A] at U [V]					Contact life <sup>1</sup>	
				30	48	60	125	250	electrical at I <sub>max</sub>	mechanical at I = 0
Standard * (e.g. contractors, solenoids)	AC	Resistive load	12	5	5	5	5	5	5 x 10 <sup>4</sup> switching cycles	≥10 <sup>7</sup> switching cycles
	AC	Inductive load, cos φ ≈ 0.7	12	3	3	3	3			
	DC	Resistive load	12	5	1,2	0,8	0,4	-		
	DC	Inductive load, L/R = 10 ms	12	3	0,5	0,35	0,05	-		
Low ** (e.g. electronic circuits)	AC	Resistive load	5 ††	0,34	0,2	0,17	0,08	0,04	2 x 10 <sup>5</sup> switching cycles	≥ 10 <sup>7</sup> switching cycles
	DC	Inductive load, L/R = 10 ms	5 ††	0,1	0,01	-	-	-		

Reference number of switchings: 30/min, Reference temperature: +30°C

Spark quenching with diode with DC and inductive load:

I<sub>max</sub> = 1.5 x I<sub>max</sub> of table

I<sub>min</sub> = 1 [mA]

Creepage and air paths correspond to insulation group B according to VDE Reg. 0110 (except contact clearance of microswitch).

\* Gold-plating not required as it would decay. Max. perm. in-rush current (appr. 30 ms) AC<sub>make</sub> = max. 15A.

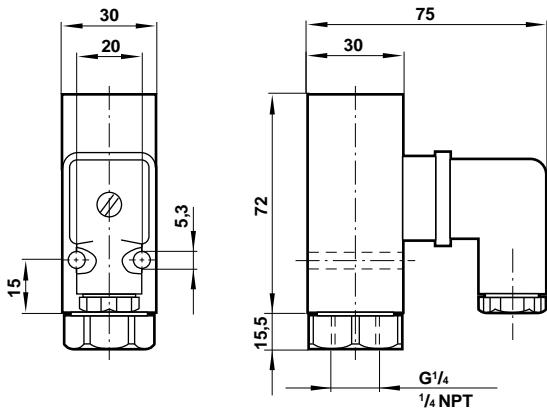
\*\* Gold-plating required (will not decay).

† 50% of the respective switching current I nearly doubles contact life. The mechanical life depends on the field of application.

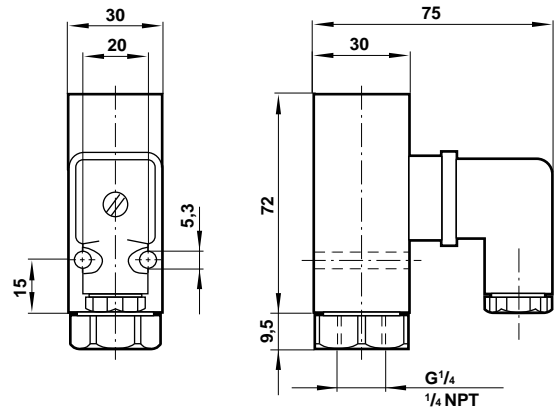
†† Lower value of critical voltage guarantees sufficient contact safety. Lower voltages permissible under favourable conditions.



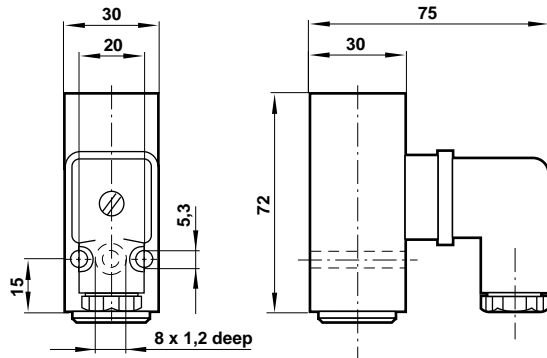
Dimensional drawing 01



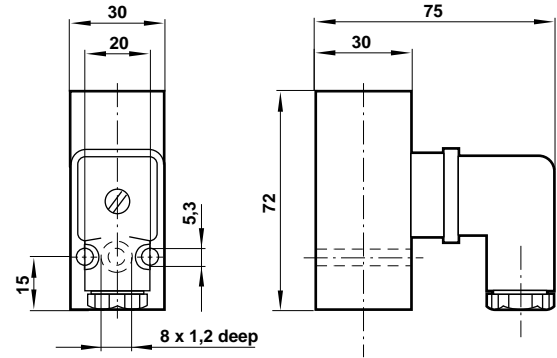
Dimensional drawing 02



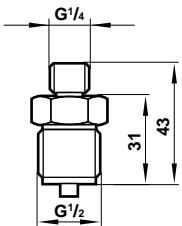
Dimensional drawing 03



Dimensional drawing 04

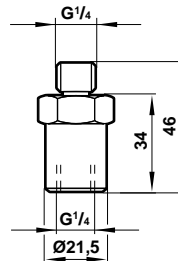


Reducer G<sup>1</sup>/<sub>2</sub> to G<sup>1</sup>/<sub>4</sub>, external thread



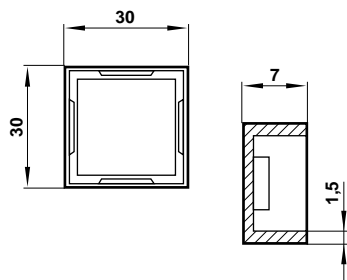
Part No. 0574767

Surge Damper G<sup>1</sup>/<sub>4</sub>



Part No. 0574773

Cover



Part No. 0574737



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## Warning

These products are intended for use in industrial systems only. Do not use these products where *pressures* and *temperatures* can exceed those listed under '**Technical Data**'.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult Norgren.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes. The system designer is warned to

consider the failure modes of all component parts used in