

8D Pneumatic pressure switch electro-mechanical actuated 0,1 ... 30 bar; G1/4 or flange

Robust design
Preferred for pressure monitoring
High accuracy



Technical features

Medium:

For neutral, gaseous fluids

Operation:

Diaphragm

Operating pressure:

0,1 ... 30 bar

Operating viscosity:

Up to 1000 mm²/s

Switching pressure difference:

Fixed

Repeatability:

±2% of final value (depending on regulating pressure)

Switching element:

Microswitch with silver plated contacts

Mounting position:

Optional

Degree of protection:

IP64 for DIN EN 175301-803 (DIN 43650) form A and cable gland

Electrical connection:

DIN EN 175301-803 (DIN 43650) form A or cable gland

Fluid temperature:

0 ... +80°C

Ambient temperature:

-10 ... +80°C

Air supply must be dry enough to avoid ice formation at temperatures below +2°C.

Materials

Housing: aluminium

Sealing: NBR

8D

Electrical connection acc. to DIN EN 175301-803, form A - Connectors are not scope of delivery

Electrical connection with cable gland (Pg 13,5) - Cable glands are scope of delivery

Symbol	Pressure range*1) (bar)	Switching pressure difference		Max. Over pressure *2) (bar)	Switching cycles (1/min)	Electrical connection	Materials pressure sensor		Port size	Weight (kg)	Dimension No.	Model
		Lower range (bar)	Upper range (bar)				Housing	Sealing				
	0,2 ... 12	0,9	1,4	50	60	Cable gland	Aluminium	NBR	G1/4	0,4	1	0820150
	0,5 ... 30	1,0	2,0	50	60	Cable gland	Aluminium	NBR	G1/4	0,4	1	0820750
	0,02 ... 2	0,12	0,14	50	60	Form A	Aluminium	NBR	G1/4	0,4	2	0820149
	0,1 ... 6	0,11	0,13	50	60	Form A	Aluminium	NBR	G1/4	0,4	2	0820148
	0,2 ... 12	0,9	1,5	50	60	Form A	Aluminium	NBR	G1/4	0,4	2	0820155
	0,5 ... 30	1,0	2,0	50	60	Form A	Aluminium	NBR	G1/4	0,4	1	0820755
	0,2 ... 12	0,9	1,4	50	60	Cable gland	Aluminium	NBR	Flange	0,4	3	0820250
	0,5 ... 30	1,0	2,0	50	60	Cable gland	Aluminium	NBR	Flange	0,4	3	0820850

*1) Setpoints should be ideally in the middle of the switching pressure range. Reference pressure = atmospheric pressure.

Switching pressure must not exceed the indicated values

*2) Max. values

Accessories

Pressure port reducing nipple	Surge damper	Connector
Page 3	Page 3	
0574767 (brass)	0574773 (brass)	0570110
0550083 (stainless steel)	0553258 (stainless steel)	

Switching capacity

Commutator with gold plated contacts

Current type	Load type	Max. permissible persistent current I max [A]			
		at U 24 V	60 V	110 V	230 V
a.c.	Resistive load	5	5	5	5
a.c.	Inductive load, $\cos \varphi 0,7$	4	2,5	1,5	0,9
d.c.	Resistive load	2	0,9	0,45	0,2
d.c.	Inductive load, L/R ≈ 10 ms	1	0,3	0,09	0,02

Reference number of switchings: 60/min.

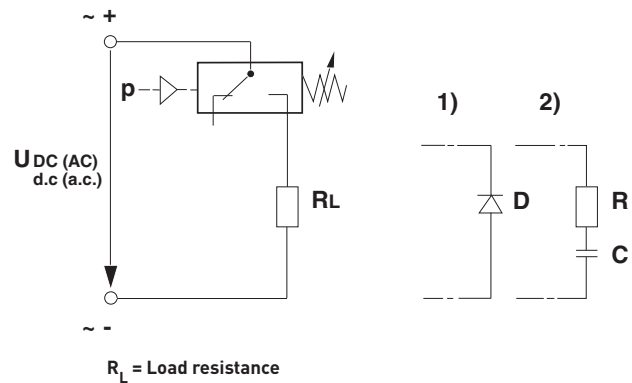
Reference temperature + 30 °C (with a reference temperature of + 70 °C, I_{max} corresponds to 50% of the tabulated values only).

Contact-life appr. 1×10^6 switching cycles at max. current (at 50% of max. current, contact life is appr. 3 times as long).

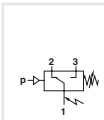
Recommended circuit

Spark quenching and EMV intrinsically safe

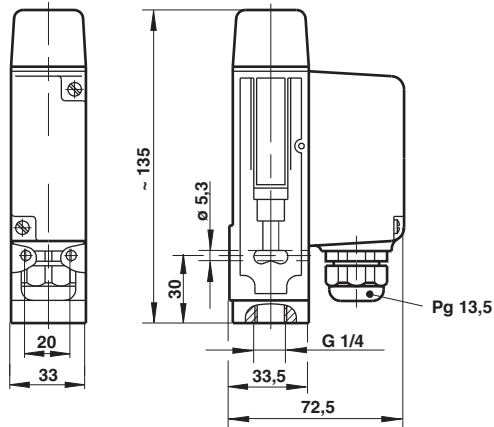
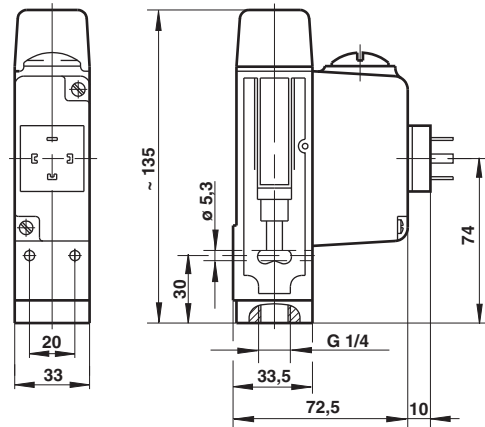
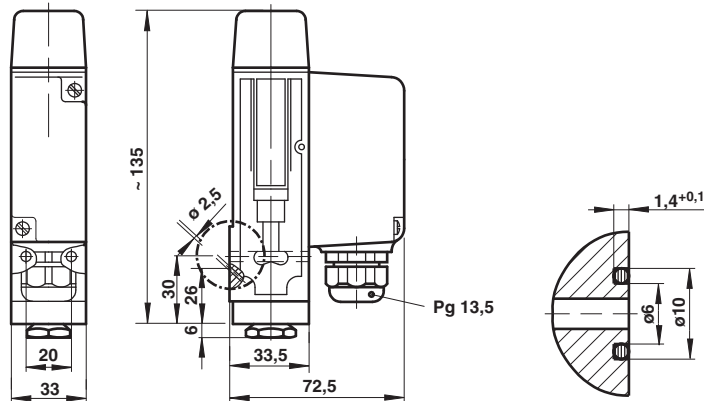
- Diode in parallel to inductive load.
Make sure polarity is correct when making connections.
Dimensioning of quenching diode (rectifier):
Rated voltage of diode $U_D \geq 1,4 \times U_S$.
Rated current of diode $I_N \geq I_{Load}$
Quick diode (D) with $t_v \leq 200$ ns, parallel to inductive load.
- RC link in parallel to load in parallel to switching contact.
Dimensioning principles:
 R_L in $\Omega \approx 0,2 \times R_{Load}$ in Ω
 C in $[\mu F] \approx I_{Load}$ in [A]



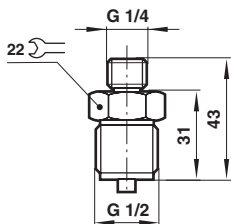
Switching function



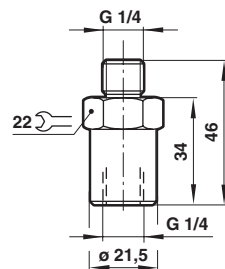
Plug DIN EN 175301-803, form A
Microswitch SPDT
Terminals 1 - 3: Contacts close
on rising pressure.
Terminals 1 - 2: Contacts open
on rising pressure.

Dimensions
1 G 1/4

2 G 1/4

3 Flange

Accessories

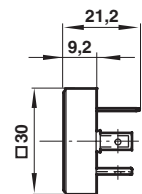
Pressure port/Reducing nipple
Material: brass
Model: 0574767



Surge damper
Material: brass
Model: 0574773



Electrical connection
for plug according to
DIN EN 175301-803, form A


Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under »**Technical features**«.

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 fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.