

5 to 420 bar
 G 1/4, 7/16-20 UNF (SAE 4), 1/4 NPT
 Flange (CETOP)

Microswitch with gold plated contacts
High number of switching cycles
Vibration resistant to 15 g
Microswitch approved by UL and CSA
Intrinsically safe operation



Technical data

Medium:

For neutral, self lubricating fluids,
 e.g. hydraulic oil, lube oil, light fuel oil

Operation:

Piston type sensor system

Port size:

G1/4, 7/16-20 UNF (SAE-4), 1/4 NPT, Flange (CETOP)

Operating pressure range:

5 to 420 bar

Temperature:

Fluid/Ambient

-10 to +80°C

(please contact our technical
 service for use below +2°C)

Temperature at switching element:

+80°C

Operating viscosity:

Up to 1000 mm²/s

Repeatability:

±3%, for vacuum ±4% of final value
 (depending on regulating pressure)

Switching element:

Microswitch with gold plated contacts

Degree of protection:

IP65 for DIN EN 175301-803, form A

IP67 (M12 x 1)

Mounting position:

Optional, preferably with pressure connection
 underneath

Electrical connection:

Acc. to DIN EN 175301-803, form A

Acc. to IEC 947-5-2 (M12 x 1)

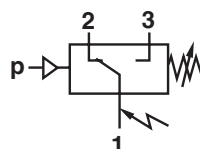
Materials:

Housing: aluminium/steel, zinc diecast/brass

Sealing: teflon, perbunan, delrin

Ordering example

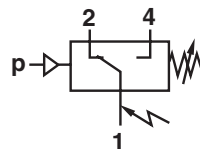
See page 2



Switching function acc. to
 DIN EN 175301-803, form A:
 Microswitch SPDT
 (commutator)

Terminals 1 - 3:
 Contacts close on rising
 pressure

Terminals 1 - 2:
 Contacts open on rising
 pressure



Switching function acc. to
 IEC 947-5-2, M12 x 1:
 Microswitch SPDT
 (commutator)

Terminals 1 - 4:
 Contacts close on rising
 pressure

Terminals 1 - 2:
 Contacts open on rising
 pressure

General information

Electrical connection acc. to DIN EN 175301-803, form A

Type	Pressure range *1) (bar)	Switching pressure difference		Max. over pressure*2) (bar)	Switching cycles (1/min)	Materials pressure sensor		Port size	Weight (kg)	Dimension No.
		Lower range (bar)	Upper range (bar)			Housing	Sealing			
0882100	5 to 70	10,5	15	400	100	AL/steel	PTFE/NBR	G1/4	0,2	1
0883100	5 to 70	10,5	15	400	100	AL/steel	PTFE/NBR	Flange	0,2	2
0882119	5 to 70	10,5	15	400	100	AL/steel	PTFE/NBR	7/16-20 UNF	0,2	1
0882120	5 to 70	10,5	15	400	100	AL/steel	PTFE/NBR	1/4 NPT	0,2	1
0870507	10 to 160	11	17	400	100	AL/steel	PTFE/NBR	Flange	0,3	3
0882200	10 to 160	11	17	400	100	AL/steel	PTFE/NBR	G1/4	0,2	1
0883200	10 to 160	11	17	400	100	AL/steel	PTFE/NBR	Flange	0,2	2
0882219	10 to 160	11	17	400	100	AL/steel	PTFE/NBR	7/16-20 UNF	0,2	1
0882220	10 to 160	11	17	400	100	AL/steel	PTFE/NBR	1/4 NPT	0,2	1
0882300	25 to 250	11	17	400	100	AL/steel	PTFE/NBR	G1/4	0,2	1
0883300	25 to 250	11	17	400	100	AL/steel	PTFE/NBR	Flange	0,2	2
0882319	25 to 250	11	17	400	100	AL/steel	PTFE/NBR	7/16-20 UNF	0,2	1
0882320	25 to 250	11	17	400	100	AL/steel	PTFE/NBR	1/4 NPT	0,2	1
0870502	40 to 420	17	35	600	100	AL/steel	PTFE/NBR	Flange	0,3	3
0882400	40 to 420	17	38	600	100	AL/steel	PTFE/NBR	G1/4	0,2	1
0883400	40 to 420	17	38	600	100	AL/steel	PTFE/NBR	Flange	0,2	2
0882419	40 to 420	17	38	600	100	AL/steel	PTFE/NBR	7/16-20 UNF	0,2	1
0882420	40 to 420	17	38	600	100	CN/brass	PTFE/NBR	1/4 NPT	0,2	1

Connector included in delivery

Electrical connection M 12 x 1

max. allowable voltage 30 V, M 12 plug not included

Type	Pressure range *1) (bar)	Switching pressure difference		Max. over pressure*2) (bar)	Switching cycles (1/min)	Materials pressure sensor		Port size	Weight (kg)	Dimension No.
		Lower range (bar)	Upper range (bar)			Housing	Sealing			
0882160	5 to 70	10,5	15	400	100	AL/steel	PTFE/NBR	G1/4	0,2	4
0882260	10 to 160	11	17	400	100	AL/steel	PTFE/NBR	G1/4	0,2	4
0882360	25 to 250	11	17	400	100	AL/steel	PTFE/NBR	G1/4	0,2	1
0882460	40 to 420	17	35	600	100	AL/steel	PTFE/NBR	G1/4	0,2	1
0883160	5 to 70	10,5	15	400	100	CN/steel	PTFE/NBR	Flange	0,3	2
0883260	10 to 160	11	17	400	100	AL/steel	PTFE/NBR	Flange	0,2	2
0883360	25 to 250	11	17	400	100	AL/steel	PTFE/NBR	Flange	0,2	2
0883460	40 to 420	17	35	600	100	AL/steel	PTFE/NBR	Flange	0,2	2

*1) Setpoints should be ideally in the middle of the switching pressure range. Reference pressure = atmospheric pressure.
The switching pressure must not exceed the listed values

*2) Max. values
AL aluminium
NBR perbunan
PTFE teflon
CN zink die cast
POM delrin

Ordering example

Pressure switch, port size G1/4,
switching pressure range 5 to 70 bar
Type: 0882100.

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 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 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.

Accessories

Pressure port Reducing nipple	Surge damper	Cover (via adjustment screw)	Connector	Connector M 12 x 1 90°	Connector M 12 x 1 straight	Connector M 12 x 1 straight	
Siehe Seite 4	Siehe Seite 4	Siehe Seite 4					
0574767 (brass)	0574773 (brass)	0554737	0570110	0523058 (2 m cable, 4-core)	0523056 (90° without cable)	0523057 (2 m cable, 4-core)	0523055 (without cable)
0550083 (stainless steel)	0553258 (stainless steel)			0523053 (5 m cable, 4-core)		0523052 (5 m cable, 4-core)	

Switching capacity
Commutator with gold plated contacts

Load level	Current type	Load type	Umin [V]	Max. permanent current Imax [A] at U [V]					Contact life
				30 M 12x1	48	60	125	250	
Standard *3) (z.B. contractors, solenoids)	AC	ohmic	12	5	5	5	5	5	≥ 10 ⁷ switching cycles
	AC	induktive, cos φ ≈ 0,7	12	3	3	3	3	3	
	DC	ohmic	12	5	1,2	0,8	0,4	–	
	DC	induktive, L/R ≈ 10 ms	12	3	0,5	0,35	0,05	–	
Minor *4) (z.B. electronic circuits)	AC	ohmic	5 *6)	0,34	0,2	0,17	0,08	0,04	≥ 10 ⁷ switching cycles
	DC	induktive, L/R ≈ 10 ms	5 *6)	0,1	0,01	–	–	–	

Reference number: 30/min, Reference temperature: +30°C
 Spark quenching with diode with DC and inductive load:
 I max = 1,5 x I max of table
 I min = 1 (mA)
 Creepage and air paths correspond to insulation group B according to VDE Reg. 0110 (except contact clearance of microswitch).

*3) Gold-plating not required as it would decay.
 Max. perm. in-rush current (appr. 30 ms) | AC = max. 15 A
 *4) Gold-plating required (will not decay).
 *6) Lower value of critical voltage guarantees sufficient contact safety.
 Lower voltages permissible under favourable conditions.

Spark quenching with DC voltage

1. Diode D in parallel to inductive load.
 Observance of correct polarity (positive pole to cathode).

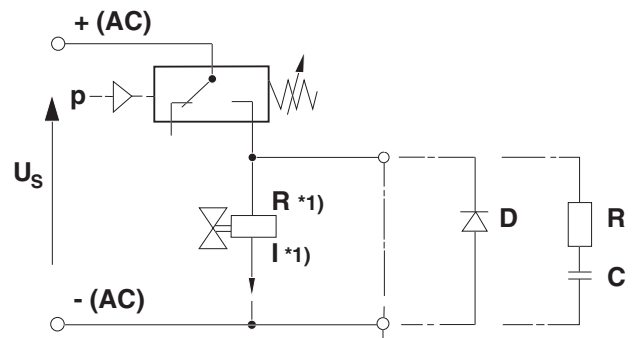
Dimensioning specifications for quenching diode:
 Rated voltage at diode: $U_D \geq 1,4 \times U_s$

Rated current at diode: $I_N \geq I_{Last}$

Selection of a quick switching diode (recovery time $t_{rr} \leq 200$ [ms]).

2. RC link in parallel to load in parallel to switching contact.
 Suited for DC and AC voltage.

Dimensioning principles:
 R in $\Omega \approx 0,2 \times R_{Load}$ in Ω
 C in $[\mu F] \approx I_{Load}$ in [A]

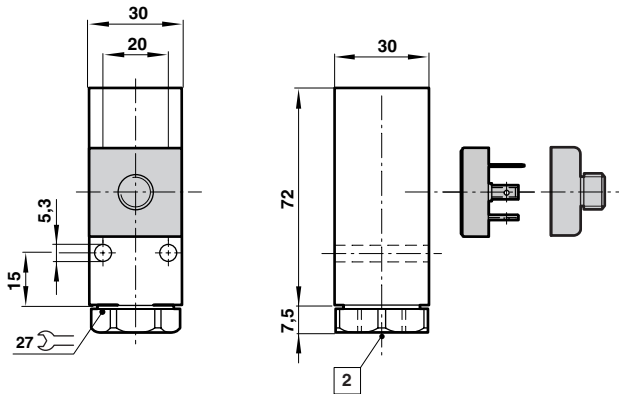


*1) load

Dimensions

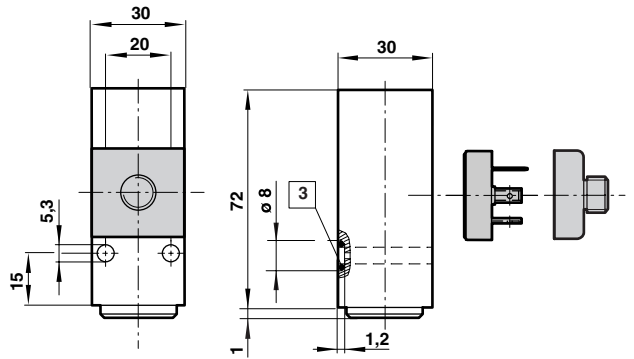
①

G 1/4



②

Flange



2

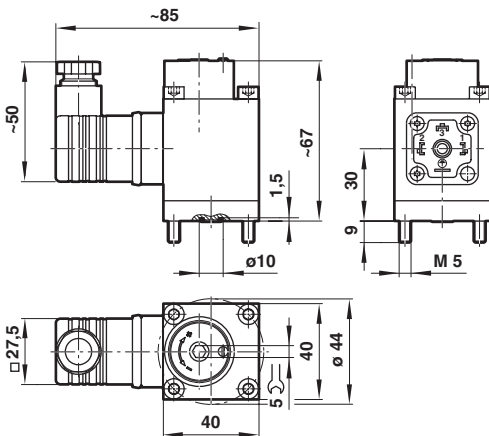
1/4 NPT on request

3

O-ring 5 x 1,5

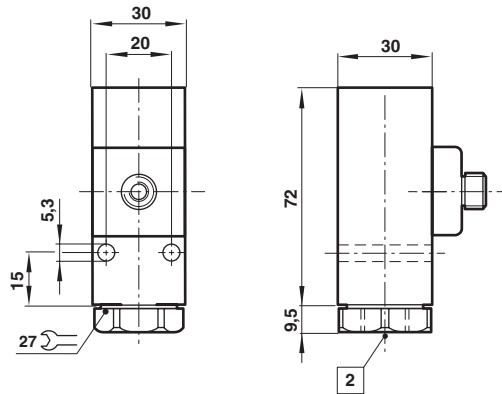
③

Flange



④

G 1/4



2

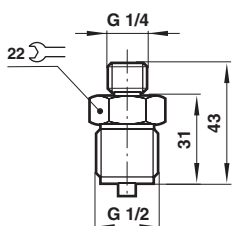
G 1/4

Accessories

Pressure port/Reducing nipple

Material: brass

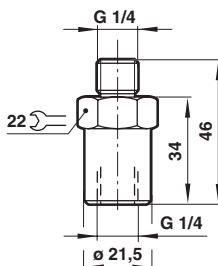
Type: **0574767**



Surge damper

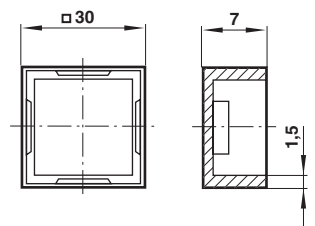
Material: brass

Type: **0574773**



Cover

Type: **0554737**



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