

- > -1 ... 30 bar  
Port size: G1/4 or flange
  - > Microswitch with gold plated contacts
  - > Vibration resistant to 15 g
  - > Microswitch approved by UL and CSA
  - > Intrinsically safe operation
- > For Ex applications conforming to ATEX 100a: Zone 2 category  
ATEX 3G (gases):  
Ex nA nC IIC T6 Gc  
Zone 22 category  
ATEX 3D (dusts):  
Versions, form A connector: Ex tc IIIC T50 °C Dc; Versions, M12x1 connector: Ex tc IIIC T80 °C Dc  
Special condition to be observed during the installation


**Technical features**
**Medium:**

For neutral, gaseous and liquid fluids

**Operation:**

Diaphragm

**Operating pressure:**

-1 ... 30 bar (-14 ... 435 psi)

**Maximum over pressure:**

80 bar (1160 psi)

**Repeatability:**

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

**Port size:**

G1/4 or flange

**Media viscosity:**

Up to 1000 mm<sup>2</sup>/s

**Switching pressure difference/hysteresis:**

Fixed

**Switching cycles:**

100 1/min

**Life cycle of mechanical parts:**

10<sup>7</sup> switching cycles

**Switching element:**

Microswitch with gold plated contacts

**Mounting position:**

Optional

**Degree of protection:**

IP65 for DIN EN 175301-803 (DIN 43650) form A connection  
IP67 for M12x1 connection

**Electrical connection:**

DIN EN 175301-803 (DIN 43650) form A or M12x1 IEC 947-5-2

**Weight:**

0,2 kg (0.44 lbs)


**Ambient/Media temperature:**

Versions, form A connector:  
0 ... +50°C (32 ... +122°F)  
Versions, M12x1 Connector:  
0 ... +80°C (32 ... +176°F)  
Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F)

**Materials:**


Housing: Aluminium  
Sealing: FPM/brass  
O-ring: NBR

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

Symbol	Port size	Pressure range *1)		Switching pressure difference				Materials press sensor		Drawing No.	Model
		(bar)	(psi)	Lower range (bar)	Upper range (psi)	Upper range (bar)	Upper range (psi)	Body	Seal		
	G1/4	-1 ... 0	-14 ... 0	0,15	2,17	0,18	2,61	AL	FPM/MS/NBR	1	0880180
	G1/4	0,2 ... 2	2,9 ... 29	0,20	2,9	0,35	5,07	AL	FPM/MS/NBR	1	0880280
	Flange	0,2 ... 2	2,9 ... 29	0,20	2,9	0,35	5,07	AL	FPM/MS/NBR	3	0881280
	G1/4	0,5 ... 8	7,2 ... 116	0,35	5,07	0,85	12,3	AL	FPM/MS/NBR	2	0880380
	Flange	0,5 ... 8	7,2 ... 116	0,35	5,07	0,85	12,3	AL	FPM/MS/NBR	3	0881380
	G1/4	1 ... 16	23,2 ... 232	0,40	5,8	1,20	17,4	AL	FPM/MS/NBR	2	0880480
	G1/4	1 ... 30	23,2 ... 435	1,0	14,5	5,00	72,5	AL	FPM/MS/NBR	2	0880680

**Electrical connection M12x1 nach IEC 947-5-2 - plug not included, max. allowable voltage 30 V**

The pressure switch will lose the Ex approval when using wire sockets other than those listed in the data sheet.

Symbol	Port size	Pressure range *1)		Switching pressure difference				Materials press sensor		Drawing No.	Model
		(bar)	(psi)	Lower range (bar)	Upper range (psi)	Upper range (bar)	Upper range (psi)	Body	Seal		
	G1/4	-1 ... 0	-14 ... 0	0,15	2,17	0,18	2,61	AL	FPM/MS/NBR	1	0880181
	G1/4	0,2 ... 2	2,9 ... 29	0,20	2,9	0,35	5,07	AL	FPM/MS/NBR	1	0880281
	G1/4	0,5 ... 8	7,2 ... 116	0,35	5,07	0,85	12,3	AL	FPM/MS/NBR	2	0880381
	Flange	0,5 ... 8	7,2 ... 116	0,35	5,07	0,85	12,3	AL	FPM/MS/NBR	3	0881381
	G1/4	1 ... 16	23,2 ... 232	0,40	5,8	1,20	17,4	AL	FPM/MS/NBR	2	0880481
	Flange	1 ... 16	23,2 ... 232	0,40	5,8	1,20	17,4	AL	FPM/MS/NBR	2	0881481

\*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.

MS = brass

**Accessories**

Pressure port reducing nipple	Surge damper	Cover	Connector DIN EN 175301-803	Connector M12x1 4-pin, 90°	4-pin, straight
<b>Page 3</b>	<b>Page 3</b>	<b>Page 3</b>			
0574767 (brass)	0574773 (brass)	0554737	0524210 (Form A)	0524207 (2 m cable, 4-core)	0524206 (2 m cable, 4-core)
0550083 (stainless steel)	0553258 (stainless steel)			0524209 (5 m cable, 4-core)	0524208 (5 m cable, 4-core)

**Switching function**

	<p>Connector DIN EN 175301-803, form A Microswitch SPDT Terminals 1 - 3: Contacts close on rising pressure. Terminals 1 - 2: Contacts open on rising pressure.</p>		<p>Connector IEC 947-5-2, M12x1 Microswitch SPDT Terminals 1 - 4: Contacts close on rising pressure. Terminals 1 - 2: Contacts open on rising pressure.</p>
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**Switching capacity**

**Commutator with gold plated contacts**

Current type	Load type *2)	U min [V]	Max. permissible persistent current I <sub>max</sub> [A] at U *1) (UL & CSA)					Electrical life-time
			M12x1 30 V	DIN EN 175301-803, form A 30 V	48 V	125 V	250 V	
a.c.	Ohmic, inductive	6	0,1	0,1	0,1	0,1	0,1	≥ 2 x 10 <sup>5</sup> Switching cycles
d.c.	Ohmic, inductive	6	0,1	0,1	—	—	—	

Reference number: 20/min, Reference temperature: +20°C.  
I<sub>min</sub> = 1 mA at 24 V d.c. or 5 mA at 6 V d.c.

\*1) Higher currents (5 A max) will cause a reduction of the durability of the micro-switch contacts. Furthermore additional measures has to be taken to fulfil the EMV regulation 2014/30/EU by the manufacturer

\*2) Spark quenching/overload protection will be necessary using inductive loads.

**Recommended circuit**

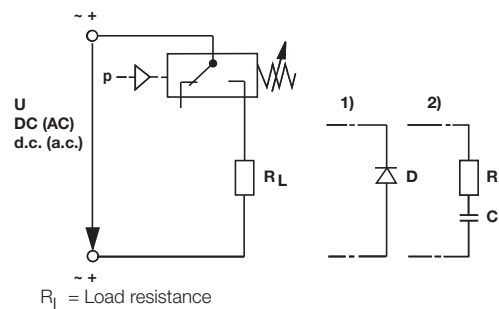
**Spark quenching and EMV intrinsically safe**

1. Quick diode (D) with  $t_v \leq 200$  ns, parallel to inductive load.
2. RC link in parallel to load in parallel to switching contact.

Dimensioning principles:

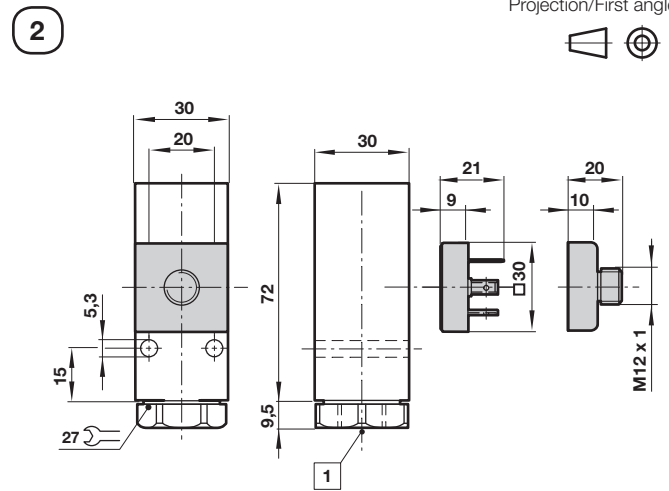
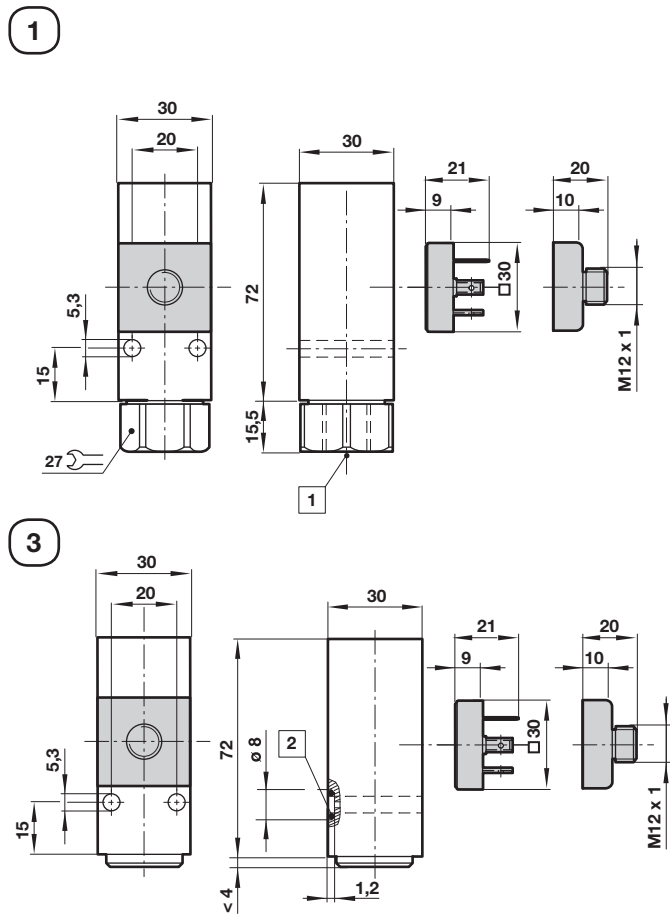
$R_L$  in  $\Omega \approx 0,2 \times R_{Load}$  in  $\Omega$

$C$  in  $[\mu F] \approx I_{Load}$  in [A]



Drawings

Dimensions in mm  
Projection/First angle



Adjustable switch point

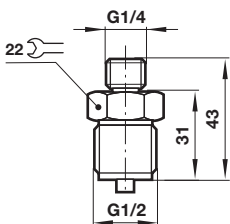
After releasing the locking screw  
Clockwise rotation = increasing switch point  
Counter clockwise rotation = decreasing the switch point



- 1 Fluid port
- 2 O-ring 5 x 1,5

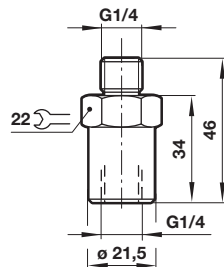
Pressure port reducing nipple

Model: 0574767 (brass)  
0550083 (stainless steel)



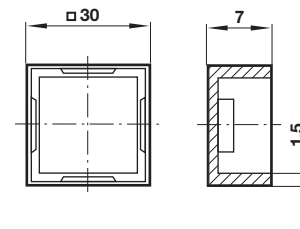
Surge damper nipple

Model: 0574773 (brass)  
0553258 (stainless steel)



Cover

Model: 0554737 (plastic)



Warning

These products are intended for use in industrial compressed air and fluid systems only. Do not use these products where pressures and temperatures can exceed those listed under »**Technical features/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 IMI Precision Engineering, Norgren GmbH.

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.