- **5 to 420 bar Port size: G1/4, 1/4 NPT 7/16-20 UNF (SAE 4) 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 features

Medium:
For neutral, self lubricating fluids, e.g. hydraulic oil, lube oil, leight fuel oil
Operation:
Softseal piston
Operating pressure:
5 ... 420 bar (72 ... 6091 psi)
Repeatability:
±4% of final value
(depending on regulating pressure)
Media viscosity:
Up to 1000 mm^2/s

Switching cycles:
100 1/min
Switching pressure difference/hysteresis:
Fixed
Life cycle of mechanical parts:
10^7 switching cycles
Switching element:
Microswitch with gold plated contacts
Degree of protection:
IP65 for DIN EN 175301-803 (DIN 43650) form A connection
IP67 for M12 x 1 connection

Mounting position:
Optional
Weight:
0,2 kg (0.44 lbs)
Electrical connection:
DIN EN 175301-803 (DIN 43650) form A or M12 x 1 IEC 947-5-2
Ambient/Media temperature:
-25 ... +80°C (-13 ... +176°F)
Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F)

Materials:
Body: Aluminium/steel
Seals: PTFE, NBR

Technical data

DIN plug connection – plug included in scope of supply

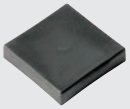
Symbol	Port size	Pressure range *1)		Switching pressure difference Lower range		Upper range		Materials press sensor		Drawing	Model
		(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	Body	Seal	No.	
	1/4"	5 ... 70	72 ... 1015	10,5	152	15	217	AL/Stahl	PTFE/NBR	1	08821#0
	Flansch	5 ... 70	72 ... 1015	10,5	152	15	217	AL/Stahl	PTFE/NBR	2	0883100
	7/16-20 UNF	5 ... 70	72 ... 1015	10,5	152	15	217	AL/Stahl	PTFE/NBR	1	0882119
	Flansch (CETOP)	10 ... 160	145 ... 2320	11	159	17	246	AL/Stahl	PTFE/NBR	3	0870507
	1/4“	10 ... 160	145 ... 2320	11	159	17	246	AL/Stahl	PTFE/NBR	1	08822#0
	Flansch	10 ... 160	145 ... 2320	11	159	17	246	AL/Stahl	PTFE/NBR	2	0883200
	7/16-20 UNF	10 ... 160	145 ... 2320	11	159	17	246	AL/Stahl	PTFE/NBR	1	0882219
	1/4“	25 ... 250	362 ... 3625	11	159	17	246	AL/Stahl	PTFE/NBR	1	08823#0
	Flansch	25 ... 250	362 ... 3625	11	159	17	246	AL/Stahl	PTFE/NBR	2	0883300
	7/16-20 UNF	25 ... 250	362 ... 3625	11	159	17	246	AL/Stahl	PTFE/NBR	1	0882319
	Flansch (CETOP)	40 ... 420	580 ... 6091	17	246	35	507	AL/Stahl	PTFE/NBR	3	0870502
	1/4“	40 ... 420	580 ... 6091	17	246	38	551	AL/Stahl	PTFE/NBR	1	08824#0
	Flansch	40 ... 420	580 ... 6091	17	246	38	551	AL/Stahl	PTFE/NBR	2	0883400
	7/16-20 UNF	40 ... 420	580 ... 6091	17	246	38	551	AL/Stahl	PTFE/NBR	1	0882419

M12 x 1 Connection – plug not included, max. allowable voltage 30

Symbol	Port size	Pressure range *1)		Switching pressure difference Lower range		Upper range		Materials press sensor		Drawing	Model
		(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	Body	Seal	No.	
	G1/4	5 ... 70	72 ... 1015	10,5	152	15	217	AL/Stahl	PTFE/NBR	1	0882160
	Flansch	5 ... 70	72 ... 1015	10,5	152	15	217	AL/Stahl	PTFE/NBR	2	0883160
	G1/4	10 ... 160	145 ... 2320	11	159	17	246	AL/Stahl	PTFE/NBR	1	0882260
	Flansch	10 ... 160	145 ... 2320	11	159	17	246	AL/Stahl	PTFE/NBR	2	0883260

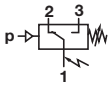
Please insert ‘0’ for ISO G, ‘2’ for NPT thread
*1) Setpoints should be ideally in the middle of the switching pressure range. Reference pressure = atmospheric pressure.
Switching pressure must not exceed the indicated values.

Accessories

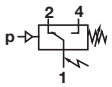
Pressure port reducing nipple	Surge damper	Cover
		
Page 3	**Page 3**	**Page 3**
0574767 (brass)	0574773 (brass)	0554737
0550083 (stainless steel)	0553258 (stainless steel)	

Connector DIN EN 175301-803	Connector M 12 x 1 4-pin, 90°		4-pin, straight	
				
0570110 (Form A)	0523058 (2 m cable,4-core)	0523056 (without cable)	0523057 (2 m cable, 4-core)	0523055 (without cable)
	0523053 (5 m cable,4-core)		0523052 (5 m cable, 4-core)	

Switching function



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.



Connector M12 x 1
Microswitch SPDT
Terminals 1 - 4:
Contacts close on rising pressure.
Terminals 1 - 2:
Contacts open on rising pressure.

Switching capacity
Commutator with gold plated contacts

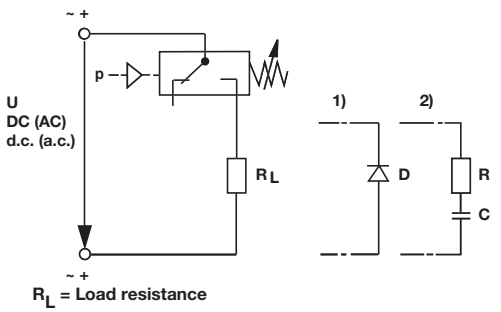
Current type	Load type *2)	U min [V]	Max. permissible persistent current Imax [A] at U *1) (UL & CSA) M12 x 1 30 V	DIN EN 175301-803, form A 30 V	48 V	125 V	250 V	Electrical life-time
a.c.	Ohmic, inductive	6	0,1	0,1	0,1	0,1	0,1	≥ 2 x 10^5 Switching cycles
d.c.	Ohmic, inductive	6	0,1	0,1	—	—	—	

Reference number: 20/min, Reference temperature: +20°C.
I min = 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. Futhermore additional measures has to be taken to fulfil the EMV regulation 2004/108/EG 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 tv ≤ 200 ns, parallel to inductive load.

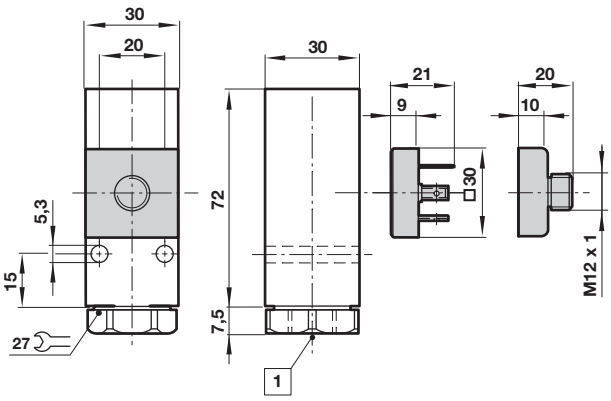
2. RC link in parallel to load in parallel to switching contact.
Dimensioning principles:
R_L in Ω ≈ 0,2 x R_{Load} in Ω
C in [µF] ≈ I_{Load} in [A]



Drawings

Dimensions in mm
Projection/First angle

1



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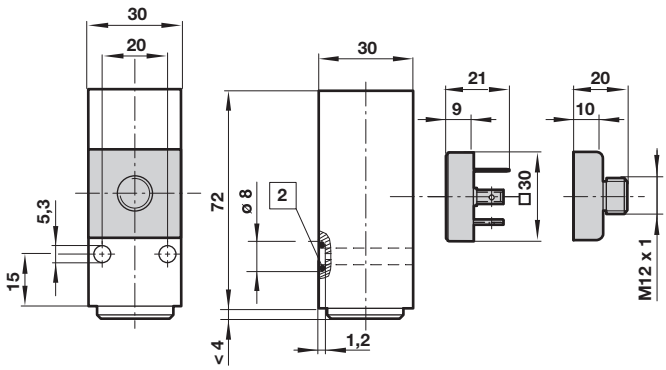
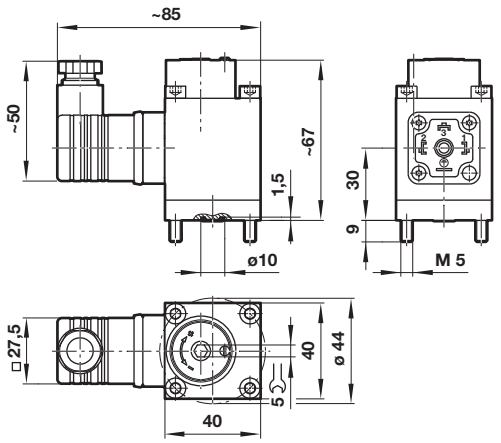
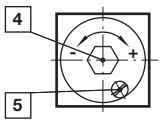


3



Adjustable switch point

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

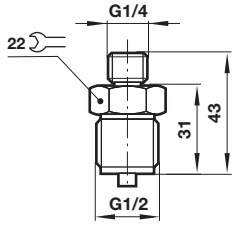


4 Locking screw
5 Switch point screw

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

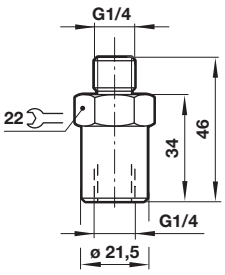
Pressure port reducing nipple

Model: 0574767 (brass)
0550083 (stainless steel)



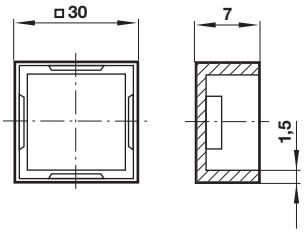
Surge damper

Model: 0574773 (brass)
0553258 (stainless steel)



Cover

Model: 0554737 (plastic)



Warning

These products are intended for use in industrial hydraulic 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 NORGREN.

Through misuse, age, or malfunction, components used in hydraulic systems can fail in various modes.
The system designer is warned to consider the failure modes of all component parts used in hydraulic 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.

- **-1 ... 30 bar Port size: G1/4, 1/4 NPT or flange**
- **Microswitch with gold plated contacts**
- **High number of switching cycles**
- **Vibration resistant to 15 g**
- **Microswitch approved by UL and CSA**
- **Conforms to Low Voltage Directive 2006/95/EG**
- **Intrinsically safe operation**

Technical features

Medium:
For neutral, gaseous and liquid fluids, non-combustible (Special versions for water application)
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, 1/4 NPF or flange

Media viscosity:
Up to 1000 mm^2/s
Switching pressure difference/hysteresis:
Fixed
Switching cycles:
100 1/min
Life cycle of mechanical parts:
10^7 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 M12 x 1 connection
Electrical connection:
DIN EN 175301-803 (DIN 43650) form A or M12 x 1 IEC 947-5-2
Weight:
0,2 kg (0.44 lbs)
Ambient/Media temperature:
NBR: -10 ... +85°C (14 ... +185°F)
FPM: 0 ... +80°C (0 ... +176°F)
Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F)

Materials:
Housing: Aluminium (brass)
Sealing: NBR/FPM

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

Symbol	Port size	Pressure range *1)		Switching pressure difference Lower range		Upper range		Materials press sensor		Drawing	Model
		(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	Body	Seal	No.	
	G1/4	-1 ... 0	-14 ... 0	0,15	2.17	0,18	2.61	AL	FPM *2)	1	0880100
	G1/4	-1 ... 1	-14 ... 14	0,25	3.62	0,35	5.07	AL	FPM *2)	1	0880110
	1/4 NPT	-1 ... 0	-14 ... 0	0,15	2.17	0,18	2.61	AL	FPM *2)	1	0880120
	G1/4	-1 ... 0	-14 ... 0	0,15	2.17	0,18	2.61	AL	FPM *2)	1	0880126 *3) *4)
	Flange	-1 ... 0	-14 ... 0	0,15	2.17	0,18	2.61	AL	FPM *2)	3	0881100
	G1/4	0,2 ... 2	2.9 ... 29	0,20	2.9	0,35	5.07	AL	FPM *2)	1	0880200
	1/4 NPT	0,2 ... 2	2.9 ... 29	0,20	2.9	0,35	5.07	AL	FPM	1	0880220
	G1/4	0,2 ... 4	2.9 ... 58	0,20	2.9	0,35	5.07	AL	FPM	1	0880226 *3) *4)
	Flange	0,2 ... 2	2.9 ... 29	0,20	2.9	0,35	5.07	AL	NBR	3	0881200
	G1/4	0,5 ... 8	7.2 ... 116	0,35	5.07	0,85	12.3	AL	NBR	2	0880300
	1/4 NPT	0,5 ... 8	7.2 ... 116	0,35	5.07	0,85	12.3	AL	NBR	2	0880320
	G1/4	0,5 ... 8	7.2 ... 116	0,35	5.07	0,85	12.3	AL	FPM	2	0880326 *3) *4)
	Flange	0,5 ... 8	7.2 ... 116	0,35	5.07	0,85	12.3	AL	NBR	3	0881300
	G1/4	1 ... 16	23.2 ... 232	0,40	5.8	1,20	17.4	AL	NBR	2	0880400
	1/4 NPT	1 ... 16	23.2 ... 232	0,40	5.8	1,20	17.4	AL	NBR	2	0880420
	G1/4	1 ... 16	23.2 ... 232	0,40	5.8	1,20	17.4	AL	FPM	2	0880426 *3) *4)
	Flange	1 ... 16	23.2 ... 232	0,40	5.8	1,20	17.4	AL	NBR	3	0881400
	G1/4	1 ... 30	23.2 ... 435	1,0	14.5	5,00	72.5	AL	NBR	2	0880600
	1/4 NPT	1 ... 30	23.2 ... 435	1,0	14.5	5,00	72.5	AL	NBR	2	0880620

*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) Static seal: O-ring (NBR)
*3) LABS free
*4) Plug 0570110 not included, please order separately.

Electrical connection M12 x 1 nach IEC 947-5-2 - plug not included, max. allowable voltage 30 V

Symbol	Port size	Pressure range *1) (bar)	(psi)	Switching pressure difference Lower range (bar)	(psi)	Upper range (bar)	(psi)	Materials press sensor Body	Seal	Drawing No.	Model *2)
	G1/4	-1 ... 0	-14 ... 0	0,15	2.17	0,18	2.61	AL	FPM	1	0880149 *3)
	G1/4	-1 ... 0	-14 ... 0	0,15	2.17	0,18	2.61	AL	FPM	1	0880160
	G1/4	0,2 ... 2	2.9 ... 29	0,20	2.9	0,35	5.07	AL	FPM	1	0880260
	G1/4	0,5 ... 8	7.2 ... 116	0,35	5.07	0,85	12.3	AL	FPM	2	0880360
	G1/4	1 ... 16	23.2 ... 232	0,40	5.8	1,20	17.4	AL	FPM	2	0880460
	G1/4	1 ... 30	23.2 ... 435	1,00	14.5	5,00	72.5	AL	FPM	2	0880660
	Flange	-1 ... 0	-14 ... 0	0,15	2.17	0,18	2.61	AL	FPM	3	0881160
	Flange	0,2 ... 2	2.9 ... 29	0,20	2.9	0,35	5.07	AL	FPM	3	0881260
	Flange	0,5 ... 8	7.2 ... 116	0,35	5.07	0,85	12.3	AL	FPM	3	0881360
	Flange	1 ... 16	23.2 ... 232	0,40	5.8	1,20	17.4	AL	FPM	3	0881460

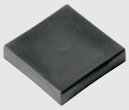
*1) Setpoints should be ideally in the middle of the switching pressure range. Reference pressure = atmospheric pressure. Switching pressure must not exceed the indicated values.
*2) LABS free
*3) Switching function reversed

Versions for water applications
Electrical connection acc. to DIN EN 175301-803, form A

Symbol	Port size	Pressure range *1) (bar)	(psi)	Switching pressure difference Lower range (bar)	(psi)	Upper range (bar)	(psi)	Materials press sensor Body	Seal	Drawing No.	Model
	G1/4	0,2 ... 2	2.9 ... 29	0,20	2.9	0,35	5.07	Brass	FPM	1	0880219
	1/4 NPT	0,2 ... 2	2.9 ... 29	0,20	2.9	0,35	5.07	Brass	FPM	1	0880240
	G1/4	0,5 ... 8	7.2 ... 116	0,35	5.07	0,85	12.3	Brass	FPM	2	0880323

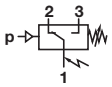
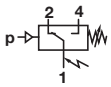
*1) Setpoints should be ideally in the middle of the switching pressure range. Reference pressure = atmospheric pressure. Switching pressure must not exceed the indicated values.

Accessories

Pressure port reducing nipple	Surge damper	Cover
		
Page 4	**Page 4**	**Page 4**
0574767 (brass)	0574773 (brass)	0554737
0550083 (stainless steel)	0553258 (stainless steel)	

Connector DIN EN 175301-803	Connector M 12 x 1 4-pin, 90°		4-pin, straight	
				
0570110 (Form A)	0523058 (2 m cable,4-core)	0523056 (without cable)	0523057 (2 m cable, 4-core)	0523055 (without cable)
	0523053 (5 m cable,4-core)		0523052 (5 m cable, 4-core)	

Switching function

	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.		Connector IEC 947-5-2, M12 x 1 Microswitch SPDT Terminals 1 - 4: Contacts close on rising pressure. Terminals 1 - 2: Contacts open on rising pressure.

Switching capacity
Commutator with gold plated contacts

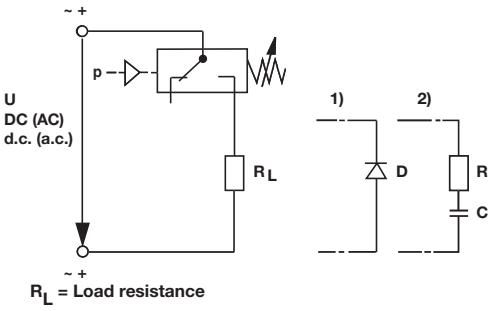
Current type	Load type *2)	U min [V]	Max. permissible persistent current Imax [A] at U *1) (UL & CSA) M12 x 1 30 V	DIN EN 175301-803, form A 30 V	48 V	125 V	250 V	Electrical life-time
a.c.	Ohmic, inductive	6	0,1	0,1	0,1	0,1	0,1	≥ 2 x 10^5 Switching cycles
d.c.	Ohmic, inductive	6	0,1	0,1	—	—	—	

Reference number: 20/min, Reference temperature: +20°C.
I min = 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. Futhermore additional measures has to be taken to fulfil the EMV regulation 2004/108/EG by the manufacturer
*2) Spark quenching/overload protection will be necessary using inductive loads.

Recommended circuit
Spark quenching and EMV intrinsically safe

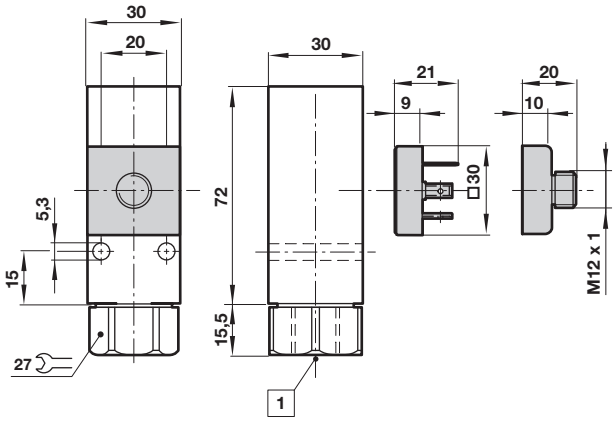
1. Quick diode (D) with tv ≤ 200 ns, parallel to inductive load.

2. RC link in parallel to load in parallel to switching contact.
Dimensioning principles:
R_L in Ω ≈ 0,2 x R_{Load} in Ω
C in [µF] ≈ I_{Load} in [A]



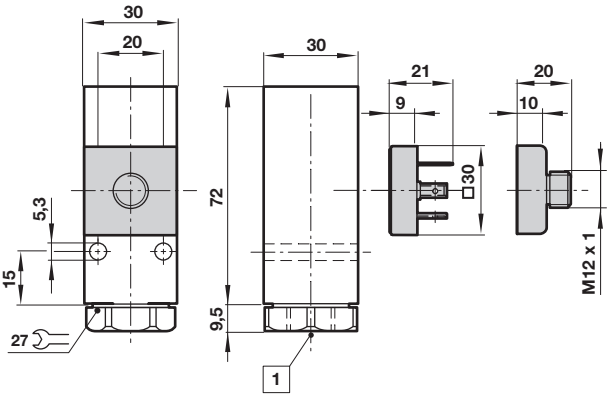
Drawings

1

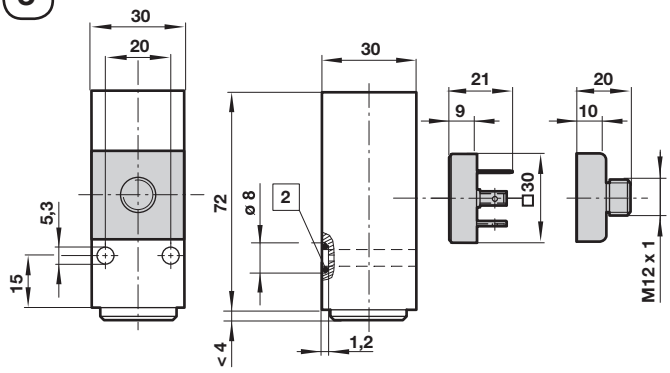


2

Dimensions in mm
Projection/First angle



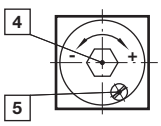
3



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

Adjustable switch point

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

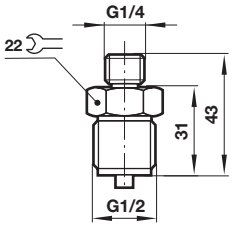


4 Switch point screw
5 Locking screw

Dimensions in mm
Projection/First angle

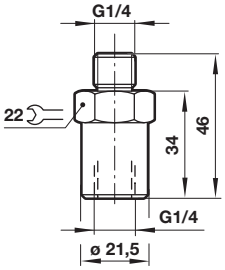
Pressure port reducing nipple

Model: 0574767 (brass)
0550083 (stainless steel)



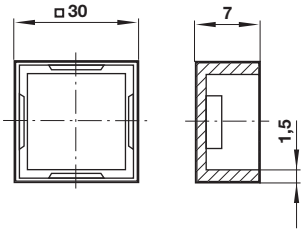
Surge damper

Model: 0574773 (brass)
0553258 (stainless steel)



Cover

Model: 0554737 (plastic)



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/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 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.

- **3 ... 420 bar (44 ... 6091 psi)**
- **High accuracy**
- **Microswitch with gold plated contacts**
- **Intrinsically safe operation**
- **Robust metal housing**
- **Electrical connection: connector acc. to DIN EN 175 301-803, form A or M20x1,5 (DIN 46320)**

Technical features

Medium:
Hydraulic oil, oiled compressed air and other non-inflammable fluids with sliding properties
Operating pressure:
3 ... 420 bar (44 ... 6091)
Operation:
Softseal piston, stainless steel bellow
Repeatability:
±1% of final value
(depending on regulating pressure)
Port size:
G1/2
Media viscosity:
Up to 1000 mm^2/s

Sealing:
$\leq 10^{-7}$ mbar x l x s^{-1}
Pulsation:
Not permitted
Switching pressure difference:
Optional: fixed or adjustable
Switching element:
Microswitch with gold plated contacts
Mounting position:
Vertical down
Degree of protection:
IP65 for DIN EN 175301-803 (DIN 43650) form A connection
IP66 with cable gland

Electrical connection:
DIN EN 175301-803 (DIN 43650) form A or cable gland
Shock-/vibrationproof:
4 g max. (sinusoidal)/5 Hz max
Switching cycles:
20/min. maximum
Ambient/Media temperature:
0 ... +80°C (0 ... +176°F)
Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F).

Material:
Housing: Aluminium diecast
Sensor: Brass or stainless steel
Sealing: steel piston with NBR, lip seal or o-ring

Technical data - fixed switching pressure difference

Symbol	Differential pressure range *2) pvu min ... pvo max. (VDI 3283) (bar)	Final value *1) (bar)	Switching pressure difference (typical) Lower range (bar)	Upper range (bar)	Model
	3 ... 40	300	5	9	1816200
	5 ... 63	300	6	13	1816300
	5 ... 100	300	6	16	1816400
	5 ... 160	300	7	19	1816500
	10 ... 220	300	10	25	1816600 0000 001 00
	10 ... 420	550	18	42	1816700 0000 002 00

Technical data - adjustable switching pressure difference

Symbol	Differential pressure range *2) pvu min ... pvo max. (VDI 3283) (bar)	Final value *1) (bar)	Switching pressure difference (typical) Lower range (bar)	Upper range minimum (bar)	maximum (bar)	Model
	3 ... 40	300	8	13	25	1806200
	5 ... 63	300	10	16	40	1806300
	5 ... 100	300	11	16	80	1806400
	5 ... 160	300	13	22	120	1806500
	10 ... 220	300	14	28	120	1806600 0000 001 00
	10 ... 420	550	20	40	330	1806700 0000 002 00

*1) In case of vibrations, please install a surgr damper; even short-term pressure peakes are not allowed to exceed this limit value during operation. Operative utilization of the limit value is not permitted. The limit value corresponds to the maximum testing pressure.
*2) Reference pressure is the atmospheric air pressure

Option selector

18★★★★★

Switching pressure difference	Substitute
Adjustable	**0**
Fixed	**1**
Pressure range (bar)	**Substitute**
3 ... 40	**62**
5 ... 63	**63**
5 ... 100	**64**
5 ... 160	**65**
10 ... 220	**66**
10 ... 420	**67**

Electrical connection	Substitute
Interface for DIN EN 175301-803 form A connector *1)	**00**
Cable gland	**05**

*1) Connector is not in scope of delivery

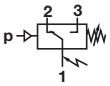
Accessories

Surge damper	Pressure port – reducing nipple	Brackets
		
Page 4	**Page 4**	**Page 4**
0553258 (stainless steel G1/4)	0550083 (G1/4 » G1/2)	0574772 (steel)
0574773 (brass/steel G1/4)	0574765 (G1/4 » 1/4 NPT)	0553908 (stainless steel)

Accessories

Connector DIN EN 175301-803	Connector with LED
	
	Page 4
0570110 (Form A)	0585418

Switching function



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.

Switching capacity
Commutator with gold plated contacts

Load level	Current type	Load type *2)	Max. permissible persistent current Imax [A] at U *1) M20 x 1,5 30 V	250 V	Electrical life-time
Standard *3) (contractors, solenoids)	a.c.	Ohmic	7	5	≥ 2 x 10^5 Switching cycles
	a.c.	Inductive, cos φ ≈ 0,7	3	0,03	
	d.c.	Ohmic	7	0,4	
	d.c.	Inductive, L/R ≈ 10 ms	3	0,03	

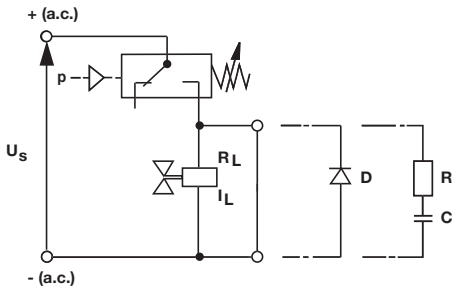
Reference number: 20/min, Reference temperature: +20°C.
Spark quenching with diode with DC and inductive load:
I min = 1 mA; I max = 1,5 x I max of table
Creepage and air paths correspond to insulation group B according to VDE Reg. 0110 (except contact clearance of microswitch).

*1) Higher currents (5 A max) will cause a reduction of the durability of the micro-switch contacts. Futhermore additional measures has to be taken to fulfil the EMV regulation 2004/108/EG by the manufacturer
*2) Spark quenching/overload protection will be necessary using inductive loads.
*3) Gold-plating not required as it would decay.
Max. perm. in-rush current (appr. 30 ms) I AC = max. 15 A

Recommended circuit
Spark quenching and EMV intrinsically safe

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: $I_N \geq I_{Load}$
   Selection of a quick switching diode (recovery time trr ≤ 200 ms)

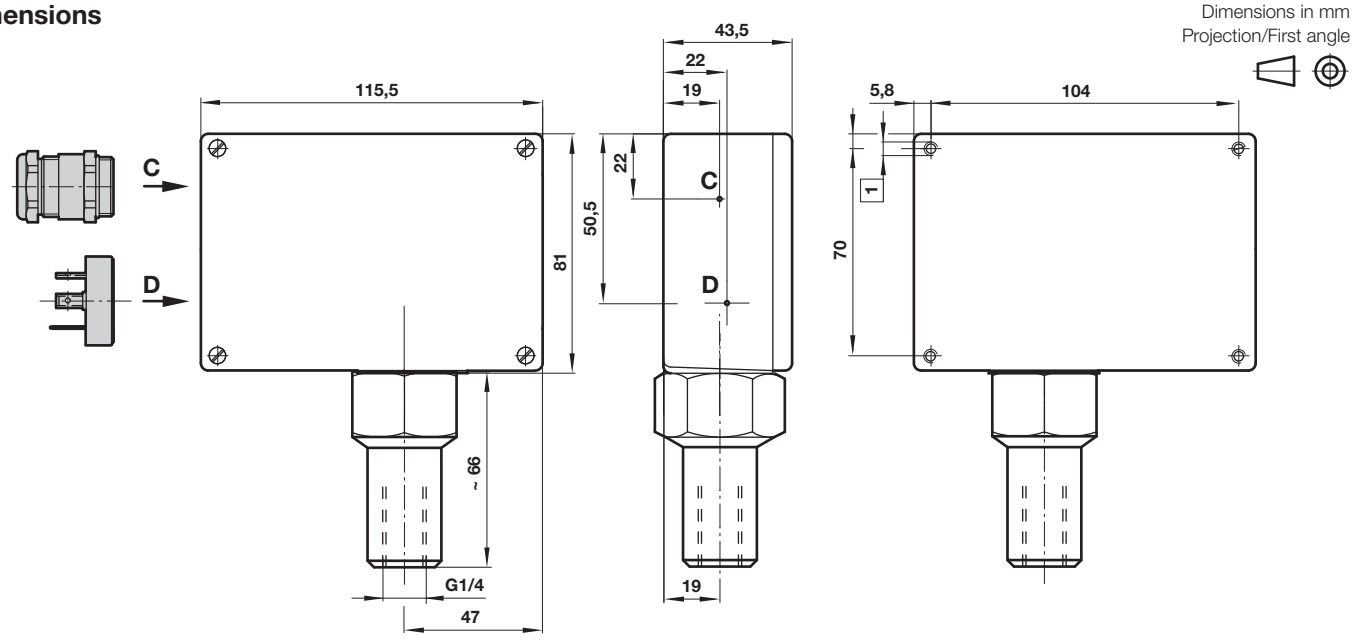
2. RC link in parallel to load in parallel to switching contact.
   Dimensioning principles:
   R_L in Ω ≈ 0,2 x R_{Load} in Ω
   C in [µF] ≈ I_{Load} in [A]



R_L = Load resistance
I_L = Load current

Dimensions

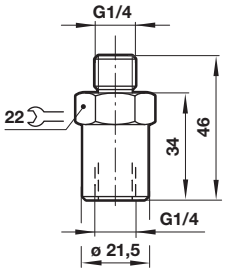
Dimensions in mm
Projection/First angle



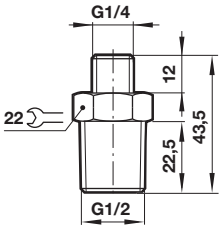
1 M4 x 10 deep

Dimensions in mm
Projection/First angle

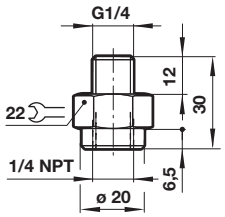
Surge damper
Model: 0574773 (brass)
0553258 (stainless steel 1.4301 AISI 304)



Pressure port/reducing nipple
Model: 0550083 (stainless steel 1.4305 AISI 303/304 S)

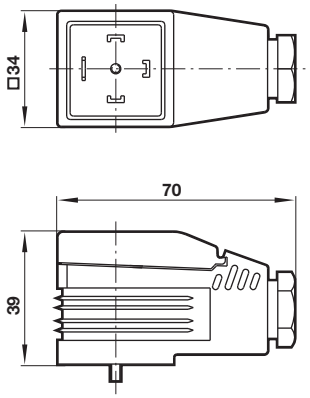


Model: 0574765 (brass)

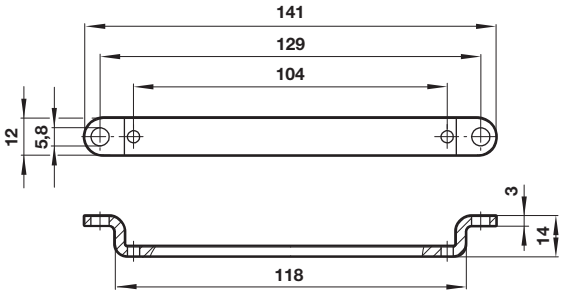


Connectors (black) with light indicator 3-pin + protective conductor
Connection acc. to
DIN EN 175301-803 (form A)
Voltage: 12 ... 28 V d.c./a.c.

Model: 0585418



Brackets (2 brackets and 4 screws)
Model: 0574772 (steel)
0553908 (stainless steel 1.4301 AISI 304)



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

- **-1 ... 25 bar Port size: G1/4**
- **Microswitch with gold plated contacts**
- **Intrinsically safe operation**
- **Electrical connection: connector acc. to DIN EN 175301-803 (form A) or cable gland**

Technical features

Medium:
For neutral, non-inflammable gases
Operation:
Diaphragm
Operating pressure:
-1 ... 25 bar (-14 ... 362 psi)
Repeatability:
±1% of final value
(depending on regulating pressure)
Port size:
G1/4
Media viscosity:
Up to 1000 mm^2/s
Sealing:
$\leq 10^{-7}$ mbar · l · s^{-1}
Pulsations:
Not permitted

Switching pressure difference/hysteresis:
Fixed or adjustable
Switching cycles:
20/min maximum
Life cycle of mechanical parts:
10^7 switching cycles
Switching element:
Microswitch with gold plated contacts
Shock-/vibrations (to avoid if possible):
4 g max. (sinusoidal) / 5 Hz max.
Mounting position:
Optional

Degree of protection:
IP65 for DIN EN 175301-803 (DIN 43650) form A connection
IP66 with cable gland
Electrical connection:
DIN EN 175301-803 (DIN 43650) form A or cable gland
Weight:
1,1 kg (2.4 lbs)
Ambient/Media temperature:
Ambient:
-25 ... +80°C (-13 ... +176°F)
Media:
-10 ... +100°C (14 ... +212°F)
Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F)

Materials:
Housing: aluminium diecast
Sensor: brass
Sealing: stainless steel-bellows

Technical data
Standard models — 181xxxx (fixed switching pressure difference)
Electrical connection acc. to DIN EN 175301-803, form A

Symbol	Pressure range *1)		Over pressure *2)		Switching pressure difference Lower range minimum		Upper range maximum		Model
	(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	
	-1 ... 0	-14 ... 0	10	145	0,06	0.87	0,07	1.01	1810100
	-1 ... 1	-14 ... 14.5	10	145	0,06	0.87	0,08	1.16	1810200
	-1 ... 1,6	-14 ... 23.2	10	145	0,08	1.16	0,09	1.30	1810300
	-1 ... 2,5	-14 ... 36.2	10	145	0,08	1.16	0,12	1.74	1810400
	0,05 ... 1	0.72 ... 14.5	10	145	0,06	0.87	0,08	1.16	1811100
	0,1 ... 2,5	1.45 ... 36.2	10	145	0,07	1.01	0,09	1.30	1811300
	0,5 ... 4	7.2 ... 58	20	290	0,20	2.90	0,25	3.62	1811400
	0,5 ... 6	7.2 ... 87	20	290	0,20	2.90	0,30	4.35	1811500
	0,5 ... 10	7.2 ... 145	20	290	0,30	4.35	0,40	5.80	1811600
	1 ... 16	14.5... 232	50	725	0,60	8.70	0,80	11.6	1811700
	1 ... 25	14.5... 362	50	725	0,70	10.1	0,90	13.0	1811800

Connector is not in scope of delivery; special pressure ranges on request

*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) Short-term pressure peakes are not allowed to exceed this limit value during operations. Operative utilization of the limit value is not permitted. The limit value corresponds to maximum testing pressure.

Standard models — 180xxxx (adjustable switching pressure difference)
Electrical connection acc. to DIN EN 175301-803, form A

Symbol	Pressure range *1)		Over pressure *2)		Switching pressure difference Lower range		Upper range minimum		maximum		Model
	(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	
	-1 ... 0	-14 ... 0	10	145	0,12	1.74	0,13	1.88	0,70	10.1	1800100
	-1 ... 1	-14 ... 14.5	10	145	0,13	1.88	0,14	2.03	1,00	14.5	1800200
	-1 ... 1,6	-14 ... 23.2	10	145	0,17	2.46	0,20	2.90	2,50	36.2	1800300
	-1 ... 2,5	-14 ... 36.2	10	145	0,17	2.46	0,20	2.90	2,50	36.2	1800400
	0,05 ... 1	0.72 ... 14.5	10	145	0,08	1.16	0,11	1.59	0,70	10.1	1801100
	0,1 ... 2,5	1.45 ... 36.2	10	145	0,11	1.59	0,15	2.17	2,00	29.0	1801300
	0,5 ... 4	7.2 ... 58	20	290	0,30	4.35	0,40	5.80	2,50	36.2	1801400
	0,5 ... 6	7.2 ... 87	20	290	0,35	5.07	0,50	7.25	5,00	72-5	1801500
	0,5 ... 10	7.2 ... 145	20	290	0,40	5.80	0,80	11.6	8,00	116	1801600
	1 ... 16	14.5... 232	50	725	0,80	11.6	1,10	15.9	12,00	174	1801700
	1 ... 25	14.5... 362	50	725	1,00	14.5	1,50	21.7	20,00	290	1801800

Connector is not in scope of delivery; special pressure ranges on request

*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) Short-term pressure peakes are not allowed to exceed this limit value during operations. Operative utilization of the limit value is not permitted. The limit value corresponds to maximum testing pressure.

Option selector

18★★★★★

Switching pressure difference	Substitute
Adjustable	0
Fixed	1
Pressure range (bar)	**Substitute**
-1 ... 0	01
-1 ... 1	02
-1 ... 1,6	03
-1 ... 2,5	04
0,05 ... 1	11
0,1 ... 2,5	13
0,5 ... 4	14
0,5 ... 6	15
0,5 ... 10	16
1 ... 16	17
1 ... 25	18

Electrical connection	Substitute
Interface for DIN EN 175301-803 form A connector *1)	00
Cable gland	05

*1) Connector is not in scope of delivery

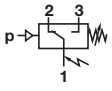
Accessories

Surge damper	Pressure port – reducing nipple	Brackets
		
Page 4	**Page 4**	**Page 4**
0553258 (stainless steel G1/4)	0550083 (G1/4 » G1/2)	0574772 (steel)
0574773 (brass/steel G1/4)	0574765 (G1/4 » 1/4 NPT)	0553908 (stainless steel)

Accessories

Connector DIN EN 175301-803	Connector with LED
	
	Page 4
0570110 (Form A)	0585418

Switching function



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.

Switching capacity
Commutator with gold plated contacts

Load level	Current type	Load type *2)	U min	Max. permissible persistent current Imax [A] at U *1) M20 x 1,5 DIN EN 175301-803, form A					Electrical life-time
			[V]	30 V	48 V	60 V	125 V	250 V	
Standard *3) (contractors, solenoids)	a.c.	Ohmic	12	0,1	0,1	0,1	0,1	0,1	≥ 2 x 10^5 Switching cycles
	a.c.	Inductive, cos φ ≈ 0,7	12	3	3	3	3	3	
	d.c.	Ohmic	12	5	1,2	0,8	0,4	-	
	d.c.	Inductive, L/R ≈ 10 ms	12	3	0,5	0,35	0,05		
Minor *4) (electronic circuits)	a.c.	Ohmic	5 *5)	0,1					
	d.c.	Inductive, L/R ≈ 10 ms	5 *5)	0,1	0,01				

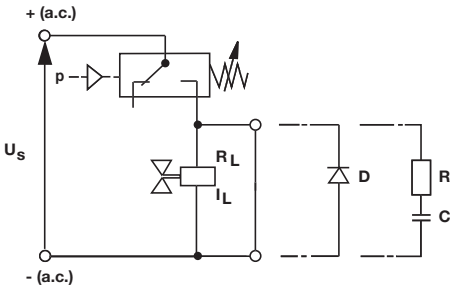
Reference number: 20/min, Reference temperature: +20°C.
Spark quenching with diode with DC and inductive load:
I min = 1 mA; I max = 1,5 x I max of table
Creepage and air paths correspond to insulation group B according to VDE Reg. 0110 (except contact clearance of microswitch).

*1) Higher currents (5 A max) will cause a reduction of the durability of the micro-switch contacts. Futhermore additional measures has to be taken to fulfil the EMV regulation 2004/108/EG by the manufacturer
*2) Spark quenching/overload protection will be necessary using inductive loads.
*3) Gold-plating not required as it would decay.
Max. perm. in-rush current (appr. 30 ms) I AC = max. 15 A
*4) Gold-plating required (will not decay).
*5) Lower value of critical voltage guarantees sufficient contact safety.
Lower voltages permissible under favourable conditions.

Recommended circuit
Spark quenching and EMV intrinsically safe

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: $I_N \geq I_{Load}$
   Selection of a quick switching diode (recovery time trr ≤ 200 ms)

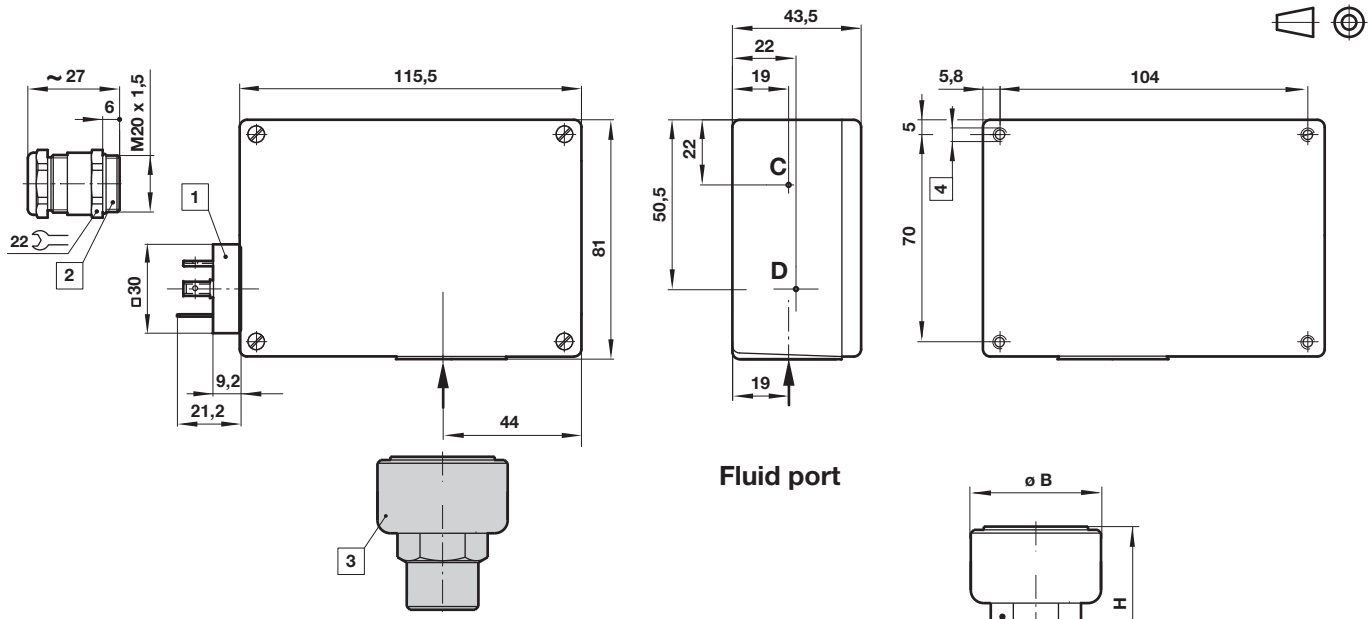
2. RC link in parallel to load in parallel to switching contact.
   Dimensioning principles:
   R_L in Ω ≈ 0,2 x R_{Load} in Ω
   C in [µF] ≈ I_{Load} in [A]



R_L = Load resistance
I_L = Load current

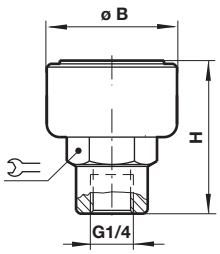
Drawings

Dimensions in mm
Projection/First angle



1 Electric standard interface, DIN EN 175301-803
Connector is not in scope of delivery
2 Alternative pressure switch range with cable gland
3 Fluid port
4 M4 x 10 deep

Fluid port

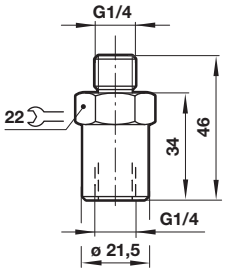


Operating pressure (bar)	B	H	
-1 ... 0/-1 ... 1/-1 ... 1,6/-1 ... 2,5/0,05 ... 10/1 ... 2,5	51	42,5	30
0,5 ... 4/0,5 ... 6/0,5 ... 10	40	47	24
1 ... 16/1 ... 25	47,5	43	41

Dimensions in mm
Projection/First angle

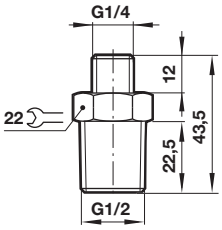
Surge damper

Model: 0574773 (brass)
0553258 (stainless steel 1.4301 AISI 304)

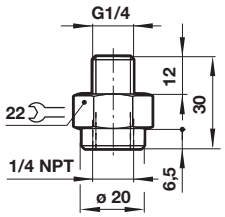


Pressure port/reducing nipple

Model: 0550083 (stainless steel 1.4305 AISI 303/304 S)



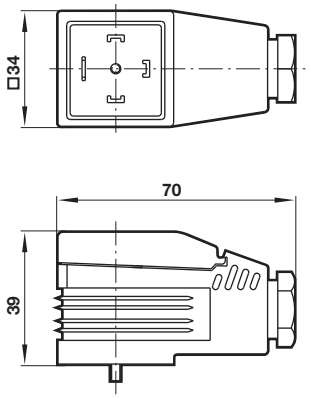
Model: 0574765 (brass)



Connectors (black) with light indicator 3-pin + protective conductor

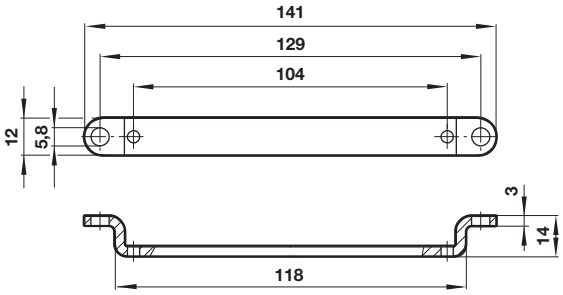
Connection acc. to
DIN EN 175301-803 (form A)
Voltage: 12 ... 28 V d.c./a.c.

Model: 0585418



Brackets (2 brackets and 4 screws)

Model: 0574772 (steel)
0553908 (stainless steel 1.4301 AISI 304)



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/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 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.