Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document.

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
General information

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

<table>
<thead>
<tr>
<th>Type</th>
<th>Pressure range *1)</th>
<th>Lower range (bar)</th>
<th>Upper range (bar)</th>
<th>Max. over pressure*2) (bar)</th>
<th>Switching cycles (1/min)</th>
<th>Switching pressure difference (bar)</th>
<th>Materials</th>
<th>Port size</th>
<th>Weight (kg)</th>
<th>Dimension</th>
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<tbody>
<tr>
<td>0882100</td>
<td>5 to 70</td>
<td>10.5</td>
<td>15</td>
<td>400</td>
<td>100</td>
<td>AL/steel</td>
<td>PTFE/NBR</td>
<td>G1/4</td>
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<td>PTFE/NBR</td>
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</table>

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

*2) Max. values

AL aluminium
NBR perbunan
PTFE teflon
CN zink die cast
POM delrin

Connector included in delivery

Electrical connection M 12 x 1 max. allowable voltage 30 V, M 12 plug not included

<table>
<thead>
<tr>
<th>Type</th>
<th>Pressure range *1)</th>
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<th>Weight (kg)</th>
<th>Dimension</th>
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<td>17</td>
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<td>100</td>
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*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.
Hydraulic pressure switch 18D
Standard

Accessories

<table>
<thead>
<tr>
<th>Pressure port</th>
<th>Surge damper</th>
<th>Cover (via adjustment screw)</th>
<th>Connector M 12 x 1 90°</th>
<th>Connector M 12 x 1 straight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Siehe Seite 4</td>
<td>Siehe Seite 4</td>
<td>Siehe Seite 4</td>
<td>052058</td>
<td>052056</td>
</tr>
<tr>
<td>(brass)</td>
<td>(brass)</td>
<td></td>
<td>(2 m cable, 4-core)</td>
<td>(90° without cable)</td>
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<tr>
<td>0574787</td>
<td>057473</td>
<td>0570110</td>
<td>0523058</td>
<td>0523056</td>
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<tr>
<td>(brass) cable</td>
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<td>(2 m cable, 4-core)</td>
<td>(90° without cable)</td>
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<td>0550083</td>
<td>0553258</td>
<td></td>
<td>0523053</td>
<td>0523052</td>
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<tr>
<td>(stainless steel)</td>
<td>(stainless steel)</td>
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<td>(5 m cable, 4-core)</td>
<td>(5 m cable, 4-core)</td>
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</table>

Switching capacity
Commmutator with gold plated contacts

<table>
<thead>
<tr>
<th>Load level</th>
<th>Current type</th>
<th>Load type</th>
<th>Umin [V]</th>
<th>Max. permanent current [I] at U [V]</th>
<th>Max. in-rush current [I] at U [V]</th>
<th>Contact life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>AC ohmic</td>
<td>12</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>(z.B. contractors, solenoids)</td>
<td>AC inductive, cos ϕ = 0.7</td>
<td>12</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>DC ohmic</td>
<td>12</td>
<td>5</td>
<td>1,2</td>
<td>0,8</td>
<td>0,4</td>
<td>–</td>
</tr>
<tr>
<td>DC inductive, L/R = 10 ms</td>
<td>12</td>
<td>3</td>
<td>0,3</td>
<td>0,35</td>
<td>0,05</td>
<td></td>
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<tr>
<td>Minor</td>
<td>AC ohmic</td>
<td>5 *6)</td>
<td>0,34</td>
<td>0,2</td>
<td>0,17</td>
<td>0,08</td>
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<tr>
<td>(z.B. electronic circuits)</td>
<td>DC inductive, L/R = 10 ms</td>
<td>5 *6)</td>
<td>0,1</td>
<td>0,01</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

Contact life ≥ 10⁶ switching cycles

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).

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: UD ≥ 1,4 x Us
   Rated current at diode: IN ≥ ILast
   Selection of a quick switching diode (recovery time trr ≤ 200 [ms]).

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

   Dimensioning principles:
   R in Ω = 0,2 x RLoad in Ω
   C in [μF] = ILoad in [A]

   ![Diagram of spark quenching with DC voltage](image-url)
Hydraulic pressure switch 18D
Standard

Dimensions

1. G 1/4

2. Flange

3. 1/4 NPT on request

4. 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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5/07
N/en 5.11.101.04