

0161 / 0162

Diaphragm / piston pressure switches up to 250 V

- Aluminium housing
- Snap action with silver contacts
- Overpressure safety up to 2,900 / 8,700 psi (200 / 600 bar)¹⁾
- Socket device similar to DIN EN 175301 (DIN 43650)
- Differential adjustable at factory

| P _{max.} in psi (bar) | Adjustment range in psi (bar) | Tolerance in psi (bar) at room temperature | Dimension A in mm | Order number: |
|-----------------------------------|----------------------------------|---|----------------------|---------------|
|-----------------------------------|----------------------------------|---|----------------------|---------------|

With female 1/4 BSPP thread

0161 Diaphragm pressure switches

| | | | | |
|--|-----------------------------------|--|--|-------------------------|
| 2,900 psi ¹⁾ (200 bar) ¹⁾ | 7.25 - 14.5 psi (0.5 - 1 bar) | ± 2.90 psi (± 0.2 bar) | | 0161 - 436 14 - X - 001 |
| | 7.25 - 72.5 psi (0.5 - 5 bar) | ± 2.90 - 72.5 psi (± 0.2 - 0.5 bar) | | 0161 - 437 14 - X - 001 |
| | 14.5 - 145 psi (1 - 10 bar) | ± 7.25 psi (± 0.5 bar) | | 0161 - 438 14 - X - 001 |
| | 145 - 725 psi (10 - 50 bar) | ± 43.5 psi (± 3.0 bar) | | 0161 - 439 14 - X - 001 |
| | 725 - 1,450 psi (50 - 100 bar) | ± 43.5 - 72.5 psi (± 3.0 - 5.0 bar) | | 0161 - 440 14 - X - 001 |

0161 Piston pressure switches

| | | | | |
|--|--------------------------------------|---|--|-------------------------|
| 8,700 psi ¹⁾ (600 bar) ¹⁾ | 1,450 - 5,800 psi (100 - 400 bar) | ± 72.5 - 130.5 psi (± 5.0 - 9.0 bar) | | 0161 - 441 14 - X - 001 |
|--|--------------------------------------|---|--|-------------------------|

Block style (with O-ring NBR 5 x 1.5 mm)

0162 Diaphragm pressure switches

| | | | | |
|--|-----------------------------------|--|----|-------------------------|
| 2,900 psi ¹⁾ (200 bar) ¹⁾ | 7.25 - 14.5 psi (0.5 - 1 bar) | ± 2.90 psi (± 0.2 bar) | 15 | 0162 - 436 14 - X - 001 |
| | 7.25 - 72.5 psi (0.5 - 5 bar) | ± 2.90 - 72.5 psi (± 0.2 - 0.5 bar) | | 0162 - 437 14 - X - 001 |
| | 14.5 - 145 psi (1 - 10 bar) | ± 7.25 psi (± 0.5 bar) | | 0162 - 438 14 - X - 001 |
| | 145 - 725 psi (10 - 50 bar) | ± 43.5 psi (± 3.0 bar) | | 0162 - 439 14 - X - 001 |
| | 725 - 1,450 psi (50 - 100 bar) | ± 43.5 - 72.5 psi (± 3.0 - 5.0 bar) | | 0162 - 440 14 - X - 001 |

0162 Piston pressure switches

| | | | | |
|--|--------------------------------------|---|------|-------------------------|
| 8,700 psi ¹⁾ (600 bar) ¹⁾ | 1,450 - 5,800 psi (100 - 400 bar) | ± 72.5 - 130.5 psi (± 5.0 - 9.0 bar) | 19.5 | 0162 - 441 14 - X - 001 |
|--|--------------------------------------|---|------|-------------------------|

Seal material – Application areas

| | | |
|--------------|---|---|
| NBR (BunaN) | Hydraulic/machine oil, heating oil, air, nitrogen, etc. | 1 |
| EPDM | Brake fluid, hydrogen, oxygen, acetylene, etc. | 2 |
| FKM (Viton®) | Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline, etc. | 3 |

Refer to page 75 for the temperature range and application thresholds of sealing materials

Your order number: 016X - XXX 14 - X - XXX

1 Adjusting the set point

To adjust the set point, undo the locknut and adjust the set screw using a screwdriver.
Clockwise screwing increases the switching pressure. After adjusting, tighten the locknut again.

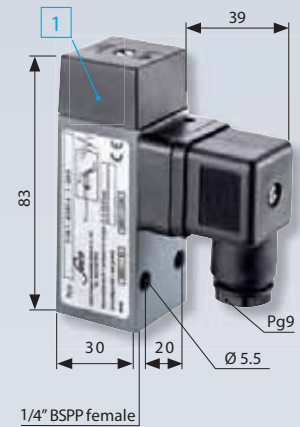
¹⁾ Static value. Dynamic value is 30-50 % lower. Values pertain to the hydraulic/pneumatic part of the pressure switch.

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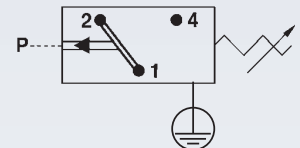
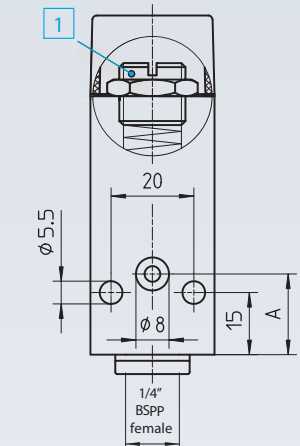
30 A/F

Suco

0161 with female thread



0162 Block style



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Pressure switches 30 A/F

Technical data

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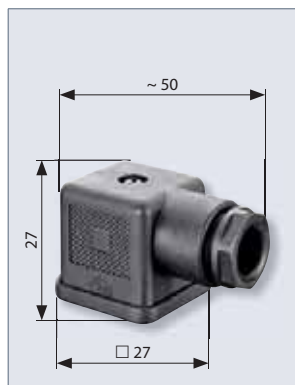
30 A/F

| | | |
|--|---|---|
| Temperature resistance of sealing materials: | NBR (BunaN) | -40 °F ... +212 °F (-40 °C ... +100 °C) |
| | EPDM | -22 °F ... +248 °F (-30 °C ... +120 °C) |
| | FKM (Viton®) (in diaphragm pressure switch) | +23 °F ... +248 °F (-5 °C ... +120 °C) |
| | FKM (Viton®) (in piston pressure switch) | +5 °F ... +248 °F (-15 °C ... +120 °C) |
| Switching frequency: | 200 / min. | |
| Mechanical life expectancy: | 1,000,000 cycles (for diaphragm pressure switches, life expectancy value only applies for switching pressures up to 725 psi / 50 bar) | |
| Pressure rise rate: | ≤ 14.5 psi/ms (≤ 1 bar/ms) | |
| Differential: | Typ 0159: | approx. 10 ... 30 % (not adjustable) |
| | Typ 0161, 0162, 0175: | approx. 10 ... 30 % (factory adjustable) |
| Vibration resistance: | 10 g; 5 ... 200 Hz sine wave; DIN EN 60068-2-6 | |
| Shock resistance: | 294 m/s ² ; 14 ms half sine wave; DIN EN 60068-2-27 | |
| Housing material: | Aluminium | |
| Protection class: | IP65 with Socket device fitted | |
| Weight: | Typ 0159, 0161, 0162: | approx. 8.5 oz (240 g) |
| | Typ 0175: | approx. 11 oz (310 g) |

| Electrical values | 0159 | 0161 / 0162 / 0175 |
|---|-----------------------------|--------------------|
| Rated working voltage U_e | Rated working current I_e | |
| 250 VAC 50 / 60 Hz, AC 12 | 2.5 A | 5 A |
| 250 VAC 50 / 60 Hz, AC 14 | 1 A | 1 A |
| 24 VDC, DC 12 / DC 13 | 2 / 2 A | 3.5 / 3.5 A |
| 50 VDC, DC 12 / DC 13 | 1 / 0.5 A | 2 / 1 A |
| 75 VDC, DC 12 / DC 13 | 0.75 / 0.4 A | 1 / 0.5 A |
| 125 VDC, DC 12 / DC 13 | 0.3 / 0.2 A | 0.3 / 0.2 A |
| 250 VDC, DC 12 / DC 13 | 0.3 / 0.2 A | 0.25 / 0.2 A |
| Rated insulation voltage U_i : | 300 V | |
| Rated impulse withstand voltage U_{imp} : | 2.5 kV | |
| Conventional thermal current I_{the} : | 6 A | |
| Switching overvoltage: | < 2.5 kV | |
| Rated frequency: | DC and 50 / 60 Hz | |
| Nominal current of short-circuit mechanism: | to 2.5 A | to 6.3 A |
| Conditional short-circuit current: | < 350 A | |
| Tightening torque of terminal screws: | < 0.35 Nm | |
| Connector cross-section: | 0.5 – 1.5 mm ² | |

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Socket device

to DIN EN 175301-803-A
(DIN 43650)

PG9 screw fitting
(tightening range 6 – 9 mm)
terminals for wire cross-sections:
0.34 ... 1.5 mm²
(AWG 22 ... AWG 16),
tightening torque
for terminal screw 0.4 Nm

**With socket device
fitted: IP65**

Suitable for voltages
up to 250 V

suitable for series

**0150 / 0161 / 0162 / 0175
0184 / 0185 / 0194 / 0195**

Order number:
1-1-84-652-009



Socket device

With indicator lamp to DIN EN
175301-803-A
(DIN 43650)

PG9 screw fitting
(tightening range 6 – 9 mm)
terminals for wire cross-sections:
0.34 ... 1.5 mm²
(AWG 22 ... AWG 16),
tightening torque
for terminal screw 0.4 Nm

**With socket device
fitted: IP65**

Suitable for voltage
24 or 250 V

suitable for series

**0150 / 0161 / 0162 / 0175
0184 / 0185 / 0194 / 0195**

Order number:
for 24 VDC: **1-1-84-652-011**
for 250 VAC: **1-1-84-652-010**



Socket device

M 12x1
DIN EN 61071-2-101 D
Straight
4-pin

Terminals for wire cross-section
0.75 mm² (AWG 18),
tightening torque for terminal
screw 0.4 Nm

**With socket device
fitted: IP65**

Suitable for voltages
up to 48 V

suitable for series

**0122 / 0123 / 0124 / 0125
0134 / 0135 / 0424 / 0425**

and for all transmitters and
electronic pressure switches
with an M12 connector

Order number:
1-6-00-652-016



Socket device

M 12x1
DIN EN 61071-2-101 D
Angled
4-pin

Terminals for wire cross-section
0.75 mm² (AWG 18),
tightening torque for terminal
screw 0.4 Nm

**With socket device
fitted: IP65**

Suitable for voltages
up to 48 V

suitable for series

**0122 / 0123 / 0124 / 0125
0134 / 0135 / 0424 / 0425**

and for all transmitters and
electronic pressure switches
with an M12 connector

Order number:
1-6-00-652-017



Pressure switches 30 A/F

Snap action with silver contacts



- Attachment options for wall fitting and block style enable clearly structured, accessible, easy-maintenance installation
- Switching pressure can be adjusted easily by user
- High overpressure safety
- Socket devices enable simple installation on the machine