

Pressure switches 30 A/F  
Changeover switch



CE marking

SUCO pressure switches rated with an operating limit of 250 V are covered by the Low Voltage Directive 73/23/EC.

An EC Declaration of Conformity has been issued for these pressure switches and is on file at our offices. The corresponding switches bear the CE mark in our catalog.



- **Mounting options for wall or manifold mounting enable easy, free-maintenance installation.**
- **Easily user-adjustable switching point.**
- **High overpressure safety.**
- **Connector allows easy assembly on site.**

Technical data

Temperature stability for diaphragm / seal materials:	NBR (BunaN) -40 °F to +212 °F (-40 °C to +100 °C) EPDM -22 °F to +248 °F (-30 °C to +120 °C) FKM (Viton ®) +23 °F to +248 °F (-5 °C to +120 °C)
Switching frequency:	200 / min.
Mechanical life expectancy:	10 <sup>6</sup> cycles (life expectancy of diaphragm pressure switches only for pressures up to max. 50 bar)
Pressure rise rate:	≤ 14.5psi / ms (≤ 1 bar / ms)
Hysteresis:	Type 0159: approx. 10 – 30 % (not adjustable) Type 0161, 0162, 0175: approx. 10 – 30 % (factory adjustable)
Vibration resistance:	10 g / 5 – 200 Hz sine-wave
Shock resistance:	294 m/s <sup>2</sup> ; 14 ms half-sine-wave
Body material:	Aluminum
Degree of protection:	IP 65 socket device fitted
Weight in ounces (grams):	Type 0159, 0161, 0162 approx. 8.4 oz (240 g) Type 0175: approx. 10.9 oz (310 g)

Electrical Values                      0159                      0161/0162

Rated operating voltage U <sub>e</sub> :	Rated operating current I <sub>e</sub>		Application category
250 Volt AC 50 / 60 Hz	2.5 Ampere	5 Ampere	AC 12
250 Volt AC 50 / 60 Hz	1 Ampere	1 Ampere	AC 14
24 Volt DC	2 / 2 Ampere	3.5 / 3.5 Ampere	DC 12 / DC 13
50 Volt DC	1 / 0.5 Ampere	2 / 1 Ampere	DC 12 / DC 13
75 Volt DC	0.75 / 0.4 Ampere	1 / 0.5 Ampere	DC 12 / DC 13
125 Volt DC	0.3 / 0.2 Ampere	0.3 / 0.2 Ampere	DC 12 / DC 13
250 Volt DC	0.3 / 0.2 Ampere	0.25 / 0.2 Ampere	DC 12 / DC 13

Rated insulation voltage U <sub>i</sub> :	300 V
Rated impulse withstand voltage U <sub>imp</sub> :	2.5 kV
Rated thermal current I <sub>the</sub> :	6 Ampere
Switching overvoltage:	< 2.5 kV
Rated frequency:	DC und 50 / 60 Hz
Short circuit current rating:	0159: up to 2.5 Ampere 0161/0162: up to 6.3 Ampere
Rated short-circuit current:	< 350 Ampere
Tightening torque of terminal screws:	< 0.35 Nm
Cross section:	0.5 – 1.5 mm <sup>2</sup>

- Aluminum body
- With snap action switch and silver contacts
- Overpressure safe to: 2,900psi (200 bar) diaphragm type <sup>1)</sup>  
8,700psi (600 bar) piston type <sup>1)</sup>
- Max. voltage 250 V
- Switching point adjustable by turning knurled screw while in operation.



#### 0159 Diaphragm pressure switches

P <sub>max.</sub> in psi (bar)	Adjustment range in psi (bar)	Tolerance in psi (bar) (at room temperature)	Thread	Order number:			
2,900psi <sup>1)</sup> (200 bar) <sup>1)</sup>	2.9 – 29psi (0.2 – 2 bar)	± 2.9 – 4.35psi (± 0.2 - 0.3 bar)	1/4 " BSPP female	0159	426	14	001
	7.25 – 72.5psi (0.5 – 5 bar)	± 2.9 – 7.25psi (± 0.2 - 0.5 bar)		0159	427	14	001
	14.5 – 145psi (1 – 10 bar)	± 7.25psi (± 0.5 bar)		0159	428	14	001
	29 – 290psi (2 – 20 bar)	± 14.5psi (± 1 bar)		0159	429	14	001
	72.5 – 725psi (5 – 50 bar)	± 43.5psi (± 3 bar)		0159	430	14	001
	145 – 1,450psi (10 – 100 bar)	± 43.5 – 72.5psi (± 3 - 5 bar)		0159	431	14	001

#### 0159 Piston pressure switches

P <sub>max.</sub> in psi (bar)	Adjustment range in psi (bar)	Tolerance in psi (bar) (at room temperature)	Thread	Order number:			
8,700psi <sup>1)</sup> (600 bar) <sup>1)</sup>	145 – 1,450psi (10 – 100 bar)	± 43.5 – 72.5psi (± 3 - 5 bar)	1/4 " BSPP female	0159	432	14	001
	362.5 – 3,625psi (25 – 250 bar)	± 72.5 – 101.5psi (± 5 - 7 bar)		0159	433	14	001
	580 – 5,800psi (40 – 400 bar)	± 72.5 – 130.5psi (± 5 - 9 bar)		0159	434	14	001

#### Diaphragm / seal material – areas of application

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

Temperature ranges of diaphragm / seal materials see page 44

Order number: 0159 - XXX 14 - X - 001

#### Degree of protection IP65

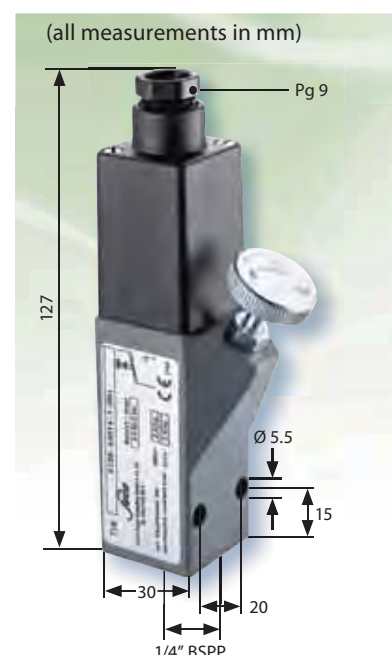
The type approval does not apply without restriction to all environmental conditions. It is the responsibility of the user to check whether the electrical connection complies with regulations other than those stated, and whether it can be used for special applications which could not be foreseen by us.

#### Warning !

When using oxygen, the relevant accident prevention regulations must be observed. In addition, we recommend that a maximum operating pressure of 10 bar is not exceeded.

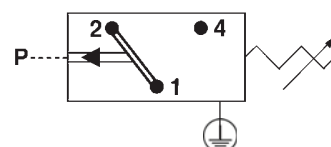
Piston pressure switches are only to a limited extent suitable for use with gases. See explanation on page 9.

#### With female thread



■ All pressure switches can be factory preset upon request.

■ For further technical data and electrical values see page 44.



<sup>1)</sup> Static pressure, dynamic pressures should be 30 to 50% lower. These values refer to the hydraulic or pneumatic part of the pressure switch.