

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 catalogue.



■ **Mounting options for wall or manifold mounting enable easy, free-maintenance installation.**

■ **Easily user-adjustable switching point.**

■ **High overpressure safety.**

■ **Socket device allows easy assembly on site.**

Technical data

Temperature stability for diaphragm / seal materials:	NBR	-40 °C – +100 °C
	EPDM	-30 °C – +120 °C
	FKM	-5 °C – +120 °C
Switching frequency:	200 / min.	
Mechanical life expectancy:	10 ⁶ cycles (life expectancy of diaphragm pressure switches only for pressures up to max. 50 bar)	
Pressure rise rate:	≤ 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 ² ; 14 ms half-sine-wave	
Body material:	Aluminium	
Degree of protection:	IP 65 socket device fitted	
Weight in grams:	Type 0159, 0161, 0162	approx. 240 g
	Type 0175:	approx. 310 g

Electrical Values

Rated operating voltage U _e :	0159		0161/0162		Application category
	Rated operating current I _e		Rated operating current I _e		
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 _i :	300 V	
Rated impulse withstand voltage U _{imp} :	2.5 kV	
Rated thermal current I _{the} :	6 Ampere	
Switching overvoltage:	< 2.5 kV	
Rated frequency:	DC und 50 / 60 Hz	
Short circuit current rating:	0159:	To 2.5 Ampere
	0161/0162:	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 ²	

0159

Diaphragm / piston pressure switches 250 V

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- Aluminium body
- With changeover switch and silver contacts
- Overpressure safe to 200 / 600 bar¹⁾
- Max. voltage 250 V
- Switching point continuously adjustable by turning knurled screw while in operation.



p _{max.} in bar	Adjustment range in bar	Tolerance at room temperature	Thread	Order number:
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0159 Diaphragm pressure switches

200 ¹⁾	0.2 – 2	± 0.2 – 0.3	G 1/4 female	0159	426	14	X	001
	0.5 – 5	± 0.2 – 0.5		0159	427	14	X	001
	1 – 10	± 0.5		0159	428	14	X	001
	2 – 20	± 1.0		0159	429	14	X	001
	5 – 50	± 3.0		0159	430	14	X	001
	10 – 100	± 3.0 – 5.0		0159	431	14	X	001

0159 Piston pressure switches

600 ¹⁾	10 – 100	± 3.0 – 5.0	G 1/4 female	0159	432	14	X	001
	25 – 250	± 5.0 – 7.0		0159	433	14	X	001
	40 – 400	± 5.0 – 9.0		0159	434	14	X	001

Diaphragm / seal material – areas of application

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

Temperature ranges of diaphragm / seal materials see page 42

Order number:	0159 – XXX 14 – X – 001
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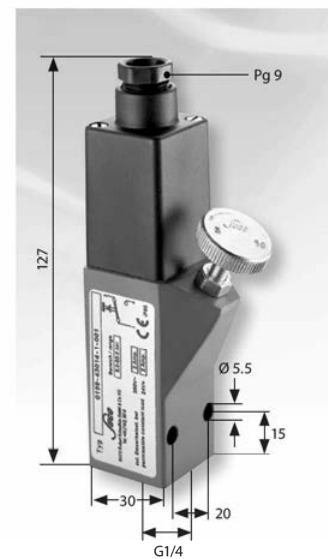
Degree of protection IP65

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!

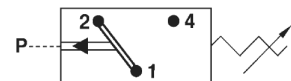
When using oxygen, the relevant accident prevention regulations must be observed. In addition, we recommend that a maximum operating pressure of 10 bar is not exceeded.

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

With female thread


■ Our pressure switches are also available with factory pre-set switching points.

■ For further technical data and electrical values see page 42.



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

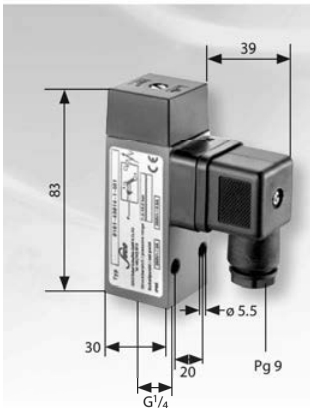
0161/0162
 Diaphragm / piston pressure switches 250 V

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- Aluminium body
- With changeover switch and silver contacts
- Overpressure safe to 200/600 bar¹⁾
- With socket device similar to DIN EN 175301 (DIN 43650)
- Adjustable hysteresis at works

0161 With female thread



p _{max.} in bar	Adjustment range in bar (tolerance at room temperature)	dim. A in mm	Female thread G 1/4	Manifold mounting
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Diaphragm pressure switches		0161				0162 ²⁾						
200 ¹⁾	0.5 – 1 (±0.2)	15	0161	436	14	X	001	0162	436	14	X	001
	0.5 – 5 (±0.2–0.5)		0161	437	14	X	001	0162	437	14	X	001
	1 – 10 (±0.5)		0161	438	14	X	001	0162	438	14	X	001
	10 – 50 (±3.0)		0161	439	14	X	001	0162	439	14	X	001
	50 – 100 (±3.0–5.0)		0161	440	14	X	001	0162	440	14	X	001

Piston pressure switches		0161				0162 ²⁾						
600 ¹⁾	100 – 400 (±5.0–9.0)	19.5	0161	441	14	X	001	0162	441	14	X	001

Diaphragm / seal material – areas of application

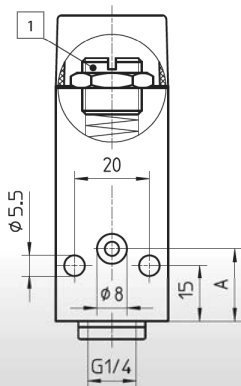
NBR	Hydraulic / machine oil, heating oil, air, nitrogen etc.	1
EPDM	Brake fluid, ozone, acetylene, hydrogen etc.	2
FKM	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline etc.	3

See page 42 for temperature ranges of diaphragm materials

Order number:	016X -XXX 14 -X- 001
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²⁾ 0162: Scope of supply includes O-ring NBR 5x1.5mm

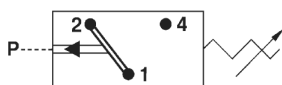
0162 Manifold mounting



1 To adjust the set point, loose the locknut and turn the set screw with a screwdriver. Clock-wise screwing increases the switching pressure. After adjusting, tighten the locknut again.

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■ For further technical data and electrical values see page 42.



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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.

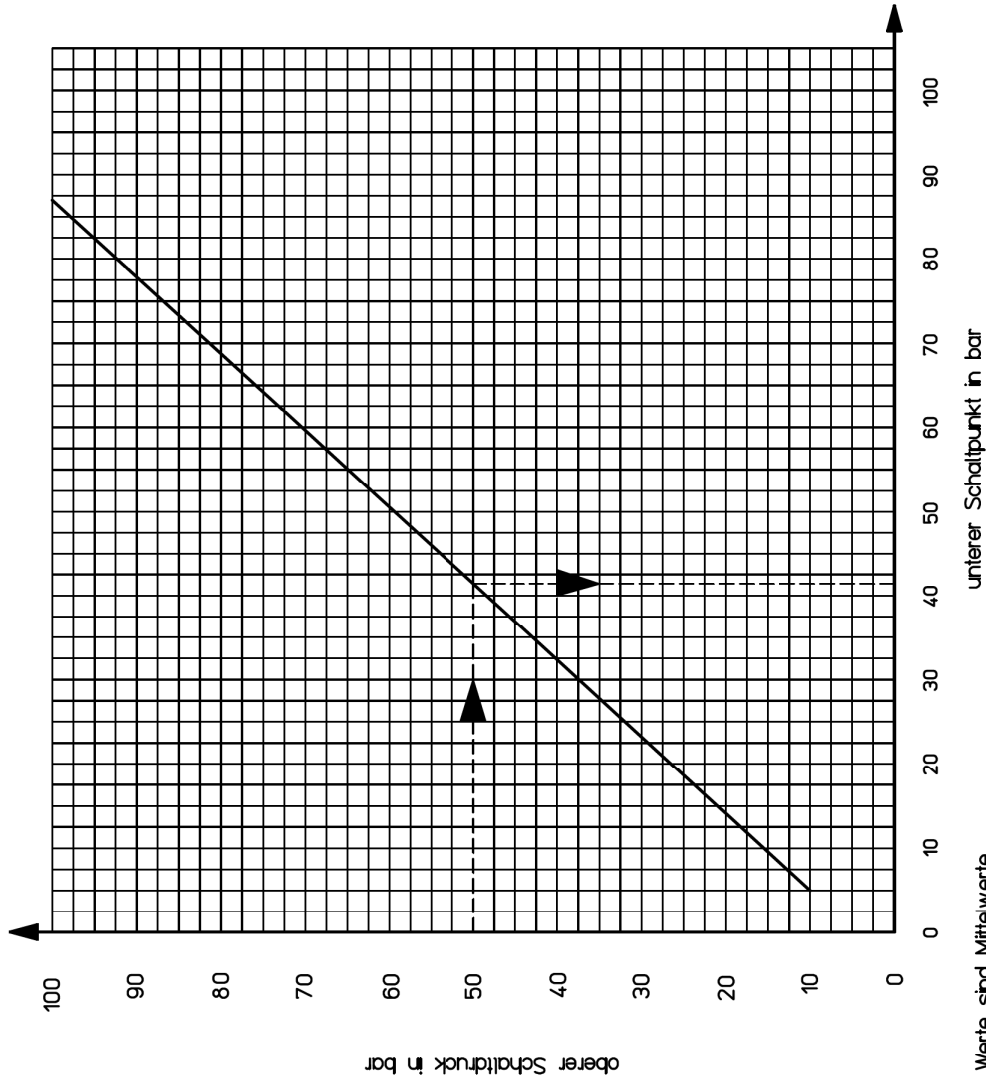
Piston pressure switches are only to a limited extent suitable for use with gases. See explanation on page 9.

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

RÜCKSCHALTWERTE TABELLE

TYP : 0159 - 432

DRUCKBEREICH : 10 - 100 BAR - KOLBEN



Die angegebenen Werte sind Mittelwerte,
Abweichungen sind möglich !!!

Stand : Dezember 2005

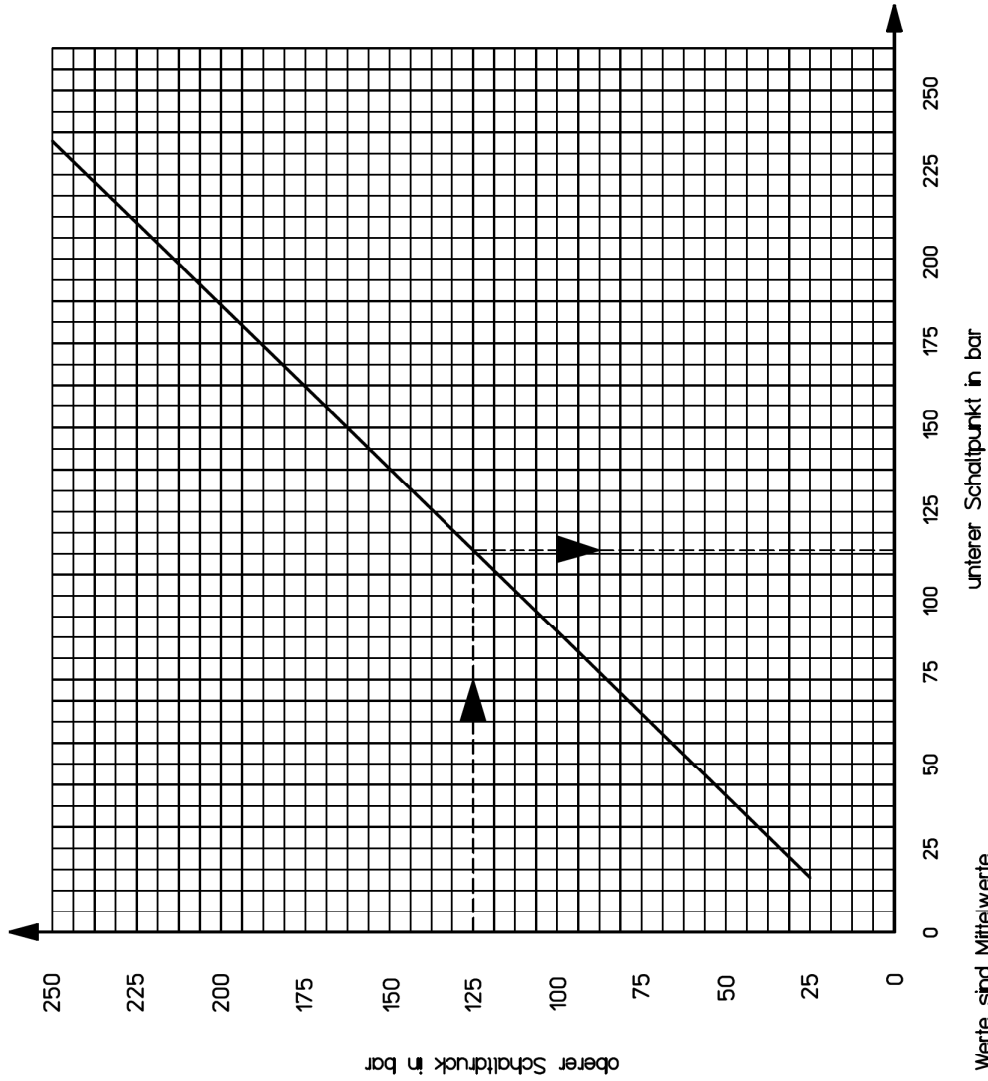
SCHILLING - 08.12.2005

Untertage weder verweilt, noch Urteilen
zugänglich gemacht werden, und sie darf durch
den Empfänger oder Dritte auch nicht in anderer
Weise irrtümlich verwendet werden.

RÜCKSCHALTWERTE TABELLE

TYP : 0159 - 433

DRUCKBEREICH : 25 - 250 BAR - KOLBEN



Die angegebenen Werte sind Mittelwerte,
Abweichungen sind möglich !!!

Stand : Dezember 2005

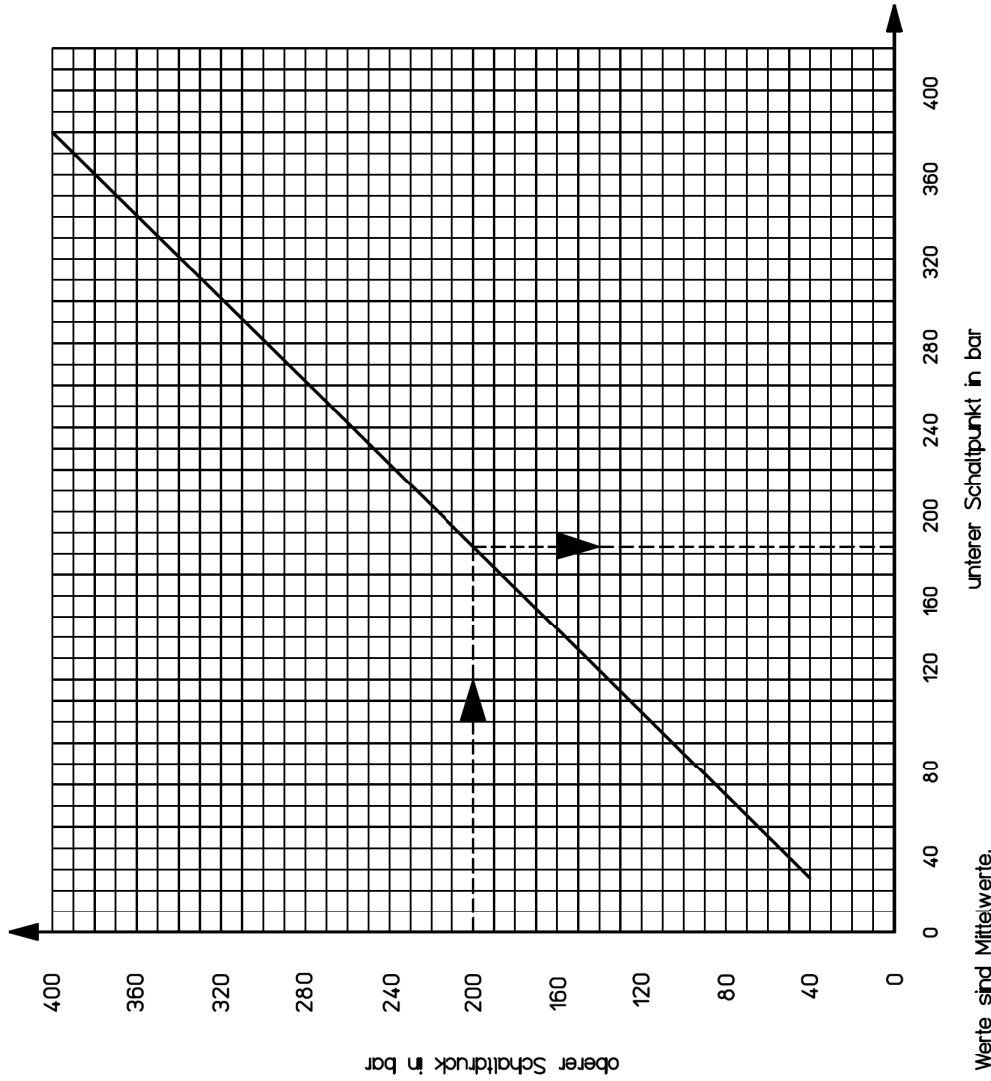
SCHILLING - 08.12.2005

Unterge weder verantwortlich, noch Urteilen
zugänglich gemacht werden, und sie darf durch
den Empfänger oder Dritte auch nicht in anderer
Weise irrtümlich verwendet werden.

RÜCKSCHALTWERTE TABELLE

TYP : 0159 - 434

DRUCKBEREICH : 40 - 400 BAR - KOLBEN



Die angegebenen Werte sind Mittelwerte,
Abweichungen sind möglich !!!

Stand : Dezember 2005

SCHILLING - 08.12.2005

Unterge weder verantwortlich, noch Urteilen
den Empfänger oder Dritte auch nicht in anderer
Weise inbündlich verwendet werden.