

Vacuum switches

for negative pressure from 950 mbar to 100 mbar



- Switching point can be adjusted when fitted on site¹⁾
- High overpressure resistance
- Long service life even under harsh conditions
- 0150 series available as changeover contacts up to 250 V
- 0151 series available as NC or NO up to 42 V

¹⁾ Pressure switches can also be supplied preset at factory.
Our preset switches are sealed with lacquer paint, set points are embossed on the housing.

Vacuum switches

Technical details

M.9

Vacuum



Type:	0150	0151
Operating voltage:	10 ... 250 VAC/DC	10 ... 42 VAC/DC
Rated current (resistive load):	Refer to electrical values below	10 mA ... 4 A
Switching power:	Refer to electrical values below	100 VA
Temperature resistance of sealing materials:	-20 °C ... +100 °C	-15 °C ... +120 °C
Switching frequency:	200 / min	
Mechanical life expectancy:	1,000,000 cycles	
Pressure rise rate:	≤ 1,000 bar / s	
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	Brass
Protection class:	IP65 with socket device	IP65, terminals IP00
Weight:	approx. 270 g	approx. 140 g

0150 Electrical values (also refer to page 14 for technical explanations)

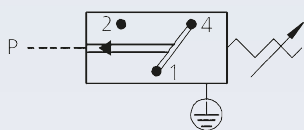
Rated working voltage U_e	Rated working current I_e (usage category)
250 VAC 50 / 60 Hz	5 A (AC 12)
250 VAC 50 / 60 Hz	1 A (AC 14)
24 VDC	3,5 / 3,5 A (DC 12 / DC 13)
50 VDC	2 / 1 A (DC 12 / DC 13)
75 VDC	1 / 0,5 A (DC 12 / DC 13)
125 VDC	0,3 / 0,2 A (DC 12 / DC 13)
250 VDC	0,25 / 0,2 A (DC 12 / DC 13)
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:	up 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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0150

Vacuum switch up to 250 V with changeover contact

- Aluminium housing
- Operating voltage up to 250 V
- Changeover with silver contacts
- Overpressure safety up to 20 bar¹⁾
- Socket device similar to DIN EN 175301 (DIN 43650)
- Hysteresis approx. 50 – 150 mbar (cannot be changed)



p_{\max} in bar	Adjustment range in mbar (relative)	Tolerance at room temperature in mbar	Thread	Article number
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0150 Vacuum switch

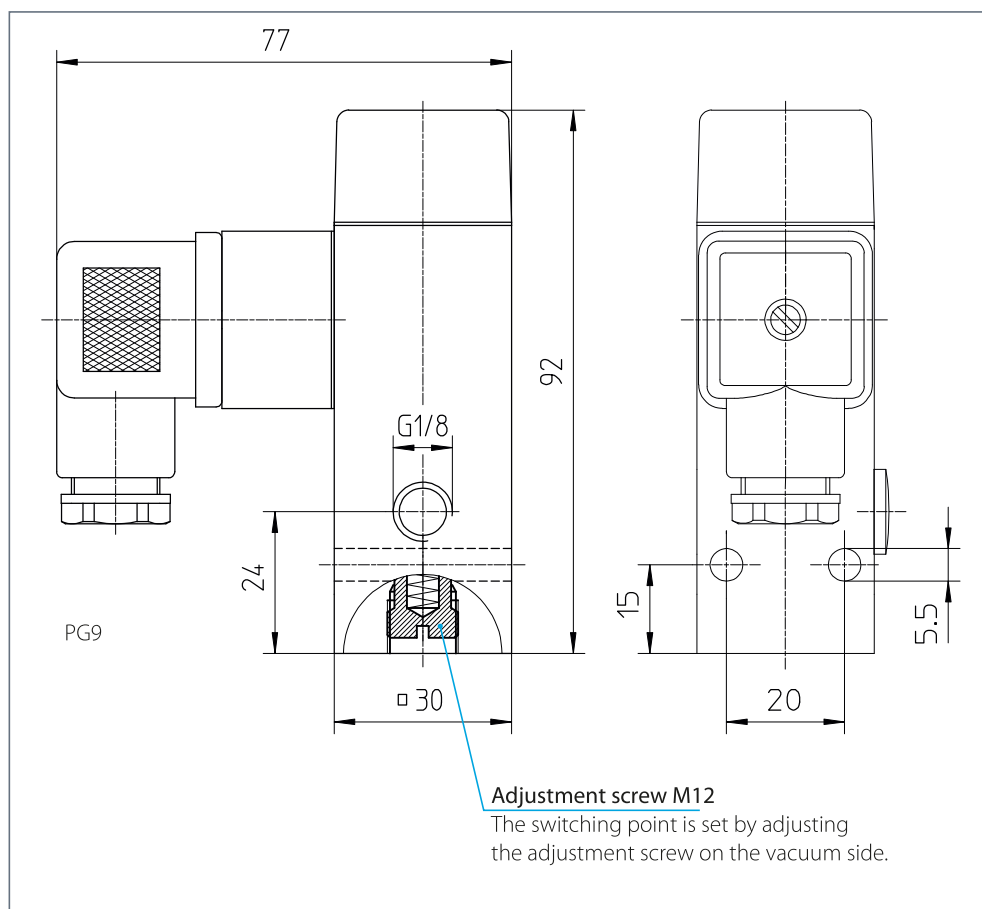
20 ¹⁾	100 – 950	± 50	G 1/8 female	0150 - 456 15 - 4 - 001
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Seal material – Application areas

ECO	Air, oils, greases, fuel/gasoline	4
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Temperature resistance: -20 °C ... +100 °C

Article number: 0150 - 456 15 - 4 - 001



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

0151

Vacuum switch up to 42 V, NO or NC

- Brass housing
- Spade or M3 screw terminal
- Operating voltage up to 42 V
- Overpressure safety up to 35 bar¹⁾

p_{\max} in bar	Adjustment range in mbar (relative)	Tolerance at room temperature in mbar	Thread	Article number
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0151 Vacuum switches with M3 screw terminal

35 ¹⁾	200 – 950	± 100	G 1/8 female	NO → : 0151 - 452 15 - 3 - 001
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NC → |:

0151 - 453 15 - 3 - 001

0151 Vacuum switches with spade terminal

35 ¹⁾	200 – 950	± 100	G 1/8 female	NO → : 0151 - 454 15 - 3 - 001
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NC → |:

0151 - 455 15 - 3 - 001

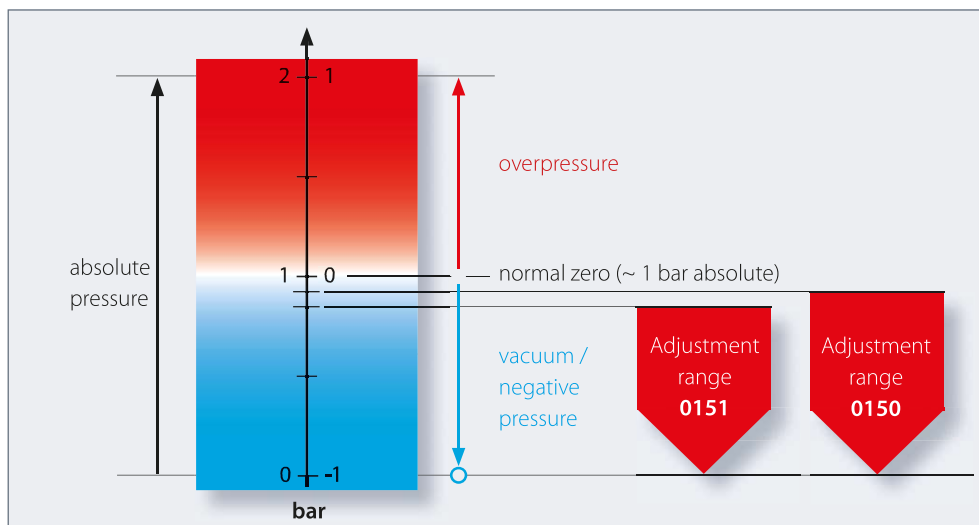
Seal material – Application areas

FKM	Air, oils, greases, fuel/gasoline	3
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Temperature resistance: -15 °C ... +120 °C

Article number: 0151 - 45X 15 - 3 - 001

Comparison of absolute/relative pressures



Note: Required set points in the vacuum range must be specified relative to atmospheric pressure (normal pressure) in the ordering process.

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

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Switches are also available on request with outer thread or integrated connector.

