



# 0159

## Diaphragm / piston pressure switch up to 250 V

- Aluminium housing
- Snap action with silver contacts
- Overpressure safety up to 2,900 / 8,700 psi (200 / 600 bar)<sup>1)</sup>
- Switching point continuously adjustable by turning knurled screw whilst system in operation

P <sub>max.</sub> in psi (bar)	Adjustment range in psi (bar)	Tolerance in psi (bar) at room temperature	Thread	Order number:
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### With female thread

#### 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:
2,900 psi <sup>1)</sup> (200 bar) <sup>1)</sup>	2.90 - 29 psi (0.2 - 2 bar)	± 2.90 - 4.35 psi (± 0.2 - 0.3 bar)	1/4" BSPP female	0159 - 426 14 - X - 001
	7.25 - 72.5 psi (0.5 - 5 bar)	± 2.90 - 7.25 psi (± 0.2 - 0.5 bar)		0159 - 427 14 - X - 001
	14.5 - 145 psi (1 - 10 bar)	± 7.25 psi (± 0.5 bar)		0159 - 428 14 - X - 001
	29 - 290 psi (2 - 20 bar)	± 14.5 psi (± 1.0 bar)		0159 - 429 14 - X - 001
	72.5 - 725 psi (5 - 50 bar)	± 43.5 psi (± 3.0 bar)		0159 - 430 14 - X - 001
	145 - 1,450 psi (10 - 100 bar)	± 43.5 - 72.5 psi (± 3.0 - 5.0 bar)		0159 - 431 14 - X - 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:
8,700 psi <sup>1)</sup> (600 bar) <sup>1)</sup>	145 - 1,450 psi (10 - 100 bar)	± 43.5 - 72.5 psi (± 3.0 - 5.0 bar)	1/4" BSPP female	0159 - 432 14 - X - 001
	362.5 - 3,625 psi (25 - 250 bar)	± 72.5 - 101.5 psi (± 5.0 - 7.0 bar)		0159 - 433 14 - X - 001
	580 - 5,800 psi (40 - 400 bar)	± 72.5 - 130.5 psi (± 5.0 - 9.0 bar)		0159 - 434 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:** 0159 - XXX 14 - X - XXX

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

# Pressure switches 30 A/F

## Technical data

M.7

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 <sup>2</sup> ; 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 <sub>e</sub>	Rated working current I <sub>e</sub>	
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 <sub>i</sub> :	300 V	
Rated impulse withstand voltage U <sub>imp</sub> :	2.5 kV	
Conventional thermal current I <sub>the</sub> :	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 <sup>2</sup>	



## 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