

# Explosion-Protected Pressure Switches

To new ATEX Standard



## TECHNICAL DATA

	0165	0340	0341
Degree of protection:		IP 65	
ATEX protection zone:	1	22	22
Switching power:	1 A / 250 VAC 0.25 A / 250 VDC	2 A / 250 VAC	
Body material:	AlMgSi1 F28	Steel, zinc-plated (CrVI-free) Anodised aluminium	
Conductor cross-section:	3 x 0.75 mm <sup>2</sup>	3 x 0.5 mm <sup>2</sup>	
Switching frequency:	200 / min.		
Temperature range:	NBR, EPDM: -20 °C – +80 °C; FKM: -5 °C – +80 °C		
Mechanical life expectancy:	10 <sup>6</sup> cycles		
Pressure rise rate:	≤ 1 bar/ms		
Vibration resistance:	10 g / 5 – 200 Hz sine-wave		
Shock resistance:	294 m/s <sup>2</sup> ; 14 ms half-sine-wave		
Cable length:	standard delivery 2 m with wire end sleeves		
Hysteresis:	10 – 30% (not adjustable)		

# TECHNICAL DATA



- ATEX-certified for use in potentially-explosive atmospheres
- Compact design
- Micro-switch for reliable operation
- Switching point can be easily adjusted by user when switch is in operation

Explosion-protected pressure switches are classified by ATEX and approved according to the type of combustible material that may be expected where they are to be used. The sub-divisions are:

**Gases and vapours**

**Dusts**

**Methane dust**

Our pressure switches are suitable for gases and vapours, or for dust according to type. They are not suitable for use in methane dust (mining applications).

**The table provides an overview of the sub-division into zones, equipment groups and equipment categories.**

## Conditions in locations with potentially-explosive atmosphere

Combustible material	Occurrence of combustible material in location	Designation of location with specified hazard	Marking required on equipment to be used in the specified zone	
			Equipment group	Equipment category
Gases Vapours	Present continuously, for long periods or frequently	Zone 0	II	1G
	Occurs occasionally	Zone 1	II	2G or 1G
	Unlikely to occur, and then only seldom or for short periods	Zone 2	II	3G or 2G or 1G
Dusts	Present continuously, for long periods or frequently	Zone 20	II	1D
	Occurs occasionally	Zone 21	II	2D or 1D
	Occurs if accumulated dust is disturbed, and then only seldom or for short periods	Zone 22	II	3D or 2D or 1D
Methane Dust	—	Mining industry	I	M1
	—	Mining industry	I	M1 or M2

### CE Marking

Directives of the European Council

**Machinery Directive**  
**EMC Directive**  
**Low Voltage Directive**  
**ATEX Directive**

Equipment that falls under these directives must have a declaration of conformity and carry the CE marking.

SUCO explosion-protected pressure switches fall under the ATEX Directive 94/9/EG.

An EC Declaration of Conformity has been prepared for all products that fall under these directives and is kept on our premises. The catalogue pages for the relevant switches carry the CE marking.

# 0165

## Diaphragm/piston pressure switches 250 V

**ATEX 0102 CE**

**Ex II 2G EEx d II C T6 / T5 (gas-protected zone 1)**

Aluminium body

With changeover switch

Max. voltage 250 V

Overpressure safe to 200 / 600 bar <sup>1)</sup>



With female thread



### 0340 Diaphragm pressure switches

Adjustment range in bar	Tolerance in bar (at room temperature)	Thread	Order number	P <sub>max.</sub> in bar
1 – 6	± 0.5	G 1/4	0165 448 14 001	200 <sup>1)</sup>
5 – 50	± 3.0		0165 449 14 001	

### 0341 Piston pressure switches

Adjustment range in bar	Tolerance in bar (at room temperature)	Thread	Order number	P <sub>max.</sub> in bar
20 – 100	± 3.0 – 5.0	G 1/4	0165 450 14 001	600 <sup>1)</sup>
100 – 400	± 5.0 – 9.0		0165 451 14 001	

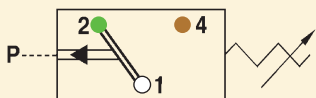
**Order number**      034X   XXX   XX   **X**   XXX  
**Add figure for diaphragm/seal material**

<b>NBR</b>	Hydraulic / machine oil, turpentine, heating oil, air etc.	=	<b>1</b>
<b>EPDM</b>	Brake fluid, ozone, acetylene, hydrogen etc.	=	<b>2</b>
<b>FKM</b>	Hydraulic fluids (HFA, HFB, HFC, HFD), petrol/gasoline etc.	=	<b>3</b>
<b>See page 42 for temperature ranges of diaphragm / seal materials</b>			

• Also available with switching point preset in our works.

#### Contact assignment:

- 1 = white
- 2 = green
- 4 = brown



• For further technical data, see page 43

#### Warning!

When using with 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-type pressure switches are only to a limited extent suitable for use with gases and oxygen. See explanation on page 5.

<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.

#### 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 connection complies with regulations other than those stated, and whether it can be used for special applications which could not be foreseen by us in advance.

# 0340/0341

## Diaphragm/piston pressure switches 250 V

ATEX CE

II 3D IP65 T90°C (dust-protected zone 22)

Zinc-plated steel body (CrVI-free)

With changeover switch

Max. voltage 250 V

Overpressure safe to 300 / 600 bar<sup>1)</sup>



### 0340 Diaphragm pressure switches

Adjustment range in bar	Tolerance in bar (at room temperature)	Thread	Order number	P <sub>max.</sub> in bar
0.3 – 1.5	± 0.2	G 1/4	0340 457 03 003	300 <sup>1)</sup>
1 – 10	± 0.5 – 1.0		0340 458 03 006	
10 – 20	± 1.0		0340 459 03 009	
20 – 50	± 2.0		0340 461 03 012	

### 0341 Piston pressure switches

Adjustment range in bar	Tolerance in bar (at room temperature)	Thread	Order number	P <sub>max.</sub> in bar
50 – 150	± 5.0	G 1/4	0341 460 03 003	600 <sup>1)</sup>

**Order number**  
Add figure for diaphragm/seal material

034X XXX XX X XXX

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<b>EPDM</b>	Brake fluid, ozone, acetylene, hydrogen etc.	=	<b>2</b>
<b>FKM</b>	Hydraulic fluids (HFA, HFB, HFC, HFD), petrol/gasoline etc.	=	<b>3</b>
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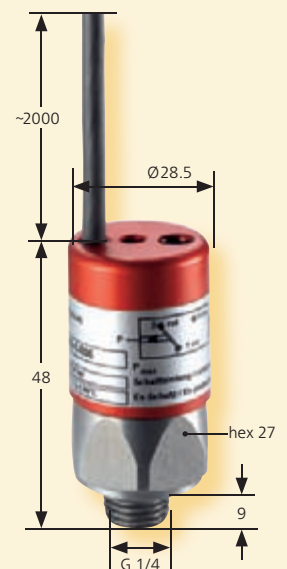
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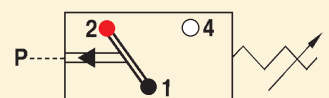
With male thread



• Also available with switching point preset in our works.

#### Contact assignment:

- 1 = black
- 2 = red
- 4 = white



• For further technical data, see page 43