

0H44 / 0H45

hex 27 ATEX

Diaphragm or piston pressure switch up to max. 250 V
with ATEX for hydrogen applications

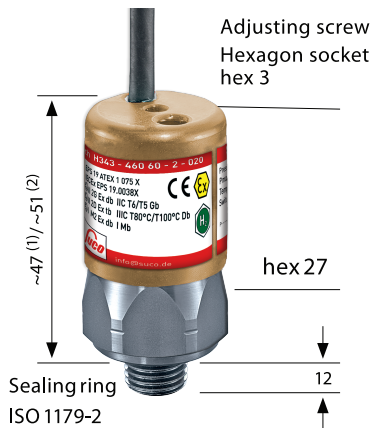
ATEX CE II 2G Ex db IIC T6/T5 Gb (gases and vapors, zones 1 + 2)

ATEX CE II 2D Ex tb IIIC T80°C/T100°C Db (dusts, zones 21 + 22)

ATEX CE I M2 db I Mb (mining)

Approval according to IECEx system

- Housing made of stainless steel 1.4404 (AISI 316L)
- Max. Voltage 250 V, IP65, protection class 2, protective insulation
- Overpressure proof up to 4,350 / 8,700 (300 / 600 bar*.)



P max	Setting range	Tolerance at room temperature in bar	External thread	Article number
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0H44 Diaphragm pressure switch

4,350 psi (300 bar*)	4.3 - 21.7 psi (0.3 - 1.5 bar)	± 2.9 psi (±0.2 bar)	G1/4-E ISO 1179-2	0H44-457 41 - 2 - 020
	14.5 - 145 psi (1 - 10 bar)	± 7.5 psi (±0.5 - 1 bar)		0H44-458 41 - 2 - 020
	145 - 290 psi (10 - 20 bar)	± 14.5 psi (±1 bar)		0H44-459 41 - 2 - 020
	290 - 725 psi (20 - 50 bar)	± 29 psi (±2 bar)		0H44-461 41 - 2 - 020

0H45 Piston pressure switch

8,702 psi (600 bar*)	725 - 2,175 psi (50 - 150 bar)	± 72 psi (±5 bar)	G1/4-E ISO 1179-2	0H45-460 41 - 2 - 020
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Sealing materials - areas of application

EPDM	Hydrogen, oxygen, water, forming gases, all inert and non-toxic gaseous or liquid media **	2
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* Static value. Dynamic value 30 to 50 % lower.

** We offer other seal and material combinations for numerous media.

(1) Piston pressure switch

(2) Diaphragm pressure switch



Explosion-proof pressure switches for hydrogen applications

0H44 / 0H45

Type 0H44 / 0H45

ATEX protection zone	1 + 2	21 + 22	Mining
Substance group	Gases / Vapors	Dusts	Methane / Coal dust
Temperature Range	EPDM -4 °F ... +176 °F (-20 °C ... +80 °C)		
Switching frequency	200 / min		
Mechanical Lifetime	1.000.000 switching cycles		
Pressure rise rate	≤ 14,500 psi (1.000 bar/s)		
Hysteresis	10 ... 30 % (type-dependent, not adjustable)		
Vibration resistance	10 g; 5 ... 200 Hz sinus; DIN EN 60068-2-6		
Shock resistance	294 m/s ² ; 14 ms semi-sinus; DIN EN 60068-2-27		
Cable length	Standard length ~2 m with ferrule, also available in ~5 m length as well as special length on request		
Protection class	IP65		
Cable cross section	3 x 0,5 mm ²		
Housing material	Stainless steel 1.4404 (AISI 316L)		
Weight in gram	approx. 230 g		

Electrical values

Rated operating voltage U _e	Rated operational current I _e
250 VAC 50 / 60 Hz, AC 12	2 A
250 VAC 50 / 60 Hz, AC 14	1 A
24 VDC, DC 12 / DC 13	2 / 1 A
50 VDC, DC 12 / DC 13	1 / 0,5 A
75 VDC, DC 12 / DC 13	0,5 / 0,25 A
125 VDC, DC 12 / DC 13	0,2 / 0,1 A
250 VDC, DC 12 / DC 13	0,15 / 0,1 A
Rated insulation voltage U _i	300 V
Rated impulse withstand voltage U _{imp}	4 kV
Conventional thermal electricity I _{the}	5 A
Switching overvoltage	< 2,5 kV
Rated frequency	DC and 50 / 60 Hz
Rated current of the short-circuit device	up to 3,5 A
Conditional short circuit current	< 350 A



Explosion-proof pressure switches for hydrogen applications

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Technical Explanations

The classification of explosion-proof pressure switches is made according to the respective flammable substances. The subdivision is made into:

Gases / Vapors	Dusts	Methane / Coal dust
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ATEX / IECEx marking for pressure switches

Our pressure switches are designed for gases and vapors (G), dusts (D) and methane / coal dust (M) in mining.

The following table shows an overview of the Ex-protection zones, device groups and categories. The applications covered by our pressure switches (according to Ex-area) are highlighted.

Conditions in the hazardous area

Combustible Fabrics	Temporary behavior of the flammable substances in the hazardous area	Division potentially explosive areas	Required marking of the usable equipment	
			Device group	Device category
Dusts / Vapors	are present constantly, for a long time or frequently	Zone 0	II	1G
	occasionally occur	Zone 1	II	2G
	are unlikely to occur, if they do, only rarely or briefly	Zone 2	II	2G
Dusts	are present constantly, for a long time or frequently	Zone 20	III	1D
	occasionally occur	Zone 21	III	2D
	robably do not occur due to whirled up dust, if so, only rarely or for a short time	Zone 22	III	3D or 2D
Methane / Coal dust	Operation with explosion hazard	–	I	M1
	Shutdown in case of explosion hazard	–	I	M2 or M1

