

### Description

LGW-2G-...-SIL differential pressure switches monitor overpressure, differential pressure and underpressure of gaseous, non-aggressive media. Possible places of use are air ducts and supply or exhaust air devices. In combination with switching amplifiers with an intrinsically safe current circuit, the sensors can be used within hazardous areas of zones 1 and 2.

The sensor has a passive potential-free switching contact. Areas of application are: flow monitoring for electric heating registers, V-belt and filter monitoring, air pressure deficiency and limit value regulation.

The device is maintenance-free.

**ATEX-compliant for zone 1 and 2 according to ATEX Directive 2014/34/EU.**



(Fig. similar)



### Delivery program

Type	Product No.	Adjustment range
LGW-2G-40-300-SIL	057.1370	40...300 Pa
LGW-2G-100-1000-SIL	057.1371	100...1000 Pa
LGW-2G-250-5000-SIL	057.1372	250...5000 Pa
LGW-2G-3000-15000-SIL	057.1373	3000...15000 Pa

### Intrinsic

Simple electrical equipment according to IEC/EN 60079-11, Section 5.7, suitable for zone 1 and 2. Only for connection to intrinsically safe circuits.

The specified values at the terminals must not be exceeded.

$U_o \leq U_i$	$9.6 \text{ V} \leq 30 \text{ V}$
$I_o \leq I_i$	$10 \text{ mA} \leq 50 \text{ mA}$
$P_o \leq P_i$	$24 \text{ mW} \leq 100 \text{ mW}$
$C_o \geq C_i + C_{\text{Cable}}$	$C_i = 0 \text{ } \mu\text{F}$
$L_o \geq L_i + L_{\text{Cable}}$	$L_i = 0 \text{ } \mu\text{H}$
$C_{\text{Cable}}, L_{\text{Cable}}$ : see the specifications of the cable manufacturer	
$C_o, L_o$ : see the documentation for the switching amplifier according to the gas group	

### Technical data

<b>Contact</b>	Single-pole, potential-free changeover switch
<b>Gear shift difference</b>	30 Pa $\pm$ 15 %
<b>Max. operating pressure</b>	50,000 Pa (500 mbar)
<b>Ambient</b>	-20...+50 °C
<b>Storage temperature</b>	-30...+85 °C
<b>Humidity</b>	0...50% RH (non-condensing)
<b>Measuring medium</b>	Gaseous, non-aggressive
<b>Membrane</b>	NBR, silicone-free

<b>Pressure connection</b>	$\varnothing$ 4.6 mm
<b>Housing</b>	Plastic, PC
<b>Housing protection type</b>	IP54 (EN60529)
<b>Safety class</b>	Simple electrical equipment according to EN 60079-0/EN 60079-11
<b>Dimensions (LxWxD)</b>	82 x 82 x 47.1 mm
<b>Weight</b>	200 g
<b>Included</b>	Differential pressure switches



We, the
Schischek GmbH Mühlsteig 45 Business Park South 5 90579 Langenzenn GERMANY
declare under sole responsibility in accordance with the provisions of the guidelines:
2014/34/EU
that the product
LGW-2G-...-SIL
to which this declaration refers, complies with the following norms or normative documents:
EN 60079-11:2012      EN IEC 60079-0:2018+AC:2020-02
Marking:
<b>CE</b> Zone 1, Zone 2 Simple resources
Managing:
 (Dr. Sven Ludwig)
90579 Langenzenn, 2024-09-01

### Manufacturer's declaration for sensors for use in hazardous areas

<b>Item</b>	Differential pressure switches	<b>Manufacturer</b>	Schischek GmbH
<b>Type</b>	LGW-2G-...-SIL	<b>Property</b>	Passive, potential-free
<b>Installation in</b>	Zone 1, 2	<b>Associated equipment</b>	EXL-IR-9170

#### Test goal

The differential pressure switch has been tested for suitability for installation and operation in hazardous areas of zones 1 and 2. The test is based on Directive 2014/34/EU (ATEX). The standards applied are EN 60079-0 and EN 60079-1. The differential pressure switch is a simple electrical device within the meaning of EN 60079-11 Section 5.7 and must be operated via an intrinsically safe circuit. The switching amplifier EXL-IR-9170 from Company Stahl is suitable. The switching amplifier may only be installed and operated in non-hazardous areas.

#### Proof of intrinsic safety for simple circuits in use with EXL-IR-9170

$U_o \leq U_i$	$9.6 \text{ V} \leq 30 \text{ V}$
$I_o \leq I_i$	$10 \text{ mA} \leq 50 \text{ mA}$
$P_o \leq P_i$	$24 \text{ mW} \leq 100 \text{ mW}$
$C_o \geq C_i + C_{\text{Cable}}$	$C_i = 0 \text{ }\mu\text{F}$
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Test	Result
IP protection	The device meets at least IP54
Inspection of metallic housing parts	Magnesium, titanium and zirconium content < 7.5%
Checking plastic	Suitable in the used ambient temperature range -20...+50 °C
Electrostatics	Can be used without restriction in groups IIA and IIB, for group IIC the warning "Wipe only with a damp cloth" applies
Locks and latches	Not to comply with special conditions, not relevant
Grounding (potential equalisation)	Double insulation, no PE, PA necessary
Cable and cable entries	The cables must be protected from mechanical and thermal stress, after installation, min. IP54 must be fulfilled
Temperature testing	Together with the switching amplifier EXL-IR-9170, a temperature increase of <5 K was measured in the event of an error; operating temperature range: -15...+50 °C

#### Overall rating/additional comments

The LGW-2G-...\_SIL differential pressure switch can be used in zones 1 and 2 in conjunction with the EXL-IR-9170 switching amplifier. The information in the data sheet or the operating instructions must be observed. The warnings regarding electrostatic charging must also be observed. After installation, at least the protection class IP54 must be guaranteed.



Langenzenn, 01. Sept. 2024  
 Wen Liu  
 Explosion Protection Officer

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