



Manufacturer-Declaration for Sensors in hazardous locations

Sensor-Type	SWBT-2G	Manufacturer	Schischek GmbH
Function	Liquid flow switch	Property	passive potential free
Installation in	Zone 1, 2	Associated IS apparatus	Type EXL-IRU-1

Test target

The sensor was tested concerning qualification for installation in hazardous locations.

Application in gas explosion proof zones 1 and 2.

Test base is the directive 94/9/EC (ATEX), applied standards are the EN 60079-0 and EN 60079-11

The device must be connected with an intrinsically safe circuit. Suitable is the switching module Type EXL-IRU-1, approved acc. to ATEX with II(1)GD [EEx ia] IIC. PTB02ATEX2195

Proof of intrinsic safety simple circuits in use with EXL-IRU-1

Simple apparatus suitable for Zone 1, 2 only for connecting to intrinsically safe circuits with max values

Voltage	Uo	13,5 VDC	Co >= Ci + Ccable	Ci = 0
Current	Io	23 mA	Lo >= Li + Lcable	Li = 0
Power	Po	76 mW	Ccable, Lcable see wire manufacturer	
			Co, Lo see EXL-IRU-1 Data sheet regarding gas group	

Test	Result	Conform
IP-protection class	The device fulfils min. IP65	✓
Metallic enclosure	The magnesium part is less than 6%	✓
Plastic enclosure	Suitable in ambient temperature range -20°C ... +65°C	✓
Electrostatics	In groups IIA and IIB without restrictions applicable, in group IIC observe the note "only wet cleaning"	✓
Fasteners and locking	No particular conditions, not applicable	✓
Earthing (potential equalisation)	Double isolation, no PE, PA necessary, inner Terminal available	✓
Cable- and wire entry	No particular conditions, the enclosure must meet IP20 after installation	✓
Temperature test	Together with module EXL-IRU-1. In case of fault conditions is a temperature increasing of 5K measurable.	✓

Evaluation / additional marks

The liquid flow switch SWBT-2G in combination with module EXL-IRU-1 is approved for use in the zone 1 and 2.

Application in gas group IIC, consider the note regarding electrostatic charge.

The tests were applied in the room of manufacturer Schischek GmbH.

Langenzenn, August 01, 2008

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Explosion proof specialist

