



## Manufacturer-Declaration for Sensors in hazardous locations

<b>Sensor-Type</b>	TBT-2G	<b>Manufacturer</b>	Schischek GmbH
<b>Function</b>	Probe thermostat	<b>Property</b>	passive potential free
<b>Installation in</b>	Zone 1, 2	<b>Associated IS apparatus</b>	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 50014 and EN 50020.

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

$U_o \leq U_i$	13,5 V < 15V	OK	$C_o \geq C_i + C_{cable}$	$C_i = 0$
$I_o \leq I_i$	23 mA <= 50 mA	OK	$L_o \geq L_i + L_{cable}$	$L_i = 0$
$P_o \leq P_i$	76 mW <= 100 mW	OK	$C_{cable}, L_{cable}$ see wire manufacturer	
			$C_o, L_o$ see EXL-IRU-1 Data sheet regarding gas group	

Test	Result	Conform
IP-protection class	The device fulfils min. IP20	✓
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 probe thermostat TBT-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, Oct. 31, 2003

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