

**Liquid flow switch with contact output  
binary sensor in hazardous locations zonen 1 and 2**

**ATEX compliant**

**Type SWBT-2G**

**APPLICATION**

SWBT-2G is suitable for monitoring of liquids in pipes. In combination with Ex-i switch Type EXL-IRU-1 with intrinsic safe circuit the sensors may be used in hazardous areas zones 1 and 2.

**TECHNICAL DATAS**

<b>Type</b>	<b>SWBT-2G</b>
Contact	dust tight single potential free microswitch
Supply	by EXL-IRU-1
Ambient temperature	-20...+60 °C
Storage temperature	-40...+80 °C
Medium temperature	max. 120 °C
Enclosure	galvanized steel sheet plate with cover in plastic, PA reinforced, IP65
Flange	brass
Max Pressure :	11 bar
Pressure loss :	approx. 0,01...0,03 bar
Dimension	132 x 70 x 133,5 mm + paddle
Protection class	simple apparatus
	acc. to EN 60079-0 / EN60079-11
CE	94/9/EC (ATEX)
Included in price	1 liquid flow switch Type SWBT-2G
Installationn area	Zone 1 and 2

suitable for  
zone 1 and 2  
acc. to ATEX



**MOUNTING AND INSTALLATION**

The flow switch may be positioned in every position far from elbows or narrowing, arrow must be oriented downstream. If pipe is vertical, reset range to balance paddle weight. If the device is toward bottom take care of slugs, and apply it in a straight pipe upstream and downstream at least five times the diameter, far from filters, valves, etc.

**Attention.**

In the case that the flow switch will be used as a minimum flow controller there is a need forward of a further controller devices to activate the signal.

In the case that the flow switch will be uses as a flow limiter on systems, acc. to TRD 604, there might be the possibility to effect maintenance and inspection on the unit providing forward and backward interception vales.

**Note:**

The flow switch is set ex factory at its min. sensitivity. To improve the set valve turn clockwise the adjustment screw. The cut-out value must be  $\geq$  of the minimum necessary flow to guarantee the protection of the system. The device without fittings will be supplied with 4 paddles (from 1" to 8"), which might be cut acc. to the pipe. All devices may be, on request, supplied with T connection to every pipe size, even if not scheduled.

**Ex-i CIRCUIT - TABLE 1**

**Operation values maximum at terminal**

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

Voltage	Uo	13,5 VDC
Current	Io	23 mA
Power	Po	76 mW

Capacity	Ci	0 µF
Inductivity	Li	0 mH

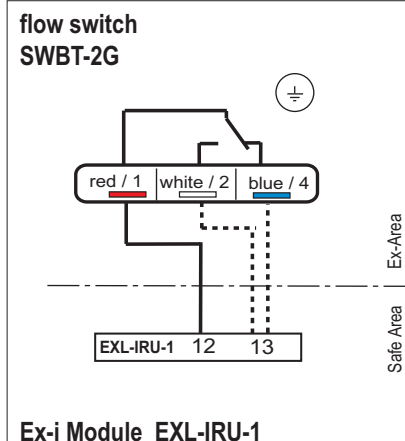
**The maximum values must not be exceeded!**

Please check your external capacities and inductivities in acc. to the length of the cable and the methode of installation

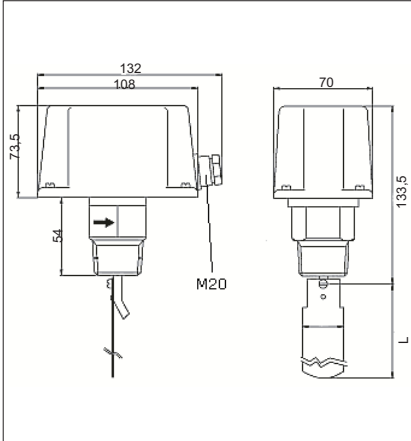
**RECOMMENDED MODULE**

- Switching module Mfr. Schischek Type EXL-IRU-1.
- In combination with transducer EXL-IRU-1 is intrinsic safety proof for simple circuits given.
- Manufacturer declaration zone 1 and 2.

**ELECTRICAL CONNECTION**



**DIMENSIONS**



**ATTENTION!**

- For installation, use and maintenance the official standards and rules must be applied.
- The energy of intrinsically safe circuits are below the level to start an explosion in case of a spark.
- Intrinsic safe circuits must be installed with light blue coloured and separate from non intrinsic safe circuits.
- The sensor is passiv and potential free for use in hazardous locations in zone 1 and 2.
- Pay attention to the max values for wiring , listed in table 1.
- Avoid electrostatic discharge.
- Only wet cleaning.
- choose the fluid temperature in such way that the maximum ambient temperature are not reached