

# RSH-01 – The Kit of the Level Radar Detector

Ex Certificate: ATEX



### **Technical parameters:**

Model	I M2 (M1) Ex d[ia] I
Supply voltage	48 - 250 V AC/DC
Power input	6 VA
Fuse rated current	0.5A
Working measuring frequency	26 GHz
Measuring range	0.4 ÷ 70 m
Measuring accuracy	±15 mm, See the user's manual
Ambient temperature	-20°C - +40 °C
Relative humidity	85 %
Protection	IP 54
Dimensions	225 x 385 x 138 mm
Weight	12.5 kg

### Use:

The kit of the level radar detector, RSH-01 type, is intended for use in the underground and surface spaces of coal mines with the increased risk of methane explosion. The kit measures the level of loose materials (level, depth and height) in a non-contact manner in tanks and containers.

### **Description:**

The level radar detector consists of:

- A radar probe
- Evaluation electronics placed in the box in the fast closure design

The radar probe is in a thread design with a parabolic aerial. The parabolic aerial can be connected to the air-blast system. In the probe head, there is a setting and display module under a transparent cover. The module allows settings of the measuring range (max. 70 m). The radar probe is to be placed on the ceiling in a suitable place.

The evaluation electronics consist of the feeding and separating unit, which is placed into the fast closure of the non-explosive box. The feeding and separating unit is interconnected with the radar probe by means of a suitable two-core cable through a current loop of 4 to 20 mA, which serves for transmission of the measured level and simultaneously for feeding of the radar probe. The output from the feeding and separating unit is an intrinsically safe output signal of 4-20 mA, to which subsequent devices, such as transmission equipment, display units etc. can be connected.

The non-explosive box with the evaluation electronics is fixed to the suitable structure or onto the wall. After the feeding and setting of the probe is connected, the operation of the kit is maintenance-free. The maintenance of the kit only consists in the removal of possible impurities.

The catalogue has only those selected important parameters for your final decision. For project designs always ask for the user's guide for this product and any engineering consultation about possible uses.

ISO 9001 : 2009 ZAM-SERVIS s.r.o. Křišťanova 1116/14 702 00 Ostrava - Přívoz V140116 tel.: +420 596 135 422, email: zam@zam.cz, www.zam.cz



# RSH-02 The Kit of the Level Radar Detector

Ex Certificate: ATEX, UK



## **Technical parameters:**

I M2 (M1) Ex d e[ia] I
230(48)V AC/DC
15.5VA / 11W
26 GHz
0.4 ÷ 70 m
±15 mm, See the user's manual
-20°C - +40 °C
85 %
IP 54
380 × 510 mm, incl. Bushings, height 210 mm
21 kg

### Use:

The kit of the level radar detector, RSH-02 type, is intended for use in the underground and surface spaces of coal mines with the increased risk of methane explosion. The kit measures the level of loose materials (level, depth and height) in a noncontact manner in tanks and containers.

### **Description:**

The level radar detector consists of:

- A radar probe
- Evaluation electronics placed in the box in the fast closure design

The radar probe is in the thread design with a parabolic aerial. The parabolic aerial can be connected to the air-blast system. In the probe head, there is a setting and display module under a transparent cover. The module allows settings to the measuring range (max. 70 m). The radar probe is to be placed on the ceiling in a suitable place.

The evaluation electronics consist of the display and setting unit and separators. Everything is placed in the fast closure of a non-explosive box with an inspection hole to the unit display.

The displaying and setting unit is interconnected with the radar probe by a suitable two-core cable through a current loop of 4-20 mA, which serves for transmission of the measured level and simultaneously for the feeding of the radar probe.

Two intrinsically safe output signals 4-20 mA, intrinsically safe communications along 1 pair of conductors and four relay intrinsically safe outputs are the output of RSH-02. Other subsequent devices, such as transmission devices, displaying units, indication etc. can be connected to these outputs. The displaying and setting unit serves, similarly to the setting and displaying module in the head, for setting of the measuring range of the probe and for programming of three relay outputs. The fourth relay output indicates a failure state of the device.

The non-explosive box with evaluation electronics is fixed onto a suitable structure or a wall. After feeding, setting of the probe and programming of the relay are connected, the operation of the kit of the level radar detector is maintenance-free. The maintenance of the kit only consists in the removal of possible impurities.

The catalogue has only those selected important parameters for your final decision. For project designs always ask for the user's guide for this product and any engineering consultation about possible uses.

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