



Description dry running protection sensor TLS

Type 010 133A

005 133A

Rudolf Koller GmbH
Rudolf-Koller-Straße 1
A-3902 Vitis
Tel. +43/2841/8207
Fax. +43/2841/8221
E-Mail: office.vitis.at@rkoller.com

Type (005, 010) 133A
1008 Rev.2
Ing. Aigner A.

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1 Application and operation

This water level sensor is suitable for use in whirlpool systems. The sensor is a capacitive proximity switch. It is therefore possible to establish the presence of water through a plastic tub (acrylic with polyester lining). The wall thickness of the tub can be up to 20 mm.

The switching status of the sensor is indicated by a red LED at the cable output. When the sensor is attenuated, the LED is switched on, the output switches to GROUND (water present).

The sensor has been set at the factory to a working range of up to 20 mm. Should the sensor fail to work properly, it is possible to adjust the sensor to the tub using the potentiometer.

2 Technical data

2.1 Dimensions

Length	40 mm
Width	30 mm
Height	17 mm
Length of cable	1600 mm

Other cable lengths on request.

2.2 Ratings Type: 010 133A

operating voltage V_{DD}	9 .. 30 V_{DC} incl. waviness
operating current I_{DD}	<12 mA unloaded
working range	up to 20 mm
output typ	bipolar
output current I_O	max ± 50 mA
output voltage V_{OH}	$>(V_{DD}-3V)$ at $I_O = 50mA$
output voltage V_{OL}	<1,4V at $I_O = -50mA$
type of protection	IP65

2.3 Ratings Type: 005 133A

operating voltage V_{DD}	5 $V_{DC} \pm 10\%$
operating current I_{DD}	<12 mA unloaded
working range	up to 10 mm
output typ	bipolar
output current I_O	max ± 20 mA
output voltage V_{OH}	$>2,4V$ at $V_{DD}=5,0V$ $I_O = 5mA$
output voltage V_{OL}	$<0,7V$ at $V_{DD}=5,0V$ $I_O = -5mA$
type of protection	IP65

2.4 Electrical connection

The sensor is a protection class III device and must therefore be supplied only with safety extra-low voltage, SELV.

2.5 Terminal assignment

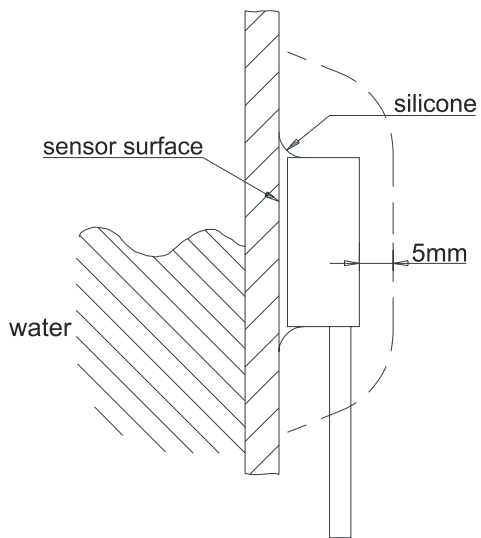
black	operating voltage V_{DD}
brown	signal (bipolar switching)
blue	GND

3 Installation on the tub

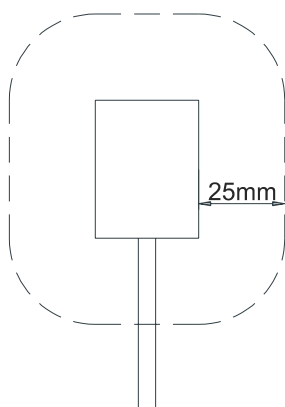
This sensor is glued to the tub at the desired water level using silicone. Ensure that no air inclusions are between sensor and tub.

Notice the minimum dimensions to neighbouring components (metal rails, brickwork, piping, electric cables, etc.) in accordance with the drawing.

At least the double distance must be maintained to another sensor.



Installation example and minimum distance at the back.



Minimum distance to other components.