

Operating Instructions

Busch-Infoline®

1531 U
Busch moisture alarm insert

1538/02
Sensor strip



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1 Safety



Warning

Electric voltage!

Risk of death and fire due to electrical voltage of 230 V.

- Work on the 230V supply system may only be performed by authorised electricians!
- Disconnect the mains power supply prior to installation and/or disassembly!

2 Intended use

The device is to be used exclusively with the components that are supplied and licensed as described in chapter "Setup and function".

3 Environment



Consider the protection of the environment!

Used electric and electronic devices must not be disposed of with domestic waste.

- The device contains valuable raw materials which can be recycled. Therefore, dispose of the device at the appropriate collecting depot.

All packaging materials and devices bear the markings and test seals for proper disposal. Always dispose of the packaging material and electric devices and their components via the authorized collecting depots and disposal companies.

The products meet the legal requirements, in particular the laws governing electronic and electrical devices and the REACH ordinance.

(EU Directive 2002/96/EC WEEE and 2002/95/EC RoHS)

(EU REACH ordinance and law for the implementation of the ordinance (EC) No.1907/2006)

4 Operation

Deactivating alarm messages

After having been triggered, the alarm is deactivated via the cancel button.

Detection

Detection is effected via a self-adhesive sensor strip.

5 Technical data

5.1 Moisture alarm insert

General	
Nominal voltage	15 - 29 V AC / 18 - 35 V DC
Rated frequency	50/60 Hz
Nominal current	70 mA AC / 40 mA DC
Loop current	5 mA
Min. short-circuit / interruption duration	0.1 s
Protection class	IP 20
Type of protection for device	SELV
Operating temperature range	5 ... 40 °C

Switching contacts	
Normally open contact	1 A, 30 VA / W, potential-bound
Changeover contact	42 V AC / 60 V DC, 30 VA / W, floating

5.2 Sensor strip

Switching contacts	
Length	2 m
Dimensions (H x W x D)	0.15 mm x 15 mm x 2 mm

6 Setup and function

6.1 Features of function and equipment

6.1.1 Moisture alarm insert

Monitoring insert for monitoring of undesired water leakages in kitchen or basements.
Used for detecting conductive liquids.



Note

The detection is effected via the separately purchasable sensor strip 1538/02.

An alarm message is signalled by the flashing cancel button, the floating change-over contact and the alarm output (clamps 3 and 4).

6.1.2 Sensor strip

Accessories for Busch moisture alarm insert 1531 U. For detecting conductive liquids. The connection to the control line is a soldered connection.

6.2 Possible combinations

	Busch moisture alarm insert
	 1531 U
 1538/02	X
 1518 U	X
 1539 U	X
 1563 U-12	X
 1561 U	X
 1564 U-1X	X
 1566 U	X
 1571 CN-21X	X

7 Installation and electrical connection



Warning

Electric voltage!

- Risk of death due to electrical voltage of 230 V during short-circuit in the low-voltage line.
- Low-voltage and 230 V lines must not be installed together in a flush-mounted socket!

7.1 Requirements for the electrician



Warning

Electric voltage!

Install the device only if you have the necessary electrical engineering knowledge and experience.

- Incorrect installation endangers your life and that of the user of the electrical system.
- Incorrect installation can cause serious damage to property, e.g. due to fire.

The minimum necessary expert knowledge and requirements for the installation are as follows:

- Apply the "five safety rules" (DIN VDE 0105, EN 50110):
 1. Disconnect from power;
 2. Secure against being re-connected;
 3. Ensure there is no voltage;
 4. Connect to earth and short-circuit;
 5. Cover or barricade adjacent live parts.
- Use suitable personal protective clothing.
- Use only suitable tools and measuring devices.
- Check the supply network type (TN system, IT system, TT system) to secure the following power supply conditions (classic connection to ground, protective earthing, necessary additional measures, etc.).

7.2 Electrical connection

Connection diagram

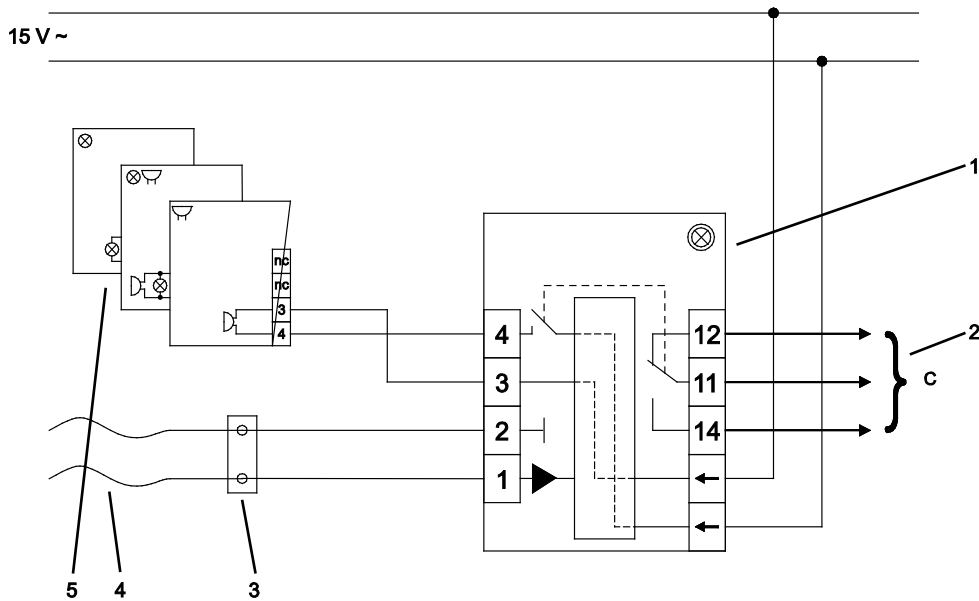


Fig. 1: Circuit diagram for Busch-Leakage guard insert

1 Busch-Leakage guard insert | 2 Floating change-over contact | 3 Soldered- / clamped connection | 4 Sensor strip | 5 signal generator

Terminal assignment

Busch-Leakage guard insert 1531 U

Terminal designation	Assignment
<-	15 V AC, ±10%, 50 / 60 Hz
<-	
4	Signal generator, potential-bound
3	
2	Sensor strip
1	
12	Floating change-over contact
11	
14	

7.3 Mounting the device insert

1. Mount the device in a flush-mounted box according to DIN 049073-1.
2. Fix the device in the flush-mounted box with screws.
3. Mount the elements of the cover plate in the sequence shown in the illustration.

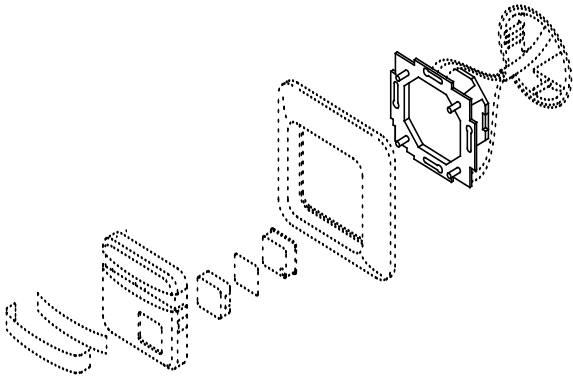


Fig. 2: Overview of installation

7.4 Installing and connecting the sensor strip



Caution

No faultless function if mounted incorrectly!

The device will not function.

- The strip must never be interrupted when laying the sensor strip around corners.
- Follow installation steps 1 to 4 and fold the sensor strip according to the illustration.

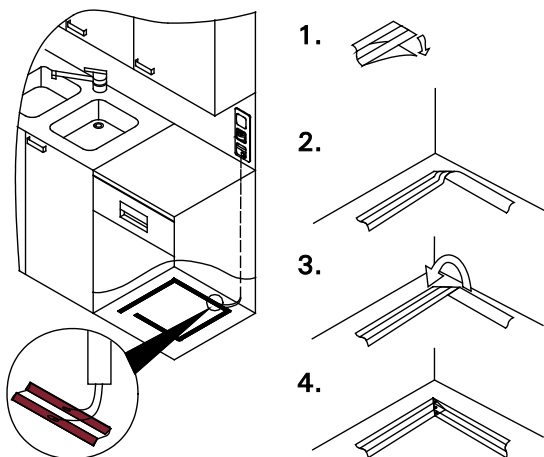


Fig. 3: Installing the sensor strip

7.5 Setting alarm behaviour with jumper

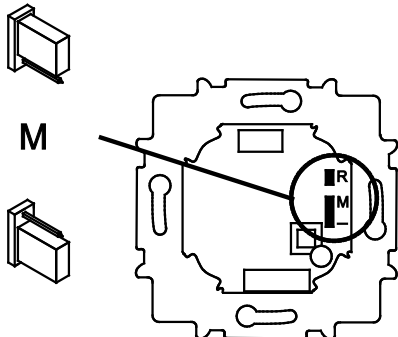


Fig. 4: Busch moisture alarm insert 1531 U

Position	Alarm behaviour
Jumper top	With storage of the alarm status
Jumper bottom	Without storage of the alarm status

7.6 Adjusting the reset mode with jumpers

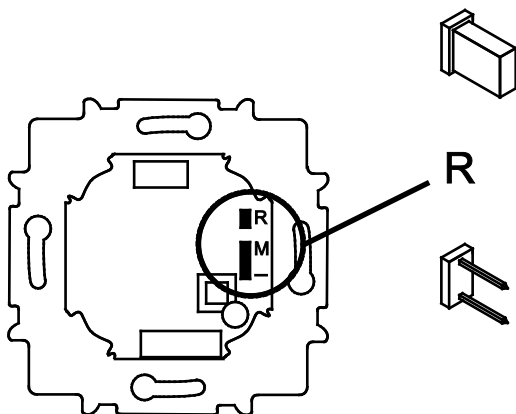


Fig. 5: Busch-Leakage guard insert 1531 U

Position	Reset mode
Plug-in jumper inserted	Indirect reset
Plug-in jumper not inserted	Direct reset

Indirect reset

- Plug-in jumper R removed
- Outputs 3, 4, 11, 12, and 14 are enabled immediately after the reset button is pressed: the alarm message disappears immediately.

Direct reset

- Plug-in jumper R inserted
- Outputs 3, 4, 11, 12, and 14 are not released after the reset button is pressed until the moisture has been removed from the sensor: the alarm message does not disappear until the damage is remedied.

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