



AFRISO

EN

Technik für Umweltschutz

Messen. Regeln. Überwachen.

Operating instructions



Oil/water alarm unit

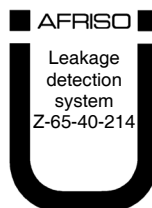
Type: OM 1

Type: OM 5

Type: OM 5+1



Copyright 2024 AFRISO-EURO-INDEX GmbH. All rights reserved.



Version: 03.2024.0
ID: 900.000.0235

Lindenstraße 20
74363 Güglingen
Telephone +49 7135 102-0
Service +49 7135 102-211
Telefax +49 7135 102-147
info@afriso.com
www.afriso.com

1 About these operating instructions

These operating instructions describe the oil/water alarm unit OM 5, OM 5+1 and OM 1 (also referred to as "product" in these operating instructions). These operating instructions are part of the product.

- You may only use the product if you have fully read and understood these operating instructions.
- Verify that these operating instructions are always accessible for any type of work performed on or with the product.
- Pass these operating instructions as well as all other product-related documents on to all owners of the product.
- If you feel that these operating instructions contain errors, inconsistencies, ambiguities or other issues, contact the manufacturer prior to using the product.

These operating instructions are protected by copyright and may only be used as provided for by the corresponding copyright legislation. We reserve the right to modifications.

The manufacturer shall not be liable in any form whatsoever for direct or consequential damage resulting from failure to observe these operating instructions or from failure to comply with directives, regulations and standards and any other statutory requirements applicable at the installation site of the product.

2 Information on safety

2.1 Safety messages and hazard categories

These operating instructions contain safety messages to alert you to potential hazards and risks. In addition to the instructions provided in these operating instructions, you must comply with all directives, standards and safety regulations applicable at the installation site of the product. Verify that you are familiar with all directives, standards and safety regulations and ensure compliance with them prior to using the product.

Safety messages in these operating instructions are highlighted with warning symbols and warning words. Depending on the severity of a hazard, the safety messages are classified according to different hazard categories.



DANGER

DANGER indicates a hazardous situation, which, if not avoided, will result in death or serious injury.



WARNING

WARNING indicates a potentially hazardous situation, which, if not avoided, can result in serious injury or equipment damage.

NOTICE

NOTICE indicates a hazardous situation, which, if not avoided, can result in equipment damage.

In addition, the following symbols are used in these operating instructions:



This is the general safety alert symbol. It alerts to injury hazards or equipment damage. Comply with all safety instructions in conjunction with this symbol to help avoid possible death, injury or equipment damage.



This symbol alerts to hazardous electrical voltage. If this symbol is used in a safety message, there is a hazard of electric shock.

2.2 Intended use

This product is intended to detect water and to signal accumulations of oil during monitoring of:

- Collection facilities under storage tanks, burners or motors
- Tanks with collection facilities which are not visible
- Collection facilities below devices consuming oil
- Manholes, pipe and cable ducts
- Pump and control stations where oil can accumulate due to leaks or back-flow

The product is suitable for liquids to which the material of the photoelectric probe is sufficiently resistant.

- Diesel fuel (DIN EN 590) and low-viscosity oils with flash points of $> 55^{\circ}\text{C}$ at atmospheric pressure and at temperatures of -10°C to $+60^{\circ}\text{C}$ in dry rooms
- Fuel oil EL as per DIN 51603-1 and as per DIN SPEC 51603-6
- Paraffinic fuels (HVO/GTL as per DIN/TS 51603-8)
- Unused and used motor oils (for example, SAE 15W-40), gearbox oils and hydraulic oils, transformer oils, vegetable oils
- AdBlue® (urea solution 32.5 %) as per DIN 70070/ISO 22241
- Water, grey water

The owner or operator must ensure that the components and the overall system meet all directives and regulations applicable at the installation site, for example, the directives pertaining to water and waterways.

Leak detection system class III as per DIN EN 13160-1 and DIN EN 13160-4 as liquid sensor system in leak or interstitial spaces, as safety device as per worksheet DWA-A 791 or leak detection system as per worksheet DWA-A 779.

Any use other than the application explicitly permitted in these operating instructions is not permitted and causes hazards.

Verify that the product is suitable for the application planned by you prior to using the product. In doing so, take into account at least the following:

- All directives, standards and safety regulations applicable at the installation site of the product
- All conditions and data specified for the product

- The conditions of the planned application

In addition, perform a risk assessment in view of the planned application, according to an approved risk assessment method, and implement the appropriate safety measures, based on the results of the risk assessment. Take into account the consequences of installing or integrating the product into a system or a plant.

When using the product, perform all work and all other activities in conjunction with the product in compliance with the conditions specified in the operating instructions and on the nameplate, as well as with all directives, standards and safety regulations applicable at the installation site of the product.

2.3 Predictable incorrect application

The product must never be used in the following cases and for the following purposes:

- Hazardous area
 - If the product is operated in hazardous areas, sparks may cause deflagrations, fires or explosions.
- Use as overfill prevention system as per Technical Approval of the German Institute for Civil Engineering (DIBt).

2.4 Qualification of personnel

Only appropriately trained persons who are familiar with and understand the contents of these operating instructions and all other pertinent product documentation are authorized to work on and with this product.

These persons must have sufficient technical training, knowledge and experience and be able to foresee and detect potential hazards that may be caused by using the product.

All persons working on and with the product must be fully familiar with all directives, standards and safety regulations that must be observed for performing such work.

In the case of water-polluting substances:

This product may only be mounted, commissioned, maintained and decommissioned by a qualified, specialised company which has all required certifications and which meets the following requirements:

- Compliance with all directives, standards and safety regulations concerning handling of water-polluting substances as applicable at the installation site of the product
- In Germany: Certification as per § 62 "Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen" (AwSV) (Ordinance on Installations for Handling Water-Polluting Substances)

2.5 Personal protective equipment

Always wear the required personal protective equipment. When performing work on and with the product, take into account that hazards may be present at the installation site which do not directly result from the product itself.

2.6 Modifications to the product

Only perform work on and with the product which is explicitly described in these operating instructions. Do not make any modifications to the product which are not described in these operating instructions.

3 Transport and storage

The product may be damaged as a result of improper transport or storage.

NOTICE

INCORRECT HANDLING

- Verify compliance with the specified ambient conditions during transport or storage of the product.
- Use the original packaging when transporting the product.
- Store the product in a clean and dry environment.
- Verify that the product is protected against shocks and impact during transport and storage.

Failure to follow these instructions can result in equipment damage.

4 Product description

4.1 Overview

The product consists of a control unit and one or several probes. Depending on the type ordered, the following probes can be connected:

- OM 5: 1 to 5 photoelectric probes (optional)
- OM 5+1: 1 to 5 photoelectric probes, 1 floating probe (one each in scope of delivery)
- OM 1: 1 photoelectric probe (permanently connected)

The product monitors for accumulations of liquid at up to five independent locations. If one or several photoelectric probes are submerged in liquid, the control unit detects the change in the probe signal and generates visual and audible alarms. The alarm signal can be transmitted to external equipment (for example, horn or warning light with rotating reflector) via the output relay.

Photoelectric probe

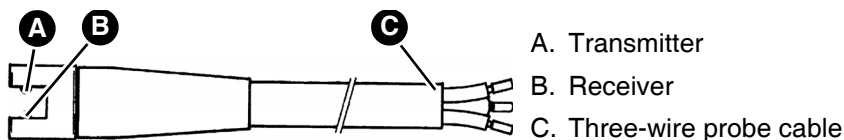


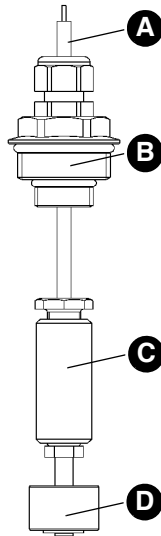
Fig. 1: Photoelectric probe

The photoelectric probe detects the different optical and conductive characteristics of air and liquids. The probe consists of an infrared transmitter and an infrared receiver located at a specific distance from each other. These two parts form a light barrier. If there is air between the transmitter and the receiver, most of the infrared light transmitted by the transmitter is received by the receiver. If the probe is submerged in liquid, only a small portion of the infrared light reaches the receiver and an alarm is triggered.

The probe is mounted at the lowest point of the area to be monitored (lying or suspended). The probe detects accumulations of liquids at a height of approximately 4 mm. A three-wire cable is used for connection to the control unit.

Floating probe

The floating probe (OM 5+1) detects the minimum level or the maximum level in a tank.



- A. Two-wire probe cable
- B. Cable gland with thread
G $\frac{1}{2}$ x G1
- C. Brass weight
- D. Float switch

Fig. 2: Floating probe (OM 5+1 only)

A magnet in the float of the probe switches a contact. Switching is triggered when the level of the liquid rises or falls and the float moves accordingly.

The probe is mounted in such a way that it is suspended at the height/level of the required switching point. A two-wire cable is used for connection to the control unit.

The type of switching function of the floating probe is determined by means of a coding plug on the PCB of the control unit (see Page 27).

Control unit

The control unit contains the following elements in an impact-resistant plastic housing: display elements and controls as well as all electronic components for evaluation and conversion of the probe signal into a digital output signal. The output signal is available via a voltage-free relay contact (changeover contact).

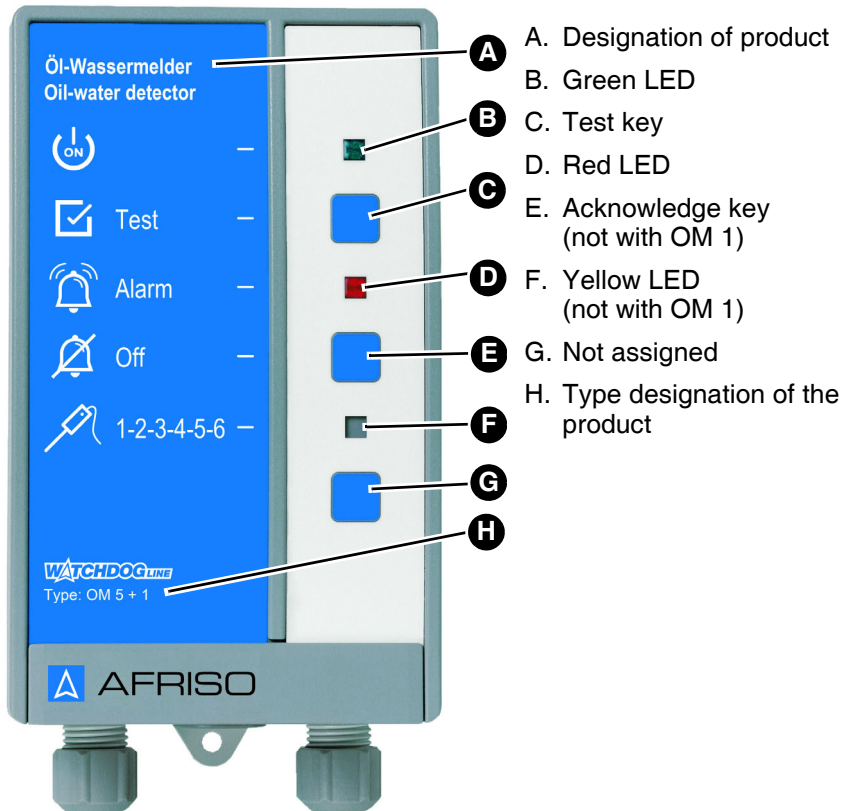





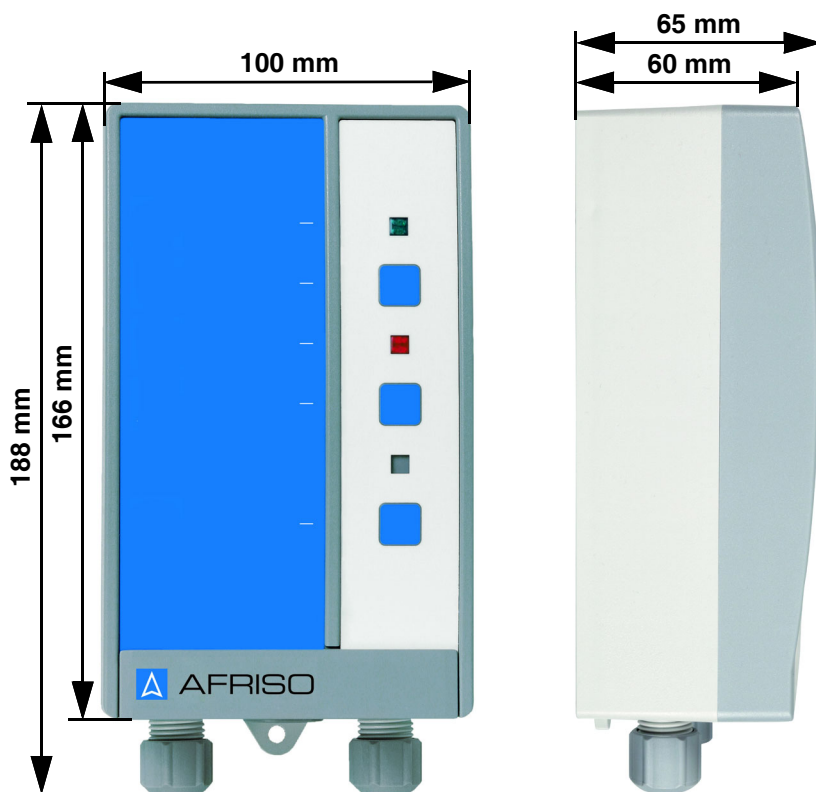


Fig. 3: Control unit

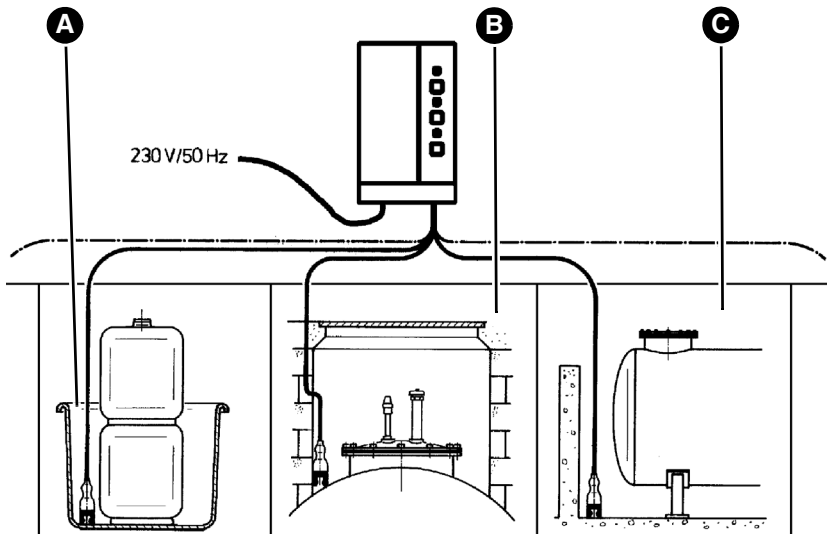
Pictograms

| Symbol | Meaning/function |
|---|---|
|  | Indication When power is supplied to the product, the green LED next to the symbol indicates that the product is ready for operation. |
|  | Key The Test key allows you to perform the function test of the product and verify correct operation. |
|  | Indication The red LED to the right of the symbol indicates an alarm. |
|  | Key This key allows you to acknowledge and mute the audible alarm (not with OM 1). |
|  | Indication The yellow LED identifies the probe which has triggered the alarm (only if multiple probes are used - not with OM 1). |

4.2 Dimensions



4.3 Application example



A. Drip pan

B. Manhole

C. Basement room

Fig. 4: Standard applications

4.4 Relay output

The product is equipped with an output relay to transmit the alarm signal to additional equipment.

The product can be operated with or without additional equipment, for example:

- Visual and audible alarm units
- Remote alarm equipment
- Building control systems
- Other

If no alarm is present, the relay is de-energised. In case of an alarm, the relay is energised.

4.5 Approvals, conformities, certifications

The product complies with:

- EMC Directive (2014/30/EU)
- Low Voltage Directive (2014/35/EU)
- RoHS Directive (2011/65/EU)
- Construction Products Directive (EU) No. 305/2011 and No. 574/2014

Approvals:

- Technical Approval of the German Institute for Civil Engineering (DIBt) Z-65.40-214.

4.6 Technical specifications

4.6.1 Photoelectric probe

| Parameter | Value |
|-------------------------------|-------------------------------|
| General specifications | |
| Dimensions (Ø x L) | 10 x 33 mm |
| Space requirements (L x H) | 50 x 10 mm |
| Weight | 0.3 kg |
| Material probe body | Plastic PE-HD |
| Probe element | Infrared transmitter/receiver |
| Response level (EN 13160-4) | ≥ 4 mm |
| Ambient conditions | |
| Ambient temperature operation | -10 ... 60 °C |
| Ambient temperature storage | -10 ... 60 °C |
| Temperature of the medium | 0 ... 60 °C |
| Electrical data | |
| Connection cable: | LiYY 3 x 0.25 mm ² |
| Standard length | 10 m |
| Maximum length | 50 m (shielded) |

4.6.2 Floating probe

| Parameter | Value |
|-------------------------------|---------------|
| General specifications | |
| Dimensions (Ø x L) | 24 x 85 mm |
| Weight | 0.35 kg |
| Material probe body | Polypropylene |
| Probe weight | Brass |
| Resistance | Water, oil |

| Parameter | Value |
|-------------------------------|--------------------------------|
| Ambient conditions | |
| Ambient temperature operation | -5 ... 50 °C |
| Ambient temperature storage | -10 ... 60 °C |
| Temperature of the medium | 0 ... 60 °C |
| Electrical data | |
| Connection cable: | Ölflex 2 x 0.5 mm ² |
| Standard length | 5 m |
| Maximum length | 50 m (shielded) |

4.6.3 Control unit

| Parameter | Value |
|--------------------------------|---|
| General specifications | |
| Dimensions housing (W x H x D) | 100 x 188 x 65 mm |
| Weight | 0.5 kg |
| Response delay OM 5, OM 5+1 | Max. 2 seconds |
| Response delay OM 1 | none |
| Emissions alarm sound | Min. 70 dB(A) A-weighted sound level of the audible alarm at a distance of one metre |
| Additional connections | 1 output relay (changeover contact) |
| Ambient conditions | |
| Ambient temperature operation | -10 ... 60 °C |
| Ambient temperature storage | -10 ... 60 °C |
| Relative humidity | < 80 % (non-condensing) |
| Atmospheric pressure | 0.08 MPa (0.8 bar) ... 0.11 MPa (1.1 bar) |

| Parameter | Value |
|---|--|
| Electrical data | |
| Supply voltage OM 5, part number 44502 | AC 100 ... 240 V, 50 ... 60 Hz |
| Supply voltage OM 5, part number 44486 | AC 15 ... 24 V, 50 ... 60 Hz or DC 15 ... 24 V |
| Supply voltage OM 5+1 and OM 1 | AC 100 ... 240 V, 50 ... 60 Hz |
| Nominal power | 5 VA |
| Mains fuse | M 32 mA |
| Relay output: breaking capacity | Max. 250 V, 2 A, resistive load |
| Maximum inrush current relay | 14 A |
| Protection class (EN 60730) 230 V, part numbers 44502, 44517, 44501 | II |
| Protection class (EN 60730) 24 V, part number 44486 | III |
| Degree of protection (EN 60529) | IP 40 |

5 Mounting

- ⇒ Verify that the audible alarm signal of the control unit can always be heard, even in the case of ambient noise.

If audibility cannot be ensured, you must install an additional alarm unit at a suitable location in the building (for example, additional alarm unit ZAG 01, horn KH 1 or combined alarm light and horn from AFRISO).

5.1 Preparing mounting

Preparation also includes requirements concerning the interstitial space and the leakage containment.

Information on these requirements can be found at the end of these operating instructions.

5.2 Mounting the photoelectric probe

NOTICE

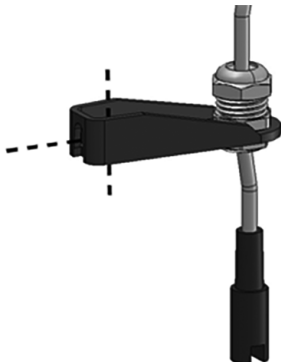
UNAVAILABLE MEASURING FUNCTION

- The probe is not intended to be permanently submerged in liquid.

Failure to follow these instructions can result in equipment damage.

- ⇒ Verify that the probe is submerged even in the case of small amounts of liquid.
- ⇒ Verify that the tip of the probe is not subjected to mechanical load.
1. Mount the photoelectric probe at the lowest point of the area to be monitored (lying or suspended).
 - Do not suspend the probe directly from the control unit.
 2. Use the holder supplied with the product or a cable clamp to provide strain relief for fastening.
 3. Place the probe at a position where there is little or no influencing light.

5.3 Mounting the bracket



1. Mount the bracket to a wall or a container (vertical or horizontal) using a screw.

5.4 Mounting the floating probe

1. Mount the probe in such a way that it is suspended at the height/level of the required switching point.
 - Do not suspend the probe directly from the control unit.
2. Use a cable clamp or the cable gland to fasten the probe and provide strain relief.
3. Fasten the probe with the enclosed cable gland G1.

5.5 Mounting the control unit

Mount the control unit to the wall using mounting type A or B.

- ⇒ Verify that the control unit is mounted to an even, rigid and dry wall at eye level.
- ⇒ Verify that the control unit is accessible and easy to oversee at all times.
- ⇒ Verify that the control unit is protected against water and splash water.
- ⇒ Verify that the control unit is protected from direct atmospheric influences if it is installed outdoors.

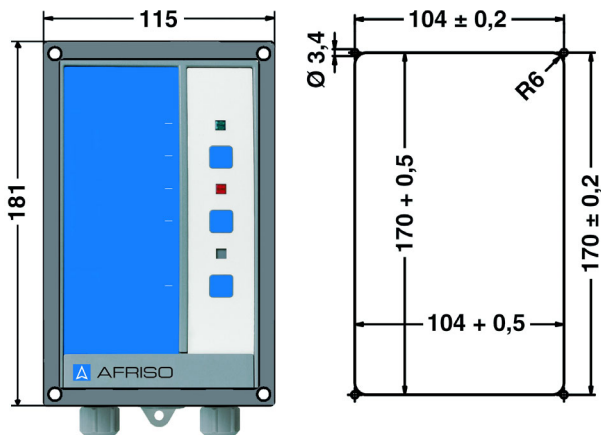
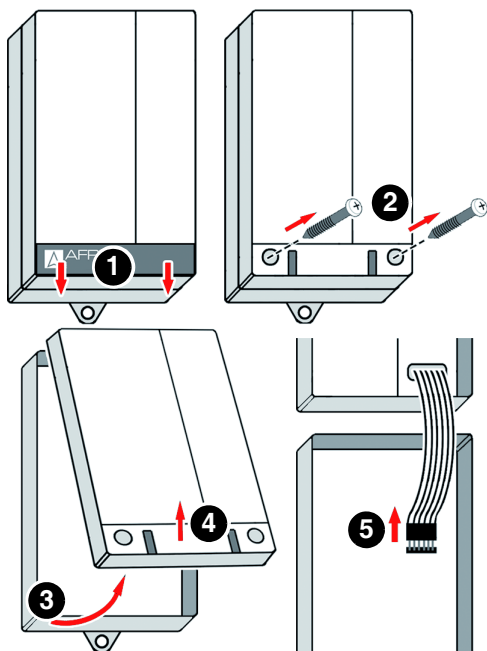
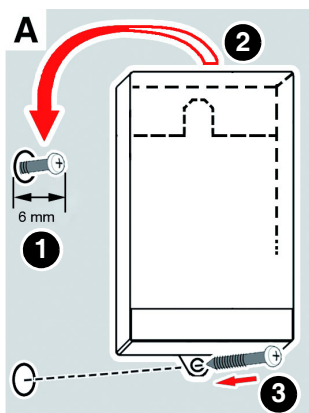


Fig. 5: Control unit with mounting frame for panel mounting; right: control panel cut out



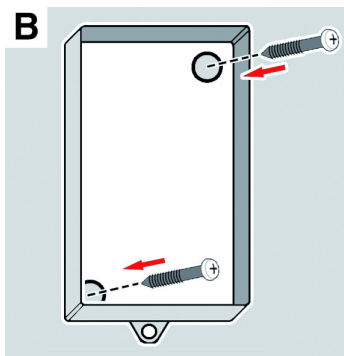
1. Open the control unit.



2. Mount the housing to the wall using mounting type A or B. Use the housing as a drilling template.

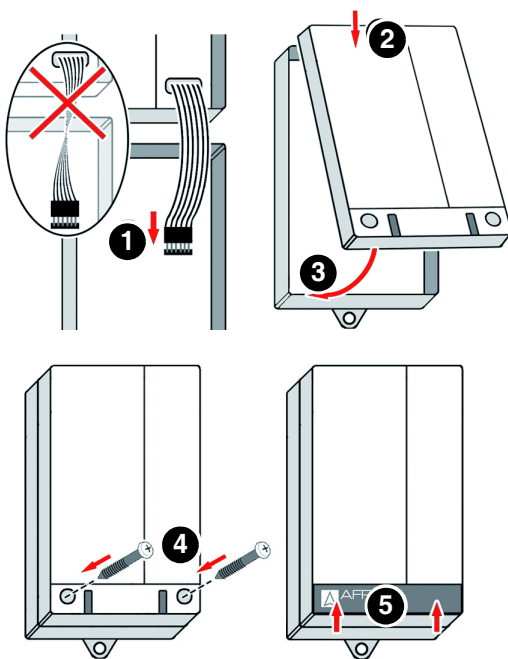
Mounting type A

1. Mount the screw to the wall.
2. Fit the control unit.
3. Fasten the control unit by screwing the bottom lug to the wall.



Mounting type B

1. Drill two fixing holes with a $\varnothing 5$ mm into the base.
2. Mount the control unit to the wall with the enclosed screws.



3. Close the control unit.

5.6 Replacing the rubber piece by a cable gland



In the case of a permanently installed cable, you can use the centre rubber piece.

The centre rubber piece must be replaced by a cable gland M20 for connection of additional equipment.

- M16 = 4 - 8.8 mm
- M20 = 8 - 12.5 mm

5.7 Electrical connection



DANGER

ELECTRIC SHOCK

- Verify that the degree of protection against electric shock (protection class, double insulation) is not reduced by the type of electrical installation.
- Verify that the product is connected by means of a permanently installed cable connection.

Failure to follow these instructions will result in death or serious injury.



DANGER

ELECTRIC SHOCK CAUSED BY LIVE PARTS

- Disconnect the mains voltage supply before performing the work and ensure that it cannot be switched on.
- Verify that no hazards can be caused by electrically conductive objects or media.

Failure to follow these instructions will result in death or serious injury.

NOTICE

UNAVAILABLE MONITORING FUNCTION

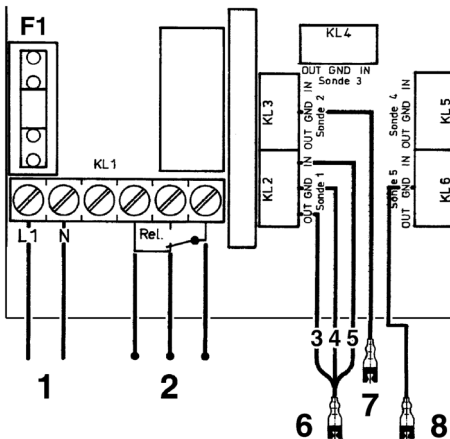
- Do not install mains plugs or switches in the supply line to the product.
- Only power on/power off the product via the on-site mains fuse.

Failure to follow these instructions can result in equipment damage.

5.7.1 Power supply control unit

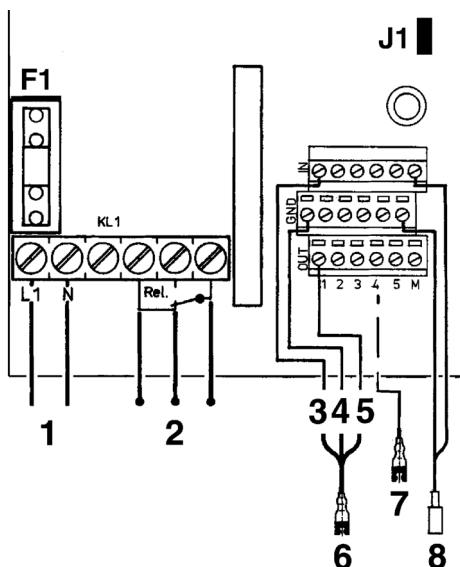
Use the wiring diagram corresponding to your product.

- ⇒ Verify that the product is connected to mains by means of a suitable, permanently installed cable (for example, NYM-J 3 x 1.5 mm²).
- ⇒ Verify that the power supply to the control unit is separately fused (16 A maximum).
- 1. Open the control unit.
- 2. In the case of OM 5 and OM 5+1, route the mains cable through the cable gland at the left into the control unit.
- 3. In the case of OM 1, route the mains cable through the cable gland at the right into the control unit.
- 4. Connect the phase to terminal L and the neutral conductor to terminal N.
- The protective ground conductor (PE) does not have to be connected.



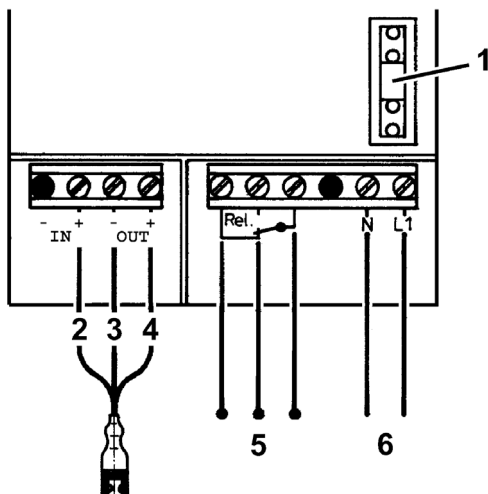
1. Supply voltage
 2. Any external equipment
 3. Green
 4. Brown
 5. White
 6. Probe 1
 7. Probe 2
 8. Probe 5
- F1 mains fuse

Fig. 6: Electrical connection OM 5



1. Supply voltage
 2. Any external equipment
 3. White
 4. Brown
 5. Green
 6. Probe 1
 7. Probe 2
 8. Floating probe
- F1 mains fuse
J1 coding plug

Fig. 7: Electrical connection OM 5+1



1. Supply voltage F1
2. White
3. Brown
4. Green
5. Any external equipment
6. Mains voltage

Fig. 8: Electrical connection OM 1

5.7.2 Connecting the probes

OM 1

The product OM 1 is shipped with a permanently connected photoelectric probe.

OM 5 and OM 5+1:

Use a cable with 3 x 1 mm² to extend the probe cable. Use shielded cables for lengths of more than 15 m. The maximum length of the probe cables is 50 m. Use underground cables such as NYY 3 x 1.5 mm² for underground cable installation.

⇒ Verify that the probe cable is not routed immediately next to or together with cables carrying mains voltage.

Connecting the photoelectric probes

1. Route the probe cable through the cable gland at the right.
2. Route the probe cable of the photoelectric probes to the appropriate terminal block "Sonde 1" to "Sonde 5".
3. Connect the wires of the probe cable as follows:
 - Brown to terminal GND
 - Green to terminal OUT
 - White to terminal IN
4. If a photoelectric probe is not connected:
Jumper the terminals "IN" and "GND" of this terminal block.

Connecting the floating probe (OM 5+1)

1. Route the probe cable through the cable gland at the right.
2. Route the probe cable of the floating probe to the terminals designated "Min/Max". Connect the two wires to the terminals "IN" and "GND". Any polarity is permissible.
3. If the floating probe is not connected:
 - If the coding plug J1 is plugged in, leave the terminals "IN" and "GND" open.
 - If the coding plug J1 is not plugged in, jumper the terminals "IN" and "GND".

5.7.3 Adjusting the alarm of the floating probe

The alarm of the floating probe is adjusted by means of the coding plug J1 (see wiring diagram Page 26).

⇒ Setting the floating probe to minimum alarm:

Mount the probe in such a way that the float is not in contact with in the liquid.

- Remove the coding plug J1. The two contact pins are visible.

⇒ Setting the floating probe to maximum alarm:

Mount the probe in such a way that the float is in the liquid.

- Plug the coding plug J1 onto the contact pins.

5.7.4 Relay output

NOTICE

VOLTAGE PEAKS WHEN INDUCTIVE CONSUMERS ARE SWITCHED OFF

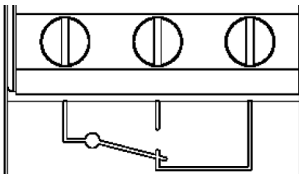
When inductive consumers are switched off, this can cause voltage peaks and can lead to adverse effects on electrical systems and may destroy the switching contact.

- Use commercially available standard RC combinations such as 0.1 μF /100 Ohm for inductive consumers.

Failure to follow these instructions can result in equipment damage.

The output signal of the control unit is made available via a voltage-free relay contact (changeover contact). The alarm signal can be transmitted to an additional alarm unit (for example, ZAG 01).

1. Connect the additional equipment to the terminals "Alarm".



6 Commissioning

6.1 Commissioning the product

⇒ Verify that all prerequisites for operation of the product are met.

1. Apply voltage via the on-site mains fuse.
 - OM 1: The green LED lights up and remains lit.
 - OM 5 and OM 5+1:
All LEDs light up for approximately one second. If no alarm condition is present, the red LED and the yellow LED go out. The green LED remains lit.
2. Perform the function test.

6.2 Performing the function test

At the photoelectric probe

⇒ Verify that the liquid to be detected is detected at all temperatures that may be present at the installation site.

1. Submerge the probe into the liquid to be detected.
 - The red LED lights up and the audible alarm sounds.
 - The yellow LED identifies the number of the probe which has triggered the alarm by means of 1 to 5 flash pulses (not OM 1).
2. Remove the probe from the liquid or remove the object.
 - The red LED goes out and the audible alarm is switched off.

At the floating probe (OM 5+1 only)

1. Push the float switch of the floating probe down (minimum alarm) or up (maximum alarm).
 - The red LED flashes and the audible alarm sounds.
 - The yellow LED indicates by 6 flash pulses that the floating probe has triggered the alarm.

At the control unit

1. Press the Test key at the control unit
 - The red LED lights up and the audible alarm sounds.
2. Release the test key.
 - The red LED goes out and the audible alarm is switched off.

7 Operation

The product monitors areas and signals accumulations of liquids. If one or several photoelectric probes are submerged in liquid, the product signals an alarm.

OM 5+1 additionally monitors for a minimum or maximum level.

If the floating probe is used for minimum level detection, the control unit triggers an alarm as soon as the liquid level falls below the adjusted limit value.

If the floating probe is used for maximum level detection, the control unit triggers an alarm as soon as the liquid level exceeds the adjusted limit value.

Operating the product is limited to its regular monitoring:

- The green LED is on.
- The red LED is off.
- The audible alarm is off.

Also note the information provided in chapter 8 "Maintenance".

7.1 Alarms

Leakage alarm:

If one of multiple photoelectric probes detect liquid, the electrical output signal of the probe changes and the control unit triggers a visual alarm.

- The red LED lights.
- The audible alarm sounds.

The alarm signal is transmitted to additional equipment via the relay output. See "Spare parts and accessories" on page 37.

Level alarm (minimum/maximum)

The switching function of the floating probe is set via a coding plug in the control unit.

If the floating probe is used for minimum level detection, the product signals an alarm if the float no longer floats on the liquid.

If the floating probe is used for maximum level detection, the product signals an alarm as soon as the float starts to float on the liquid.

In the case of a level alarm, the red LED **flashes** and the audible alarm sounds.

In the case of simultaneous leakage alarm and level alarm, the red LED is permanently illuminated and the audible alarm is activated. The number of flash pulses of the yellow LED identifies the probe (1 to 6) which has triggered the alarm. The flash pulses are repeated at intervals of approximately three seconds.

- **Example:**

Probe 2 triggers an alarm. The yellow LED flashes twice. After approximately three seconds, the yellow LED flashes twice again. This is repeated until you have acknowledged the alarm.

7.2 Acknowledging an alarm (OM 5 and OM 5+1 only)

You can mute the audible alarm by pressing the "Acknowledge" key. Press the key again to switch on the audible alarm again.

Power outage

No alarm is triggered in case of a power outage. When mains voltage is restored, the product immediately resumes operation. If, during the power outage, leakage has occurred or the minimum level or the maximum level have been reached, the product triggers an alarm once power is available again.

7.3 After an alarm condition

Verifying the photoelectric probe:

After a photoelectric probe has triggered an alarm, this probe must be checked for pollution.

- ⇒ Verify that there are no remainders of the liquid or deposits between the transmitter and the receiver of the light barrier.
- 1. Remove remainders of liquid between the transmitter and the receiver.
- 2. Carefully clean the probe with a dry, lint-free cloth (see "Maintenance").
- 3. Replace the probe if deposits or encrustation have formed between the transmitter and the receiver of the light barrier.
- 4. Perform a function test.

Verifying the floating probe:

The floating probe does not require a special check after an alarm condition. Perform a function test. See "Performing the function test" on page 29.

7.4 Use in flood hazard areas

NOTICE

INOPERABLE PRODUCT

- Verify that the product is replaced after a flood event.

Failure to follow these instructions can result in equipment damage.

The floating probe is suitable for use in flood hazard areas; it is watertight up to 10 mH₂O (1 bar pressure).

8 Maintenance

8.1 Maintenance intervals

| When | Activity |
|--|---|
| Monthly, weekly, if necessary Depends on the resistance of the retention unit to the medium | Verify correct state and function of the system |
| Monthly, weekly, if necessary In the case of additional alarm unit or other equipment connected to the relay output | Verify correct state and function of the product and of connected equipment |
| After an alarm condition | Perform a visual inspection of the probes. See "After an alarm condition" Clean slightly polluted parts Replace damaged parts Perform a function test (see "Performing the function test") |
| Change of the liquid to be monitored or recommissioning of the storage system | Perform a function test (see "Performing the function test") |

8.2 Maintenance activities

8.2.1 Cleaning the probes

1. Remove slightly adhesive liquids from the probe with a dry, lint-free cloth.

The probe must be replaced in the case of strongly adhering pollution (for example, crystal salts or adhering oil).

8.2.2 Replacing the mains fuse F1



DANGER

ELECTRIC SHOCK CAUSED BY LIVE PARTS

- Disconnect the mains voltage supply before performing the work and ensure that it cannot be switched on.

Failure to follow these instructions will result in death or serious injury.

⇒ Verify that the mains voltage is interrupted and cannot be switched on.

1. Open the control unit, see Page 21.
2. Remove the transparent cover from the mains fuse F1.
3. Insert a new mains fuse F1, see Page 16.
4. Refit the transparent cover.
5. Connect the flat cable to the connector.
6. Close the control unit, see 1 above.
7. Apply mains voltage.

9 Troubleshooting

The product is safety-related equipment.

Any malfunctions that cannot be removed by means of the measures described in this chapter may only be repaired by the manufacturer.

| Problem | Possible reason | Repair |
|--|---|--|
| Green LED is not on | No supply voltage | Apply supply voltage |
| | Mains fuse defective | Replace the mains fuse |
| | Flat cable not connected to printed circuit board | Connect the flat cable to the printed circuit board |
| Red LED is on or flashes | Alarm: Photoelectric probe submerged | Remove the cause of the alarm |
| | Alarm: Minimum level or maximum level reached | Remove the cause of the alarm |
| | Probe not connected | Connect the probe |
| | No wire jumper at unused terminal block for probe | Insert a jumper at the unused terminal block |
| Red LED does not light up, even though the photoelectric probe is submerged in liquid or the floating probe should respond | Light reaches the photoelectric probe | Mount the probe at a different position or protect the probe against light |
| | Float of the floating probe cannot move | Find a different position for the floating probe or remove the immobility of the float |
| | Probe defective | Replace the probe |

| Problem | Possible reason | Repair |
|--|--------------------------------|------------------------------------|
| Red LED is always on, even if the probe is not submerged in liquid | Short circuit in the probe | Check the probe or replace it |
| | Line interruption in the probe | Check the probe cable |
| Pressing the Test key has no effect | Control unit defective | Replace the control unit |
| Other malfunctions | - | Contact the AFRISO service hotline |

10 Decommissioning, disposal

Dispose of the product in compliance with all applicable directives, standards and safety regulations.

Electronic components must not be disposed of together with the normal household waste.



1. Disconnect the product from mains.
2. Dismount the product (see chapter "Mounting the control unit", reverse sequence of steps).
3. Dispose of the product.

11 Returning the device

Get in touch with us before returning your product (service@afriso.de).

12 Warranty

See our terms and conditions at www.afriso.com or your purchase contract for information on warranty.

13 Spare parts and accessories

NOTICE

UNSUITABLE PARTS

- Only use genuine spare parts and accessories provided by the manufacturer.

Failure to follow these instructions can result in equipment damage.

Product

| Product designation | Part no. | Figure |
|---|----------|--------|
| Control unit OM 5 | 44502 | |
| Control unit OM 5, 24 V | 44486 | |
| Control unit OM 5+1 with 1 photoelectric probe and 1 floating probe | 44517 | |
| Control unit OM 1 with 1 photoelectric probe | 44501 | |

Spare parts and accessories

| Product designation | Part no. | Figure |
|--|----------------|--------|
| Photoelectric probe | 44503 | |
| Floating probe | 16703 | |
| Cable extension fitting KVA | 40041 | |
| Mounting frame for control unit | 43521 | |
| Sealing kit IP 54 for AFRISO alarm units | 43416 | |
| Mains fuse F1 (M 32 mA) | 941571 0032 | |
| Additional alarm unit ZAG 01 | 40633 | |
| Warning light with rotating reflector | 61015 | |
| Horn KH 1 | 61011 | |
| Combined alarm light and horn | 61020 | |
| Horn HPW 2 | 61012 | |

14 Appendix

14.1 EU Declaration of Conformity

| | | |
|--|---|---------------|
|  AFRISO | | |
| Technik für Umweltschutz | | |
| Messen. Regeln. Überwachen. | | |
| EU - Konformitätserklärung <i>EU Declaration of Conformity / Déclaration EU de conformité /</i> <i>Declaración de conformidad CE / Declaração de conformidade CE /</i> <i>Deklaracja zgodności UE</i> | <div style="text-align: center; font-size: 48px; font-weight: bold;">CE</div> <div style="text-align: center; padding-top: 10px;"> Formblatt FB 27 - 03 </div> | |
| <p>Name und Anschrift des Herstellers: <u>AFRISO-EURO-INDEX GmbH, Lindenstraße 20, 74363 Güglingen</u> <i>Manufacturer / Fabricant / Fabricante / Nome e endereço do fabricante / Producent:</i></p> <p>Erzeugnis: <u>Ölmelder OM1, OM5 und OM5+1 mit optoelektronischen Sonden</u> <i>Product / Produit / Produto / Produto / Produkt:</i></p> <p>Typenbezeichnung: <u>OM1, OM5, OM5+1</u> <i>Type / Type / Tipo / Tipo / Typ:</i></p> <p>Betriebsdaten: <u>230V AC, 5VA, IP 40; 24V AC/DC, 5VA, IP 40</u> <i>Techn. Details / Caractéristiques / Características / Detalhes técnicos / Dane techniczne:</i></p> <p>Wir erklären in alleiniger Verantwortung, dass das bezeichnete Erzeugnis mit den Vorschriften folgender Europäischer Richtlinien übereinstimmt: <i>We declare under our sole responsibility that the above mentioned product meets the requirements of the</i> <i>following European Directives:</i> <i>Le produit mentionné est conforme aux prescriptions des Directives Européennes suivantes:</i> <i>El producto indicado cumple con las prescripciones de las Directivas Europeas siguientes:</i> <i>O produto indicado cumpre com as prescrições das seguintes Diretivas Europeias:</i> <i>Wymieniony wyżej produkt spełnia wymagania następujących Dyrektyw Europejskich:</i></p> <p>Elektromagnetische Verträglichkeit (2014/30/EU) <i>Directive Electromagnetic Compatibility / Directive compatibilité électromagnétique / Directiva compatibilidad</i> <i>electromagnética / Diretiva sobre compatibilidade eletromagnética / Dyrektywa kompatybilności elektromagnetycznej</i> <u>EN 60730-1:2011 (erfüllt auch / meets also EN 60730-1:2016 + A1:2019)</u></p> <p>Niederspannungsrichtlinie (2014/35/EU) <i>Low Voltage Directive / Directive basse tension / Directiva baja tensión / Diretiva sobre baixa tensão /</i> <i>Dyrektywa niskonapięciowa</i> <u>EN 60730-1:2011 (erfüllt auch / meets also EN 60730-1:2016 + A1:2019)</u></p> <p>Bauprodukte Verordnung (EU) Nr. 305/2011 + Nr. 574/2014 <i>Construction Products Directive / directive sur les produits de construction / Reglamento de productos de construcción /</i> <i>Regolamento dei prodotti da costruzione / Rozporządzenie w sprawie wyrobów budowlanych</i> <u>EN 13160-1:2003; EN 13160-4:2003</u></p> <p>RoHS-Richtlinie (2011/65/EU) <i>RoHS Directive / Directive RoHS / Directiva RoHS / Diretiva RoHS / Dyrektywa RoHS</i> <u>EN IEC 63000:2018</u></p> <p>Unterzeichner: <u>Dr. Späth, Geschäftsführer Technik</u> <i>Signed / Signataire / Firmante /</i> <i>Assinado por / Podpisal:</i> <i>Technical Director / Directeur Técnico / Dyrektor Techniczny</i></p> <p style="text-align: center;">13. Juli 2023 <i>Datum / Date / Fecha / Data</i></p> <div style="text-align: center;">  AFRISO <i>AFRISO-EURO-INDEX GmbH, Lindenstr. 20, 74363 Güglingen</i> <i>tel. +49 7146 112 200 fax +49 7146 112 201</i> </div> <p style="text-align: center;">Unterschrift / Signature / Firma / Assinatura / Podpis</p> | | |
| Version: 3 Index: 5 | AFRISO-EURO-INDEX GmbH D-74363 Güglingen | Seite 1 von 1 |

990002 00004 09/13

14.2 Additional requirements and information

This chapter contains further requirements and information from the 13160:2003 series of standard which must be fulfilled for a standards-compliant installation of the product.

14.2.1 Interstitial space

The standards EN 13160-4:2003 and EN 13160-7:2003 define the following requirements concerning the interstitial space:

- The interstitial space must be designed in such a way that it allows for the indication of at least 10 l of a specific liquid that is present in the interstitial space or that penetrates into it.
- The interstitial space must be resistant to the expected thermal, chemical and mechanical loads.
- The interstitial space must be resistant to the stored liquid.
- The liquid in the interstitial space must not be harmful to the stored liquid.
- The interstitial space must be designed in such a way that a monitoring probe can be installed at the lowest point of the interstitial space.
- The interstitial space must be designed in such a way that the leakage liquid reaches the lowest point of the interstitial space.
- The tank system must be designed in such a way that there are no connections through the interstitial space to the inner tank below the maximum filling level.
- The pipe system must be designed in such a way that there are no connections through the interstitial space to the inner pipe.
- It must be possible to inspect the interstitial space for possible damage.

14.2.2 Leakage containment

The standard EN 13160-7:2003 defines the following requirements for the leakage containment:

- The design of the leakage containment (with liquid) must allow for the indication of a minimum amount of 10 l of the leak detection fluid.
- The number of sensors in the system must correspond to the number of recesses in the leakage containment.
- The leakage containment must be liquid-tight and impermeable to the stored liquid. The leakage containment must not have an outlet below the liquid level.
- No water may be able to enter the leakage containment (for example, through rain). If necessary, take appropriate measures so that the function of the product is not impaired.
- There must be no openings through the walls of the leakage space that could impair the function of the leakage containment.
- It must be possible to inspect the leakage containment for leaks.
- The primary barrier is constituted by the inner jacket or the inner tank wall. If the leakage containment is used as a retention unit for a primary system containing liquid, then the retention unit must be able to contain the entire contents of the primary system.