Mess-, Regel- und
Überwachungsgeräte
für Haustechnik,
Industrie und Umweltschutz

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Operating instructions

Boiler water low level alarm – electronic WMS

WMS 2-1
WMS 3-1

☞ Read instructions before using device!
☞ Observe all safety information!
☞ Keep instructions for future use!

CE 0036

04.2017.0
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Table of contents

1 This instruction manual

This instruction manual is part of the product.

- Read this manual before using the product.
- Keep this manual during the entire service life of the product and always have it readily available for reference.
- Always hand this manual over to future owners or users of the product.

1.1 Precautions

WARNING TERM Type and source of the danger are shown here.

- Precautions to take in order to avoid the danger are shown here.

There are three different levels of warnings:

Warning term	Meaning
DANGER	Immediately imminent danger! Failure to observe the information will result in death or severe injuries.
WARNING	Possibly imminent danger! Failure to observe the information may result in death or severe injuries.
CAUTION	Dangerous situation! Failure to observe the information may result in minor or severe injuries as well as damage to property.

2 Safety

2.1 Intended use

The WMS boiler water low level alarm may only be used to monitor water levels in heating systems as per EN 12828. The device detects and signals low water levels (insufficient water volume).

Any use other than the application explicitly permitted in this instruction manual is not permitted.

2.2 Predictable incorrect application

The WMS boiler water low level alarm must never be used in the following cases:

- Water temperature higher than 120 °C
- Water pressure higher than 10 bar
- Welding at the probe
- Hazardous area (Ex)
  If the device is operated in hazardous areas, sparks may cause deflagrations, fires or explosions.

2.3 Safe handling

This product represents state-of-the-art technology and is made according to the pertinent safety regulations. Each device is subjected to a function and safety test prior to shipping.

▶ Operate the product only when it is in perfect condition. Always observe the operating instructions, all pertinent local and national directives and guidelines as well as the applicable safety regulations and directives concerning the prevention of accidents.

WARNING

Severe burns or death caused by mains voltage (AC 230 V, 50 Hz) in the control unit.

▶ Do not expose the control unit to water.

▶ Interrupt the mains voltage supply before opening the control unit or before performing maintenance and cleaning work and make sure it cannot be switched on by accident.

▶ Do not tamper with the control unit in any way whatsoever.

WARNING

Danger of severe burns at the body, in particular the face and the hands, caused by escaping heating water.

The water in heating systems is under high pressure and may have temperatures of more than 100 °C.

▶ Never tamper with the probe or the heating system in any way whatsoever.

▶ Drain the heating water or allow it to cool down before opening the probe.

CAUTION

Destruction of the probe due to excessive water temperatures or excessive water pressures in the probe.

- ▶ Do not exceed the maximum permissible water temperature; see table 2, page 10.
- ▶ Do not exceed the maximum permissible water pressure in the probe; see table 2, page 10.

2.4 Staff qualification

The product may only be mounted, commissioned, operated, maintained, decommissioned and disposed of by qualified, specially trained staff.

Electrical work may only be performed by trained electricians and in compliance with all applicable local and national directives.

2.5 Modifications to the product

Changes or modifications made to the product by unauthorised persons may lead to malfunctions and are prohibited for safety reasons.

2.6 Usage of spare parts and accessories

Usage of unsuitable spare parts and accessories may cause damage to the product.

- ▶ Use only genuine spare parts and accessories of the manufacturer (see chapter 11, page 26).
- ▶ Additional devices used for external unlocking and for transmitting the output signal may only be installed by trained electricians.

2.7 Liability information

The manufacturer shall not be liable in any form whatsoever for direct or consequential damage resulting from failure to observe the technical instructions, guidelines and recommendations.

The manufacturer or the sales company shall not be liable for costs or damages incurred by the user or by third parties in the usage or application of this device, in particular in case of improper use of the device, misuse or malfunction of the connection, malfunction of the device or of connected devices. The manufacturer or the sales company shall not be liable for damage whatsoever resulting from any use other than the use explicitly permitted in this instruction manual.

The manufacturer shall not be liable for misprints.

3 Product description

The WMS boiler water low level alarm consists of a failsafe, self-monitoring control unit with a periodic self-test function and a sensor.

The control unit and the probe are connected by a two-core signal cable (maximum length 10 m).

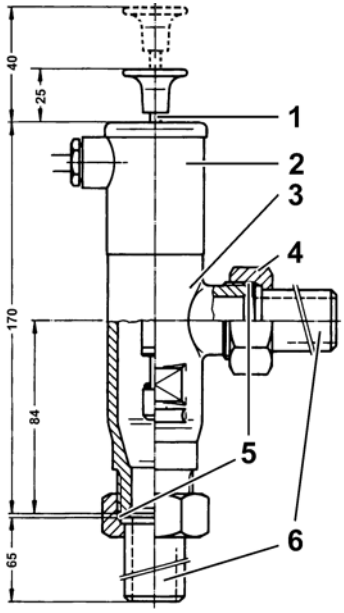
The device combination detects and signals low water levels (insufficient water volume).

Probe

The probe consists of a metal electrode housing, an outer plastic housing and a rod electrode that can be pulled out about 12 to 13 mm for function tests.

Two probe versions are available:

- Probe DN 20:
  Angled electrode housing with two (DN 20) welding sockets (Ø i=20 mm, Ø o=26.5 mm)



1 Electrode rod

2 Plastic housing

3 Electrode housing

4 Union nuts G1", width across flats SW 40

5 Flat gasket 30 x 21 x 2

6 Welding socket Ø 26.5 (DN 20)

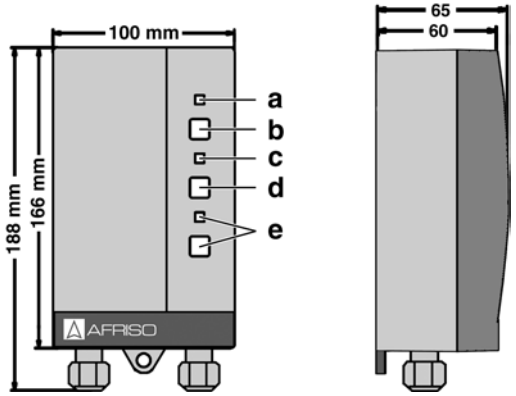
Fig. 1: Probe DN 20

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 signal processing and conversion of the probe signal into a digital output signal. The output signal is available as a voltage-free relay contact.

The control unit is available in two versions:

- Control unit WMS 2-1:
  With internal power failure lock, i.e. the control unit must be unlocked after a power failure.
- Control unit WMS 3-1:
  With external power failure lock, i.e. the control unit unlocks itself automatically after a power failure.



a Green pilot lamp
b Test button
c Red alarm lamp
d Unlock button
e Without function

Fig. 2: Control unit

Versions

Table 1: WMS versions

Part no.	Type	Control unit	Probe	Type approval mark
42351	WMS 2-1	WMS 2-1	DN 20	TÜV.WBH.14-345
42352	WMS 3-1	WMS 3-1	DN 20	TÜV.WBH.14-348

3.1 Function

WMS monitors water levels in heating systems. If the water falls below the minimum level, the boiler water low level alarm triggers an alarm.

The boiler water low level alarm operates on the principle of measuring the conductivity of water in a heating system. If water flows through the probe, the boiler water low level alarm signals that a sufficient supply of heating water is available. If no water flows through the probe, the control unit immediately triggers an alarm.

Probe

The probe consists of an outer electrode and a moving inner electrode. Both electrodes are connected to the control unit by a two-wire cable. The control unit continuously monitors the conductivity / electrical resistance between the two electrodes. For testing purposes, the inner electrode can be pulled up out of the water by approximately 12 to 13 mm. This interrupts the contact between the electrode and the water, simulating an alarm condition. The control unit immediately triggers an alarm. An integrated spring returns the electrode to its normal position.

Control unit

The control unit continuously monitors the conductivity of the water or rather the electrical resistance between the two electrodes of the probe. If the measured conductivity is greater than 20 µS / if the resistance of less than 50 kΩ, the control unit signals that sufficient water is available and that there are no defects in the probe circuit. The red alarm lamp is not on. Conductivity values lower than 20 µS or resistance values higher than 50 kΩ are interpreted as low water level, line interruption or a fault in the probe circuit. The red alarm lamp is on.

WMS is a failsafe, self-monitoring unit. The electronics of the control unit checks the entire boiler water low level alarm several times per second.

An alarm is triggered if errors are detected in the probe circuit or the control unit. The boiler water low level alarm can only be unlocked if the complete device is free from errors, if the power supply is available and if the water level is above the minimum value. In this case, the red alarm lamp goes out and the integrated output relay is energised.

The green pilot lamp lights up as soon as the boiler water low level alarm is supplied with mains voltage. The Test button allows you to simulate an alarm condition in order to perform a function check.

3.2 Operating modes

WMS 2-1 has an internal power failure lock, i.e. after a power failure the control unit must be reset via the "Unlock" button or via an external reset contact.

WMS 3-1 unlocks automatically after a power failure. The user must install an external power failure lock as per EN 12828.

4 Technical specifications

Table 2: Technical specifications probes

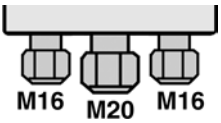
Parameters	DN 20	R 2
General specifications		
Dimensions housing (W x H x D)	130 x 270 x 44 mm	90 x 200 x 75 mm
Space requirements (W x H x D)	100 x 300 x 150 mm	100 x 230 x 110 mm
Weight	0.8 kg	0.9 kg
Electrode housing	Brass	Steel, galvanised
Electrode rod	V4A	V4A
Resistance	Boiler water	Boiler water
Mechanical connection	Welding socket Ø i = 20 mm, Ø o = 26.5 mm	Treaded socket R 2 male thread
Operating pressure	Max. 10 bar	Max. 10 bar
Connection cable: Standard length Max. length	H05RN-F, 2 x 1 mm² 1.5 m 10 m (shielded)	H05RN-F, 2 x 1 mm² 1.5 m 10 m (shielded)
Probe voltage	Max. 12 V	Max. 12 V
Operating temperature range		
Ambient	0 °C to +55 °C	0 °C to +55 °C
Medium	Max. 120 °C	Max. 120 °C
Storage	-10 °C to +60 °C	-10 °C to +60 °C
Electrical safety		
Degree of protection	IP 54	IP 54

Table 3: Technical specifications control unit

Parameters	Value
General specifications	
Dimensions housing (W x H x D)	100 x 188 x 65 mm

Parameters	Value
Weight	0.7 kg
Response delay	Approx. 1 second standard
Connections	1 output relay (changeover contact), 1 external unlocking
Operating temperature range	
Ambient	0 °C to +55 °C
Storage	-10 °C to +60 °C
Supply voltage	
Nominal voltage	AC 230 V ± 10 %, 50 Hz
Nominal power	5 VA
Mains fuse	T 50 mA
Breaking capacity output relay (1 voltage-free changeover contact)	Max. 250 V, 2 A, resistive load
Electrical safety	
Electrical safety	EN 60730
Protection class	II (EN 60730)
Degree of protection	IP 40 (EN 60529)
Electromagnetic compatibility (EMC)	
As per EN 61000-6-3	EN 61000-6-3
As per EN 61000-6-2	EN 61000-6-2

Cable glands at the control unit



The centre rubber piece can be replaced with a cable gland M20.

Cable gland	Cable diameter
M16	4.0-8.8 mm
M20	8.0-12.5 mm

4.1 Approvals, tests and conformities

WMS complies with the VdTÜV sheet "Wasserstand 100" ("Water Level 100") (edition 02.2010), the EMC Directive (2014/30/EU), the Low Voltage Directive (2014/35/EU), the Pressure Equipment Directive (2014/68/EU) and the RoHS Directive (2011/65/EU).

5 Transport and storage

CAUTION **Damage to the device due to improper transport.**

- Do not throw or drop the device.
- Protect from wetness, humidity, dirt and dust.

CAUTION **Damage to the device due to improper storage.**

- Store the device in a clean and dry environment.
- Only store the device within the permissible temperature range.

6 Mounting and commissioning

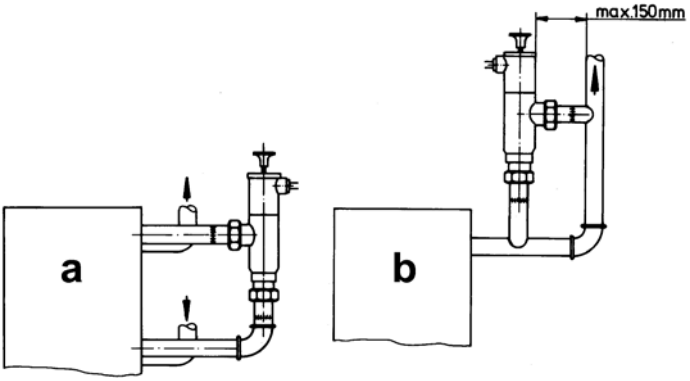
☑ Do not install the control unit and the probe in hazardous areas (EX areas).

6.1 Mounting the probe

- ▶ Install the probe in a connecting pipe between the steam and water chamber of the boiler or parallel with the flow line between the boiler and the circulation pump.
  If the boiler is already fitted with threaded sockets for connection of the probe, install the probe on these threaded sockets.
- ▶ There must be no circulation pump with check valve and no shut-off valve between the probe and the boiler
- ▶ It must not be possible to shut off the pipes to the probe to the system and the inside diameter of the pipes must be at least 20 mm / ¾ ".
- ▶ Install the probe according to these operating instructions; use the sealing rings shipped with the unit.
- ▶ Make sure to install the probe in such a way as to protect it from foam and high water levels.
- ▶ No feed water supply pipe may be connected to the connection pipes at the water side of the probe housing.
- ▶ Verify sure the permissible ambient temperature at the probe housing outside of the boiler is not exceeded, see chapter 4, page 10.
- ▶ To avoid false alarms caused by air bubbles, the inside diameter of the pipes to the probe must not be significantly smaller than that of the flow line (this is especially important in the case of large heating systems). Keep the distance between the probe and the flow line short and reduce it in steps to ¾ ".
- ▶ If possible, install the probe in a vertical position. In exceptional cases, the probe may be installed at an angle of up to 45° from the vertical; however, verify that air bubbles cannot collect in the probe.
- ▶ Mount the probe in such a way that the bottom edge of the probe is at least 100 mm above the highest point of the boiler.

CAUTION **Destruction of the probe caused by welding on the probe.**

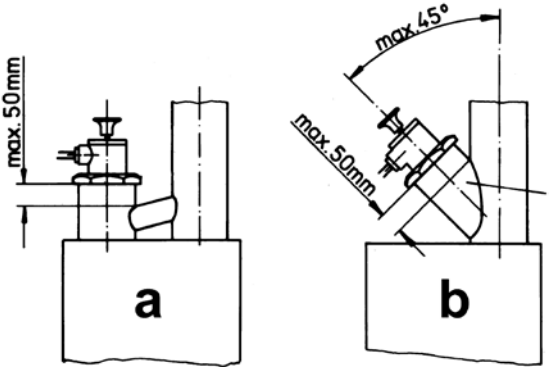
▶ Do not perform any welding work on the probe.



a Boiler, rear side, separate sockets for probe

b Boiler

Fig. 3: Mounting the probe DN 20



a Boiler with threaded socket G2

b Boiler

Fig. 4: Mounting the probe R 2

6.2 Mounting the control unit

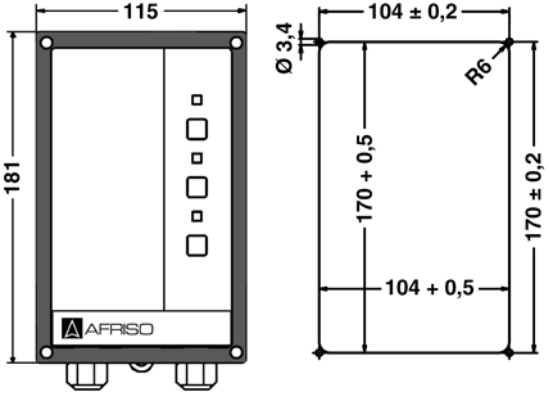
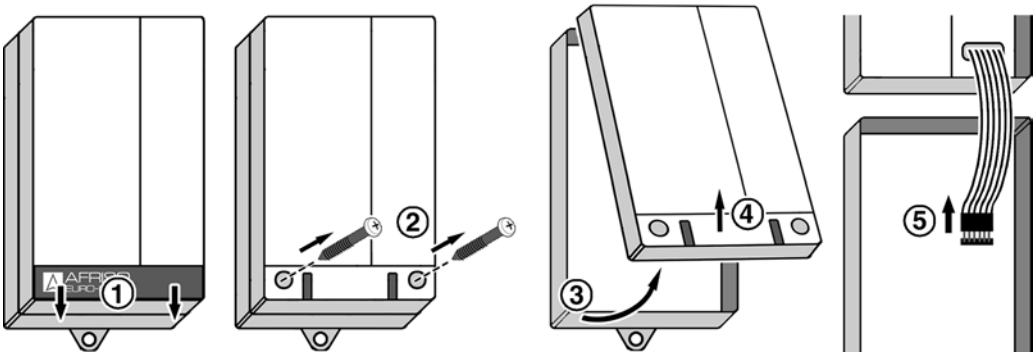


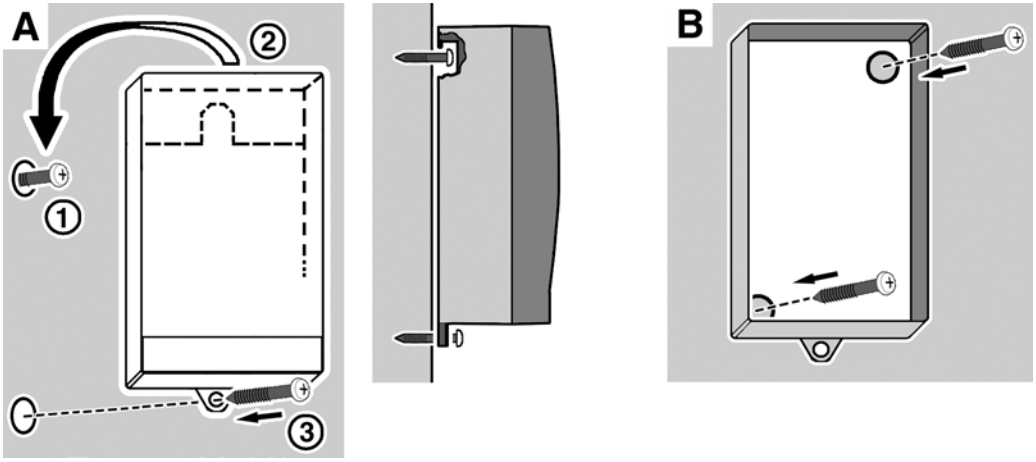
Fig. 5: Control unit with mounting frame for panel mounting; right: control panel cut out

- ☑ Mount the control unit to an even, rigid and dry wall at eye level.
- ☑ The control unit must be accessible and visible at all times.
- ☑ The control unit must not be exposed to water or splash water.
- ☑ The control unit must not be installed in damp rooms.
- ☑ The maximum ambient temperature at the control unit must not be exceeded, see table 3, page 10.
- ☑ Protect the control unit from direct atmospheric influences if it is installed outdoors.
- ☑ Take the required precautions concerning protection against contact when mounting the control unit.
- ☑ Ensure a minimum degree of protection of IP 44 as per EN 60529 in the boiler room.
- ☑ The hazard risk in the case of external fire or loads caused by traffic, wind and earthquakes depends on the installation conditions and the installation site of the pressure equipment and may have to be assessed separately.

1. Open the control unit.



2. Mount the control unit to the wall (**A** or **B**).



A **1** Mount the screw to the wall.

2 Fit the control unit.

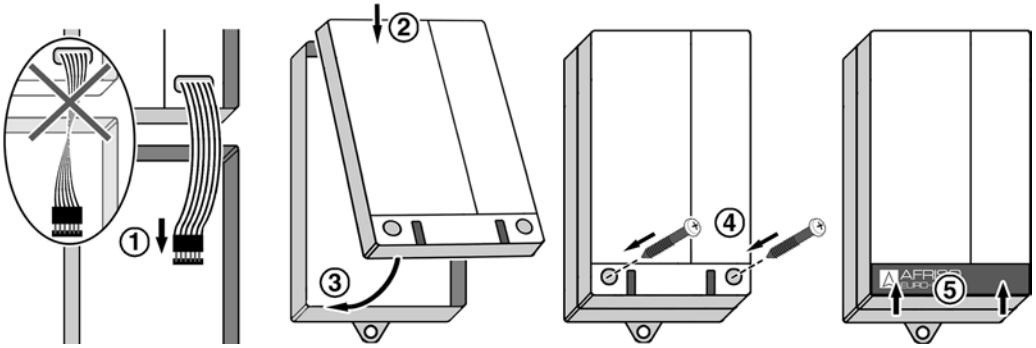
3 Fixate the control unit by screwing the bottom lug to the wall.

B Drill the fixing holes in the bottom part with a Ø 5 mm drill.

Mount the bottom part to the wall with the screws shipped with the unit.

3. Connect the unit electrically, see chapter 6.3, page 18.

4. Close the control unit.



6.3 Electrical connection

☑ Mains voltage is interrupted and cannot be switched on.

▶ Electrical work may only be performed by trained electricians.

▶ Comply with all applicable electrical code regulations, the applicable accident prevention regulations and the operating instructions of the boiler water low level alarm, the boiler and the burner.

☑ The power supply cable to the heating room must be equipped with a main switch located outside the boiler room; this switch must disconnect all non-earthed conductors with a contact spacing of at least 3 mm.

Power supply

Connect WMS to mains by means of a permanently installed cable such as NYM-O 2 x 1.5 mm².

1. Route the power supply cable through the cable gland at the right into the control unit.
2. The phase must be connected to terminal L1, the neutral conductor to terminal N.
3. The control unit supply should have a separate fuse (max. 10 A).

Probe

1. Route the probe cable through the cable gland at the left into the control unit.
2. Connect the probe cable to the two terminals in the control unit marked "Sonde" (probe). You do not have to ensure a specific polarity.
3. If the probe cable is not sufficiently long (1.5 m), it is possible to extend the probe cable using shielded cable 2 x 1.5 mm². The length of the connection cable between the probe and the control unit must not exceed 10 m.
4. The connection cable must not be subject to interference.
5. Ensure a minimum degree of protection of IP 65 as per EN 60529.

External unlocking

1. A pushbutton (normally open contact) can be connected to the two terminals with the designation "Entr" (Unlock) in the control unit which allows for an external reset of WMS from a distance of up to 10 m. The maximum voltage at these terminals is 12 V.
2. The pushbutton connections must be voltage-free.
3. If an external unlocking unit is used, the downstream circuit must comply with EN 50156-1.

Output

The output signal of WMS is made available via a voltage-free relay contact (changeover contact). This relay contact is used for the safety shutoff system of the boiler.

1. Wiring (max. 10 m) must be made in such a way that the power supply to the boiler is interrupted in the case of an alarm condition.
   The relay contact is energised when there is no error condition. It is de-energised in the case of an alarm condition.
2. Use an external fuse (max. M 2 A) for the output contact of the boiler water low level alarm.

Wiring examples

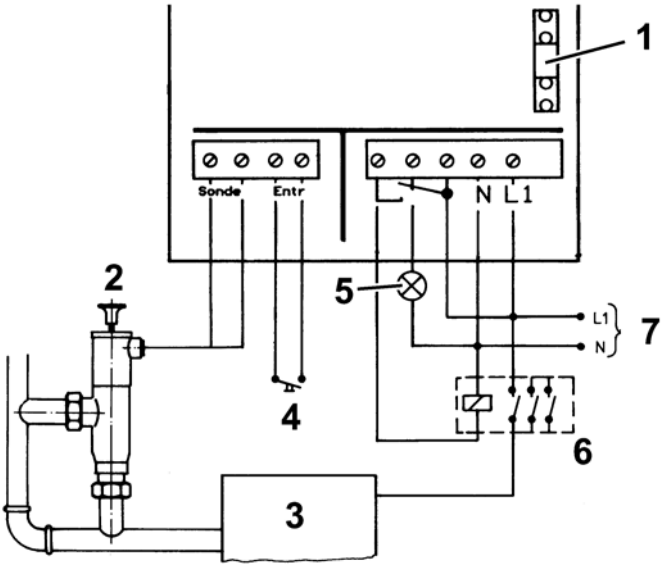


Fig. 6: Wiring example WMS 2-1

1 Mains fuse F1
2 Probe
3 Boiler
4 External unlocking (optional)
5 External alarm (optional)
6 Release contactor
7 Mains voltage

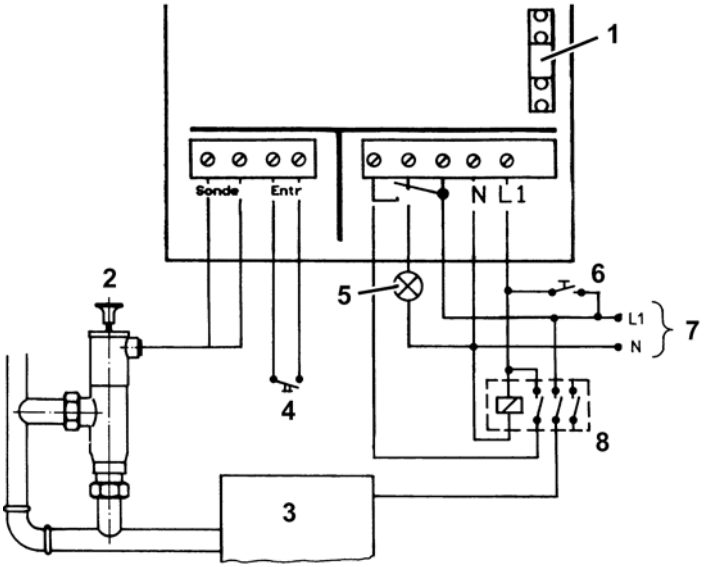


Fig. 7: Connection example WMS 3-1

1 Mains fuse F1
2 Probe
3 Boiler
4 External unlocking (optional)
5 External alarm (optional)
6 Pushbutton
7 Mains voltage
8 Release contactor

In the case of the WMS 3-1, a downstream contactor must be wired for the external power failure lock.

CAUTION

Adverse effects on the function of electrical systems due to voltage peaks when inductive consumers are switched off.

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

6.4 Commissioning the device

☑ The probe and control unit have been installed as per chapter 6, page 14.

☑ Probe is tight.

☑ Heating system water has been refilled.

☑ The unit has been connected electrically as described in chapter 6.3, page 18.

☑ The probe has been connected to the control unit.

☑ Output relay has been wired (if required).

☑ External power failure lock has been implemented.

☑ The unit has been connected to mains.

☑ The flat cable has been connected to the printed circuit board.

☑ The control unit housing has been closed with screws.

If all prerequisites are met, the device is ready for operation.

1. Switch on the power supply via the on-site mains fuse.

↳ The green pilot lamp and the red alarm lamp light up.

↳ **WMS 3-1** unlocks automatically, i.e. the red alarm lamp goes out after approx. 1 second if no alarm condition is present.

2. Unlock **WMS 2-1** manually with the "Unlock" pushbutton or with the external unlock pushbutton.

↳ If no alarm condition is present, the red alarm lamp goes out and the burner starts.

3. Perform a function test, see chapter 6.5, page 22.

6.5 Function test

The function test is performed by manually lowering the water level below the response threshold or by pulling up the inner, moving electrode. Function tests must be performed at regular intervals.

▶ Perform a function test once per year and after each repair and maintenance.

At the probe

1. Perform the function test by pulling up the electrode rod all the way to the stop for at least 1 second.

↳ The electrode is no longer in the boiler water, thus simulating a low water condition.

↳ The red alarm lamp lights up and the burner shuts down automatically.

2. Press the Unlock pushbutton at the control unit to resume normal operation.

↳ The red alarm lamp goes out and the burner starts.

At the control unit

1. Hold down the Test pushbutton for at least 1 second.

↳ The connection to the probe is interrupted and the red alarm lamp lights up.

↳ The burner switches off automatically

2. Press the Unlock pushbutton at the control unit to resume normal operation.

↳ The red alarm lamp goes out and the burner starts.

7 Operation

WMS monitors water levels in heating systems. If the water level falls below a minimum level, WMS triggers an alarm and the boiler is switched off. Down. The operation of WMS is limited to its regular monitoring:

- The green pilot lamp is on.
- The red alarm lamp is not on.
- The burner operates.

8 Maintenance

8.1 Maintenance times

Table 4: Maintenance times

When	Activity
Annually	▶ Perform a function test, see chapter 6.5, page 22.
At regular intervals	▶ Verify that the boiler water low level alarm and its environment are always clean, accessible and easy to oversee. ▶ Keep the probe clean and free from any deposits; clean the probe, if necessary. Do not add any substances to the heating system water which could form films, adhere to surfaces or pollute the water.
Mains fuse defective	▶ Replace the mains fuse F1, see chapter 8.2, page 24.

8.2 Maintenance activities

Replacing the mains fuse F1

☑ Mains voltage is interrupted and cannot be switched on.

1. Open the control unit, see chapter 6.2, page 16.
2. Remove the transparent cover from the mains fuse F1.
3. Replace the mains fuse F1, see table 3, page 10.
4. Snap the transparent cover onto the mains fuse F1.
5. Connect the flat cable to the connector.
6. Close the control unit, see chapter 6.2, page 16.
7. Switch on the mains voltage.
8. Unlock the control unit.

9 Troubleshooting

Boiler water low level alarms are safety equipment; if damaged, they may only be repaired by the manufacturer.

Repairs may only be performed by specially trained, qualified staff.

Table 5: Troubleshooting

Problem	Possible reason	Repair
Green pilot lamp is not on.	Mains voltage interrupted.	▶ Supply mains 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 alarm lamp is on.	Low water alarm.	▶ Refill boiler water. ▶ Press the Unlock pushbutton.
	Probe not connected.	▶ Connect probe.
Red alarm lamp is always on, WMS cannot be unlocked.	Line interruption in the probe, probe cable or control unit.	▶ Check cables.
Pressing the Test button has no effect.	Control unit defective.	▶ Replace control unit.
Pulling the electrode rod has no effect.	Probe/wiring defective.	▶ Replace probe. ▶ Check wiring.
Burner does not start.	Low water alarm.	▶ Check whether red alarm lamp is on.
	Wiring/burner defective.	▶ Check wiring. ▶ Check burner.
Other malfunctions	–	▶ Send the device to the manufacturer.

10 Decommissioning, disposal

1. Switch off the supply voltage.
2. Dismount the device (see chapter 6, page 14, reverse sequence of steps).

3. To protect the environment, this device must **not** be disposed of together with the normal household waste. Dispose of the device according to according to local directives and guidelines.

This device consists of materials that can be reused by recycling firms. The electronic inserts can be easily separated and the device consists of recyclable materials.

If you do not have the opportunity to dispose of the used device in accordance with environmental regulations, please contact us for possibilities to return it.

11 Spare parts and accessories

Part	Part no.
WMS 2-1	42351
WMS 3-1	42352
Control unit WMS 2-1	42356
Control unit WMS 3-1	42357
WMS probe DN 20	42362
WMS probe R 2	42366
Mounting frame for control unit	43521
IP54 kit with screw connection M20	43416
Cable extension fitting KVA	40041
RC combination (0.1 µF/100 Ohm)	618.001.5100

12 Warranty

The manufacturer's warranty for this product is 24 months after the date of purchase. This warranty shall be good in all countries in which this device is sold by the manufacturer or its authorised dealers.

13 Copyright

The manufacturer retains the copyright to these operating instructions. These operating instructions may not be reprinted, translated, copied in part or in whole without prior written consent.

We reserve the right to technical modifications with reference to the specifications and illustrations in this manual.

14 Customer satisfaction

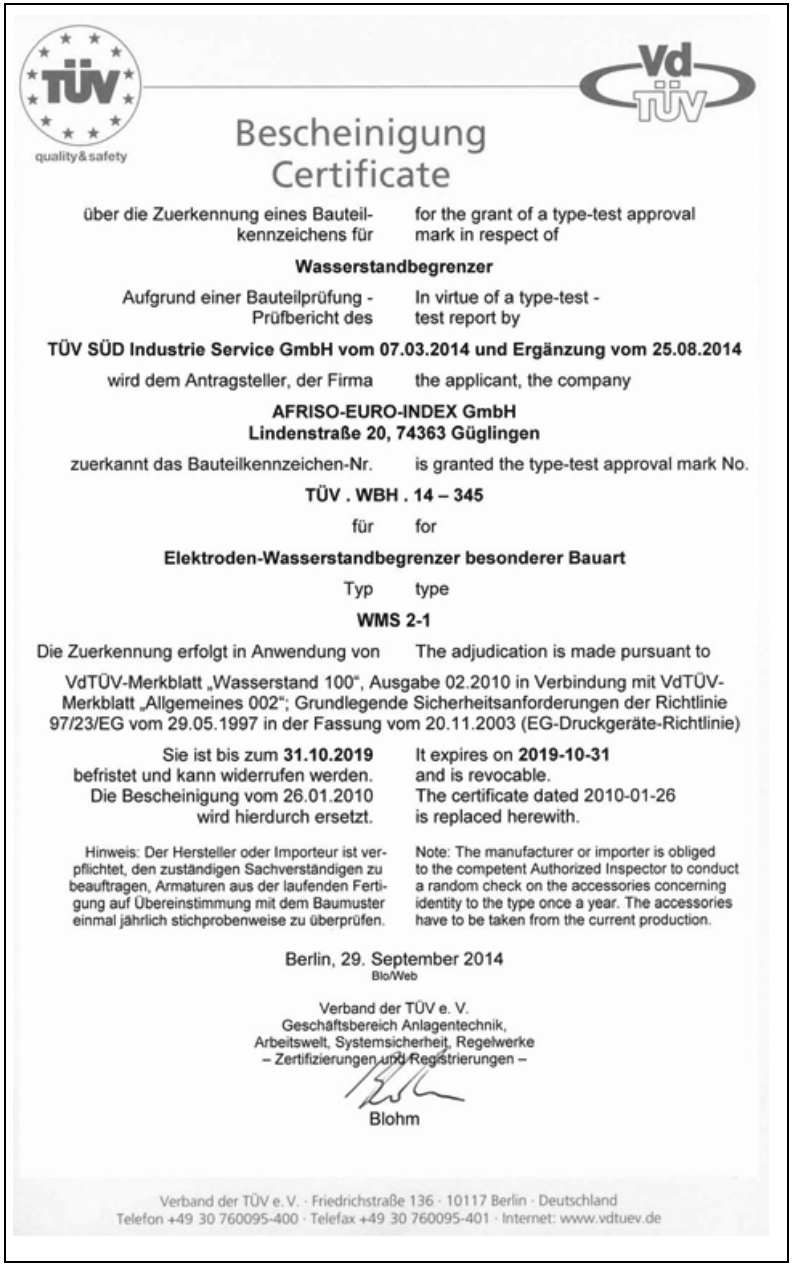
Customer satisfaction is our prime objective. Please get in touch with us if you have any questions, suggestions or problems concerning your product.

15 Addresses

The addresses of our worldwide representations and offices can be found on the Internet at www.afriso.com.

16 Appendix

16.1 Approval documents



quality & safety

Bescheinigung
Certificate

über die Zuerkennung eines Bauteilkennzeichens für — for the grant of a type-test approval mark in respect of

Wasserstandbegrenzer

Aufgrund einer Bauteilprüfung - Prüfbericht des — In virtue of a type-test - test report by

TÜV SÜD Industrie Service GmbH vom 07.03.2014 und Ergänzung vom 25.08.2014

wird dem Antragsteller, der Firma — the applicant, the company

AFRISO-EURO-INDEX GmbH
Lindenstraße 20, 74363 Güglingen

zuerkannt das Bauteilkennzeichen-Nr. — is granted the type-test approval mark No.

TÜV . WBH . 14 – 345

für — for

Elektroden-Wasserstandbegrenzer besonderer Bauart

Typ — type

WMS 2-1

Die Zuerkennung erfolgt in Anwendung von — The adjudication is made pursuant to

VdTÜV-Merkblatt „Wasserstand 100", Ausgabe 02.2010 in Verbindung mit VdTÜV-Merkblatt „Allgemeines 002"; Grundlegende Sicherheitsanforderungen der Richtlinie 97/23/EG vom 29.05.1997 in der Fassung vom 20.11.2003 (EG-Druckgeräte-Richtlinie)

Sie ist bis zum **31.10.2019** befristet und kann widerrufen werden. Die Bescheinigung vom 26.01.2010 wird hierdurch ersetzt. — It expires on **2019-10-31** and is revocable. The certificate dated 2010-01-26 is replaced herewith.

Hinweis: Der Hersteller oder Importeur ist verpflichtet, den zuständigen Sachverständigen zu beauftragen, Armaturen aus der laufenden Fertigung auf Übereinstimmung mit dem Baumuster einmal jährlich stichprobenweise zu überprüfen.

Note: The manufacturer or importer is obliged to the competent Authorized Inspector to conduct a random check on the accessories concerning identity to the type once a year. The accessories have to be taken from the current production.

Berlin, 29. September 2014
Blo/Web

Verband der TÜV e. V.
Geschäftsbereich Anlagentechnik,
Arbeitswelt, Systemsicherheit, Regelwerke
– Zertifizierungen und Registrierungen –

Blohm

Verband der TÜV e. V. · Friedrichstraße 136 · 10117 Berlin · Deutschland
Telefon +49 30 760095-400 · Telefax +49 30 760095-401 · Internet: www.vdtuev.de

quality & safety

Bescheinigung
Certificate

über die Zuerkennung eines Bauteilkennzeichens für — for the grant of a type-test approval mark in respect of

Wasserstandbegrenzer

Aufgrund einer Bauteilprüfung - Prüfbericht der — In virtue of a type-test - test report by

TÜV SÜD Industrie Service GmbH vom 07.03.2014 und Ergänzung vom 25.08.2014

wird dem Antragsteller, der Firma — the applicant, the company

AFRISO-EURO-INDEX GmbH
Lindenstraße 20, 74363 Güglingen

zuerkannt das Bauteilkennzeichen-Nr. — is granted the type-test approval mark No.

TÜV . WBH . 14 – 348

für — for

Elektroden-Wasserstandbegrenzer besonderer Bauart

Typ — type

WMS 3-1

Die Zuerkennung erfolgt in Anwendung von — The adjudication is made pursuant to

VdTÜV-Merkblatt „Wasserstand 100", Ausgabe 02.2010 in Verbindung mit VdTÜV-Merkblatt „Allgemeines 002"; Grundlegende Sicherheitsanforderungen der Richtlinie 97/23/EG vom 29.05.1997 in der Fassung vom 20.11.2003 (EG-Druckgeräte-Richtlinie)

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ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Mitglied von TÜV CERT

TÜV SÜD Industrie Service

ZERTIFIKAT
Certificate

EG-Baumusterprüfung (Modul B) nach Richtlinie 97/23/EG
EC Type-examination (Module B) according to Directive 97/23/EC

Zertifikat-Nr.: Z-IS-TAF-MUC-14-03-39471-003
Certificate No.:

Name und Anschrift des Herstellers: *Name and Postal Address of Manufacturer:*	**Afriso-Euro-Index GmbH D-74363 Güglingen**

Hiermit wird bescheinigt, dass das unten genannte EG-Baumuster die Anforderungen der Richtlinie 97/23/EG erfüllt.
We herewith certify that the type mentioned below meets the requirements of the Directive 97/23/EC.

Produktart *product category*	**Elektroden-Wasserstandbegrenzer besonderer Bauart**
Typ, Ausführung *type, model*	**WMS 2-1** **WMS 3-1** **Bestehend aus dem Schaltverstärker in Verbindung mit der Bypaß-Sonde Typ ¾" (DN 20) oder der Einschraub-Sonde Typ 2"**
Prüfgrundlage *basis of examination*	**VdTÜV Merkblatt „Wasserstand 100" Ausgabestand 2010-02**
Prüfbericht Nr. *test report no.*	**C-W 1516-00/14 vom 2014-03-07**
Fertigungsstätte *manufacturing plant*	**Afriso-Euro-Index GmbH D-74363 Güglingen**
Gültig bis: *valid until*	**06.03.2024**

(Ort, Datum)

München, 07.03.2014

TÜV SÜD Industrie Service GmbH
Zertifizierungsstelle
für Druckgeräte

Benannte Stelle, Kennummer 0036
Notified Body, No. 0036

Bitte beachten Sie die umseitigen Hinweise.
Please note the remarks on the second page.

Mitglied der CONFEDERATION EUROPEEN CEOC D'ORGANISMES DE CONTROLE

TÜV SÜD Industrie Service GmbH
Feuerungs- und Wärmetechnik
Ridlerstraße 65
80339 München
Tel.: + 49 89 51 90 - 10 27
Fax: + 49 89 51 90 - 33 07
E-Mail: feuerung@tuev-sued.de
www.tuev-sued.de/is

TÜV®

16.2 Declaration of Conformity

AFRISO

Technik für Umweltschutz

Messen. Regeln. Überwachen.

EU – Konformitätserklärung

EC-Declaration of Conformity / Déclaration CE de conformité
Declaración de conformidad CE / Declaração de confirmidade CE

CE

Formblatt
FB 27 - 03

Name und Anschrift des Herstellers: AFRISO-EURO-INDEX GmbH, Lindenstr. 20, 74363 Güglingen
Manufacturer / Fabricant / Fabricante / Nome e endereço do fabricante:

Erzeugnis: Wassermangelsicherung
Product / Produit / Producto / Produto:

Typenbezeichnung: WMS 2-1, WMS 3-1
Type / Type / Tipo / Tipo:

Betriebsdaten: 230V, 50Hz, 5VA, IP 40, Schutzklasse II, PN10
Techn. Details:
Caractéristiques / Características / Detalhes técnicos:

Wir erklären in alleiniger Verantwortung, dass das bezeichnete Erzeugnis mit den Vorschriften folgender Europäischer Richtlinien übereinstimmt:
The above mentioned product meets the requirements of the following European Directives
Le produit mentionné est conforme aux prescriptions des Directives Européennes suivantes
El producto indicado cumple con las prescripciones de las Directivas Europeas siguientes
O produto indicado cumpre com as prescrições das seguintes Diretivas Europeias:

Elektromagnetische Verträglichkeit (2014/30/EU)
Directive Electromagnetic Compatibility / Directive compatibilité électromagnétique / Directiva compatibilidad electromagnética / Diretiva sobre compatibilidade eletromagnética

- DIN EN 61000-6-2
- DIN EN 61000-6-3

Niederspannungsrichtlinie (2014/35/EU)
Low Voltage Directive / Directive basse tension / Directiva baja tensión / Diretiva sobre baixa tensão

- DIN EN 60335 Teil 1

Druckgeräterichtlinie (2014/68/EU)
Pressure Equipment Directive / Directive équipements sous pression / Directiva equipos a presión / Diretiva sobre equipamentos sob pressão

- Modul B (Baumuster) und Modul D nach Anhang III
- Notifizierte Stelle: TÜV SÜD Ind.S.GmbH, Westendstr. 199, 80686 München, Kennnummer 0036
- EG-Baumusterprüfung (Baumuster) Nr. BAF-MUC 03 01 39471 001 und ...002

RoHS-Richtlinie (2011/65/EU)
RoHS Directive / Directive RoHS / Directiva RoHS / Diretiva RoHS

Angewendetes Regelwerk
Type examination / Examen CE de type / Certificado CE de tipo / Examo do tipo construtivo

- VdTÜV-Merkblatt „Wasserstand 100"

Unterzeichner: Dr. Aldinger, Geschäftsführer Technik
Signed / Signataire / Firmante / Assinado por: Technical Director / Diretor Técnico

19.7.2016
Datum / *Date / Fecha / Data*

Unterschrift / *Signature / Firma / Assinatura*

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