



Operating Manual

Day Signalling Searchlight
HML-ISO 35

Change history

Issue	Rev.	Date	Chapter	Remark
1	0	19.01.2017	All	Creation
2	1	15.05.2024	11	Technical Data, Layout changings
2	2	02.12.2024	11	Charger added
2	3	18.03.2025	7, 8.3.1	Correction of spelling mistakes
2	4	23.05.2025	11.1, 3.2	Correction of spelling mistakes

Always keep the operating instructions to hand with the appliance.

List of abbreviations

<i>HML-ISO 35</i>	Day signalling searchlight
<i>Lux</i>	Lux is the illuminance of an illuminated surface. Lux is therefore luminous flux in lumens per square meter.
<i>Cd</i>	Candela; unit of measurement for luminous intensity
<i>CE</i>	Declaration of conformity in the European Union
<i>SP</i>	Spare part

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1 About these instructions

1.1 Structure and purpose of these instructions

The operating instructions are important for installation, maintenance, and operation. They must be observed to avoid hazards, reduce repair costs and downtimes, and increase reliability and service life.

Read the instructions carefully! WISKA Hoppmann GmbH is not liable for damage and malfunctions caused by failure to observe the operating instructions.

1.2 Users and target groups

These operating instructions are intended for operators, specialist personnel and operating personnel.

Every person who operates and maintains the product must have read and understood the contents of these operating instructions and must follow all safety instructions and handling instructions to handle the product safely. Provide appropriate product training and instructions to each user.

You may not work on the product without these instructions.

1.3 Safety instructions

1.3.1 Standard Sicherheitshinweise

WISKA safety instructions are based on the SAFE principle and derived from residual hazards in the risk assessment:

- **Keyword**
The keyword reflects the gravity of the hazard (danger, warning, caution, note).
- **Nature and source of the hazard**
The type and source of the hazard derive from the standard DIN EN ISO 12100.
- **Consequences**
Shows the possible consequences of non-compliance.
- **Escaping from or avoiding the situation**
That lists how to avoid or evade the hazard.



Keyword

Nature and source of the hazard

The consequences arising from this hazard
Escape and avoid the hazard.

2 For your safety

Always follow these safety precautions:

- Read these instructions fully before using, maintaining or repairing the product. Failure to do so may place people and the product at risk.
- Only qualified electricians may perform service or repair work.
- Do not modify the products without prior authorization; the resulting hazards are not foreseeable.
- Unauthorized modifications invalidate the operating permit, approval, and warranty of the product.
- The use of unapproved spare parts cancels the warranty.
- Never look straight into the light source. You may have damage to your eyes.
- Always follow all safety instructions in these operating instructions.
- Observe the national and local regulations when working on and repairing the product.

2.1 Structure of safety instructions

The chapter describes the setup and use of the safety instructions. Before describing a potentially dangerous situation, a warning indicates the situation to be avoided.



DANGER

Danger refers to a hazardous situation that can result in imminent death or severe injury if not avoided.



WARNING

Warning refers to a hazardous situation that may result in death or severe injury if not avoided.



CAUTION

Caution refers to a hazard with a low level of risk that, if not avoided, could result in minor or reversible injury to persons.

ATTENTION

Attention indicates the possibility of material damage to the product and its function.

2.1.1 Embedded safety instructions

In order not to interrupt the reading flow of descriptive activities to a higher degree, additional embedded safety notes are used for procedural activities. These look as follows:

1. ...take ...
2. ...remove...



Burning due to hot surfaces.

Headlights in operation heat up and can cause burns.

Make sure that the headlight has cooled down before starting work.

Wear appropriate personal protective equipment.

3. ...separate
 4. ...extract...
- ✓ The assembly has been removed.

2.2 Intended use

The WISKA day signalling searchlight is designed to transmit light signals and emergency signals.

The range (1 lux at the target) of the spotlight is 275 meters.

The searchlight has been developed for use on seagoing vessels over 150 gross register tons in accordance with SOLAS and for safety applications in coastal areas.

It fulfills the requirements of the Marine Equipment Directive MED 2014/90/EU (Daylight signalling lamp

A.1/4.52). The certificates are described in chapter 12
Supplier documentation and certificates.

2.3 Foreseeable misuse

The searchlight may only be used for the activities listed
in the intended use. All other activities are prohibited.

Due to its high luminosity, it must not be used at close
range to dazzle/illuminate people.

The searchlight is not suitable for illuminating rooms on
the ship or in buildings.

2.4 Warranty

If there is a defect in your product, please contact WISKA
Service.

2.5 Qualification of users/expertise

These operating instructions apply to operators, technical
personnel and operating personnel.

Every person who operates and maintains the product must
have read and understood the contents of these operating
instructions and must follow all safety instructions and
handling instructions to handle the product safely. Provide
appropriate product training and instructions to each user.

You may not work on the product without these instructions.

A qualified electrician is required to connect electrical
components. Observe the regional and national
regulations and guidelines.

Professional knowledge as a specialist in waste management
is needed for recycling of the lead battery.

2.6 Danger areas and danger points

Danger areas or danger points are, among others:

- Button (pinching the skin).
- Observe the protective distance to the compass.
- Observe the handling precautions for halogen lamps.




2.7 Battery

- Protect the battery from fire, heat, and sunlight.
- Do not short-circuit.
- Do not open. If gel or acid gets on the skin, immediately rinse with clean water, and consult a doctor.
- Follow the enclosed instructions for handling the lead battery.

2.8 Specifications for operation

The day signalling searchlight has a DNV approval. Please note: Sufficient replacement lamps must be available on board for the day signalling searchlight.

2.9 Labels and symbols

Icon	Meaning	Use
	Hazard symbol Warns of an imminent danger.	Safety and warning notice
	Hazard symbol Warns of an electrical hazard.	Safety and warning notice
	Commandment sign Disconnect the system from the power supply before working on it.	Safety and warning notice
	Commandment sign Observe the operating instructions.	Safety and warning notice
	Information Installation only by a qualified electrician.	Safety and warning notice

3 Technical description

3.1 Product Overview

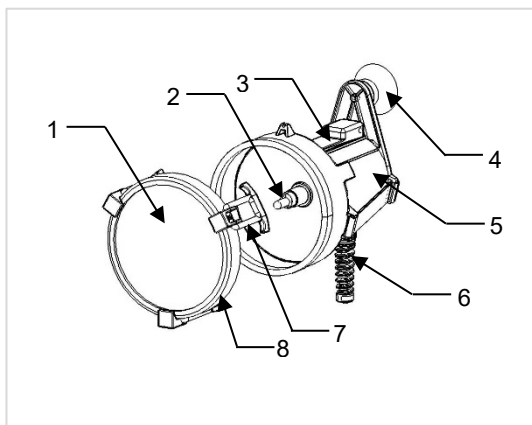


Figure 1 Overview of day signalling searchlight

Pos.	Designation
1	Glass pane
2	Lamp
3	Signal button
4	Target device
5	Housing
6	Cable
7	Tension fasteners
8	Front frame

3.2 Function and design

Day Signalling Searchlight The day signalling searchlight is used for manual illumination of the route in shipping traffic (search for persons) and as an emergency signal device. It is intended to bridge light signals to a distant destination. The direction in which the signal is emitted must be maintained.

The performance of a light is indicated by the luminous intensity I in candela cd. It results of multiplying the illuminance E in lux by the square of the distance in meters. The performance is limited by external influences (fog, precipitation, etc.) and can be added to the calculation formula as a correction factor F .

The range during the day is 4800 m, at night 21400 m.

Battery charger The battery charger is used to charge the battery of the daytime signal light. The charging current can be adjusted with different modes.

Housing The housing is injection-molded from glass fiber reinforced plastic and equipped with the necessary access options. A hand strap on the side serves to hold it in place.

Mirror The lamp mirror is a silver-coated glass parabolic mirror. The glass lamp mirror offers a long range.

Front frame The front frame is attached to the housing with tension locks. The lens is inserted into the front frame to protect the light source. The lens is made of polycarbonate (PC).

Lamp The light source is a halogen lamp. It serves as a thermal radiator. As the temperature increases, the light color changes and appears blue. The light color corresponds to the values required by the standard.

4 Transport, unpacking

4.1 Transportation and lifting

Depending on the order, the product comes in a parcel or on a pallet, for example, in weatherproof and sturdy packaging.

In case of damage, contact our customer service.

If required, store it temporarily in the original packing material.

Transport the product to the installation location by an appropriate means of transport.

4.2 Unpack

The product is supplied in a bag or case, depending on the scope of delivery ordered.

1. Open the packaging.
 2. Observe the enclosed instructions for charging the battery.
 3. Remove the day signalling searchlight and, if necessary, the charger and/or the battery pack.
- ✓ The product is unpacked.

5 Commissioning

The preparatory measures are as follows:

- Ensure that all electrical cables are securely routed or stowed away.
 - Make sure that the light source is connected correctly and that the seal of the LED module is seated correctly.
 - After the visual inspection, close all latches that are still open.
 - Observe both the enclosed charger's operating instructions and the battery hints.
-
1. Connect the charger to the charging socket.
 2. Charge the battery.
 3. Insert- if necessary- the light source into the day signalling searchlight.
 4. Connect the day signalling searchlight to the charger.
 5. Check the function of the device after charging.
- ✓ The day signalling searchlight is put into operation.

6 Operation



WARNING

Risk of burns due to hot surface.

The halogen light source develops high heat radiation during operation, which can cause severe burns if the front pane is touched.

- Do not touch the front pane during operation.
- Allow the day signalling searchlight to cool down for at least 60 minutes after operation before opening it.

Note

When the status indicator lights up:

- the battery of the day signalling searchlight must be charged.
- the operating voltage is too low.

This chapter describes how to operate the product. It ensures that all operating modes available on the product are described. It also describes how to put the product back into operation after a system failure and warns of any dangerous situations that may arise during operation

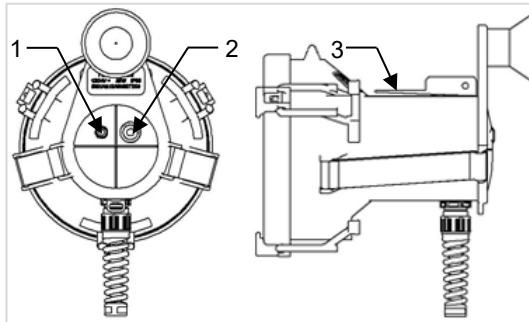


Figure 2 Day signalling searchlight controls

Pos.	Bezeichnung
1	Battery status
2	Function switch
3	Signal button

6.1 Operation via signal button

1. Make sure that the battery is charged.
 2. Press the signal button to switch on the day signalling searchlight.
 3. Release the signal button to switch off the day signalling searchlight.
 4. Repeat steps 2 and 3 until the message to be transmitted has been sent.
- ✓ The spotlight can be used for further use.

6.2 Operation as a light (torch function)

1. Make sure that the battery is charged.
2. Press and hold the signal button and the function switch to switch on the day signalling searchlight.
 - ✓ The day signalling searchlight lights up continuously.
3. Press the signal button or the function switch to switch the day signalling searchlight off again.

6.3 Operation via SOS button

4. Make sure that the battery is charged.
5. Press the function switch to generate a continuous SOS emergency signal.
6. Press the signal button to switch off the SOS emergency signal.
 - ✓ The day signalling searchlight is now ready for further use.

6.4 Connecting the battery

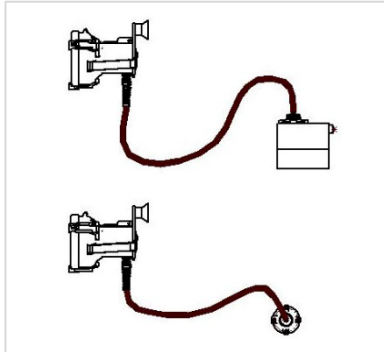


Figure 3 Connections

1. Insert the plug into the connection socket of the battery. Observe polarity.
2. Charge the battery if the status indicator on the day signalling searchlight lights up.
- ✓ The plug connection is now established.

6.5 Charging the battery

Charge the battery after each use and leave it connected to the charger (trickle charging).

Follow the separate instructions for the charger.

1. Connect the charger to the charging socket (15) of the battery pack.
2. Connect the charger to the power circuit.
3. Charge the battery according to the instructions in the separate operating instructions.
4. The day signalling searchlight is now ready for further use.

7 Troubleshooting

If faults occur on the product, the necessary measures can be determined here to provide the operator with measures to rectify the fault within the scope of his possibilities.

Error	Cause	Remedy
Day signalling searchlight cannot be switched on	No power available.	Establish the power supply. Check that the charger is working.
	Status indicator lights up.	Check the fuse in the battery pack, insert a replacement fuse if necessary.
	Signal button defective.	Check the signal button
	Function switch defective.	Check the function switch
	Cable/plug defective.	Make sure that no live cables are defective.
	Light source defective.	Replace the lamp.

8 Maintenance



DANGER

Danger to life due to electrical currents.

Working on open circuits can lead to short circuits and short circuits in the body.

- A qualified electrician is required when working on electrical components.
- Make sure that the system is disconnected from the electrical connection.
- Secure the power supply against being switched on again.
- Cover open external system parts.
- If necessary, short-circuit the system components.
- Test whether the system is de-energized.



WARNING

Danger of glare

If the searchlight is switched on during maintenance work, the light intensity can permanently damage the eyes or even lead to blindness.

- Switch off the product.
- Secure the product against being switched on again.

**WARNING****Risk of burns due to hot surface.**

The halogen light source develops high heat radiation during operation, which can cause severe burns if the front pane is touched.

- Do not touch the front pane during operation.
- Allow the day signalling searchlight to cool down for at least 60 minutes after operation before opening it.

8.1 Maintenance

The battery must be charged regularly in accordance with the manufacturer's instructions. It can remain connected to the power supply with the charger between two uses. See also the instructions in the instruction leaflet (30101990001) Charging the battery.

8.2 Inspection

Carry out a visual and functional check at regular intervals, but at least once a month. Check the product for:

- External damage
- Damaged retaining straps and tension locks
- Functional lamp
- Damages of the mirror
- External damage to the cables.

8.3 Repair

Please follow the steps below before carrying out any repair work:

- A qualified electrician is required when working on electrical components.
- Switch off the day signalling searchlight.
- Lassen Sie die Anlage mindestens 60 min abkühlen.
- Make sure that the day signalling searchlight is disconnected from the battery.
- Secure the power supply against being switched on again.

8.3.1 Changing the light source

1. Open the retaining straps of the front frame.
 2. Observe all instructions from the lamp manufacturer.
 3. Pull out the defective lamp
 4. Insert the new lamp.
 5. Close the retaining straps of the front frame.
 6. Carry out a function test.
- ✓ The lamp has now been replaced.

8.4 Cleaning

ATTENTION

Do not use cleaning agents containing alcohol or brine for cleaning. These can damage the surface and dull the glass.

Clean the surface of the product with a clean, lint-free cloth and, if necessary, a solvent-free cleaning agent.

9 Spare parts

Nr.	Designation	Article no.
1	HML-ISO 35 Front frame	22000456
2	HML-ISO 35 Glass pane, clear	22000457
3	HML-ISO 35 Retaining straps	22000460
4	Halogen lamp 30W, 12 VDC; GY6.35	22000470
5	Concentric plug	22000463
Additional optios		
1	Concentric socket DK 503	22000464
2	Power pack ISO 35	22000465
3	HML-ISO 35 Charger	22000466
4	HML-ISO 35 Front glass; blue	22000467
5	HML-ISO 35 Front glass; green	22000468
6	HML-ISO 35 Front glass; red	22000469
7	Concentric socket outlet 503 PG16	10010003
8	Extension cable; 10 m	10101233

10 Entsorgung und Stilllegung



DANGER

Danger to life due to electrical currents.

Working on open circuits can lead to short circuits and short circuits in the body.

- A qualified electrician is required when working on electrical components.
- Make sure that the system is disconnected from the electrical connection.
- Secure the power supply against being switched on again.
- Cover open external system parts.
- If necessary, short-circuit the system components.
- Test whether the system is de-energized.

10.1 Disposal

Waste electrical and electronic equipment (Applies in the European Union and other European countries with separate collection systems).

The electrical appliances of WISKA Hoppmann GmbH are professional electrical appliances, which are called business-to-business (B2B) appliances. We take back old electrical appliances in accordance with § 19 ElektroG and dispose of them properly. Please contact us before shipping your old WISKA electrical equipment - contact@wiska.de. Components such as cable glands are not covered by the law.

Do not mix or dispose of used electrical appliances from WISKA Hoppmann GmbH with other commercial waste.

- If there is a rechargeable battery or a battery in the device: Open the device, remove the rechargeable accumulator/battery and dispose of it properly.
- Always dispose of batteries in battery recycling containers.

Current information on disposal can be found [here](#).

Always observe local and national laws, guidelines, and regulations on the disposal of materials and products.

10.2 Decommissioning

Disconnect the battery from the day signalling searchlight before decommissioning.

11 Technical data

11.1 Specifications

Type of illuminant	Halogen
Lampholder type	GY6.35
Operating voltage [V]	12 – 24 VDC
Diffusion angle	8° I/10
Luminous intensity [cd]	90000
Range (1 lx)	300 m
Signal range (visibility)	4800 m by day 21400 m at night
Power of lamp [W]	30
Average lamp life [h]	50
Glass reflector [mm]	150
Housing material	PBT
Color	RAL 9005, black
Diameter [mm]	160
Depth [mm]	244
Weight [kg]	1.75 (basic device, 5m cable) 9.19 (weight of set)
Protection class	IP 56
Safe distance to compass [m]	0,5 (magnetic compass) 0,4 (steering compass)

11.2 Type key

The type key for searchlights is as follows:

Position	Example	Description of the placeholders
1	HML	Hand morse lamp
2	-ISO	According to ISO standard
3	35	Type designation
4	-xx	Cable length in [m]
5	-x	Transport container
6	-W	Enclosure model
7	-Fxx	Filter combination
8	-Axx	Equipment
9	-Zxx	Accessories
10	-Sxx	Special solution

11.3 Nameplate

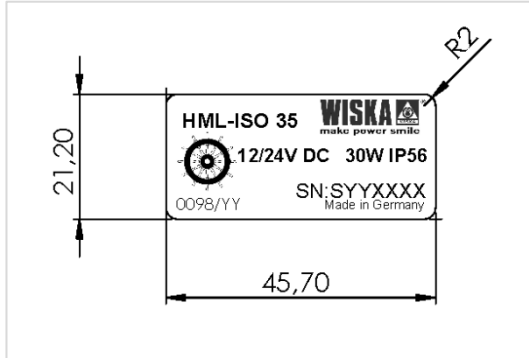


Figure 4 Nameplate HML-ISO 35

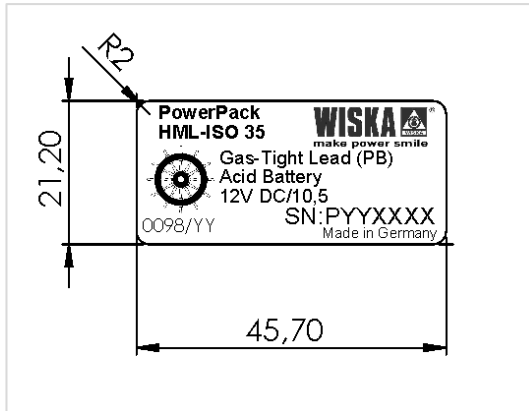


Figure 5 Nameplate Battery



Figure 6 Nameplate Battery charger

The nameplate has a three-row structure. Line contents are:

- Article description
- Item number
- Production date
- Power supply
- Serial number
- Certifying body

11.4 Protection class

The IP codes are derived from the IEC 60529 and IEC 60945 standards. The product has been tested as follows:

IP protection class	Description
IP 5X	Protection against dust ingress
IP X6	Protection against strong water jets (100 l/min)

11.5 Dimensions

11.5.1 HML-ISO 35

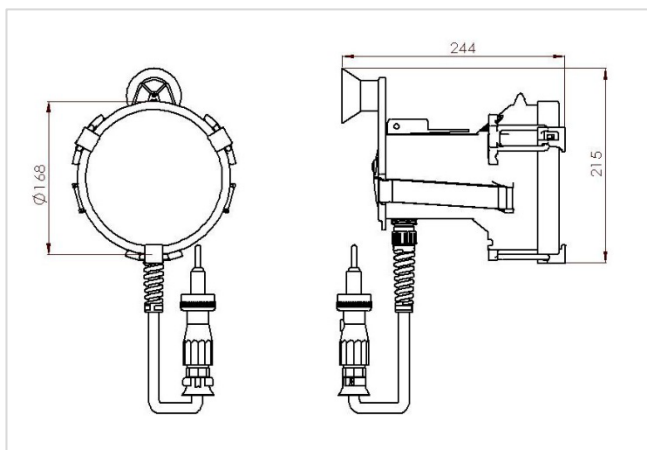


Figure7 Dimensional Drawing HML-ISO 35

11.5.2 Battery

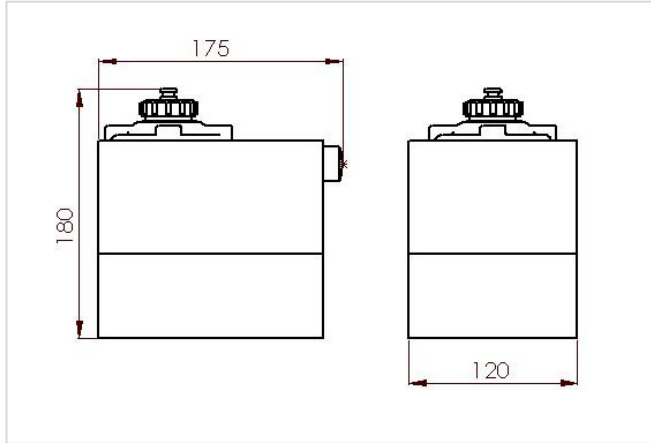


Figure 7 Dimensional Drawing Battery

11.5.3 Battery charger

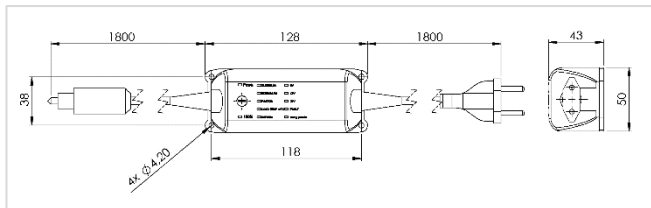
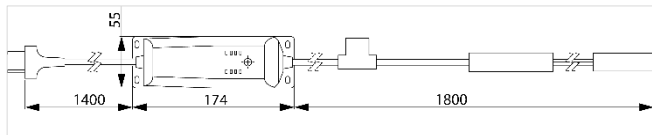


Figure 8 Dimensional Drawing of battery charger Var A

Var B:



11.6 Electrical diagram

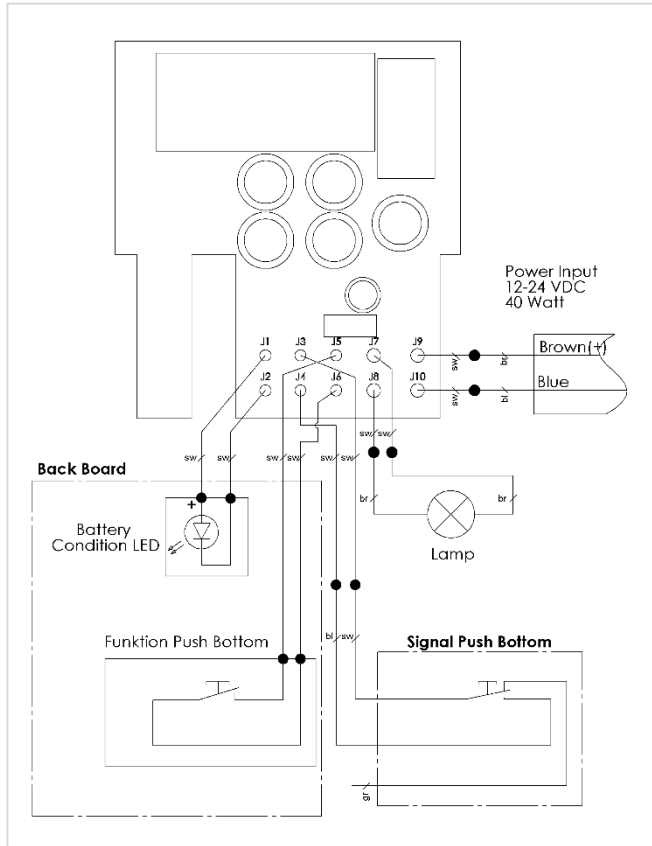


Figure 9 Electrical connection diagram

12 Supplier documents and certificates

12.1 Overview

The following supplier documentation is binding for this product:

- Handling lead-acid batteries (enclosed)
- Charger operating instructions (enclosed)

12.2 Certificates

Certificates are enclosed separately with these instructions. If these are lost, the status can be viewed on the DNV website:

<https://approvalfinder.dnv.com/>

12.3 MED and MER certificates


The MED Declaration of Conformity is enclosed separately with these instructions. If this is lost, a current version can be viewed on the WISKA homepage:

<https://www.wiska.com/de/>



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ORIGINAL
Änderungen
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