Operating instructions

Additional languages www.stahl-ex.com

EN

Inspection Light LED

6149/2

STAHL

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1 General Information

1.1 Manufacturer

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1.2 Information regarding the operating instructions

ID-No.: 252455 / 6149603000320
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The original instructions are the English edition.
They are legally binding in all legal affairs.

1.3 Conformity with standards and regulations

See certificates and EC Declaration of Conformity: www.stahl-ex.com.

2 Explanation of the symbols

2.1 Symbols in these operating instructions

Symbol	Meaning
	Tips and recommendations on the use of the device
	General danger
	Danger due to explosive atmosphere
	Danger due to energised parts

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2.2 Warning notes

Warning notes must be observed under all circumstances, in order to minimize the risk due to construction and operation. The warning notes have the following structure:

- Signalling word: DANGER, WARNING, CAUTION, NOTICE
- Type and source of danger/damage
- Consequences of danger
- Taking countermeasures to avoid the danger/damage

	DANGER Danger to persons Non-compliance with the instruction results in severe or fatal injuries to persons.
	WARNING Danger to persons Non-compliance with the instruction can result in severe or fatal injuries to persons.
	CAUTION Danger to persons Non-compliance with the instruction can result in light injuries to persons.
	NOTICE Avoiding material damage Non-compliance with the instruction can result in material damage to the device and / or its environment.

2.3 Symbols on the device

Symbol	Meaning
CE 0158 05594E00	CE marking according to the currently applicable directive.
Ex 02198E00	According to marking, device approved for hazardous areas.

3 Safety notes

3.1 Operating instructions storage

- Read the operating instructions carefully and store them at the mounting location of the device.
- Observe applicable documents and operating instructions of the devices to be connected.

3.2 Safe use

- Read and observe the safety notes in these operating instructions!
- Observe characteristic values and rated operating conditions on the rating and data plates!
- Observe additional information plates on the device!
- Use the device in accordance with its intended and approved purpose only!
- We cannot be held liable for damage caused by incorrect or unauthorized use or by non-compliance with these operating instructions.
- Before installation and commissioning, make sure that the device is not damaged!
- Work on the device (installation, maintenance, overhaul, repair) may only be carried out by appropriately authorized and trained personnel.

3.3 Modifications and alterations

	DANGER Explosion hazard due to modifications and alterations to the device! Non-compliance results in severe or fatal injuries. • Do not modify or alter the device. No liability or warranty for damage resulting from modifications and alterations.

4 Function and device design

The device can be used in hazardous areas of Zones 1, 2, 21, 22 and in the safe area. The inspection light 6149 is designed for use as a portable workplace light. The optional mounting brackets allow the inspection light to also be used as a machine light.

	WARNING Danger if used in aggressiv ambient conditions! The explosion protection is impaired! • Do not use when exposed to kerosene, ammonia and phosphorus vapour. • The enclosure can be damaged.

	DANGER Explosion hazard due to improper use! Non-compliance results in severe or fatal injuries. • Use the device only according to the operating conditions described in these operating instructions.

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5 Technical data

Explosion Protection

Global (IECEx)	
Gas and dust	IECEx PTB 07.0018 Ex d IIC T* Gb Ex tb IIIC T* °C Db * temperature classes and surface temperatures see below
Europe (ATEX)	
Gas and dust	PTB 07 ATEX 1009 ⟨Ex⟩ II 2 G Ex d IIC T* Gb ⟨Ex⟩ II 2 D Ex tb IIIC T* °C Db * temperature classes and surface temperatures see below
Certifications and certificates	
Certificates	IECEx, ATEX, Brazil (INMETRO), Kazakhstan (TR), Russia (TR), Belarus (TR)

Surface temperature and temperature class

Version	Temperature class	Surface temperature
6149/2-.2..-....	T4	100 °C
6149/2-.4..-....	T6	80 °C

Technical Data

Electrical data			
Version	6149/2-2 (12 V)	6149/2-3 (24 ... 48 V)	6149/2-5 (110 ... 240 V)
Rated operational voltage	12 (± 10 %) V DC	24 ... 48 (± 10 %) V AC / DC, 50 / 60 Hz	110 ... 240 (± 10 %) V AC / DC, 50 / 60 Hz
Nominal operational current	12 V 1.3 A	24 V 0.7 A 48 V 0.3 A	110 V 0.13 A 240 V 0.07 A
Luminous characteristics			
Version	6149/2-2 (12 V)	6149/2-3 (24 ... 48 V)	6149/2-5 (110 ... 240 V)
Lamps	LED	LED	LED
Luminous flux	approx. 1,000 lm	approx. 1,000 lm	approx. 1,000 lm
Luminous Intensity	253 lux in 1 m distance	253 lux in 1 m distance	285 lux in 1 m distance

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Technical Data

Ambient conditions

Ambient temperature

Cable		6149/2-2 (12V)	6149/2-3 (24 ... 48 V)	6149/2-5 (110 ... 240 V)
H07RN-F; 2 x 1,5 mm^2	T4 T6	-40 ... +40 °C	-40 ... +60 °C -40 ... +40 °C	-30 ... +60 °C -30 ... +40 °C
HXSLHXÖ-J; 2 x 1,5 mm^2	T4 T6	-40 ... +40 °C	-40 ... +60 °C -40 ... +40 °C	-30 ... +60 °C -30 ... +40 °C
(N)SSHÖU 1kV; 2 x 1,5 mm^2	T4 T6	-40 ... +40 °C	-40 ... +60 °C -40 ... +40 °C	-30 ... +60 °C -30 ... +40 °C
RADOX, MFH-S B; 2 x 1,5 mm^2	T4 T6	-40 ... +40 °C	-40 ... +60 °C -40 ... +40 °C	-30 ... +60 °C -30 ... +40 °C

The luminaire must be switched on above -40 °C.

Mechanical data

Degree of protection	IP66 / IP67
Protection class	II
Material	
Enclosure tube	Polycarbonate
Grip	Aluminium
Sealing cap	Aluminium
Rubber grip	NBR / PVC (EPDM)
Suspension hook	NBR / PVC (EPDM)

Mounting / Installation

Cable glands: CMP cable gland for rubber case-, Thermflex- and wire mesh lead

Connection line

Designation	Application
H07RN-F, ∅ 8.8 ... 11 mm, 2 x 1.5 mm^2	Standard
Gifas Thermflex cable, HXSLHXÖ-J, ∅ 7.7 ... 10 mm, 2 x 1.5 mm^2	
(N)SSHÖU 1kV, ∅ 8.7 ... 9 mm, 2 x 1.5 mm^2	Voltage-proof up to 1kV
RADOX, MFH-S B, ∅ 6 ... 7 mm, 2 x 1.5 mm^2	Offshore

6 Transport and storage

- Transport and store the device only in the original packaging.
- Store the device in a dry place (no condensation) and vibration-free.
- Do not drop the device.

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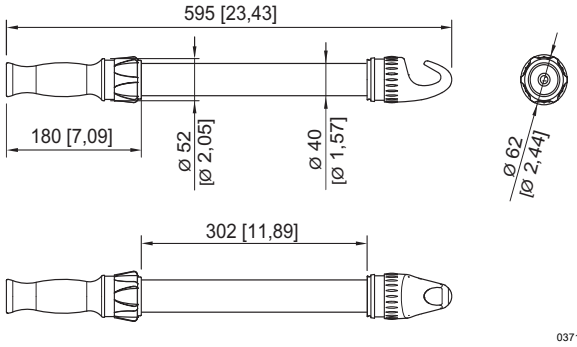
7 Mounting and installation

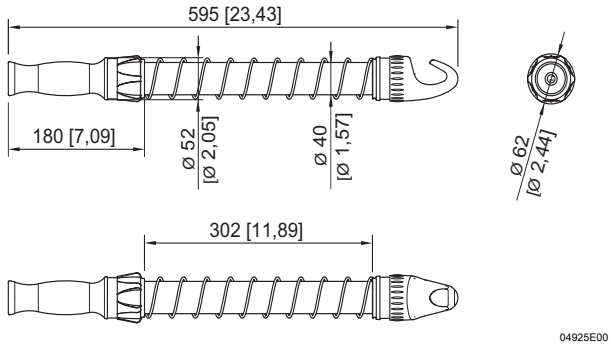
	DANGER Explosion hazard due to incorrect installation of the device! Non-compliance results in severe or fatal injuries. • Carry out installation strictly according to the instructions and national safety and accident prevention regulations to maintain the explosion protection. • Select and install the electrical device so that explosion protection is not affected due to external influences, i.e. pressure conditions, chemical, mechanical, thermal and electric impact such as vibration, humidity and corrosion (see IEC/EN 60079-14). • The device must only be installed by trained qualified personnel who is familiar with the relevant standards.

7.1 Dimensions / fastening dimensions

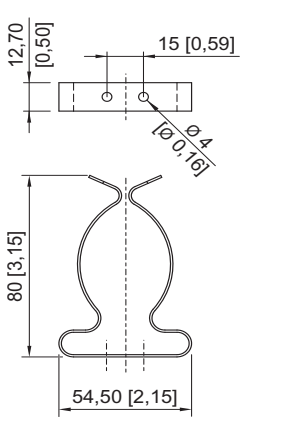
Dimensional Drawings (All Dimensions in mm [inches]) - Subject to Alterations



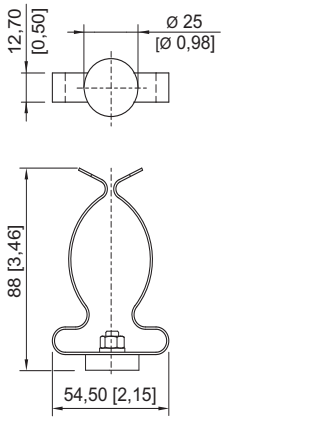
Inspection light without wire guard



Inspection light with wire guard



Mounting bracket



Mounting bracket and magnet

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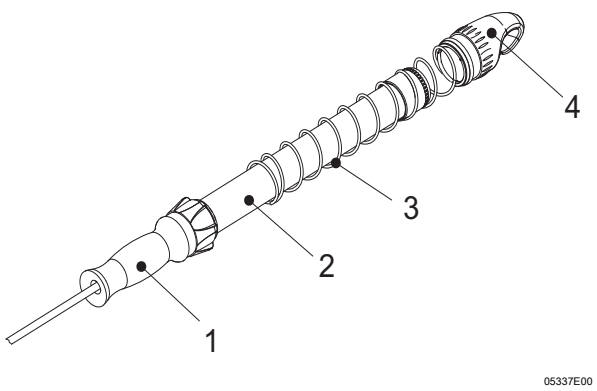
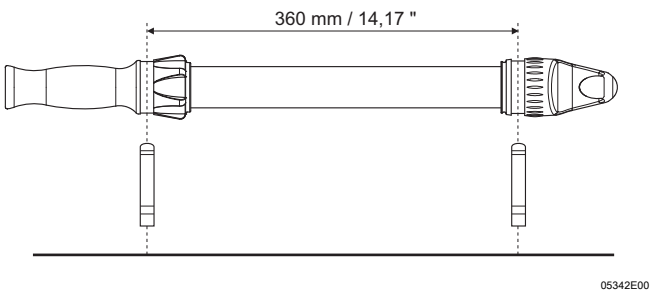
7.2 Mounting / dismounting, operating position

7.2.1 Wire Guard Assembly



- remove the suspension hook (4) from the enclosure tube (2).
- push the wire guard (3) over the enclosure tube.
- push the first coil of the wire guard over the lip of the grip (1)
- push the suspension hook back onto the enclosure tube and push the last coil of the wire guard over the lip of the suspension hook when doing so.
- wire guard is now fitted.

7.2.2 Wall mounting



- fix the mounting brackets to the wall at a spacing distance of 360 mm.
- clip the inspection light into the mounting brackets.
- wall mounting is complete.

7.3 Installation

7.3.1 Electrical connections

EX	**WARNING** Danger due to wrong plugs! The explosion protection is impaired! • Only use plugs, which are approved for use in the relevant zone.
i	The light is delivered with a connection cable. A standard CE connector must be used for operation. When selecting the connector observe the IP level of protection!
i	The maximum cable length for the 12 V version is 5 m. All other versions can be operated with a cable length of up to 100 m.
i	It is not permitted to extend the connection cable.

- Installation of the plugs should be performed in accordance with the corresponding operating instructions.

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8 Commissioning

DANGER

Explosion hazard due to incorrect installation!
Non-compliance results in severe or fatal injuries.
- Check the device for proper installation and function before commissioning.
- Comply with the national regulations.

- Make sure that the plug is fitted correctly.
- Check that the cable is clamped properly.
- Inspect cable glands for damage.
- Check the light for visible damage.

9 Maintenance and repair

WARNING

Risk of electric shock or malfunctioning of the device due to unauthorized work!
Non-compliance can result in severe injuries and material damage.
- Work performed on the device must only be carried out by appropriately authorized and qualified electricians.

9.1 Maintenance

Observe the relevant national regulations in the country of use.

- Determine the type and extent of inspections in compliance with the relevant national regulations.
- Adapt inspection intervals to the operating conditions.

The following tests and measures must be carried out during regular maintenance.

Check	Measures
the permissible ambient temperature	If exceeding the permissible ambient temperature or falling below the device must be taken out of operation.
the enclosure components for formation of cracks and damage.	Replace the exchangeable enclosure components. If the enclosure components are non-exchangeable, the device must be taken out of operation.
its intended use	If the device is not used according to its intended use, it must be taken out of operation.

9.1.1 Cleaning

- Clean the device only with a cloth, brush, vacuum cleaner or similar items.
- When cleaning with a damp cloth, use water or mild, non-abrasive, non-scratching cleaning agents.
- Do not use aggressive detergents or solvents.

9.2 Repair

	DANGER
	Explosion hazard due to improper repair! Non-compliance results in severe or fatal injuries. • Repair work on the devices must be performed only by R. STAHL Schaltgeräte GmbH.

9.3 Returning the device

Use the "Service form" to return the device when repair/service is required. On the internet site "www.stahl-ex.com" under "Downloads > Customer service":

- Download the service form and fill it out.
- Send the device along with the service form in the original packaging to R. STAHL Schaltgeräte GmbH.

10 Disposal

- Observe national and local regulations and statutory regulation regarding disposal.
- Separate materials when sending it for recycling.
- Ensure environmentally friendly disposal of all components according to the statutory regulations.

11 Accessories and Spare parts

NOTE
Malfunction or damage to the device due to the use of non-original components. Non-compliance can result in material damage. • Use only original accessories and spare parts from R. STAHL Schaltgeräte GmbH.

	For accessories and spare parts, see data sheet on our homepage www.stahl-ex.com.

EG/EU-Konformitätserklärung
EC/EU Declaration of Conformity
Déclaration de Conformité CE/UE

R. STAHL Schaltgeräte GmbH • Am Bahnhof 30 • 74638 Waldenburg, Germany
erklärt in alleiniger Verantwortung, *declares in its sole responsibility, déclare sous sa seule responsabilité,*

dass das Produkt: *that the product:* *que le produit:*	Inspektionsleuchte *Inspection light* *Baladeuse*
Typ(en), *type(s), type(s):*	**6149/.**

mit den Anforderungen der folgenden Richtlinien und Normen übereinstimmt.
is in conformity with the requirements of the following directives and standards.
est conforme aux exigences des directives et des normes suivantes.

Richtlinie(n) / *Directive(s) / Directive(s)*	**Norm(en)** / *Standard(s) / Norme(s)*
Bis/*Until/Jusque* 2016-04-19: **94/9/EG** *94/9/EC* *94/9/CE* **ATEX-Richtlinie** *ATEX Directive* *Directive ATEX* **Ab/*From/De* 2016-04-20:** **2014/34/EU** *2014/34/EU* *2014/34/UE*	EN 60079-0:2009 EN 60079-1:2007 EN 60079-31:2009
Kennzeichnung, *marking, marquage:*	**II 2 G Ex d IIC T. Gb** **II 2 D Ex tb IIIC T ...°C Db** **CE 0158**
EG/EU-Baumusterprüfbescheinigung: *EC/EU Type Examination Certificate:* *Attestation d'examen CE/UE de type:*	**PTB 07 ATEX 1009** (Physikalisch-Technische Bundesanstalt, Bundesallee 100, 38116 Braunschweig, Germany)
Produktnormen nach Niederspannungsrichtlinie: *Product standards according to Low Voltage Directive:* *Normes des produit pour la Directive Basse Tension:*	EN 60598-1:2008 + A11:2009 EN 62471:2008
Bis/*Until/Jusque* 2016-04-19: **2004/108/EG** *2004/108/EC* *2004/108/CE* **EMV-Richtlinie** *EMC Directive* *Directive CEM* **Ab/*From/De* 2016-04-20:** **2014/30/EU** *2014/30/EU* *2014/30/UE*	EN 61547:2009 EN 55015:2013 EN 61000-3-2:2014 EN 61000-3-3: 2013
Produktnormen nach RoHS-Richtlinie (2011/65/EU): *Product standards according to RoHS Directive:* *Normes des produit pour la Directive RoHS:*	EN 50581:2012

Waldenburg, 2015-11-19	i.V.	i.V.
Ort und Datum *Place and date* *Lieu et date*	**Dr. A. Kaufmann** **Leiter BU Leuchten & Signalgeräte** *Head of BU Lightings & Signalling* *Directeur BU Eclairage & Appareils de signalisation*	**J.-P. Rückgauer** **Leiter Qualitätsmanagement** *Director Quality Management* *Directeur Assurance de Qualité*