



Inspection Light LED

Series 6149/2

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1 General Information

1.1 Manufacturer

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Germany

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Internet: r-stahl.com
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74638 Waldenburg
Germany

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1.2 Information regarding the operating instructions

ID-No.: 252455 / 614960300320
Publication Code: 2020-07-09-BA00-III-en-03

The original instructions are the English edition.
They are legally binding in all legal affairs.

1.3 Further documents

- Data sheet

For documents in additional languages, see r-stahl.com.

1.4 Conformity with standards and regulations

See certificates and EU Declaration of Conformity: r-stahl.com.

The device has IECEx approval. For certificate please refer to the IECEx homepage:
<http://iecex.iec.ch/>

Further national certificates can be downloaded via the following link:
<https://r-stahl.com/en/global/support/downloads/>.

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


2.2 Warning notes

Warnings 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 or 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
 <small>17055E00</small>	CE marking according to the current applicable directives.

3 Safety notes

3.1 Operating instructions storage

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

3.2 Safe use

Before mounting

- Read and observe the safety notes in these operating instructions!
- Ensure that the contents of these operating instructions are fully understood by the personnel in charge.
- Use the device in accordance with its intended and approved purpose only.
- Always consult R. STAHL Schaltgeräte GmbH if using the device under operating conditions which are not covered by the technical data.
- We cannot be held liable for damage to the device caused by incorrect or unauthorised use or non-compliance with these operating instructions.

For assembly and installation

- Observe national assembly and installation regulations (e.g. IEC/EN 60079-14).
- Observe national safety and accident prevention regulations.
- During installation and operation, observe the information (characteristic values and rated operating conditions) on the type plates and data plates and information signs located on the device.
- Before installation, make sure that the device is not damaged.

Maintenance, repair, commissioning



- Before commissioning, make sure that the device is not damaged.
- Work on the device, such as installation, maintenance, overhaul, repair, may only be carried out by appropriately authorised and trained personnel.
- Perform only maintenance work or repair described in these operating instructions.

3.3 Intended Use


Inspection light 6149/2 is equipment

- for lighting areas, work spaces and objects
- can be used indoors and outdoors
- for mobile applications
- for use in Zones 1, 21, 2, 22 and in the safe area
- The variants 6149/2-2 (12 V) and 6149/2-3 (24 to 48 V) are class III devices (safety extra-low voltage) and must be connected to a power supply with safety extra-low voltage (SELV).
- The variant 6149/2-5 (110 to 240 V) is a class II device (double insulated).


3.4 Modifications and alterations

	<p style="text-align: center;">DANGER</p> <p>Explosion hazard due to modifications and alterations to the device! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> • Do not modify or alter the device.
	<p>No liability or warranty for damage resulting from modifications and alterations.</p>

4 Function and device design

	<p style="text-align: center;">DANGER</p> <p>Explosion hazard due to improper use! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> • Use the device only in accordance with the operating conditions described in these operating instructions. • Use the device only for the intended purpose specified in these operating instructions.
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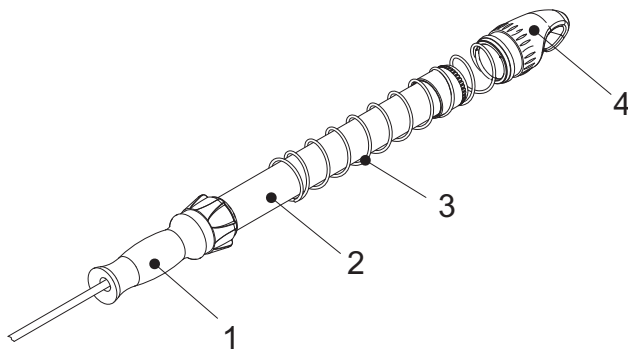
4.1 Function

	DANGER
	<p>Explosion hazard if device is used in aggressive ambient conditions! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> Do not use the device in environments with kerosene, ammonia or phosphorus vapours.

Application range

The inspection light 6149/2 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. It is used as equipment for lighting areas, work equipment and objects. It can be used indoors and outdoors. The luminaire is approved for use in hazardous areas of Zones 1, 2, 21 and 22.

4.2 Device design



05337E00

- | | | | |
|---|----------------|---|-----------------|
| 1 | Grip | 3 | Wire guard |
| 2 | Enclosure tube | 4 | Suspension hook |

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
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Europe (ATEX)

Gas and dust	PTB 07 ATEX 1009 II 2 G Ex d IIC T* Gb II 2 D Ex tb IIIC T* °C Db * temperature classes and surface temperatures see below
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Certifications and certificates

Certificates	IECEX, ATEX, Brazil (INMETRO)
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Surface temperature and temperature class

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

Technical Data

Version	6149/2-2 (12 V)	6149/2-3 (24 to 48 V)	6149/2-5 (110 to 240 V)
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Electrical data

Rated operational voltage	12 (± 10 %) V DC	24 to 48 (± 10 %) V AC / DC, 50 / 60 Hz	110 to 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
Protection class	III	III	II

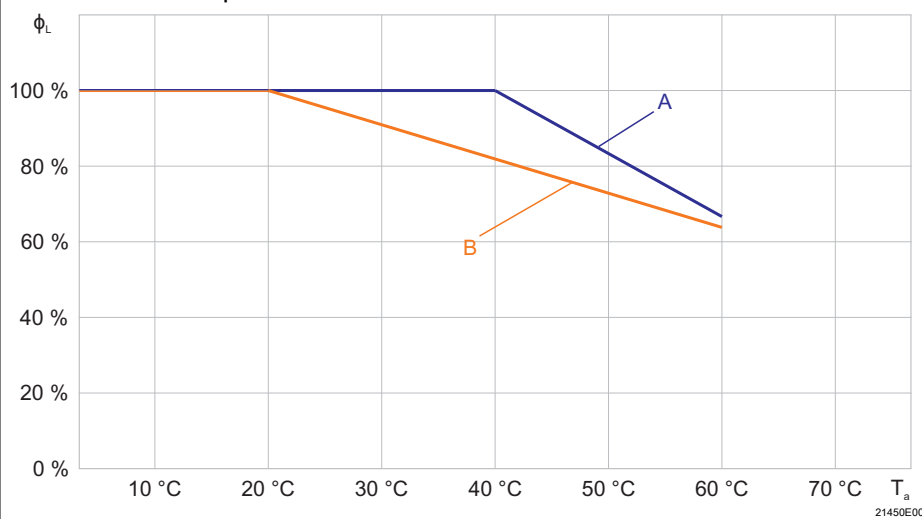
Luminous characteristics

LED	Mid power, single-row Luminous flux: 1,396 lm Illuminance: 353 lx / 1m
Light colour	Neutral white
Colour temperature	5,000 K
Colour rendering	Ra ≥ 80

Technical Data

Luminous flux decline

• at ambient temperature



A: 110 to 240 V
B: 12, 24 to 48 V

Ambient conditions

Ambient temperature

Electrical line		6149/2-2 (12 V)	6149/2-3 (24 to 48 V)	6149/2-5 (110 to 240 V)
H07RN-F; 2 x 1.5 mm ²	T4	-40 to +40 °C	-40 to +60 °C	-30 to +60 °C
	T6		-40 to +40 °C	-30 to +40 °C
HXSLHXOE-J; 2 x 1.5 mm ²	T4	-40 to +40 °C	-40 to +60 °C	-30 to +60 °C
	T6		-40 to +40 °C	-30 to +40 °C
(N)SSHÖU 1kV; 2 x 1.5 mm ²	T4	-40 to +40 °C	-40 to +60 °C	-30 to +60 °C
	T6		-40 to +40 °C	-30 to +40 °C
RADOX, MFH-S B; 2 x 1.5 mm ²	T4	-40 to +40 °C	-40 to +60 °C	-30 to +60 °C
	T6		-40 to +40 °C	-30 to +40 °C

Mechanical data

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

Technical Data

Mounting / Installation

Cable glands CMP cable entry for rubber jacket, Thermflex and wire mesh line
 Connection line


Designation	Application
H07RN-F, Ø 8.8 to 11 mm, 2 x 1.5 mm ²	Standard
HXSLHXOE-J, Ø 6.8 to 7.6 mm, 2 x 1.5 mm ²	Increased oil and fuel resistance
(N)SSHÖU 1kV, Ø 8.7 to 9 mm, 2 x 1.5 mm ²	Voltage-proof up to 1 kV
RADOX, MFH-S B, Ø 6 to 7 mm, 2 x 1.5 mm ²	Offshore

For further technical data, see r-stahl.com.

6 Transport and storage

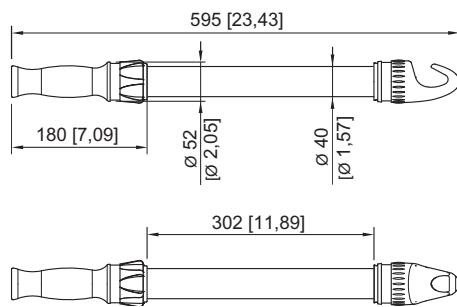
- Transport and store the device only in the original packaging.
- Store the device in a dry place (no condensation) and vibration-free.
- Do not drop the device.

7 Mounting and installation

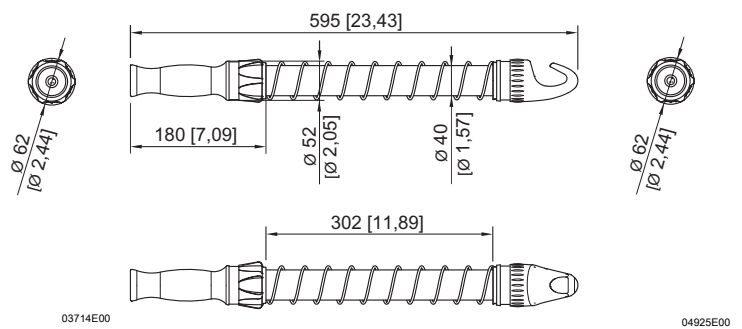
	DANGER
	<p>Explosion hazard due to incorrect installation of the device! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> • Carry out installation strictly according to the instructions and national safety and accident prevention regulations to maintain the explosion 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

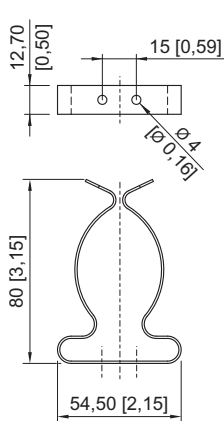
Dimensional drawings (all dimensions in mm [inches]) – Subject to modification



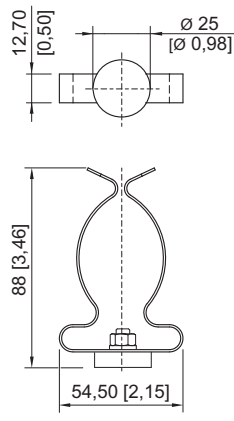
Inspection light without wire guard



Inspection light with wire guard



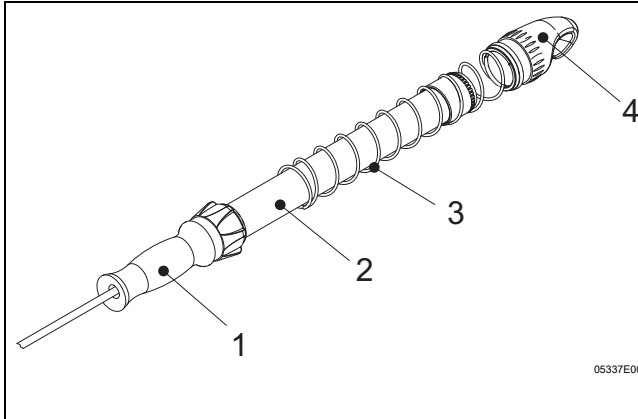
Mounting bracket



Magnet mounting bracket

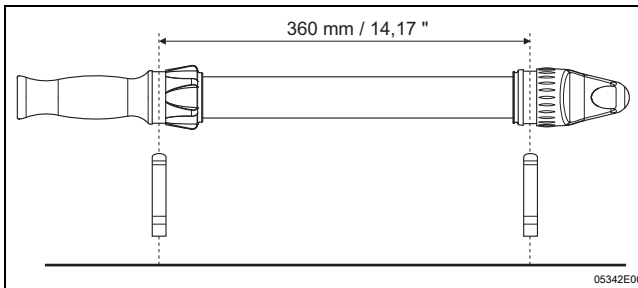
7.2 Mounting / dismounting, operating position

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 onto the enclosure tube and push the last coil of the wire guard over the lip of the suspension hook when doing so. The wire guard is installed.

7.2.2 Wall mounting



- Fix the mounting brackets to the wall at a spacing distance of 360 mm.
- Put the inspection light onto the mounting brackets. The wall mounting is complete.

7.3 Installation


7.3.1 Electrical connections

	DANGER
	<p>Explosion hazard from incorrectly selected plugs! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> • Only use plugs which are approved for use in the relevant Zone. <p style="background-color: yellow; text-align: center;">CAUTION</p> <p>Risk of electric shock or malfunction of the device due to a faulty connection! Non-compliance can result in light injuries!</p> <ul style="list-style-type: none"> • Variant (see "Technical Data" chapter) connected to a suitable voltage source based on class.

i	Plugs from the company R. STAHL Schaltgeräte GmbH that fulfil the explosion protection requirements can be found on the data sheet at r-stahl.com .
i	The maximum conductor length for the 12 V DC version is 5 m. All other versions can be operated with a conductor 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.

8 Commissioning

	DANGER
	<p>Explosion hazard due to incorrect installation! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> • Check the device for proper installation before commissioning. • Comply with national regulations.


- Make sure that the plug is fitted according to regulations and that it is approved for use in the Zone in question.
- Ensure that the conductor is clamped firmly.
- Inspect the enclosure and cable entry for damage.
- Ensure that the device is correctly connected to the suitable voltage source based on the class of the design.

9 Maintenance, Overhaul, Repair

	CAUTION
	<p>Risk of electric shock or malfunction of the device due to unauthorized work! Non-compliance can result in light injuries!</p> <ul style="list-style-type: none"> • Before carrying out work on the device, switch off voltage supply. • Work performed on the device must only be carried out by authorized and appropriately trained qualified electricians.

9.1 Maintenance


- Consult the relevant national regulations to determine the type and extent of inspections.
- Adapt inspection intervals to the operating conditions.
- Perform maintenance and repair work in accordance with IEC 60079-17 and IEC 60079-19.

	<p>Observe the relevant national regulations in the country of use.</p>
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At a minimum, check the following points during maintenance work on the device:

- Whether the clamping screws holding the electrical lines are fitted securely
- Whether the device enclosure and/or protective enclosure has/have cracks or other visible signs of damage
- Compliance with the permissible temperatures (according to EN 60079)
- Whether the device is used as intended and functions properly

9.2 Repair

	DANGER
	<p>Explosion hazard due to improper repair! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> • Repair work on the devices must be performed only by R. STAHL Schaltgeräte GmbH.

9.3 Returning the device

- Only return or package the devices after consulting R. STAHL!
Contact the responsible representative from R. STAHL.

R. STAHL's customer service is available to handle returns if repair or service is required.

- Contact customer service personally.

or

- Go to the r-stahl.com website.
- Under "Support" > "RMA" > select "RMA-REQUEST".
- Fill out the form and send it.
You will automatically receive an RMA form via email. Please print this file off.
- Send the device along with the RMA form in the packaging to
R. STAHL Schaltgeräte GmbH (refer to chapter 1.1 for the address).

10 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.

11 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.

12 Accessories and Spare parts

NOTICE

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

Waldenburg, 2015-11-19

i.V.

Ort und Datum
Place and date
Lieu et date

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 Leiter BU Leuchten & Signalgeräte
Head of BU Lightings & Signalling
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