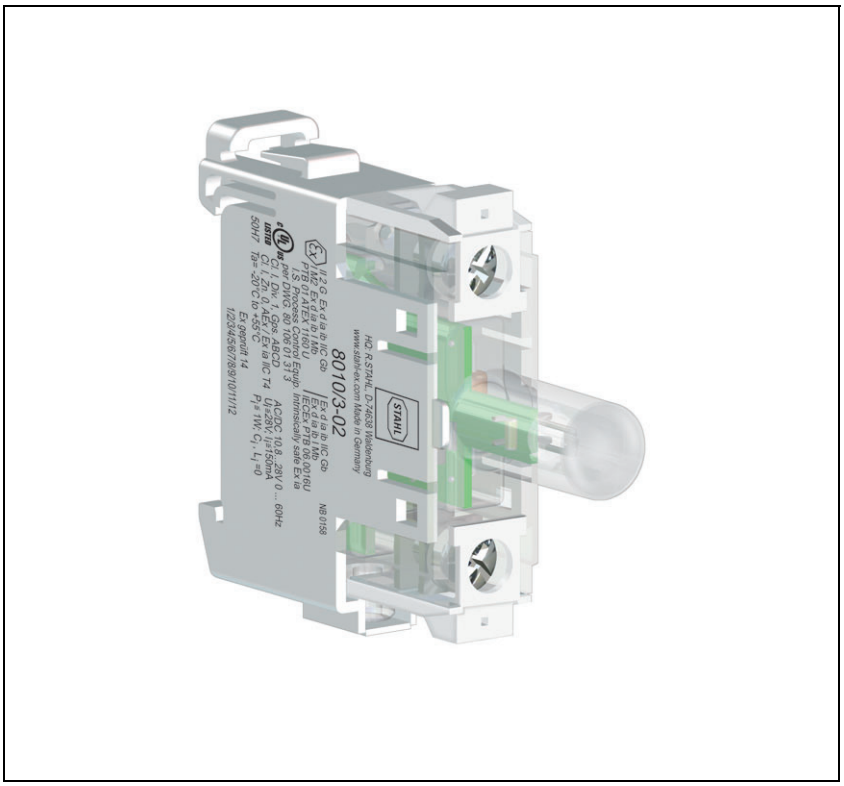

Operating instructions

Additional languages www.stahl-ex.com

EN

LED Indicating Lamp

Series 8010

STAHL

EN

Contents

1 General Information

1.1 Manufacturer

R. STAHL Schaltgeräte GmbH
Am Bahnhof 30
74638 Waldenburg
Germany

Phone: +49 7942 943-0
Fax: +49 7942 943-4333
Internet: www.stahl-ex.com
E-Mail:info@stahl.de

1.2 Information regarding the operating instructions

ID-No.: 128912 / 8010607300
Publication Code: 2015-05-20·BA00·III·en·00

1.3 Further documents

For further languages, see www.stahl-ex.com.

1.4 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

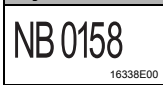
Warning notes must be observed under all circumstances, in order to minimize the risk due to construction and operation. The warning notes have the following structure:

- 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	Bedeutung
	ATEX-Notified Body for Quality Assessment.
	According to marking, device approved for hazardous areas.
	Input
	Output

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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!
- 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.
- During installation and operation observe the information (characteristic values and rated operating conditions) on the rating, data and information plates located on the device.
- Always consult with R. STAHL Schaltgeräte GmbH in case of operating conditions which deviate from the technical data.

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.

4 Function and device design

	**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.

4.1 Function

The indicating lamps display the current state of a command by either switching on or switching off a light signal. In combination with a switching device, they indicate the switching state.
The indicating lamps of the type 8010/... are designed for installation in enclosures of the type of protection Increased safety "e".
The light signal is displayed from the enclosure via a transparent indicating lamp actuator equipped with a diffuser lens.
The devices are certified for use in hazardous areas of Zones 1 and 2.

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5 Technical Data

Explosion Protection

Global (IECEx)

Gas and mining	IECEx PTB 06.0016U
Gas	Ex d e IIC Gb Ex d ia/ib IIC Gb
Mining	Ex d e I Mb Ex d ia/ib I Mb

Europe (ATEX)

Gas and mining	PTB 01 ATEX 1160 U
Gas	Ⓔx II 2 G Ex d e IIC Gb Ⓔx II 2 G Ex d ia/ib IIC Gb
Mining	Ⓔx I M2 Ex d e I Mb Ⓔx I M2 Ex d ia/ib I Mb

Certifications and certificates

Certificates	IECEx, ATEX, India (PESO), Canada (CSA, cUL), Serbia (SRPS), USA (UL), Belarus (operating licence)

Technical Data

Electrical data

Rated operational voltage	Ex e: 12 ... 240 V, AC / DC (± 10%) Ex i: 10.8 ... 30 V DC / 12 ... 24 V_{ac} (± 10%)
Safety-specific maximum values (Ex i)	U_i (30 V, I_i (150 mA, P_i (1 W, inductance L_i and capacity C_i negligible
Frequency range	0 ... 60 Hz
Rated operational current	max. 15 mA
Rated operational power	max. 1 W
Electrical life	10^5 lighting hours

Luminous characteristics

Lamps	white LED
Light intensity	max. 6 cd
Colour	red, yellow, green, blue, white, via coloured lenses (not included in delivery)

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Technical Data

Ambient conditions

Ambient temperature	8010/2	-60 ... +65 °C at U = 24 ... 120 V
		-60 ... +60 °C at U > 120 V
	8010/3	-60 ... +65 °C at U < 24 V
		-60 ... +60 °C at U = 24 ... 30 V

Mechanical data

Enclosure material	Polyamide
Terminals	0.75 mm^2 ... 2.5 mm^2 solid, stranded with core end sleeve
Tightening torque	max. 1.2 Nm
Degree of protection	IP20 (connection) acc. to IEC 60529

Lens

Version	∅ 38 mm, colour: red, yellow, green, blue and clear
Mechanical data	
Degree of protection	IP66
Material	Polyamide

☞ The indicating lamps are designed on the basis of LEDs.

Risk group according to IEC 62471: RG0, hazard-free, no photobiological hazard

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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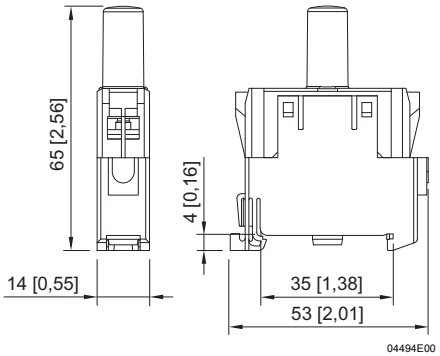
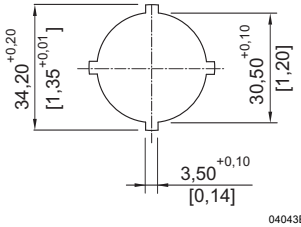
7 Mounting and installation

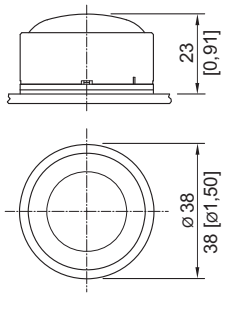
Dimensional Drawings (All Dimensions in mm) - Subject to Alterations



8010/2 and 8010/3
LED indicating lamp



Cut-out details



Lenses for 8602A

NOTICE

Please observe the following when snapping the indicating lamp on a mounting rail.
- The indicating lamp must not be tilted!
- The indicating lamp must be firmly attached!

7.1 Installation

Electrical connection
- The information given in chapter “Technical Data” must be observed.
- The conductor must be connected carefully.
- The conductor insulation must reach to the clamping units.
- Do not damage the conductor (nicking) when stripping it.
- Ensure that the maximum permissible conductor temperatures and the maximum permissible surface temperature are not exceeded by selecting suitable electric lines and means of running them.

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.

Before commissioning, ensure that:
- the connection has been performed correctly
- the indicating lamp has been installed according to regulations
- the indicating lamp is not damaged
- all screws are tightened firmly
- the flameproof enclosure is not damaged

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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

- Consult the relevant national regulations to determine the type and extent of inspections.
- Adapt inspection intervals to the operating conditions, however, maximum every three years.

During maintenance of the device, the following must be checked:
- correct seat of all clamped lines
- whether the device enclosure has cracks or other visible signs of damage
- whether the permissible ambient temperatures are observed
- designated use

9.2 Maintenance

	**DANGER**
	Danger due to energised parts! **Risk of death or severe injuries!** • Before starting any maintenance work, disconnect the device from the power supply. • Secure the device against unauthorized switching.

	Observe the relevant national regulations in the country of use.

9.3 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.

9.4 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.

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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

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.

Konformitätsbescheinigung
Attestation of Conformity
Attestation Écrite de Conformité

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:*	**Leuchtelement** *Indicating lamp* *Voyant lumineux*
Typ(en), *type(s), type(s):*	**8010/2-*** **8010/3-***

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)*
2014/34/EU **ATEX-Richtlinie** *2014/34/EU* *ATEX Directive* *2014/34/UE* *Directive ATEX*	EN 60079-0:2012+A11:2013 EN 60079-1:2014 EN 60079-7:2015 EN 60079-11:2012
Kennzeichnung, *marking, marquage:*	**II 2 G Ex db eb IIC Gb** **II 2 G Ex db ia ib IIC Gb** **NB0158** **I M2 Ex db eb I Mb**
EG-Baumusterprüfbescheinigung: *EC Type Examination Certificate:* *Attestation d'examen CE de type:*	**PTB 01 ATEX 1160 U** (Physikalisch-Technische Bundesanstalt, Bundesallee 100, 38116 Braunschweig, Germany, NB0102)
Produktnormen nach Niederspannungsrichtlinie: *Product standards according to Low Voltage Directive:* *Normes des produit pour la Directive Basse Tension:*	EN 60947-1:2007+A1:2011+A2:2014 EN 60947-5-1:2004+AC:2005+A1:2009
2014/30/EU **EMV-Richtlinie** *2014/30/EU* *EMC Directive* *2014/30/UE* *Directive CEM*	EN 60947-1:2007+A1:2011+A2:2014 EN 60947-5-1:2004+AC:2005+A1:2009
2011/65/EU **RoHS-Richtlinie** *2011/65/EU* *RoHS Directive* *2011/65/UE* *Directive RoHS*	EN 50581:2012

Spezifische Merkmale und Bedingungen für den Einbau siehe Betriebsanleitung.
Specific characteristics and how to incorporate see operating instructions.
Caractéristiques et conditions spécifiques pour l'installation voir le mode d'emploi.

Waldenburg, 2016-04-20
Ort und Datum
Place and date
Lieu et date

i.V.
Holger Semrau
Leiter Entwicklung Schaltgeräte
Director R&D Switchgear
Directeur R&D Appareillage

i.V.
J.-P. Rückgauer
Leiter Qualitätsmanagement
Director Quality Management
Directeur Assurance de Qualité