Operating Instructions

Installation switch

> 8030/51

1 Contents

2 General Information

2.1 Manufacturer

R. STAHL Schaltgeräte GmbH
Am Bahnhof 30
74638 Waldenburg, Germany

Phone: +49 7942 943-0
Fax: +49 7942 943-4333
Internet: www.stahl.de

2.2 Information regarding the Operating Instructions

ID NO.: 130351 / 8030610300
Publication Code: S-BA-8030/51-04-en-09/11/2010

We reserve the right to make technical changes without notice.

2.3 Purpose of these instructions

When working in areas subject to explosion hazards, the safety of personnel and plant depends on complying with all relevant safety regulations.
Assembly and maintenance staff working on installations therefore have a particular responsibility. A precise knowledge of the applicable standards and regulations is required.
These operating instructions give a brief summary of the most important safety measures. They supplement the corresponding regulations which the personnel in charge must study.

3 Safety Instructions

Use the device only for its intended purpose.

Incorrect or impermissible use or non-compliance with these instructions invalidates our warranty provision.

No changes to the device impairing its explosion protection are permitted.

Mount the device only if it is clean and undamaged.

Observe the following when using the device:

- ▶ National safety regulations
- ▶ National accident prevention regulations
- ▶ National assembly and installation regulations (e.g. IEC/EN 60079-14)
- ▶ Generally recognised technical regulations
- ▶ Safety instructions in these operating instructions
- ▶ Characteristic values and rated operating conditions on the rating and data plates
- ▶ Additional instruction plates on the device

Any damage may render explosion protection null and void.

4 Conformity to Standards

The device complies with the following standards and regulations:

- ✗ Directive 94/9/EC
- ✗ IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7
- ✗ IEC/EN 61241-0, IEC/EN 61241-1
- ✗ IEC/EN 60947-1

Type 8030/51 switch is suitable for use in hazardous areas, Zones 1, 2, 21, and 22.

5 Function

The type 8030/51 installation switch is an explosion-protected device for fixed mounting. It is used for control and switching functions in hazardous areas.

6 Technical Data

Explosion protection	
Gas explosion protection	
ATEX	⟨Ex⟩ II 2 G Ex de IIC T6
IECEx	Ex de IIC T6
Dust explosion protection	
ATEX	⟨Ex⟩ II 2 D Ex tD A21 IP65 T80 °C
IECEx	Ex tD A21 IP65 T80
Ambient temperature	- 40 °C ... + 60 °C (- 50 °C ... + 60 °C on request)
Certificates	
Gas explosion protection	
ATEX	PTB 02 ATEX 1026
IECEx	IECEx PTB 06.0074
Dust explosion protection	
ATEX	PTB 02 ATEX 1026
IECEx	IECEx PTB 06.0074
Type of protection	IP65
Material	
Enclosure	Polyester
Cover	Polyamide
Cover fixing	M4 x 22, stainless steel cheese-head screw (4x)
Rated operational voltage	690 V AC, 250 V DC
Switching capacity	AC 1 16 A 690 V AC 15 16 A 415 V AC 3 8 A 500 V AC 3 4 A 690 V DC 1 10 A 24 V DC 1 6 A 60 V DC 1 6 A 110 V 2 contacts connected in series DC 1 6 A 220 V 3 contacts connected in series
No. of poles	2-pole
Service life	≥ 10^6 operations
Terminals	finely stranded: 1.5 mm^2 ... 2.5 mm^2 single-wire: 1.5 mm^2 ... 4.0 mm^2
Tightening torque	1.8 Nm
Cable entries	8161/5-M25-17: 1 x M25 x 1.5
Stopping plugs	8290/3-M25: 2 x M25 x 1.5

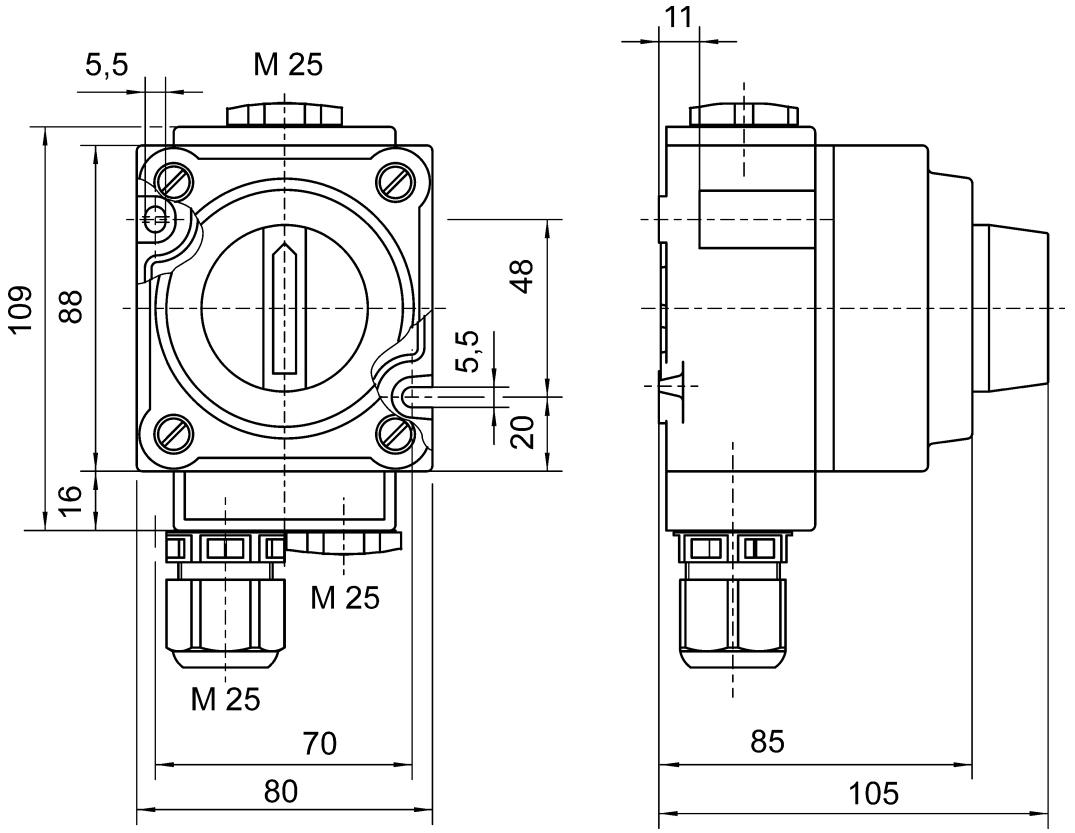
⚠ WARNING

With ambient temperatures < -20 °C, special cable entries "suitable for low temperatures" must be used, or the station must be positioned in a way that the cable entries are mechanically protected.
Please consult the manufacturer if operating conditions are non-standard.

☞ If cable entries other than those manufactured by R. STAHL Schaltgeräte GmbH are used, then their ingress protection should be noted.

7 Assembly

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



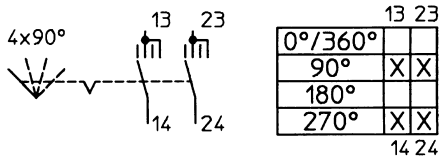
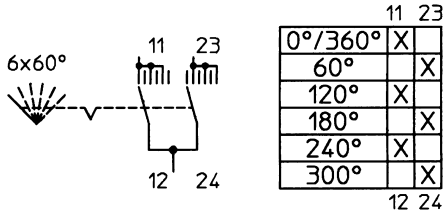
8030/51 Installation switch

Install a protective roof or wall if the explosion-protected electrical device is mounted outdoors.

Transport and storage are only permitted in the original packing.

8 Installation

☞	To avoid an accumulation of dirt inside the device, the electrical installation has to be executed under clean and dry ambient conditions. The devices must only be opened during installation works and be closed correctly after completing the work.

	Circuit diagram
On-off switch	 08804E00
Changeover switch	 08805E00

Mains connection:

- The conductors must be carefully connected.
- The conductor insulation must reach to the terminal. The conductor itself must not be damaged (nicked) when removing the insulation.
- Ensure that the maximum permissible conductor temperatures are not exceeded by suitable selection of cables and means of running them.

☞	When terminal sleeves are fitted, they must be gas-tight and applied with a suitable tool.

Connecting cables to fitted devices with screw terminals:

Where fitted devices have screw terminals, 1 or 2 cables may be connected to a single terminal.

In case of single-wired conductors, both conductors must have the same cross section and be of the same material.

The conductors can be connected without previous measures.

9 Commissioning

⚠ WARNING
Please make sure before operation that the enclosure is completely without damage.

Before commissioning, ensure that

- the device has been correctly installed
- the device is not damaged
- it contains no foreign bodies
- the connection has been made correctly
- the cables have been connected correctly
- all screws and nuts are fully tightened
- the cable entries and stopping plugs are securely tightened
- unused cable entries are sealed with plugs certified according to Directive 94/9/EC, and unused holes are sealed by stopping plugs certified according to Directive 94/9/EC.

⚠ WARNING
Excessive tightening of cable entries and stopping plugs can impair the ingress protection.

☞	We recommend the use of type 8290 stopping plugs for unused holes and type 8161 stopping plugs for unused cable entries. Both are available from R. STAHL Schaltgeräte GmbH

10 Repairs and Maintenance

Repairs and maintenance work on the devices may only be carried out by appropriately authorised and trained personnel.

⚠ WARNING
Observe the relevant national regulations in the country of use!

☞	If a flameproof device is damaged, absolutely no repair or maintenance work is allowed. In this case, please replace the device.

For the purpose of maintenance work, the length of time between periodic checks shall be so set that any system faults likely to arise are found promptly. The maximum interval between checks is three years.

Note the following when establishing the interval between checks:

- the ambient conditions (installed in the open, wind, rain, sunlight, etc)
- the operating conditions (utilisation of system, operator errors)
- manufacturers' instructions in technical documentation (mechanical and electrical life of switchgear)
- big changes in the whole system (e.g. change of zone allocation)

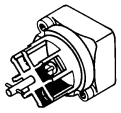
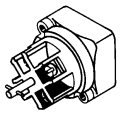
⚠ WARNING
Checks should be by sight, adjacent or detailed, depending on local conditions. If faults are found during these checks which affect the explosion protection, then the system must be taken out of service until the faults have been cleared.

The following points must be checked during maintenance:

- clamping screws holding the cables are securely seated
- Compliance with the permitted temperatures (in accordance with IEC/EN 60079-0)
- cracks in plastic enclosures
- Damage to the gaskets

11 Accessories and Spare Parts

⚠ WARNING
Use only original spare parts as well as original accessories made by R. STAHL Schaltgeräte GmbH.

Designation	Illustration	Description		Order number	Weight kg
Switch	 04836E00	On-off switch	for installation switch 8030/51-033	128441	0.128
	 04836E00	Changeover switch	for installation switch 8030/51-035	128450	0.128
Cable glands	 05864E00	8161/5-M 25-17	1 piece	138520	0.016
Stopping plug	 04840E00	8290/3-M 25 x 1.5	1 piece	143524	0.006

12 Disposal

Observe the national standard for refuse disposal.

☞	We are pleased to answer any special questions you may have. Please contact your nearest R. STAHL representative.

13 EC Type Examination Certificate

13.1 EC Type Examination Certificate (Page 1)

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

PTB

(1) **EC-TYPE-EXAMINATION CERTIFICATE**

(Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) EC-type-examination Certificate Number:

PTB 02 ATEX 1026

(4) Equipment: Installation switch, type 8030/51-..-.../...

(5) Manufacturer: R. STAHL Schaltgeräte GmbH

(6) Address: Am Bahnhof 30, D-74683 Waldenburg (Württ.), Germany

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report PTB Ex 02-12054.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50014:1997 + A1 + A2 **EN 50018:2000** **EN 50019:2000**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type-examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:

Ex II 2 G EEx ed IIC T6

Zertifizierungsstelle Explosionsschutz Braunschweig, May 16, 2002

By order:

Dr.-Ing. U. Klausmeyer
Regierungsdirektor

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EC-type-examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt.
In case of dispute, the German text shall prevail.

Physikalisch-Technische Bundesanstalt • Bundesallee 100 • D-38116 Braunschweig

13.2 EC Type Examination Certificate (current supplement)

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

1st SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 1026

(Translation)

Equipment: Installation switch, type 8030/51

Marking: ⟨Ex⟩ **II 2 G EEx ed IIC T6**

Manufacturer: R. STAHL Schaltgeräte GmbH

Address: Am Bahnhof 30, 74638 Waldenburg (Württ.), Germany

Description of supplements and modifications

The installation switch, type 8030/51-..-.../..., made from plastics, may also be employed in areas in which a potentially explosive atmosphere as a mixture of dust and air can occasionally form.

It has been re-inspected on the basis of Standards EN 60079-0, EN 60079-1 and EN 60079-7.

The marking will thus change to:

⟨Ex⟩ **II 2 G Ex de IIC T6**

⟨Ex⟩ **II 2 D Ex tD A21 IP65 T 80 °C**

Applied standards

EN 60079-0:2004	**EN 60079-1:2004**	**EN 60079-7:2003**
prEN 61241-0:200X	**EN 61241-1:2004**	

Test report: PTB Ex 06-16308

Zertifizierungsstelle Explosionsschutz
By order

Dr.-Ing. U. Klausmeyer
Direktor und Professor

Braunschweig, October 11, 2006

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14 EC-Declaration of Conformity

EG-Konformitätserklärung
EC-Declaration of Conformity
Déclaration de Conformité CE

Wir *(we; nous)*

R. STAHL Schaltgeräte GmbH, Am Bahnhof 30, 74638 Waldenburg, Germany — **8030/51**

erklären in alleiniger Verantwortung, dass das Produkt — **Installationsschalter**
hereby declare in our sole responsibility, that the product — *Installation switch*
déclarons, sous notre seule responsabilité, que le produit — *Commutateur tournant*

mit der (*under; avec*) **EG-Baumusterprüfbescheinigung:** (*EC-Type Examination Certificate: Attestation d'examen CE de type:*) **PTB 02 ATEX 1026**

auf das sich diese Erklärung bezieht, mit den folgenden Normen oder normativen Dokumenten übereinstimmt
which is the subject of this declaration, is in conformity with the following standards or normative documents
auquel cette déclaration se rapporte, est conforme aux normes ou aux documents normatifs suivants

Bestimmungen der Richtlinie *terms of the directive* *prescriptions de la directive*	**Nummer sowie Ausgabedatum der Norm** *Number and date of issue of the standard* *Numéro ainsi que date d'émission de la norme*
94/9/EG: ATEX-Richtlinie *94/9/EC: ATEX Directive* *94/9/CE: Directive ATEX*	EN 60079-0:2006 EN 60079-1:2007 EN 60079-7:2007 EN 61241-0:2006 EN 61241-1:2004
2004/108/EG: EMV-Richtlinie *2004/108/EC: EMC Directive* *2004/108/CE: Directive CEM*	EN 60947-1:1999

Qualitätssicherung Produktion:
Production Quality Assessment:
Assurance Qualité Production: PTB 96 ATEX Q006-4

Kenn-Nr. der benannten Stelle / *Notified Body number / N° de l'organisme de certification:* 0102

Waldenburg, 06. Aug. 2008	i.V.	i.V.
Ort und Datum *Place and date* *Lieu et date*	**B. Limbacher** **Leiter Entwicklung** *Head of Development* *Directeur Développement*	**Dr. S. Jung** **Leiter Qualitätsmanagement** *Director Quality Management Dept.* *Directeur Dept. Assurance de Qualité*

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S-BA-8030/51-04-en-09/11/2010