Operating instructions

Additional languages www.stahl-ex.com





SolConeX Wall-Mounted Socket, 32 A

Series 8571/11



Contents

| 1 | General Information | 3 |
|------|--|----|
| 1.1 | Manufacturer | 3 |
| 1.2 | Information Regarding the Operating Instructions | |
| 1.3 | Further Documents | |
| 1.4 | Conformity with Standards and Regulations | |
| 2 | Explanation of the Symbols | |
| 2.1 | Symbols in these Operating Instructions | |
| 2.2 | Warning Notes | |
| 2.3 | Symbols on the Device or in the Circuit Diagrams | 4 |
| 3 | Safety Notes | |
| 3.1 | Operating Instructions Storage | |
| 3.2 | Safe Use | |
| 3.3 | Modifications and Alterations | 5 |
| 4 | Function and Device Design | 5 |
| 4.1 | Function | 5 |
| 5 | Technical Data | 6 |
| 6 | Transport and Storage | 7 |
| 7 | Mounting and Installation | 8 |
| 7.1 | Dimensions / Fastening Dimensions | 8 |
| 7.2 | Mounting / Dismounting, Operating Position | 10 |
| 7.3 | Installation | 11 |
| 8 | Commissioning | 13 |
| 9 | Operation | 13 |
| 10 | Maintenance and Repair | 14 |
| 10.1 | Maintenance | 14 |
| 10.2 | Maintenance | 14 |
| 10.3 | Repair | |
| 10.4 | Returning the Device | 15 |
| 11 | Cleaning | |
| 12 | Disposal | 15 |
| 13 | Accessories and Spare Parts | 15 |



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

1.2 Information Regarding the Operating Instructions

ID-No.: 150942 / 8571601300 Publication Code: 2014-01-21·BA00·III·en·08

Hardware version: n/a Software version: n/a

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

1.3 Further Documents

 Data sheet Plug and socket devices SolConeX & CES 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 |
|--------|---|
| i | Tips and recommendations on the use of the device |
| | General danger |
| EX | Danger due to explosive atmosphere |
| | Danger due to energised parts |



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 for persons

Non-compliance with the instruction results in severe or fatal injuries to persons.



WARNING

Danger for persons

Non-compliance with the instruction can result in severe or fatal injuries to persons.



CAUTION

Danger for persons

Non-compliance with the instruction can result in minor or 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 or in the Circuit Diagrams

| Symbol | Meaning | | |
|---------------------|--|--|--|
| C € 05594E00 | CE marking according to the current applicable directive. | | |
| (Ex) | According to marking, device approved for hazardous areas. | | |
| 15649E00 | Input | | |
| 15648E00 | Output | | |



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 instructions in these operating instructions!
- Use the cable gland in accordance with its intended purpose only.
- We cannot be held liable for damage caused due to incorrect or unauthorized use or non-compliance with these operating instructions.
- Before installation and commissioning, make sure that the device is not damaged.
- Work on the cable gland (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 and data plates and the information plates located on the device containing the cable glands.
- Always consult with R. STAHL Schaltgeräte in case of operating conditions which deviate from the technical data.

3.3 Modifications and Alterations



WARNING

Danger due to modifications and alterations to the device!

Explosion protection is impaired!

- Do not modify or change the device.
- No liability or warranty for damage resulting from modifications and alterations.

4 Function and Device Design



WARNING

Danger due to improper use!

Explosion protection is impaired!

- The device may only be used according to the operating conditions described in these operating instructions.
- Use the device in hazardous areas only according to these operating instructions.

4.1 Function

The wall-mounting socket 8571/11 is an explosion-protected electric equipment. It connects portable and stationary electric equipment as well as electric lines and circuits in hazardous areas.

It is approved for use in hazardous areas of Zones 1, 2, 21 and 22.



Technical Data 5

Explosion Protection

Global (IECEx)

Gas and dust

IECEx PTB 05 0024

Ex de IIC T6 or T5

Ex tD A21 IP66 T60°C or T75°C

Europe (ATEX)

Gas and dust

PTB 04 ATEX 1060

- ⟨□⟩ II 2 D Ex tD A21 IP66 T60°C (Ta = -30 ... +40 °C) ⟨□⟩ II 2 D Ex tD A21 IP66 T75°C (Ta = -30 ... +55 °C)

Special version with intrinsically safe auxiliary contacts

- ⟨ы II 2 G Ex d e [ia] IIC T6 (Ta = -30 ... +40 °C)
- ⑤ II 2 G Ex d e [ia] IIC T5 (Ta = -30 ... +55 °C)

Certifications and certificates

Certificates

IECEx, ATEX, Brazil (INMETRO), China (China-Ex), India (PESO), Canada (CSA), Kazakhstan (operating license), Korea (KCs), Russia (GOST R), Taiwan (ITRI), Ukraine (TR), USA (FM),

Belarus (operating license)

Ship approval

GL

Technical Data

Electrical data

Rated operational

voltage

Main contacts

Auxiliary contacts

Frequency

Voltage tolerance Rated operational

current

Main contacts

Auxiliary contacts

Rated operational

power

max. 690 V AC / max. 110 V DC

max. 500 V AC / max. 110 V DC

0 ... 60 Hz, others on request

-10 ... +6 %

32 A

max. 6 A

Main contacts:

AC-3: 690 V, 32 A

7.5 kW: 220 V / 230 V / 240 V 15 kW: 380 V / 400 V / 415 V

30 kW: 600 V / 690 V

Auxiliary contacts:

AC-15: 500 V, max. 1250 VA AC-15: 230 V, max. 1380 VA AC-12: 500 V. max. 3000 VA

DC-13: 110 V, 110 W



| Tec | hn | ica | ΙD | ata |
|-----|----|-----|----|-----|
| | | | | |

| Back-up fuse | |
|----------------------------|---------|
| without thermal protection | 35 A gG |
| with thermal protection | 63 A gG |
| Ambient conditions | - |

Ambient temperature see Explosion protection -50 °C on request (internal lubrication using silicone grease)

Mechanical data

 $3P + \frac{1}{2}$, $3P + N + \frac{1}{2}$ Number of poles Auxiliary contacts 2 optional auxiliary contacts (ON - delayed, OFF - leading)

Switching handle lockable in 0 and I position

Material

Enclosure polyamide, glass fibre reinforced Degree of protection IP66 acc. to IEC/EN 60529 Connection type Screw-type terminals

Connection Terminals

2 x 2.5 ... 10 mm² single-wire Main contacts 2 x 2.5 ... 6 mm² finely stranded

2 x 0.5 mm² ... 2.5 mm² single wire/stranded copper Auxiliary contacts

Weight 8571/11-4 2.0 kg

> 8571/11-5 2.2 kg

Service life 5000 switching cycles (electrical and mechanical) Terminal: 1.6 Nm; in connection 2 x 10 mm²: 2.0 Nm Tightening torque

Socket connection chamber cover max. 1.8 Nm

Cable entries

Clamp size 13 mm ... 21 mm outer diameter

Cable gland 1 x M32 x 1.5

(positioning on the top or at the side, according to the order)

optional: top max. 2 x M 32x 1.5; sealing plugs or metal entries are also

available

1 x M32 x 1.5 Stopping plug

For further technical data, see www.stahl-ex.com.

6 Transport and Storage

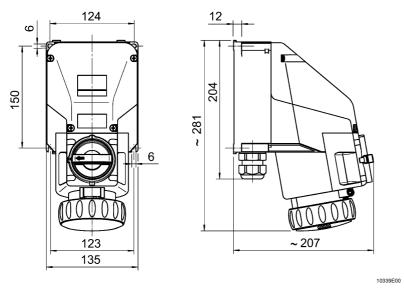
- Transport and store the device only in the original packaging.
- Store the device in a dry place (no condensation) and vibration-free.
- Do not drop the device.



7 Mounting and Installation

7.1 Dimensions / Fastening Dimensions

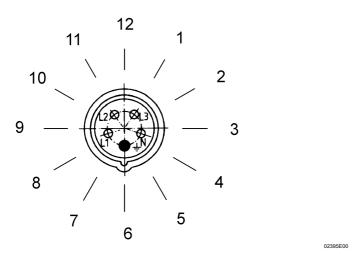
Dimensional drawings (all dimensions in mm [inch] - Subject to alterations



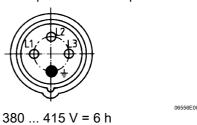
8571/11-.. 32 A

Arrangement of the earth contact sleeve

Position: clock hour position, View: front side of the socket



Example: Clock hour position



Arrangement of socket contacts and terminal markings



Arrangement of the socket contacts and terminal markings in the 6h position (view from the front side of the shrouded socket outlet to the socket contacts)



Colour code and arrangement of socket contacts and terminal markings

| No. of poles* | Frequency [Hz] | Voltage [V] | Colour code | Position of the earth contact sleeve |
|---------------|-----------------------|-------------------------------|-------------|--------------------------------------|
| 8571/11-4 | 50 and 60 | 200 250 | blue | 9 h |
| 3 P + | 50 and 60 | 380 415 | red | 6 h |
| | 60 | 440 460 ¹⁾ | red | 11 h |
| | 50 and 60 | 480 500 | black | 7 h |
| | 50 and 60 | 600 690 | black | 5 h |
| | 100 300 ²⁾ | > 50 | green | 10 h |
| 8571/11-5 | 50 and 60 | 57/100 75/130 | yellow | 4 h |
| 3 P + N + | 50 and 60 | 120/208 144/250 | blue | 9 h |
| | 50 and 60 | 200/346 240/415 | red | 6 h |
| | 50 | 220/380 | red | 3 h |
| | 50 and 60 | 277/480 288/500 | black | 7 h |
| | 50 and 60 | 347/600 400/690 | black | 5 h |
| | 60 | 250/440 265/460 ¹⁾ | red | 11 h |

^{*} All numbers of poles: All nominal operating voltages and/or frequencies not covered by other arrangements have the position of earth contact sleeve 1 h.

Colour code and arrangement, relative to the polarizing slot, for different voltages and frequencies according to IEC 60309-2



¹⁾ Mainly for ship installations

²⁾ Frequencies \geq 100 Hz lead to higher heating behaviour. This must be compensated by max. ambient temperature \leq 40 °C, temperature class T5 or reduction of current to 25 A.

7.2 Mounting / Dismounting, Operating Position

7.2.1 Assembly



If mounted outdoors, equip the enclosure with protective roof or wall.

Operating position

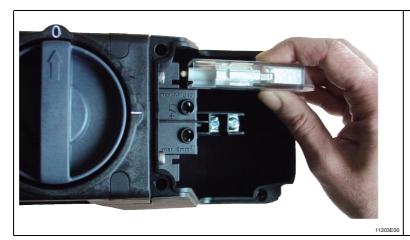
Hinged cover facing downwards, connection chamber - upwards.

• Fasten the wall-mounting socket by means of four screws in the vertical operating position on an even wall.



The fastening holes are designed as elongated holes. This allows vertical and horizontal adjustment during mounting.

Mounting auxiliary contacts



- Open the enclosure.
- Snap the auxiliary contacts into place optionally in the left-hand or right-hand seat.
 Double equipping is possible.
- Close the enclosure.



7.3 Installation



WARNING

Danger due to live components!

Risk of severe injuries!

- All connections and wiring must be disconnected from the power supply.
- Secure the connections against unauthorized switching.



DANGER

Explosion hazard!

Risk of injuries and material damage!

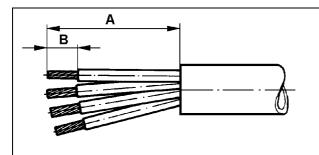
- Select suitable conductors to ensure that the maximum permissible conductor temperatures are not exceeded.
- When using the core end sleeves, attach them using a suitable tool.
- Observe the insulating capacity and separation distances between intrinsically safe and non-intrinsically safe circuits according to EN 60079-14, section 12.
- Use only separately tested cable glands and stopping plugs with EC Type Examination Certificate.
- The conductor insulation must reach to the terminal.
- Do not damage the conductor (e.g. nicking) when stripping it.
- Always connect the protective conductor.



Two conductors can be installed under one connection terminal. The material and cross-section of both conductors must be identical. The conductors can be connected without any special preparations.

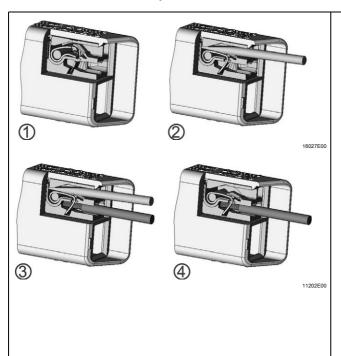


| | Dimensions [mm] | |
|--------------------|-----------------|----|
| | Α | В |
| Main contacts | 200 | 12 |
| Auxiliary contacts | 200 | 6 |
| Ex i auxiliary | 20 | 6 |
| contacts | | |



- Open the enclosure.
- Lead the cable through the cable gland into the connection chamber.
- Insert the conductors in the corresponding terminals and clamp them (for tightening torque, see chapter "Technical data").
 The stripped cable ends must be fully underneath the clamping plate.
- Check if the conductors are clamped properly.
- Align the conductors (the clamping units must not be under tension).
- Tighten the cable gland(s).
- Close the enclosure.
 For the tightening torque,
 see chapter "Technical data".

Installation of auxiliary contacts



- · Open the enclosure.
- Lead the cable through the cable gland into the connection chamber.
- Unlock the screwless type terminals by means of a screwdriver (2) (cutting edge 06 x 3.5 form A according to DIN 5264 or ISO 2380-1).
- Insert the conductors in the corresponding screwless type terminals and clamp them (3).
 The stripped conductor ends must be fully inside the terminal.
- Align the conductors (the clamping units must not be under tension).
- Tighten the cable gland(s).
- Close the enclosure.
 For the tightening torque,
 see chapter "Technical data".



8 Commissioning



WARNING

Check the device before commissioning! Explosion protection is impaired!

- Observe the inspection requirements in the current national regulations before commissioning in order to maintain the explosion protection.
- Check the device for proper installation and function before commissioning.

Before commissioning, ensure the following:

- Check the mounting and installation.
- Inspect the enclosure for damage.
- If necessary, remove foreign bodies.
- If necessary, clean the connection chamber.
- Check whether the cables have been inserted correctly.
- Check whether all screws and nuts have been tightened firmly.
- Check whether all the cable entries and stopping plugs have been tightened firmly.
- Check whether all conductors have been clamped firmly.
- Observe the line voltage.
- Seal the unused cable entries with plugs certified to Directive 94/9/EC and unused bores with stopping plugs certified to Directive 94/9/EC.
- Use only in completely mounted state.



Switching on and off has to be performed quickly and completely. Avoid switching positions between 0 and I (ON and OFF).

9 Operation



The wall-mounting socket may only be operated when fully mounted.



The wall-mounting socket can be switched only with the inserted plug. If the plug has been disconnected, close the hinged cover with the bayonet ring.

Only Type 8571/12 and 8578/12 plugs by R. STAHL may be used.



10 Maintenance and Repair



WARNING

Unauthorized work being performed on the device! Risk of injuries and material damage!

 Work performed on the device must only be carried out by appropriately authorized and trained personnel.

10.1 Maintenance

- Consult the relevant national regulations to determine the type and extent of inspections.
- Adapt inspection intervals to the operating conditions.

During maintenance of the device, check at least:

- if the cables are clamped properly;
- the enclosure, seals and surface of the plug pins for damage;
- · sleeves for pollution;
- compliance with the permitted temperatures in accordance with IEC/EN 60079-0;
- · whether the device is used according to its designated use.

10.2 Maintenance



WARNING

Danger due to live components!

Risk of severe injuries!

- All connections and wiring must be disconnected from the power supply.
- Secure the connections against unauthorized switching.



DANGER

Danger due to defective switching contacts!

Risk of injuries and material damage!

 Replace the entire socket flange after each short circuit in the main circuit of the switch because the state of the switching contacts cannot be checked in hermetically sealed equipment.



Observe the relevant national regulations in the country of use.



10.3 Repair



DANGER

Danger due to improper maintenance/repair!

Explosion protection is impaired!

 Repair work on the device must be performed only by R. STAHL Schaltgeräte GmbH.

10.4 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.

11 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.
- Prevent water and cleaning agents from penetrating the socket contacts.

12 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.

13 Accessories and Spare Parts

NOTICE

Use only original accessories and spare parts by R. STAHL Schaltgeräte GmbH.



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



EG-Konformitätserklärung

EC Declaration of Conformity Déclaration de Conformité CE



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:

Steckvorrichtung
Plug and socket
Prise de courant

Typ(en), type(s), type(s):

8571/1*-***

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) | | Norm(en) |
|---|---|---|
| Directive(s) | | Standard(s) |
| Directive(s) | | Norme(s) |
| 94/9/EG: 94/9/ <i>EC:</i> 94/9/ <i>CE:</i> | ATEX-Richtlinie ATEX Directive Directive ATEX | EN 60079-0:2012 EN 60079-1:2007 EN 60079-7:2007 EN 60079-11:2012 EN 60079-31:2009 |

Kennzeichnung, marking, marquage:

II 2 G Ex d e IIC T6, T5 Gb

(Ex) II 2 G Ex d e [ia Ga] IIC T6, T5 Gb

II 2 D Ex tb IIIC T60°C, T75°C Db

C€ 0158

EG-Baumusterprüfbescheinigung: EC Type Examination Certificate: Attestation d'examen CE de type: PTB 04 ATEX 1060

(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 60309-1:1999+A1:2007+A2:2012 EN 60309-2:1999+A1:2007+A2:2012

EN 60309-4:2007+A1:2012

2004/108/EG: EMV-Richtlinie 2004/108/EC: EMC Directive 2004/108/CE: Directive CEM Nicht zutreffend nach Artikel 1, Absatz 3. Not applicable according to article 1, paragrap

Not applicable according to article 1, paragraph 3. Non applicable selon l'article 1, paragraphe 3.

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.

i.V.

Waldenburg, 2014-09-19

Ort und Datum
Place and date
Lieu et date

Steffen Buhl 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

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