



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: **IECEX TUR 19.0075X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2020-02-19

Applicant: **R. STAHL Schaltgeräte GmbH**  
Am Bahnhof 30  
74638 Waldenburg  
Germany

Equipment: **Relay Module Ex i / Ex e, Type 9177/12-11-01**

Optional accessory:

Type of Protection: **Ex i / Ex e / Ex m**

Marking: Ex eb mb [ia Ga] IIC T4 Gb  
[Ex ia Da] IIIC  
Other Ex markings see operating instructions!

Approved for issue on behalf of the IECEx  
Certification Body:

**Andreas Maschke**

Position:

**Deputy Head of Certification Office**

Signature:  
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting [www.iecex.com](http://www.iecex.com) or use of this QR Code.



Certificate issued by:

**TUV Rheinland Industrie Service GmbH**  
Am Grauen Stein  
51105 Cologne  
Germany





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Manufacturer: **R. STAHL Schaltgeräte GmbH**  
Am Bahnhof 30  
74638 Waldenburg  
Germany

Additional  
manufacturing  
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

## STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

**IEC 60079-0:2017** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

**IEC 60079-11:2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

**IEC 60079-18:2014** Explosive atmospheres – Part 18: Equipment protection by encapsulation "m"  
Edition:4.0

**IEC 60079-7:2017** Explosive atmospheres - Part 7: Equipment protection by increased safety "e"  
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

## TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[DE/TUR/ExTR19.0075/00](#)

Quality Assessment Report:

[DE/BVS/QAR10.0002/15](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The Relay Module type 9177 is an explosion protected apparatus for installation in hazardous areas classified Zone 1, Zone 2, Zone 21, Zone 22 or in the safe area. The Relay Module switches circuits up to 253V AC or 125 V DC with a maximum current of 2 A.

The Relay Module provides galvanic isolation for up to 375 V peak according to IEC 60079-11 between its two circuit parts, the coil circuit and the contact circuit. The coil circuit as well as the contact circuit in arbitrary combinations can be connected to either Ex i circuits or non Ex i circuits.

The terminals for connection of the non-intrinsically safe circuits (coil and contact circuit) meet the requirements of type of protection Ex eb, while the internal circuitry is protected by encapsulation Ex mb.

After the coil side circuit has been connected to a non intrinsically safe circuit, the coil side may be connected to an intrinsically safe circuit, without any impact to that intrinsically safe circuit.

The Relay Module has to be mounted inside an enclosure with a type of protection listed in IEC 60079-0 (e.g.: Ex eb).

For further details see attachment.

## **SPECIFIC CONDITIONS OF USE: YES as shown below:**

If the coil circuit is connected to a non-intrinsically safe circuit, the absolute maximum rating of  $U_m = 60V$  shall not be exceeded.

When used in Zone 1 and Zone 2, the device is to be installed in a protective enclosure with a type of protection listed in IEC/EN 60079-0, providing a grade of ingress protection of at least IP54. When used in Zone 21 and Zone 22, the device is to be installed in a protective enclosure with a type of protection according to IEC/EN 60079-31.

The pollution level shall be limited to a pollution degree 2 or better.

## **Annex:**

[IECEx\\_TUR\\_19.0075X\\_Attachment\\_1.pdf](#)



**Device:** Relay Module  
**Type:** 9177/12-11-01

**Manufacturer:** R. STAHL Schaltgeräte GmbH  
**Address:** Am Bahnhof 30  
74638 Waldenburg, Germany

### Subject and type

Relay Module Ex I / Ex e, Type 9177/12-11-01

### Type Designation

Relay Module	Type	9177/	a	b	-	c	d	-	e	f
Number Channel:		1								
Category Device:		2								
Input	Ex e or Ex i	1								
Output	Ex e or Ex i	1								
Without ext. Power Supply		0								
Status LED		1								

### Electrical Data

Coil circuit X1: Terminals: 4 (+) and 3 (-)

Connected to intrinsically safe circuits:

$U_i = 32 \text{ V DC}$

$U_n = 24 \text{ V DC (18 V – 32 V DC)}$

$I_i$  and  $P_i$ : internally limited

$C_i$  and  $L_i \approx 0$

Connected to non-intrinsically safe circuits:

$U_m = 60 \text{ V DC}$

$U_n = 24 \text{ V DC (18 V – 32 V DC)}$

$I_n = 18 \text{ mA}$

$P_n = 450 \text{ mW}$

Contact circuit X2: Terminals: 5 and 6

Connected to Non-intrinsically safe circuits:

$U_m = 253 \text{ V AC; 125 V DC}$

$I_n \leq 2 \text{ A}$

Connected to Intrinsically safe circuits:

$U_i = 253 \text{ V AC; 125 V DC}$

$I_i \leq 2 \text{ A}$

$U_n \leq 230 \text{ V AC/ 125 V DC}$

$I_n \leq 2 \text{ A}$

$C_i$  and  $L_i \approx 0$

### Environmental Data

$T_a = -40 \text{ °C ... } +75 \text{ °C}$