

(1) EU-TYPE EXAMINATION CERTIFICATE



- (2) Equipment and Protective Systems intended for use in Potentially Explosive Atmosphere - **Directive 2014/34/EU**
- (3) EU-Type Examination Certificate Number

TÜV 19 ATEX 8453 X

Issue: 00

- (4) Equipment: **Relay Module Ex i / Ex e, Type 9177/12-11-01**
- (5) Manufacturer: **R. STAHL Schaltgeräte GmbH**
- (6) Address: **Am Bahnhof 30
74638 Waldenburg, Germany**
- (7) This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) The TÜV Rheinland Zertifizierungsstelle für Explosionsschutz of TÜV Rheinland Industrie Service GmbH, Notified Body No. 0035 in accordance with Article 21 of the Council Directive 2014/34/EU of 26th February 2014, certifies this product which 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 atmosphere, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report 557/E8453.00/19
- (9) Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule of this certificate, has been assessed by reference to:

**EN IEC 60079-0: 2018 EN IEC 60079-7: 2015 / A1: 2018 EN 60079-11: 2012
EN 60079-18: 2014 / AC: 2018**
- (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 EU-Type Examination Certificate relates only to the design and specification for construction of the equipment or protective system. It does not cover the process for actual manufacture or supply of the equipment or protective system, for which further requirements of the directive are applicable.
- (12) The marking of the equipment shall include the following:



II 2 (1) G Ex eb mb [ia Ga] IIC T4 Gb and II (1) D [Ex ia Da] IIIC

Other Ex markings see operating instructions!

TÜV Rheinland Zertifizierungsstelle für Explosionsschutz

Cologne, 2020-02-17


Dipl.-Ing. Andreas Maschke

This EU-Type Examination Certificate without signature and stamp shall not be valid.

This EU-Type Examination Certificate may be circulated only without alteration. Extracts or alterations are subject to approval by the TÜV Rheinland Industrie Service GmbH TÜV Rheinland Group Am Grauen Stein 51105 Köln
Tel. +49 (0) 221 806-0 Fax. + 49 (0) 221 806 114

(13) Annex

(14) **EU Type Examination Certificate**
TÜV 19 ATEX 8453 X Issue: 00

(15) Description of equipment

15.1 Equipment and type:

Relay Module Ex i / Ex e
 Type 9177/12-11-01

15.2 Description / Details of Change

General product information

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 EN 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 EN 60079-0 (e.g.: Ex eb).

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								

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Technical Data

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:

$T_a = - 40 \text{ °C ... + 75 °C}$

(16) Test-Report No. 557/Ex8453.00/19

(17) Special Conditions for safe use

1. If the coil circuit is connected to a non-intrinsically safe circuit, the absolute maximum rating of $U_m = 60\text{V}$ shall not be exceeded.
2. 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.

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(18) Basic Safety and Health Requirements

Covered by afore mentioned standard

TÜV Rheinland Zertifizierungsstelle für Explosionsschutz

Cologne, 2020-02-19


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