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

Certificate No.:	**IECEx TUR 20.0035X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 0	
Date of Issue:	2020-07-31		
Applicant:	**R. STAHL Schaltgeräte GmbH** Am Bahnhof 30 74638 Waldenburg **Germany**		
Equipment:	**Electronic Relay Module, Type 9174/12-15-01**		
Optional accessory:			
Type of Protection:	**Ex i, m, e**		
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: **Dipl. Ing. Klauspeter Graffi**

Position: **Head of Certification Body**

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 or use of this QR Code.

Certificate issued by:

TUV Rheinland Industrie Service GmbH
Am Grauen Stein
51105 Cologne
Germany

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Certificate No.: **IECEx TUR 20.0035X**

Date of issue: 2020-07-31

Issue No: 0

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 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

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/ExTR20.0035/00

Quality Assessment Report:

DE/BVS/QAR10.0002/15

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Electronic Relay Module, Type 9174/12-15-01

The Electronic Relay Module type 9174 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 Electronic Relay Module switches AC circuits up to 253 V with a maximum current of 5 A.

The Electronic Relay Module provides galvanic isolation for up to 375 V peak according to IEC/EN 60079-11 between its two circuit parts, the input circuit and the output circuit. The input circuit can be connected to either Ex i circuits or non Ex i circuits. The output circuit can be only connected to non-intrinsically safe circuits.

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

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

SPECIFIC CONDITIONS OF USE: YES as shown below:

If the input 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.

Module mounted on a DIN Rail side by side to another 9174 module and $I_{output} \leq 1$ A or
Module mounted on a DIN Rail with > 12 mm distance to another 9174 module and $I_{output} \leq 2$ A:
Ta = - 40 °C ... + 75 °C
The ambient temperature T_a is de-rated by 15 K/A I_{output} down to T_a = 30 °C at $I_{output} \leq 5$ A.

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Equipment (continued):

Electrical data

Input circuit X1: Terminal No. 4 (+) and No. 3 (-)

Connected to intrinsically safe circuits:

U_i = 32 V DC

U_n = 24 V DC (18 V – 32 V DC)

I_i and P_i: internally limited

C_i and L_i ≈ 0

Connected to non-intrinsically safe circuits:

U_m = 60 V DC

U_n = 24 V DC (18 V – 32 V DC)

I_n = 8.0 mA ± 2mA

P_n = 204 mW

Output circuit X2: Terminals No. 5 and No. 6

Connected to Non-intrinsically safe circuits:

U_m = 253 V AC (20 V – 253 V AC)

The nominal output current I_n depends on the mounting on the DIN rail.

I_n ≤ 1 A at Ta 75 °C when mounted side by side to another 9174 module.

I_n ≤ 2 A at Ta 75 °C when mounted with 12 mm distance to other modules.

I_n is de-rated by 1 A/15 K from 75 °C down to 5 A at T_a= 30 °C.

Environmental Data

T_a = - 40 °C ... + 75 °C (see special conditions for derating)

Annex:

IECEx_TUR_20.0035X_Attachment_Rev.01.pdf

Device: Electronic Relay Module
Type: 9174/12-15-01

Manufacturer: R. STAHL Schaltgeräte GmbH

Address: Am Bahnhof 30,
D-74638 Waldenburg, Germany

Type designation:

Relay Module	Type	9174/	a	b	-	c	d	-	e	f
Number Channel:		1								
Category Device:		2								
Input	Ex e or Ex i	1								
Output	Ex e	5								
Without ext. Power Supply		0								
Status LED		1								

Electrical data:

Input circuit X1: Terminal No. 4 (+) and No. 3 (-)

Connected to intrinsically safe circuits:
U_i = 32 V DC
U_n = 24 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 V DC
U_n = 24 V DC (18 V – 32 V DC)
I_n = 8.0 mA ± 2mA
P_n = 204 mW

Output circuit X2: Terminals No. 5 and No. 6

Connected to Non-intrinsically safe circuits:
U_m = 253 V AC (20 V – 253 V AC)
The nominal output current I_n depends on the mounting on the DIN rail.
$I_n \leq 1$ A at Ta 75 °C when mounted side by side to another 9174 module.
$I_n \leq 2$ A at Ta 75 °C when mounted with 12 mm distance to other modules.
I_n is de-rated by 1 A/15 K from 75 °C down to 5 A at T_a= 30 °C.

Environmental Data:
T_a = - 40 °C ... + 75 °C (see special conditions for derating)