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 22.0047X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 1	Issue 0 (2023-08-08)
Date of Issue:	2024-03-07		
Applicant:	**K. A. Schmersal GmbH** Möddinghofe 30 42279 Wuppertal **Germany**		
Equipment:	**Safety-relay module**		
Optional accessory:	SRB101EXi-1A, SRB200EXi-1A, SRB101EXi-1R, SRB200EXi-1R		
Type of Protection:	**ec nc ib**		
Marking:	Ex ec nC [ib Gb] IIC T5 Gc [Ex ib Db] IIIC		

Approved for issue on behalf of the IECEx Certification Body: **Christian Mehrhoff**

Position: **Assigned certifier**

Signature: (for printed version)

Date: (for printed version) 2024-03-07

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

IECEx Certificate of Conformity

Manufacturer: **K. A. Schmersal GmbH**
Möddinghofe 30
42279 Wuppertal
Germany

Manufacturing locations: **K. A. Schmersal GmbH & Co. KG**
Im Ostpark 2
35435 Wettenberg
Germany

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 60079-15:2017 Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition:5.0

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/ExTR22.0047/01

Quality Assessment Report:

DE/TUR/QAR11.0008/05

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

Safety-relay module

Type:

SRB101EXi-1A, SRB200EXi-1A,
SRB101EXi-1R, SRB200EXi-1R

Details see attachement to certificate

SPECIFIC CONDITIONS OF USE: YES as shown below:
For equipment ”ec” Installation in Zone 2

- The equipment shall only be used in an area of at least pollution degree 2, as defined in IEC 60664-1.”
- The equipment shall be installed in an enclosure that provides a minimum ingress protection of IP 54 in accordance with IEC 60079-0”.
- Transient protection shall be provided that is set at a level not exceeding 140 % of the peak rated voltage value at the supply terminals to the equipment”.
- The maximum voltage must be limited to Um = 253 V

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Corrections were made and the electrical parameters for the intrinsically safe output circuit were added.

Annex:

IECEx_TUR_22.0047 X_01_Attachment.pdf

Attachment to Certificate IECEx TUR 22.0047X

Device: Safety-relay module

Type: SRB101EXi-1A, SRB200EXi-1A,
SRB101EXi-1R, SRB200EXi-1R)

Manufacturer: K. A. Schmersal GmbH & Co. KG

Address: Im Ostpark 2,
35435 Wettenberg
Germany

General product information:

Issue 00

Type designation

SRB ① EX-i -②③

①	200	2 no / 0 nc (STOP 0)
	101	1 no / 1 nc (STOP 0)
②	1	Sensor use into Zone 1 and 21
③	A	Autostart
	R	Reset (monitored start with falling edge)

General product description

The safety relay module type SRB is a relay module whose signal inputs are intrinsically safe according to EN 60079-11. The relay module can be installed in Zone 2 in a suitable housing. It is used to evaluate sensors that are located in an Ex zone (1 or 2).

Its marking is:

Ex ec nC [ib Gb] IIC T5 Gc

In addition, it is used to evaluate sensors located in an Ex Zone (21 or 22) with its intrinsically safe signal inputs. The relay module must be installed as associated equipment outside the Ex-area in a suitable switch box or switch cabinet.

Its marking is:

[Ex ib Db] IIIC

Technical Data

Power supply	24 V DC, 100 mA (max.)
Maximum voltage Um	253 V
Contact circuits / Release paths:	250 V AC, 3 A
Ambient temperature range	-25°C <= Ta <= +60°C

Values of the intrinsically safe output circuit of the equipment with

Intrinsically safe values for equipment associated with protection level [Ex ib] IIC, linear source:

Protection level [ib Gb] IIC or [Ex ib Db] IIIC linear source:

The following maximum Lo and Co values can be connected together:

Group	II C				II B					
External capacity Co [nF]	26	36	46	49	160	180	230	280	350	412
External inductivity Lo [mH]	4,0	2,0	1,0	0,5	38,0	5,0	2,0	1,0	0,5	0,2

Issue 01

Detail of change

Corrections were made and the electrical parameters for the intrinsically safe output circuit were added.

Type designation
Unchanged

General product information:

Unchanged

Technical Data

Power supply		24 V DC, 100 mA (max.)
Maximum voltage	Um	253 V
Contact circuits / Release paths:		250 V AC, 3 A
Ambient temperature range		-25°C <= Ta <= +60°C

Values of the intrinsically safe output circuit of the equipment with
Protection level [ib Gb] IIC or [Ex ib Db] IIIC linear source:

Uo = 33,6 V

Io = 57 mA

Po = 478,8 mW (characteristic linear)

The following maximum Lo and Co values can be connected together:

Group	II C				II B					
External capacity Co [nF]	26	36	46	49	160	180	230	280	350	412
External inductivity Lo [mH]	4,0	2,0	1,0	0,5	38,0	5,0	2,0	1,0	0,5	0,2