



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Ex COMPONENT CERTIFICATE

Certificate No.: IECEx TUR 16.0031U Issue No: 0 Certificate history:
Issue No. 0 (2019-08-07)

Status: **Current** Page 1 of 3

Date of Issue: **2019-08-07**

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

Ex Component: **Control devices ,indicator lights and and housing as component**

This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).

Type of Protection: **Ex ib, Ex tb**

Marking:
EX ib IIC Gb or Ex tb IIIC Db

Approved for issue on behalf of the IECEx
Certification Body:

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 the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

TUV Rheinland Industrie Service GmbH
Am Grauen Stein
51105 Cologne
Germany





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Date of Issue: 2019-08-07 Page 2 of 3
Manufacturer: **K. A. Schmersal GmbH**
Möddinghofe 30
42279 Wuppertal
Germany

Additional Manufacturing location(s):

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 Component 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 Ex Component 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 60079-31 : 2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

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

TEST & ASSESSMENT REPORTS:

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

Test Report:

[DE/TUR/ExTR16.0031/00](#)

Quality Assessment Report:

[DE/TUR/QAR11.0008/03](#)



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Schedule

Ex Component(s) covered by this certificate is described below:

Control devices and indicator lights of the Ex-Rxxxxxxx series and housing series Ex-EBG xxx.O

SCHEDULE OF LIMITATIONS:

The user must ensure protection against permanent UV exposure when using certain controls.

The control devices and indicator lights for use in potentially explosive areas of zone 1 and 2 may only be used with an appropriate housing or panels (material: stainless steel or metal with painted surface). These housings must comply with the requirements of IP 65 or higher acc. to IEC 60529 and the tests acc. to EN 60079-0, para. 26.4.

The presence of small dust particles must be excluded inside the dust-tight IP 65 housing.

The information in the manual or in the information on the specifications in this IECEx type-examination certificate on maximum proven impact energy must be observed. If certain controls are used, this equipment must be installed mechanically protected.

If the Ex-EBGxxx.O housing with the cable/line lead-ins is used, fixed cables or lines must be utilised.

The types of the Ex-Rxxxxxxx program and the Ex-EBGxxx.O housing as well as the cable/line lead-ins have different admissible ambient temperatures. The ambient temperature range of the particular assembly is derived from the range of the most critical single assemblies. Observe the operator's manual or the information under item (15.3.1).

Annex:

[DE-IECEX_TUR_16.0031_U_00_Attachment.pdf](#)



Attachment to Certificate IECEX TUR 16.0031 U

Device: Control devices ,indicator lights and and housing as component
Type: Ex-Rxxxxxxxx and Ex-EBG xxx.O

Manufacturer: K. A. Schmersal GmbH & Co. KG
Address: Möddinghofe 30
42279 Wuppertal, Germany

Product description

The control devices and indicator lights (type Ex-Rxxxxxxxx) are used in areas with a potentially explosive gas and dust atmosphere of zones 1, 2 and 21, 22 for installation in appropriate housings. They comply with the types of protection ib and tb

The housing (type Ex-EBGxxx.O) is used in potentially explosive dust atmospheres of zones 21 and 22 and is prepared for the installation of suitable add-on parts. It complies with type of protection tb.

The control devices and indicator lights for use in potentially explosive gas atmospheres may only be used in an appropriate housings or panels (material: stainless steel or metal with painted surface). These housings must comply with the requirements of IP 65 or higher acc. to IEC 60529 and meet the tests acc. to EN 60079-0, para. 26.4. The housing Ex-EBGxxx.O complies with these requirements.

Type overview

Designation	Type
Marking plate	Ex-RZSO
Blanking plug	Ex-RB
Pushbutton	Ex-RDT xx
Pushbutton with membrane	Ex-RDM xx
Contact element	Ex-RF w
Light terminal block	Ex-RLDE ws24
Indicator light	Ex-RMLH xx
Illuminated pushbutton	Ex-RDL xx
Illuminated pushbutton with membrane	Ex-RDLM xx
Mounting flange	Ex-RLM
Emergency stop switch with latching function (also in combination with emergency stop sign type NDP-65)	Ex-RDRZ45 xx
Mushroom button (without latching function)	Ex-RDP40 xx
Key-operated selector switch	Ex-RSSyySzzz
Key-operated selector switch	Ex-RSSTyySzzz
Key-operated selector switch	Ex-RSTyySzzz
Key-operated selector switch	Ex-RSTyySzzz
Selector switch	Ex-RWS yy.v
Selector switch	Ex-RWST yy.v
Selector switch	Ex-RWT yy.v
Selector switch	Ex-RWTS yy.v
Housing, 1 fitting hole	EX-EBG 311.O
Housing, 3 fitting holes	EX-EBG 633.O
Housing, 5 fitting holes	EX-EBG 665.O



General technical data of control elements

Fixation With mounting flange max. torque 2 Nm

Technical data of Ex-EBGxxx.0 Housing incl. entries

Service temperature limits dependent on a max. Ta of +55 °C - 20 °C ...+63 °C

Ambient temperature range T_{amb} - 20 °C ...+55 °C

Proven impact energy (EN 60079-0 or EN 60079-31) Housing body, incl. entries 7J

Technical data of contact / light terminal block		
Service temperature limits dependent on a max. Ta of +55 °C		- 25 °C ...+63 °C
Ambient temperature range	T_{amb}	- 25 °C ...+55 °C
Number of elements	Contact element Light terminal block	2 max. (position 2 and 3) 1 max. (position 1)

Type of protection "tb"

Voltage U	Contact element	250 V
	Light terminal block Ex-RLDE	24 V +/- 10%
Current I	Contact element	5.0 A
	Light terminal block Ex-RLDE	30 mA
Rating P	Contact element	max. 1500 W
	Light terminal block Ex-RLDE	0.9 W

Type of protection "ib"

For connecting each element only with one intrinsically safe circuit

U_i	Contact element	250 V
	Light terminal block Ex-RLDE	30 V
I_i	Contact element	3.3 A with Ex ib
	Light terminal block Ex-RLDE	Not relevant (internal current limit 30 mA)
P_i	Light terminal block Ex-RLDE and contact element	Not relevant
C_i		Negligible
L_i		Negligible
Overvoltage category	Acc. to IEC 60664-1	Cat. III



Ex-related technical data of contact elements and light terminal block

Terminal cross-section	Single strand	2 × (0.5 ... 2.5 mm ²)
	Finely-stranded ferrules with protective shroud	2 × (0.5 ... 1.5 mm ²)
Torque of connecting screw		1 Nm max.

Ex-related technical data of control elements		
Ambient temperature T _{amb}	Blanking plug Pushbutton Illuminated pushbutton Indicator light Emergency stop switch with latching function Mushroom pushbutton (w/wo latching function) Key-operated selector switches (all types) Selector switches (all types)	– 25 °C ... + 55 °C – 25 °C ... + 55 °C – 25 °C ... + 55 °C – 25 °C ... + 55 °C – 25 °C ... + 55 °C – 25 °C ... + 55 °C – 25 °C ... + 55 °C 0 °C ... + 55 °C 0 °C ... + 55 °C
Protection type to IEC 60529		IP 65
Proven impact energy (EN 60079-0 or EN 61241-0)	Blanking plug Pushbutton Illuminated pushbutton Indicator light Emergency stop switch with latching function Mushroom pushbutton (w/wo latching function) Key-operated selector switches (all types) Selector switches (all types)	7J 7J 4J 4J 4J 4J 4J 4J
UV exposure	Ex-RDL Ex-RDLM Ex-RMLH	Protection against permanent UV exposure must be ensured by the user