



# 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](http://www.iecex.com)

Certificate No.: IECEx PTB 14.0038X Issue No: 0 Certificate history:  
Status: **Current** Issue No. 0 (2017-08-07)  
Date of Issue: **2017-08-07** Page 1 of 3  
Applicant: **ROSE Systemtechnik GmbH**  
Erbeweg 13 - 15  
32457 Porta Westfalica  
Germany  
Equipment: **Power distribution, switch and control gear assembly out of aluminium  
type 90. XX XX XX**  
*Optional accessory:*  
Type of Protection: **different**  
Marking:  
Ex eb db mb ia [ia Ga] nA nC [op is] IIC T6, T5, T4 Gc  
Ex tb IIIC T85 °C, T100 °C, T135 °C Db


Approved for issue on behalf of the IECEx  
Certification Body:

Dr. Ing. Detlev Markus

Position:

Head of Working Group "Explosion Protection in Energy Technology"

Signature:  
(for printed version)

  
18.08.17

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:

Physikalisch-Technische Bundesanstalt (PTB)  
Bundesallee 100  
38116 Braunschweig  
Germany





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Date of Issue: 2017-08-07 Page 2 of 3

Manufacturer: **ROSE Systemtechnik GmbH**  
Erbeweg 13 - 15  
32457 Porta Westfalica  
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 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 electrical apparatus 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:

<b>IEC 60079-0 : 2011</b> Edition:6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2014-06</b> Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-11 : 2011</b> Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
<b>IEC 60079-15 : 2010</b> Edition:4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
<b>IEC 60079-18 : 2014</b> Edition:4.0	Explosive atmospheres - Part 18: Equipment protection by encapsulation "m"
<b>IEC 60079-28 : 2015</b> Edition:2	Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
<b>IEC 60079-31 : 2013</b> Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*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 equipment listed has successfully met the examination and test requirements as recorded in*

Test Report:

[DE/PTB/ExTR14.0045/00](#)

Quality Assessment Report:

[DE/EPS/QAR17.0003/02](#)



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Page 3 of 3

## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The power distribution, switch and control gear assembly, type 90. XX XX XX, consists of an aluminium enclosure designed to Increased Safety "e" or Protection by Enclosure "tb" type of protection, which can be provided with flanges, if necessary. It is used to accommodate field bus distributors and terminals, and can be provided with actuator elements and pilot lamps, if necessary.

Ex-cable glands are used for connection.

All installed and attached components are tested and certified with a separate examination certificate.

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

The empty enclosure with a coating must not be used in areas affected by charge-producing processes, mechanical friction and separation processes, electron emission (e.g. in the vicinity of electrostatic coating equipment), and pneumatically conveyed dust.

### Annex:

[COCA140038-00.pdf](#)



Applicant: ROSE Systemtechnik GmbH  
Erbeweg 13-15  
32457 Porta Westfalica  
Germany

Electrical Apparatus: Power distribution, switch and control gear assembly out of aluminium type 90. XX XX XX

### Description

The power distribution, switch and control gear assembly, type 90. XX XX XX, consists of an aluminium enclosure designed to Increased Safety "e" or Protection by Enclosure "tb" type of protection, which can be provided with flanges, if necessary.

It is used to accommodate field bus distributors and terminals, and can be provided with actuator elements and pilot lamps, if necessary.

Ex-cable glands are used for connection.

All installed and attached components are tested and certified with a separate examination certificate.

### Technical data:

-55 °C to +90 °C: with gasket out of silicon

-40 °C to +90 °C: with gasket out of HF

-40 °C to +90 °C with PU-foam

-20 °C to +90 °C with gasket out of CR

-50 °C to +85 °C with window out of PC

-20 °C to +90 °C with window out of glass

Degree of protection: IP66

Technical data	
Rated voltage:	Up to 1500 V
Rated current:	Max. to 400 A
Conductor size:	Max.300 mm <sup>2</sup>
Protective cross section	Max. 120 mm <sup>2</sup>

Thread stud of the earth bolt compl. .... M6x60, M8x50, M10x60, M12x80

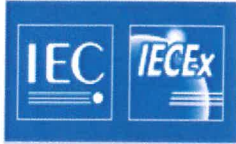


Enclosure standard

No.	Enclosure Type	Height [mm]	Width [mm]	Depth [mm]	No.	Enclosure Type	Height [mm]	Width [mm]	Depth [mm]
1.	90.06 06 03	64	58	34	21.	90.16 56 09	160	560	91
2.	90.06 10 03	64	98	34	22.	90.18 18 10	180	180	101
3.	90.06 15 03	64	150	34	23.	90.18 28 10	180	280	101
4.	90.08 08 06	80	75	57	24.	90.23 10 11	230	100	111
5.	90.08 13 06	80	125	57	25.	90.23 20 11	232	202	111
6.	90.08 18 06	80	175	57	26.	90.23 20 18	232	202	181
7.	90.08 25 05	80	250	52	27.	90.23 28 11	230	280	111
8.	90.10 10 08	100	100	81	28.	90.23 33 11	230	330	111
9.	90.10 16 08	100	160	81	29.	90.23 33 18	230	330	181
10.	90.10 20 08	100	200	81	30.	90.23 40 11	230	400	111
11.	90.12 12 08	120	122	81	31.	90.23 40 23	230	400	225
12.	90.12 12 09	120	220	91	32.	90.23 60 11	230	600	111
13.	90.12 22 08	120	220	81	33.	90.31 40 11	313	404	111
14.	90.12 22 09	120	220	91	34.	90.31 40 14	312	403	141
15.	90.12 36 08	120	360	81	35.	90.31 40 18	313	404	181
16.	90.14 14 09	140	140	91	36.	90.31 40 23	313	404	227
17.	90.14 20 09	140	200	91	37.	90.31 60 11	310	600	111
18.	90.16 16 09	160	160	91	38.	90.31 60 18	310	600	181
19.	90.16 26 09	160	260	91	39.	90.60 60 20	600	600	202
20.	90.16 36 09	160	360	91					

Max. Power Dissipation of Aluminium Enclosures

Gehäuse Typ Enclosure Type	Max. Verlustleistung Max. Power Dissipation [Watt]	Gehäuse Typ Enclosure Type	Max. Verlustleistung Max. Power Dissipation [Watt]
25.06 06 03	5.7	25.16 56 09	107.1
25.06 10 03	8.3	25.18 18 10	49.8
25.06 15 03	11.8	25.18 28 10	68.7
25.08 08 06	10.9	25.23 10 11	45.1
25.08 13 06	15.5	25.23 20 11	68.9
25.08 18 06	20.1	25.23 20 18	92.5
25.08 25 05	25.8	25.23 28 11	86.3



Gehäuse Typ <i>Enclosure Type</i>	Max. Verlustleistung <i>Max. Power Dissipation [Watt]</i>	Gehäuse Typ <i>Enclosure Type</i>	Max. Verlustleistung <i>Max. Power Dissipation [Watt]</i>
25.10 10 08	19.2	25.23 33 11	97.8
25.10 16 08	26.5	25.23 33 18	127.3
25.10 20 08	31.4	25.23 40 11	113.8
25.12 12 08	24.9	25.23 40 23	167.3
25.12 12 09	26.8	25.23 60 11	159.7
25.12 22 08	38.2	25.31 40 11	145.3
25.12 22 09	40.7	25.31 40 14	160.9
25.12 36 08	57.1	25.31 40 18	183.3
25.14 14 09	32.8	25.31 40 23	208.3
25.14 20 09	42.1	25.31 60 11	199.6
25.16 16 09	39.6	25.31 60 18	246.7
25.16 26 09	56.5	25.60 60 20	428.7
25.16 36 09	73.4		

The rated values are maximum values, the actual electrical values depend on the electrical equipment incorporated. Within the scope of these maximum permissible values and with due regard to the standards, the manufacturer specifies the final rated values dependent on the system conditions, mode of operation, utilization category, etc. The characteristic values of the intrinsically safe circuits are to be given by the manufacturer on his own responsibility. Further technical details have been specified in the test documents.

The composition of the symbol specifying the type of protection depends on the types of protection of the components used.

The maximum permissible ambient temperature range of the terminal housing can be limited by the maximum permissible ambient temperature ranges of the separately certified equipment.

#### Nomenclature

25.	**	**	**
1	2	3	4

- 1: Type, material aluminium
- 2: Length or product line (see above)
- 3: Width or number depending on product line
- 4: Depth or number depending on product line





#### Additional Advices

The empty enclosure with a coating must not be used in areas affected by charge-producing processes, mechanical friction and separation processes, electron emission (e.g. in the vicinity of electrostatic coating equipment), and pneumatically conveyed dust.

Components attached or installed (terminal compartments, bushings, Ex-type cable glands, connectors) shall be of a technical standard that at least complies with the specifications on the cover sheet, and they shall have a separate examination certificate. The operating conditions specified in the component certificates must definitely be complied with, and the operating instructions must include a note to inform the operating company of this equipment. The method used for assessing the suitability of the used component must be documented in a verifiable manner in compliance with the QM system.

For repair of separately certified components, the EU-Type Examination for these components must be observed.

Equipment of the type of protection intrinsic safety "i" according to IEC 60079-11 is to be installed in such a way that the distances, creepage distances und clearances between intrinsically safe circuits and non-intrinsically safe circuits required according to EN 60079-14 are complied with.

When more than one intrinsically safe circuit is used, the rules for interconnection are to be observed.

Degree of protection IP66 will be safeguarded only when sealing and cable entry fittings are properly fitted. The manufacturer's instructions must be followed.

Installation of the components in the electrical apparatus shall be made such that the local temperatures will be within the operating temperature range.

#### Notes for manufacturing and operation

Each device needs to be evaluated concerning the max. allowed temperature limit according to the relevant temperature class and concerning the limiting temperature of the materials. This evaluation needs to be done within the engineering process and must be complemented by an additional temperature measurement in any case doubt. The admissible ambient temperature ranges of the built-in components may not be exceeded at the place of installation.