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

Certificate No.: IECEx PTB 08.0006X

Issue No: 2

Certificate history:
Issue No. 2 (2018-03-27)
Issue No. 1 (2012-02-29)
Issue No. 0 (2008-03-07)

Status: **Current**

Date of Issue: **2018-03-27**

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

Equipment: **Connection and Junction Box and Control Box Type 05.XX XX XX and 15.XX XX XX**

Optional accessory:

Type of Protection: **Different**

Marking:

Ex db eb ia [ia] mb IIC T4, T5, T6 Gb

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)

Date: 27.03.18

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.

Certificate issued by:

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

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin

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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 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:

IEC 60079-0 : 2017 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-1 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-18 : 2014 Edition:4.0	Explosive atmospheres – Part 18: Equipment protection by encapsulation "m"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure **"t"**
IEC 60079-7 : 2015 Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

*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/ExTR08.0006/02

Quality Assessment Report:

DE/EPS/QAR17.0003/02

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Description of equipment
The power distribution, switch and control gear assembly, type 05.XX XX XX (Increased Safety) and 15.XX XX XX (Intrinsic Safety), 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 equipment, 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, Nomenclature, Notes for manufacturing and operation and Assembly tables: see Annex

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.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

- Update of the state of standards IEC 60079-0:2011 (Ed. 6), IEC 60079-7:2015 (Ed. 5), IEC 60079-11:2011(Ed.6), IEC 60079-31:2013 (Ed. 2)
- Implementation of Specific Conditions of Use for an enclosure with a coating

Annex:

Annex_Manufacturing_Locations_080006X-02.pdf

COCA_08.0006X_02.pdf

Applicant:	ROSE Systemtechnik GmbH Erbeweg 13-15 32457 Porta Westfalica Germany
Electrical Apparatus:	Power distribution, switch and control gear assembly type 05.XX XX XX and 15.XX XX XX

List of Manufacturing Locations:

1. Rose Systemtechnik GmbH
   Erbeweg 13-15
   32457 Porta Westfalica
   Germany
2. Phoenix Mecano (India) Private Limited
   Plant - I & II, Pirangut Industrial Area, Post Ghotawade, Plot 288/389
   Village Bhare, Taluka Mulshi, Dist Pune – 412 115
   India
3. Phoenix Mecano (India) Private Limited
   Plant - III, GatNo 408, 410 & 412
   Village Urse, Taluka Maval, Talegaon Urse Road, Dist Pune - 410 506
   India
4. Phoenix Mecano S.E. Asia Pte. Ltd.
   35 Ubi Ave 3#04-01, Colorscan Building
   Singapore 408863
   Singapore
5. Phoenix Mecano Kecskemet KFT
   Istvan kiraly krt. 24
   6000 Keskemet
   Hungary
6. Phoenix Mecano Inc.
   7330 Executive Way
   MD 21704 Frederick
   United States
7. PM Komponenten N. V.
   Karrewegstraat 124
   9800 Deinze
   Belgium

8. PM Komponenten B. V.
   Havenstraat 100
   7005 AG Doetinchem
   Netherlands

9. Mecano Components Co. Ltd/012
   No. 1001, Jiaqian Road, Nanxiang, Jiading District
   Shanghai P.R.C. 201802
   China

Applicant:	ROSE Systemtechnik GmbH Erbeweg 13-15 32457 Porta Westfalica Germany
Electrical Apparatus:	Power distribution, switch and control gear assembly type 05.XX XX XX and 15.XX XX XX

Description

The power distribution, switch and control gear assembly, type 05.XX XX XX and 15.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 equipment, 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

Ambient temperature:

-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 500 A
Conductor size:	Max. 300 mm²
Protective cross section	Max. 150 mm²

Thread rod of the earth bolt: M6x60, M8x50, M10x60, M12x80

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Postfach 33 45, 38023 Braunschweig, Germany
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Enclosure standard and max. Power Dissipation of Aluminium Enclosures

No.	*Product Type*	*Height* [mm]	*Width* [mm]	*Depth* [mm]	*Max. Power Dissipation* [W] (dT 40 °K)
1	XX. 06 06 03	64	58	34	5
2	XX. 06 10 03	64	98	34	8
3	XX. 06 15 03	64	150	34	11
4	XX. 08 08 06	80	75	57	10
5	XX. 08 13 06	80	125	57	15
6	XX. 08 18 06	80	175	57	20
7	XX. 08 25 05	80	250	52	25
8	XX. 10 10 08	100	100	81	19
9	XX. 10 16 08	100	160	81	26
10	XX. 10 20 08	100	200	81	31
11	XX. 12 12 08	120	122	81	24
12	XX. 12 12 09	120	122	91	26
13	XX. 12 22 08	120	220	81	38
14	XX. 12 22 09	120	220	91	40
15	XX. 12 22 12	120	220	121	45
16	XX. 12 36 08	120	360	81	57
17	XX. 14 14 09	140	140	91	32
18	XX. 14 20 09	140	200	91	42
19	XX. 16 16 09	160	160	91	39
20	XX. 16 26 09	160	260	91	56
21	XX. 16 36 09	160	360	91	73
22	XX. 16 56 09	160	560	91	107
23	XX. 18 18 10	180	180	101	49
24	XX. 18 28 10	180	280	101	68
25	XX. 23 10 11	230	100	111	45
26	XX. 23 20 11	232	202	111	68
27	XX. 23 20 18	232	202	181	92
28	XX. 23 28 11	230	280	111	86
29	XX. 23 33 11	230	330	111	97
30	XX. 23 33 18	230	330	181	127
31	XX. 23 40 11	230	400	111	113

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No.	*Product Type*	*Height* [mm]	*Width* [mm]	*Depth* [mm]	*Max. Power Dissipation* [W] (dT 40 °K)
32	XX. 23 40 23	230	400	225	208
33	XX. 23 60 11	230	600	111	159
34	XX. 31 40 11	313	404	111	145
35	XX. 31 40 14	313	404	141	160
36	XX. 31 40 18	313	404	181	183
37	XX. 31 40 23	313	404	227	208
38	XX. 31 60 11	310	600	111	199
39	XX. 31 60 18	310	600	181	246
40	XX. 60 60 20	600	600	201	428

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

XX.	**	**	**
1	2	3	4

1: Type, material aluminium
2: Length
3: Width
4: Depth

Type reference:

Increased Safety
05.XX XX XX Ex Aluminium standard

Intrinsic Safety / mixed assembled
15.XX XX XX Ex Aluminium standard

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Additional Advices

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 IECEx 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 of doubt. The admissible ambient temperature ranges of the build-in components may not be exceeded at the place of installation.

Specific conditions of use

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 viciity of electrostatic coating equipment), and pneumatically conveyed dust.

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