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 ITS 22.0015X**	Page 1 of 5	Certificate history:
Status:	**Current**	Issue No: 2	Issue 1 (2023-04-18) Issue 0 (2022-07-26)
Date of Issue:	2024-10-14		

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

Equipment: **Power Distribution, Switchgear and Control Assembly – ELJB Series (ELJB 01 to ELJB 05)**

Optional accessory:

Type of Protection: **Flameproof and Dust Ignition Protection by Enclosure**

Marking: Ex db IIB T4…T6 Gb or

Ex db IIB+H_2 T4…T6 Gb and/or

Ex tb IIIC T135°C …T85°C Db IP66

-20°C ≤ Ta ≤ +40°C …+110°C

IECEx ITS 22.0015X

Approved for issue on behalf of the IECEx Certification Body: **Mark Newman**

Position: **Certificate Officer**

Signature: (for printed version)

Date: (for printed version) 2024.10.14 09:30:16 +01'00'

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Intertek Testing & Certification Limited
ITS House, Cleeve Road
Leatherhead
Surrey, KT22 7SA
United Kingdom

IECEx Certificate of Conformity

Certificate No.: **IECEx ITS 22.0015X**

Date of issue: 2024-10-14

Issue No: 2

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

Manufacturing locations:

ROSE Systemtechnik GmbH
Erbeweg 13-15
D-32457 Porta Westfalica
Germany

Phoenix Mecano Kecskemét
Szent István krt. 24
Kecskemét 6000
Hungary

Phoenix Mecano B.V.
Havenstraat 100
7005 AG Doetinchem
Netherlands

See following pages for more 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 Edition:7.0 — Explosive atmospheres - Part 0: Equipment - General requirements

IEC 60079-1:2014 Edition:7.0 — Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"

IEC 60079-31:2022 Edition:3.0 — Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"

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 Reports:

GB/ITS/ExTR22.0015/00 GB/ITS/ExTR22.0015/01 GB/ITS/ExTR22.0015/02

Quality Assessment Report:

DE/EPS/QAR17.0003/64

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

Power Distribution, Switchgear and Control Assembly - ELJB series (ELJB 01, ELJB 02, ELJB 03, ELJB 04 and ELJB 05) are assembled utilising empty enclosures certified under certificate number IECEx ITS 22.0011U.

See Annex for full description.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- LED Indicating lamps. If assembled, are suitable for low risk of mechanical danger.
- Equipment provided with Control Accessories i.e., Indicating lamps, Push button and Rotary actuators; and or powder coating or liquid painting and intended for use in Group III applications, may pose risk of electrostatic discharge, hence clean with damp cloth.
- Equipment must be installed in vertical position only.
- Yield strength of lid fixing fasteners shall be ≥ 450MPa.
- Refer Instruction manual for proper selection of cables and cable glands or conductors in conduit.
- No modifications must be made to the flamepaths of the unit without consultation of the drawings listed on the Ex-Certificates.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 01 :

- Correction to justifications within original reports.
- Additional Routine Test:

"If control accessories are fitted, manufacturer needs to perform earth continuity check between exposed metal part of control accessories and metal enclosure on which it is fixed".

- Update to control document Ex.PMI.ELJB.201-2 to include additional Routine Test.

Issue 02 :

- Addition of Model ELJB 05.
- Update of the IEC 60079-31:2022.
- Specific Conditions of Use modified from "Use cables suitable for rated T Class operating temperature referring to marking as per recommendation of IEC 60079-14" to "Refer Instruction manual for proper selection of cables and cable glands or conductors in conduit."
- Update of the description, drawings and installation manual to reflect the above changes.

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Additional manufacturing locations:

Phoenix Mecano Saudi Arabia LLC
Building no 3267
King Abdul Aziz Road Unit No 1
Dharan
Dammam 3451
Saudi Arabia

Phoenix Mecano Inc.
7330 Executive Way
Frederick MD 21704
United States of America

Rose Systemtechnik Middle East
B.o. Box 8993
Sharjah
United Arab Emirates

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

Phoenix Mecano nv
Karrewegstraat 124
Deinze 9800
Belgium

Phoenix Mecano S.E. Asia Pte. Ltd.
53 Ubi Ave 3#04-01
Travelite Building
Singapore 408863
Singapore

Phoenix Mecano India Pvt Ltd (Plant-I)
Pirangut Industrial Area, Post Ghotawade Plot 388/389
Village Bhare, Taluka Mulshi
District Pune 412115
India

Phoenix Mecano India Pvt Ltd (Plant III)
Village Urse, GAT NO. 408, 410 & 412
Taluka Maval
District Pune 410506
India

Annex:

SFT IECEx OP 19f Annex 1 for IECEx CoC ELJB_1.pdf

Annex to IECEx Certificate of Conformity

Certificate No:	IECEx ITS22.0015X	Issue No. 2
Annex No. 1		

Technical Documents			
Title:	Drawing No.:	Rev. Level:	Date:
*Power Distribution, Switchgear and Control Assembly – ELJB series (Sheet 1 of 4)	Ex.PMI.ELJB.201-2	2	15.05.2024
*Power Distribution, Switchgear and Control Assembly – ELJB series (Sheet 2 of 4)	Ex.PMI.ELJB.201-2	1	15.05.2024
*Power Distribution, Switchgear and Control Assembly – ELJB series (Sheet 3 of 4)	Ex.PMI.ELJB.201-2	1	15.05.2024
*Power Distribution, Switchgear and Control Assembly – ELJB series (Sheet 4 of 4)	Ex.PMI.ELJB.201-2	0	15.05.2024
*Instruction Manual for Power Distribution, Switchgear and Control Assembly – ELJB Series.	IM.ELJB.X	1	15.05.2024

Note: An * is included before the title of documents that are new or revised.

DESCRIPTION OF THE EQUIPMENT OR PROTECTIVE SYSTEM

Power Distribution, Switchgear and Control Assembly - ELJB series (ELJB 01, ELJB 02, ELJB 03, ELJB 04 and ELJB 05) are assembled utilising empty enclosures certified under certificate number IECEx ITS 22.0011U. The assembly provides a degree of ingress protection of IP66. Enclosures are fabricated from stainless steel SS304 or SS316L or Mild Steel plates.

They can be used as control panel or terminal box for power, control, instrumentation, heat trace, battery charger and UPS etc. containing all type of electrical/electronic power components (e.g., Switch, MCB, MPCB, MCCB, contactors, transformers, rectifiers, invertors, relays, transducers, isolators, barriers, power supply, PLC, IO's, PCB etc.), bus bars and or terminals in numbers and combination as required.

Electrical/ electronic components may be placed inside enclosures in any arrangement provided that an area of at least 20% for IIB and 40% for IIB+H_2 of each cross-sectional area remains free. Separate relief areas may be aggregated provided that each area has a minimum dimension in any direction of 12.5mm.

The rating of components, bus bars and terminals will generally be up to 1.1kV AC/DC subject to max permissible watt dissipation as shown hereunder. Declared voltage rating is nominal and items having higher voltage rating as required may be populated inside enclosure subject to required creepage and clearance and within permitted watt dissipation.

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Annex No. 1		

T Class	Dust temp Marking*	Max ambient temp	Max Watt Dissipation (W) Type				
			ELJB 01	ELJB 02	ELJB 03	ELJB 04	ELJB 05
T6	T85°C	+40°C	167	227	380	455	956
		+50°C	112	145	268	318	649
		+60°C	80	95	186	227	452
T5	T100°C	+40°C	214	309	564	705	1355
		+50°C	168	245	418	527	1037
		+55°C	167	227	380	455	956
		+60°C	132	187	318	395	792
		+65°C	112	145	268	318	649
		+75°C	80	95	186	227	452
T4	T135°C	+40°C	422	672	1054	1336	2668
		+50°C	376	600	923	1136	2339
		+60°C	318	518	800	982	2012
		+75°C	214	309	564	705	1355
		+85°C	168	245	418	527	1037
		+90°C	167	227	380	455	956
		+95°C	132	187	318	395	792
		+100°C	112	145	268	318	649
		+110°C	80	95	186	227	452

Note: * Without dust layer

Lid may be populated with IECEx ITS 16.0002U certified control accessories (e.g., various type of PB actuators, rotary actuator for switching devices and LED Indicating lamp etc.) in required numbers & combination as shown hereunder. These control accessories can be populated on sides of base of enclosure also if required. Lid may also be populated with display window, for Indicating or control instruments with display, number and size as shown hereunder. Smaller size display window can be provided e.g. 120x90 mm instead of 140x140 mm without altering glass thickness.

Type	Dimensions WxHxD (mm)	Max Rated Current (A)	Max Conductor Size (mm^2)	Max. no. of control accessories	Display window (mm)		
					44x44	92x92	140x140
ELJB 01	390x540x264	850	500	35	1	2	1
ELJB 02	510x660x297	935	630	63	1	2	1
ELJB 03	620x870x313	1055	1000	96	1	2	1
ELJB 04	730x930x325	1055	1000	130	1	2	1
ELJB 05	920x1390x498	1055	1000	130	1	2	1

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Note: Max rated current is for single run of conductors and can be increased by terminating multiple runs of conductors subject to permissible watt dissipation.

The rated service temperature of LED indicating lamps is "-60°C to +100°C" and hence they shall be provided on equipment having T Class as T6 & T5 and or dust temperature rating as +85°C or +100°C.

Power distribution, switchgear and control assembly may be formed consisting of one or more enclosures of this ELJB series and other certified enclosures using suitably rated and certified bushing and or conduit accessories referring to the enclosure marking. A minimum distance of 30mm in case of IIB and 40mm in case of IIB+H_2 shall be maintained from flange joint.

These enclosures contain one internal and one external earthing. The enclosures are provided with threaded holes in the wall of the enclosure for cable glands, breather, bushings, conduit fittings, adapters and stopping plugs etc.

Required Manufacturer Routine Testing

Test	Title/Description of Test	Standard and Clause
1	A routine overpressure test was carried out by the manufacturer on ELJB series (ELJB 01, ELJB 02, ELJB 03, ELJB 04 and ELJB 05) empty enclosures certified under IECEx ITS 22.0011U as per clause 16.0 of IEC 60079-1.	IEC 60079-1:2014 Clause 16.1
2	If control accessories are fitted, manufacturer needs to perform earth continuity check between exposed metal part of control accessories and metal enclosure on which it is fixed.	IEC 60079-0:2017