



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

Ex COMPONENT CERTIFICATE

Certificate No.: **IECEX ITS 22.0011U** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2022-07-25

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

Ex Component: ELJB Series Empty Enclosures

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

Marking: Ex db IIB Gb or
Ex db IIB+H2 Gb and/or
Ex tb IIIC Db IP66
IECEX ITS22.0011U

Approved for issue on behalf of the IECEx
Certification Body:

Mark Newman

Position:

Certificate Officer

Signature:
(for printed version)

Date:
(for printed version)

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Certificate issued by:

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

intertek



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

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

**Additional Manufacturing Locations
are included in Annex 2**

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 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 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

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

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

TEST & ASSESSMENT REPORTS:

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

Test Report:

GB/ITS/ExTR22.0010/00

Quality Assessment Report:

DE/EPS/QAR17.0003/42



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

Empty enclosures ELJB series (ELJB 01, ELJB 02, ELJB 03 and ELJB 04) are fabricated from Stainless steel SS304 or SS 316L or Mild Steel plates. The lid may contain display windows made of toughened, heat & impact resistant glass, permanently sealed with silicon sealant and threaded entries for Ex control accessories.

See Annex 1 for further details

SCHEDULE OF LIMITATIONS:

1. Refer instruction manual for maximum number, size, and location of entries.
2. Oil filled circuit breaker and contactors shall not be used.
3. The rated ambient temperature of these enclosures with or without display window is “-20°C to +110°C”.
4. The rated service temperature of these enclosures with or without display window is “-20°C to +135°C”.
5. T Class, Max. surface temperature and ambient temperature to be marked as per watt dissipation table during equipment certification.
6. Marking Label to be fixed inside enclosure being empty enclosure.
7. Yield strength of lid fixing fasteners shall be $\geq 450 \text{ N/mm}^2$ (MPa).
8. The continuous effects of devices, such as rotating devices, which can create significant turbulence that may result in an increase in reference pressure shall be considered during equipment certification.
9. Equipment inside empty enclosure may be placed in any arrangement provided that an area of at least 40% of each cross section remains free when marked IIB+H₂ and an area of at least 20% free when marked IIB. Separate relief areas may be aggregated provided that each area has a minimum dimension in any direction of 12.5mm.
10. No modifications must be made to the flamepaths of the unit without consultation of the drawings listed on the Ex-Certificate.
11. Only suitably certified bushings and or conduit fittings to be used referring to the enclosure marking to connect to other certified enclosures. Minimum distance of obstructions from flameproof flange openings shall be 30mm for IIB and 40mm for IIB+H₂.
12. For enclosures provided with powder coating or liquid painting and intended for use in Group III applications, may pose risk of electrostatic discharge, hence clean with damp cloth only.

Annexes:

[SFT IECEx OP 19f Annex 1 for IECEx Certificate of Conformity_1.pdf](#)

[SFT IECEx OP 19f Annex 2 for IECEx CoC Add Manufacturing locations.pdf](#)

Annex to IECEx Certificate of Conformity

Certificate No:	IECEx ITS22.0011U	Issue No. 0
Annex No. 1		

Technical Documents			
Title:	Drawing No.:	Rev. Level:	Date:
Empty enclosures - ELJB Series (4 Sheets)	Ex.PMI.ELJB.201-1	0	11.01.2022
Instruction Manual for configuration of equipment's from ELJB Series empty enclosures	IM.ELJB.U	0	11.01.2022

DESCRIPTION OF THE EQUIPMENT OR PROTECTIVE SYSTEM

Empty enclosures ELJB series (ELJB 01, ELJB 02, ELJB 03 and ELJB 04) are fabricated from Stainless steel SS304 or SS 316L or Mild Steel plates. The lid may contain display windows made of toughened, heat & impact resistant glass, permanently sealed with silicon sealant and threaded entries for Ex control accessories.

The enclosure is provided with bolted lid having flange joint. In case of flameproof enclosure ingress protection of IP66 as per IEC 60529 is achieved by application of silicone grease to flange surface of base and lid or providing O Ring of Silicone in flange joint between lid & base as an option. However, in case of Ex tb enclosures ingress protection IP66 with silicon grease is not allowed and silicon O ring to achieve the same will be provided by default.

Enclosures shall be used within permissible watt dissipation as under:

TYPE No.	T Class	T6			T5			T4		
	*Max. surface temperature	T85°C			T100°C			T135°C		
	Max ambient temperature	+40°C	+50°C	+60°C	+40°C	+50°C	+60°C	+40°C	+50°C	+60°C
ELJB 01	Max Watt Dissipation	167	112	80	214	168	132	422	376	318
ELJB 02		227	145	95	309	245	187	672	600	518
ELJB 03		380	268	186	564	418	318	1054	923	800
ELJB 04		455	318	227	705	527	395	1336	1136	982

Note: * Without dust layer

The watt dissipation values for T6 at 40°C, 50°C and 60°C can be extrapolated for T5 at higher ambient of 55°C, 65°C and 75°C and for T4 at higher ambient of 90°C, 100°C and 110°C and similarly watt dissipation values for T5 at 40°C, 50°C and 60°C can be extrapolated for T4 at higher ambient of 75°C, 85°C and 95°C.

Lid may be populated with separately 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. Lid may also be populated with display window, for Indicating or control instruments with display, number and size as shown hereunder. These control accessories or display window can be populated on sides of base of enclosure also if required.

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Type	Dimensions (mm)			Max. no. of control accessories	Display window (mm)		
	Width	Height	Depth		44x44	92x92	140x140
ELJB 01	390	540	264	35	01	02	01
ELJB 02	510	660	297	63	01	02	01
ELJB 03	620	870	313	96	01	02	01
ELJB 04	730	930	325	130	01	02	01

Note: Smaller size display window can be provided e.g., 60x90 instead of 92x92 without reducing the thickness of glass.

The ELJB series empty enclosures contains 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.

One or more enclosures of this ELJB series and other certified enclosures may be joined using separately certified sealed wire bushing and or conduit accessories.

Required Manufacturer Routine Testing						
Test	Title/Description of Test				Standard and Clause	
1	A routine overpressure test shall be carried out by the manufacturer on flameproof enclosures of ELJB Series at pressure in bar for a period of at least 10 seconds and test results recorded.				IEC 60079-1:2014 Clause 16.1	
	The overpressure test shall be considered satisfactory if no permanent deformation or damage invalidating the type of protection is observed, the joints in no place have been permanently enlarged and no leakage through the walls of enclosure and cemented joint shall be observed and test results must be recorded.					
	Enclosure	ELJB 01	ELJB 02	ELJB 03		ELJB 04
	(bar)					
	Pressure for min ambient of "-20°C"	11.3	11.3	11.5	10.1	



Annex to IECEx Certificate of Conformity

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Additional Manufacturing Locations

Phoenix Mecano Kecsemet KFT
Szent István krt. 24
6000 Hungary

PM Komponenten N.V.
Karrewegstraat 124
9800 Deinze
Belgium

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

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

Phoenix Mecano (India) Private Limited
Pirangut Industrial Area, Post Ghotawade
Plot 388, Village Bhare, Taluka Mulshi
Dist. Pune - 412115 India


Phoenix Mecano India Pvt. Ltd
Plant III, Gat No 408, 410 & 412,
Village - Urse, Taluka - Maval, Talegaon Urse Road,
Dist. Pune - 410506, India

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

Phoenix Mecano Inc.
7330 Executive Way Frederick
MD 21704 USA

Phoenix Mecano Saudi Arabia LLC,
Building no 3267, king Abdul Aziz Road Unit No1, Dharan 3451,
Dammam, Kingdom of Saudi Arabia

Rose Systemtechnik Middle East, P.O. Box 8993, Sharjah, U.A.E

Certificate issued by:	Intertek Testing & Certification Ltd. Intertek House, Cleeve Road, Leatherhead, Surrey, KT22 7SA, UK	Page 1 of 1
 Total Quality. Assured.		SFT-IECEx-OP-19f (26 October 2018)