



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

### Ex COMPONENT CERTIFICATE

Certificate No.: **IECEX ITS 21.0031U** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2022-04-27

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

Ex Component: EJS 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 IIC Gb  
Ex tb IIIC Db IP66  
IECEX ITS 21.0031U

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/ExTR21.0030/00**

Quality Assessment Report:

**DE/EPS/QAR17.0003/42**



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

Empty enclosures EJS series (EJS 01, EJS 02, EJS 03 and EJS 04) are made of cast aluminium alloy or cast Stainless steel SS304 or SS 316L or Cast Iron. 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 details

## SCHEDULE OF LIMITATIONS:

1. The enclosures of cast stainless steel or cast iron can be offered as flameproof only and not for dust atmosphere and cannot have display window.
2. Oil-filled circuit breakers and contactors shall not be used.
3. The content of the enclosures may be placed in any arrangement provided that an area of at least 40% 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.
4. For enclosures provided with powder coating or liquid painting and intended for use in Group III applications, the user shall minimise the risk from electrostatic discharge by suitable selection and installation.
5. The rated service temperature range for the non-metallic material is -20°C or -60°C to +135°C.
6. No modifications must be made to the flame paths as they differ from the values stated in IEC 60079-1. Contact the manufacturer on the dimension of the flameproof joints.
7. Yield strength of lid fixing fasteners shall be  $\geq 450\text{Mpa}$  with tolerance class 6g.
8. Only suitably certified bushings to be used referring to the enclosure marking to connect to other certified enclosures.

## Annexes:

[SFT IECEx OP 19f Annex 1 for IECEx Certificate of Conformity EJS\\_1.pdf](#)  
[SFT IECEx OP 19f Annex 2 for IECEx CoC Add Manufacturing locations.pdf](#)

## Annex 1 to IECEx Certificate of Conformity

<b>Certificate No:</b>	<b>IECEx ITS21.0031U</b>	<b>Issue No. 0</b>
<b>Annex No. 1</b>		

Technical Documents				
Title:	Drawing No.:	Rev. Level:	Date:	
Empty enclosures - EJS Series (Sheet 1 of 4)	Ex.PMI.EJS.201-1	0	01.11.2021	
Empty enclosures - EJS Series (Sheet 2 of 4)	Ex.PMI.EJS.201-1	0	01.11.2021	
Empty enclosures - EJS Series (Sheet 3 of 4)	Ex.PMI.EJS.201-1	0	01.11.2021	
Empty enclosures - EJS Series (Sheet 4 of 4)	Ex.PMI.EJS.201-1	0	01.11.2021	
Instruction manual for configuration of equipments from EJS series empty Enclosures	IM.EJS.U	0	01.11.2021	

### DESCRIPTION OF THE COMPONENT

Empty enclosures EJS series (EJS 01, EJS 02, EJS 03 and EJS 04) are made of cast aluminium alloy or cast Stainless steel SS304 or SS 316L or Cast Iron. 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 conical joint. In case of flameproof enclosure ingress protection of IP 66 as per IEC 60529 is achieved by application of silicone grease to flange surface of base & 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		
	Dust Temp Marking *	T85°C			T100°C			T135°C		
	Max ambient temp	+40°C	+50°C	+60°C	+40°C	+50°C	+60°C	+40°C	+50°C	+60°C
EJS 01	Max Watt Dissipation (W)	87	63	39	123	100	76	209	185	161
EJS 02		140	104	63	200	160	121	331	293	257
EJS 03		200	148	93	284	228	175	470	417	364
EJS 04		295	218	140	415	327	259	684	606	530

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

## Annex 1 to IECEx Certificate of Conformity

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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.

Type	Dimensions (mm)			Max. no. of control accessories	Display window (mm)			
	Width	Height	Depth		44x44	92x92	140x140	186x186
EJS 01	270	320	166	9	1	1	X	X
EJS 02	330	430	291	20	1	1	1	X
EJS 03	400	550	277	35	1	2	1	1
EJS 04	530	630	311	56	1	2	1	1#
<p># Note 1. All windows as above allowed in all the enclosures for both "-20°C" and "-60°C" except 186x186 window allowed in EJS 04 for "-20°C" only.</p> <p>Note 2. Smaller size display window can be provided e.g., 60x90 instead of 92x92 without reducing the glass thickness.</p>								

The EJS 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, bushings, conduit fittings and stopping plugs.

One or more enclosures of this EJS 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	<p>A routine overpressure test shall be carried out by the manufacturer on each flameproof enclosures of EJS Series at pressure in bar as detailed below with for a period of at least 10 seconds and test results recorded.</p> <p>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 observed. The enclosure shall withstand the pressure without suffering permanent deformation of the joints, which means the measurement before and after the pressure test in order to evaluate a deformation.</p>				IEC 60079-1:2014 Clause 16.0	
	Enclosure			EJS 01	EJS 02	EJS 03
				(bar)		
	Test Pressure for minimum ambient of "-20°C"			12.0	11.0	12.9
	Test Pressure for minimum ambient of "-60°C"			19.5	17.8	20.9



## Annex to IECEx Certificate of Conformity

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<b>Annex No. 2</b>		

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