

# EU-Type Examination Certificate



1. **EU-TYPE EXAMINATION CERTIFICATE**

2. **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU**

3. **EU-Type Examination Certificate Number: ITS15ATEX18302X Issue 02**

4. **Product:** Power Distribution, Switchgear and Control Assembly - EJB series

5. **Manufacturer:** ROSE Systemtechnik GmbH

6. **Address:** Erbeweg 13-15  
32457 Porta Westfalica  
Germany

7. This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8. Intertek Testing and Certification Limited, Notified Body number 0359 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of the products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificate referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. New issues of such EC-Type Examination Certificates, and Supplementary Certificates to such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.

The examination and test results are recorded in confidential Intertek Report Reference No. G102913924 dated March 2017 and Intertek India Report Reference no. CE-JOB-DEL-17-000103-001 to 004 (G102913924) dated March 2017.

9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2012+A11:2013, EN 60079-1:2014 and EN 60079-31:2014 except in respect of those requirements referred to at item 16 of the Schedule.

10. If the sign "X" is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Safe Use specified in the Schedule to this certificate.

11. This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12. For marking information see Schedule:

**Intertek Testing & Certification Limited**  
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**V K Varma**  
**Certification Officer**  
**13<sup>th</sup> April 2017**

## SCHEDULE

### EU-TYPE EXAMINATION CERTIFICATE NUMBER ITS15ATEX18302X Issue 02

#### 13. Description of Equipment or Protective System

The apparatus is a series of three Flameproof Control Station Enclosures - EJB Series (EJB 01, EJB 02 & EJB 03). The material of construction of enclosure assembly is EN AC-AISI12 (a) (EN AC 44200) Al alloy as per EN 1706 or alternate suitable material of SS 304 or 316L or Cast Iron. The lid is bolted to the enclosure through the flange by M8x30mm fasteners of grade A2-70 with a yield stress of  $\geq 450$  MPa. Silicone grease (Anabond 662) or O ring of Silicone may be provided between base & lid for ingress protection of IP66 in accordance with IEC 60529. In the case of Ex tb enclosures, which are intended for dust environment, Silicone O ring must be fitted by default.

Entries are provided for the accommodation of appropriately rated and certified cable/conduit entry devices.

Type No.	Dimensions (mm)		
	W	H	D
EJB 01	170	220	152
EJB 02	220	270	158
EJB 03	270	320	166

Type No.	Permissible Cable Entries									
	M20 or ½" NPT		M25 or ¾" NPT		M32 or 1" NPT		M40 or 1 ¼" NPT		M50 or 1 ½" NPT	
	Short Side	Long Side	Short Side	Long Side	Short Side	Long Side	Short Side	Long Side	Short Side	Long Side
EJB 01	04	06	02	04	01	02	-	-	-	-
EJB 02	06	08	04	05	03	04	02	03	-	-
EJB 03	08	10	06	08	04	05	03	03	02	03

These enclosures can be used as control station or enclosures for mounting of electrical / electronic components (e.g. PB, LED Indicating lamps, Switch, MCB, MPCB, Contactors, transformers, relays, transducers, isolators, barriers etc.) of up to 1.1 KV AC/DC subject to max permissible watt dissipation as shown hereunder.

Type No.	T Class	T6	T5	T6	T5
	Ambient Temp	-20°C ≤ Ta ≤ +40°C	-20°C ≤ Ta ≤ +55°C	-20°C ≤ Ta ≤ +60°C	-20°C ≤ Ta ≤ +75°C
EJB 01	Permissible	60W	60W	36W	36W
EJB 02	Watt	76W	76W	42W	42W
EJB 03	Dissipation	87W	87W	60W	60W

Alternatively, the lid may be populated with separately certified control components (combination of various types of PB actuators, rotary actuator for Switch & MCB, LED indicating lamp etc.) in required number & combination in permissible numbers as shown hereunder. LID may also be populated with a display window within permissible limit as shown in the following table:

Type No.	Max Number of control components	Display Window (mm)			
		44x44	68x68	92x92	140x140
EJB 01	04	01	-	-	-
EJB 02	09	04	01	01	-
EJB 03	16	09	04	01	01

Note: Display window size can vary up to max. size as indicated (e.g. 40x60 instead of 68x68)



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## SCHEDULE

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When used as terminal enclosures, the permissible quantity, size & combination of terminals shall be subject to the restrictions given in the following table:

Type No.	Permissible Terminals										
	Size (mm <sup>2</sup> )	2.5	4	6	10	16	25	35	50	70	95
	Rating (A)	20	26	33	45	60	75	95	125	170	210
EJB 01	No of Terminals	20	16	08	06	04	-	-	-	-	-
	Watt Dissipated /Terminal	1.1	1.3	1.5	1.8	2.3	-	-	-	-	-
EJB 02	No of Terminals	30	24	12	10	08	06	06	-	-	-
	Watt Dissipated /Terminal	1.3	1.5	1.7	2.1	2.6	2.9	3.6	-	-	-
EJB 03	No of Terminals	40	32	16	12	10	08	08	06	04	04
	Watt Dissipated /Terminal	1.6	1.7	2.0	2.4	2.9	3.2	3.9	5.3	7.3	9.0

The marking of the equipment or protective system shall include the following:-



## II 2 GD

**Ex db IIB+H<sub>2</sub> [1] Gb -20°C ≤ Ta ≤ +[3]**

Ex tb IIIC [2] Db -20°C ≤ Ta ≤ +[3] IP66

Type No.	<b>[1]</b> T CLASS	T6	T5	T6	T5
	<b>[2]</b> Dust Temp.	T80°C	T95°C	T80°C	T95°C
	<b>[3]</b> Max. Ambient	+40°C	+55°C	+60°C	+75°C
EJB 01	Max Watt Dissipation	60W	60W	36W	36W
EJB 02		76W	76W	42W	42W
EJB 03		87W	87W	60W	60W





## SCHEDULE

### EU-TYPE EXAMINATION CERTIFICATE NUMBER ITS15ATEX18302X Issue 02

#### 14. Report Number

Intertek Certification Report No. G101942441.  
Intertek India Report reference No CE-JOB-DEL-14-000469-008 to 011 dated July 2015.

#### 15. Conditions of Certification

##### (a). Specific Conditions of Safe Use

1. Only suitably rated and certified bushings shall be selected referring to the equipment marking. When connecting to other certified enclosures a minimum distance of 40mm to be maintained from the flange joint.
2. Enclosures are to be installed in vertical position only.
3. No modifications must be made to the flame paths without consultation of the drawings listed on the ExTR.
4. Use cables suitable for operating temperature referring to marking as per recommendation of IEC/EN 60079-14.

##### (b). Conditions of Manufacture - Routine Tests

A routine overpressure test in accordance with EN 60079-1:2014 Clause 15.2.3 shall be carried out by the manufacturer on each EJB Series at a pressure of 10 bar/145 PSI for a period of at least 10 seconds and test results recorded. The overpressure test shall be considered satisfactory if no permanent deformation or damage invalidating type of protection is observed. The joints shall not have been permanently enlarged and no leakage through the walls of the enclosure shall be observed.

The configuration shall also be in accordance with the manufacturers work instruction entitled "Work Instruction for configuration of products from EJB Series Enclosures".

#### 16. Essential Health and Safety Requirements (EHSRs)

The relevant EHSR's have been identified and assessed in Intertek Report Ref. CE-JOB-DEL-14-000469-008 to 011 and Intertek UK Project G101942441 dated July 2015.

#### 17. Drawings and Documents

Title	Drawing No.:	Rev.	Date:	Sheet
FLAMEPROOF CONTROL STATION ENCLOSURE - EJB SERIES	EX.PMI.EJB.201	0	10.04.2015	1 of 9
FLAMEPROOF CONTROL STATION ENCLOSURE - EJB SERIES	EX.PMI.EJB.201	0	10.04.2015	2 of 9
FLAMEPROOF CONTROL STATION ENCLOSURE - EJB SERIES	EX.PMI.EJB.201	0	10.04.2015	3 of 9
EJB 01 LID (MACHINED CASTING)	EX.PMI.EJB.201	0	10.04.2015	4 of 9
EJB 01 BASE (MACHINED CASTING)	EX.PMI.EJB.201	0	10.04.2015	5 of 9
EJB 02 LID (MACHINED CASTING)	EX.PMI.EJB.201	0	10.04.2015	6 of 9
EJB 02 BASE (MACHINED CASTING)	EX.PMI.EJB.201	0	10.04.2015	7 of 9
EJB 03 LID (MACHINED CASTING)	EX.PMI.EJB.201	0	10.04.2015	8 of 9
EJB 03 BASE (MACHINED CASTING)	EX.PMI.EJB.201	0	10.04.2015	9 of 9

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## SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE NUMBER ITS15ATEX18302X Issue 02

### Details of Certificate changes Issue 01

To permit the following change:

1. Change of the Certificate Holder and Addition of other Manufacturing location:

Manufacturer 1	Manufacturer 2
ROSE Systemtechnik GmbH Erbeweg 13-15 32457 Porta Westfalica Germany	Phoenix Mecano (India) Pvt. Ltd. Plant - I & II: Pirangut Industrial Area, Post Ghotawade, Plot 388/389, Village Bhare, Taluka Mulshi, Distt. Pune - 412 115 India

2. Updating of the manufacturers name and address in the drawings title block and on the label.

### Report Number

Intertek Certification Report No. G102517397 dated April 2016.

### Conditions of Certification

#### (a). Specific Conditions of Safe Use

1. Only suitably rated and certified cable glands, blanking elements, thread adapter to be used referring to the equipment marking.
2. Only suitably rated and certified bushings shall be selected referring to the equipment marking. When connecting to other certified enclosures a minimum distance of 40mm to be maintained from the flange joint.
3. Each entry shall have no more than one thread adapter. A blanking element shall not be used with thread adapter.
4. Enclosures are to be installed in vertical position only.
5. No modifications must be made to the flame paths without consultation of the drawings listed on the ExTR.
6. Use cables suitable for operating temperature referring to marking as per recommendation of IEC/EN 60079-14.

#### (b). Conditions of Manufacture - Routine Tests

See original certificates

### Essential Health and Safety Requirements (EHSR's)

The relevant EHSR's have been identified and assessed in Intertek UK Project G102517397 dated April 2016.

### Drawings and Documents

Title	Drawing No.:	Rev.	Date:
FLAMEPROOF CONTROL STATION ENCLOSURE – EJB SERIES – Sheet 1	EX.PMI.EJB.201	1	27.11.2015
FLAMEPROOF CONTROL STATION ENCLOSURE – EJB SERIES – Sheet 2	EX.PMI.EJB.201	1	27.11.2015
FLAMEPROOF CONTROL STATION ENCLOSURE – EJB SERIES – Sheet 3	EX.PMI.EJB.201	1	27.11.2015
EJB 01 LID (MACHINED CASTING) – Sheet 4	EX.PMI.EJB.201	1	27.11.2015
EJB 01 BASE (MACHINED CASTING) – Sheet 5	EX.PMI.EJB.201	1	27.11.2015
EJB 02 LID (MACHINED CASTING) – Sheet 6	EX.PMI.EJB.201	1	27.11.2015
EJB 02 BASE (MACHINED CASTING) – Sheet 7	EX.PMI.EJB.201	1	27.11.2015
EJB 03 LID (MACHINED CASTING) – Sheet 8	EX.PMI.EJB.201	1	27.11.2015
EJB 03 BASE (MACHINED CASTING) – Sheet 9	EX.PMI.EJB.201	1	27.11.2015

## SCHEDULE

### EU-TYPE EXAMINATION CERTIFICATE NUMBER ITS15ATEX18302X Issue 02

#### Details of Certificate changes Issue 02

To permit the following change:

1. Re-designation of the Flameproof Control Station Enclosures - EJB Series as Power Distribution, Switchgear and Control Assembly - EJB series
2. Re-assessment of the Flameproof Control Station Enclosures for the additional models of EJB 06, EJB 09 and EJB 10 in EJB Series to the ambient temperatures +40°C, +50°C and +60°C for T6, T5 and T4 temperature class.
3. Assessment to the ATEX Directive 2014/34/EU.

The apparatus is a series of six enclosures for Power Distribution and Control Assembly - EJB Series (EJB 01, EJB 02, EJB 03, EJB 06, EJB 09 & EJB 10). The material of construction of enclosure assembly is EN AC-ALSi12 (a) (EN AC 44200) for EJB 01, EJB 02, EJB 03 and EN AC-ALSi7Mg (EN AC 42000) heat treated for EJB 06, EJB 09, EJB 10 Al alloy as per EN 1706 or equivalent Al alloy having same or more proof stress, alternate suitable material of SS 304 or 316L or Cast Iron. The enclosure is provided with flange bolted lid. Silicone grease Anabond 662 or equivalent has been provided in flange joint to achieve ingress protection of IP66 in accordance with IEC 60529. "O" ring of silicon may be provided between base & lid as an option for ingress protection of IP66 in accordance with IEC 60529. However in case of Ex tb enclosures Ingress protection IP66 with silicone grease is not allowed and silicone "O" ring to achieve the same will be provided by default.

Cable/conduit entries are provided for the accommodation of suitable cable/conduit entry devices.

Type No	Dimensions (mm)			Max Rated Current (A)	Max Conductor Size (mm <sup>2</sup> )
	W	H	D		
EJB 01	170	220	152	76	16
EJB 02	220	270	158	125	35
EJB 03	270	320	166	232	95
EJB 06	440	490	250	415	240
EJB 09	580	780	440	935	630
EJB 10	680	980	485	1055	1000

Permissible entries from each side		EJB 01	EJB 02	EJB 03	EJB 06	EJB 09	EJB 10
M20 or ½" NPT	Short Side	04	06	08	21	54	66
	Long Side	06	08	10	24	84	108
M25 or ¾" NPT	Short Side	02	04	06	17	33	54
	Long Side	04	05	08	20	54	90
M32 or 1" NPT	Short Side	01	03	04	11	28	36
	Long Side	02	04	05	12	43	60
M40 or 1 ¼" NPT	Short Side	-	02	03	08	18	28
	Long Side	-	03	03	10	28	44
M50 or 1 ½" NPT	Short Side	-	-	02	04	12	18
	Long Side	-	-	03	05	21	28
M63 or 2" NPT	Short Side	-	-	-	03	11	15
	Long Side	-	-	-	04	17	24
M75 or 2 ½" NPT	Short Side	-	-	-	03	06	09
	Long Side	-	-	-	03	09	15
M90 or 3" or 3 ½" NPT	Short Side	-	-	-	-	05	07
	Long Side	-	-	-	-	08	12
M100 or 4" NPT	Short Side	-	-	-	-	05	06
	Long Side	-	-	-	-	07	10



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These enclosures can be used for mounting electrical/ electronic components (e.g. PB, Indicating lamp, Switch, MCB, MPCB, MCCB, Contactors, transformers, relays, transducers, isolators, barriers, power supply, PCB etc.) and or terminals of size and combination as required. The rating of components and terminals will generally be up to 1.1 KV AC/DC subject to max permissible watt dissipation as shown hereunder. However, 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.

Lid may be populated with separately certified control components (combination of various types of PB actuators, rotary actuator for Switch, MCB, MPCB & MCCB etc, LED indicating lamp etc.) in required number & combination in permissible numbers as shown hereunder. LID may also be populated with display window for indicating or control instruments with display in required number & size within permissible limit as shown.

TYPE No.	Max Number of control components	Display Window (mm)								
		44 x 44	68 x 68	92 x 92	140 x 140	186 x 186	234 x 234	280 x 280	328 x 376	376 x 376
EJB 01	04	01	-	-	-	-	-	-	-	-
EJB 02	09	04	01	01	-	-	-	-	-	-
EJB 03	16	09	04	01	01	-	-	-	-	-
EJB 06	49	25	09	04	01	01	01	-	-	-
EJB 09	88	56	20	12	04	02	01	01	01	-
EJB 10	150	90	36	20	09	04	02	01	01	01

Empty enclosures can be sold to other manufacturers to be configured as product under their equipment certificate.

Power distribution, switchgear and control assembly may be formed consisting of one or more enclosure of this EJB series and other certified enclosures. The electrical connection shall be made by direct entry or by using terminal boxes or control and distribution boxes in type of protection increased safety. These shall be joined together through certified bushing keeping a minimum distance of 40mm from flange joint.

The marking of the equipment or protective system shall include the following:-



II 2 G D

Ex db IIB+H<sub>2</sub> \* [1] Gb -20°C ≤ Ta ≤ [3]  
Ex tb IIIC [2] Db -20°C ≤ Ta ≤ [3] IP66

Type No.	[1] T CLASS	T6			T5					T4		
	[2] Dust Temp. Marking	T80°C			T95°C					T130°C		
	[3] Max. Ambient Temp.	+40°C	+50°C	+60°C	+40°C	+50°C	+55°C	+60°C	+75°C	+40°C	+50°C	+60°C
EJB 01	Max. Watt Dissipation	60 W	-	36W	-	-	60 W	-	36W	-	-	-
EJB 02		76W	-	42W	-	-	76W	-	42W	-	-	-
EJB 03		87W	-	60W	-	-	87W	-	60W	-	-	-
EJB 06		209W	166W	114W	338W	260W	-	206W	-	584W	514W	436W
EJB 09		467W	319W	236W	728W	555W	-	353W	-	1238W	1145W	956W
EJB 10		726W	568W	400W	1085W	864W	-	712W	-	2038W	1709W	1454W

\* Enclosures may be marked IIB or IIB+H<sub>2</sub> as required.

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Note : Equipment marking shall be completed by using type of protection e, i, [i], m, q for certified equipment or components used for assembly.

#### Report Number

Intertek Certification Report No. G102913924

Intertek India Report reference No CE-JOB-DEL-17-000103-001 to 004 dated March 2017.

#### Conditions of Certification

##### (a). Specific Conditions of Safe Use

See original certificates and Issue 1

##### (b). Conditions of Manufacture - Routine Tests

A routine overpressure test in accordance with EN 60079-1:2014 Clause 15.2.3 shall be carried out by The manufacturer on each EJB Series (EJB 01, EJB 02 & EJB 03) at a pressure of 10 bar/145 PSI and (EJB 06, EJB 09 & EJB 10) at a pressure of 11.5 bar / 166.8 PSI for a period of at least 10 seconds and test results recorded. The overpressure test shall be considered satisfactory if no permanent deformation or damage invalidating type of protection is observed. The joints shall not have been permanently enlarged and no leakage through the walls of the enclosure shall be observed.

The configuration shall also be in accordance with the manufacturers work instruction entitled "Work Instruction for configuration of products from EJB Series Enclosures".

#### Essential Health and Safety Requirements (EHSR's)

EHSR's contained within the new directive are technically identical and therefore the EHSR checklists contained in the original report G101942441 dated July 2015 are considered to be with sufficient justification for compliance with the EHSR's contained in 2014/34/EU.



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## SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE NUMBER ITS15ATEX18302X Issue 02

### Drawings and Documents

Title	Drawing No.:	Rev.	Date:
POWER DISTRIBUTION, SWITCHGEAR AND CONTROL ASSEMBLY - EJB SERIES SHEET 1 of 16	EX.PMI.EJB.201	2	30.07.2016
POWER DISTRIBUTION, SWITCHGEAR AND CONTROL ASSEMBLY - EJB SERIES SHEET 2 of 16	EX.PMI.EJB.201	2	30.07.2016
POWER DISTRIBUTION, SWITCHGEAR AND CONTROL ASSEMBLY - EJB SERIES SHEET 3 of 16	EX.PMI.EJB.201	2	30.07.2016
EJB 01 LID (MACHINED CASTING) SHEET 4 of 16	EX.PMI.EJB.201	1	27.11.2015
EJB 01 BASE (MACHINED CASTING) SHEET 5 of 16	EX.PMI.EJB.201	1	27.11.2015
EJB 02 LID (MACHINED CASTING) SHEET 6 of 16	EX.PMI.EJB.201	1	27.11.2015
EJB 02 BASE (MACHINED CASTING) SHEET 7 of 16	EX.PMI.EJB.201	1	27.11.2015
EJB 03 LID (MACHINED CASTING) SHEET 8 of 16	EX.PMI.EJB.201	1	27.11.2015
EJB 03 BASE (MACHINED CASTING) SHEET 9 of 16	EX.PMI.EJB.201	1	27.11.2015
POWER DISTRIBUTION, SWITCHGEAR AND CONTROL ASSEMBLY - EJB SERIES SHEET 10 of 16	EX.PMI.EJB.201	0	30.07.2016
EJB 06 LID (MACHINED CASTING) Sheet 11 of 16	EX.PMI.EJB.201	0	30.07.2016
EJB 06 BASE (MACHINED CASTING) Sheet 12 of 16	EX.PMI.EJB.201	0	30.07.2016
EJB 09 LID (MACHINED CASTING) Sheet 13 of 16	EX.PMI.EJB.201	0	30.07.2016
EJB 09 BASE (MACHINED CASTING) Sheet 14 of 16	EX.PMI.EJB.201	0	30.07.2016
EJB 10 LID (MACHINED CASTING) Sheet 15 of 16	EX.PMI.EJB.201	0	30.07.2016
EJB 10 BASE (MACHINED CASTING) Sheet 16 of 16	EX.PMI.EJB.201	0	30.07.2016

This Certificate is the property of Intertek Testing and Certification Ltd and is subject to Intertek Testing and Certification's Conditions for Granting Certification

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