

EU TYPE-EXAMINATION CERTIFICATE

1. EU type-examination Certificate (Module B)
2. Equipment or Protective System intended for use in potentially explosive atmospheres (Directive 2014/34/EU)
3. EU type examination certificate Nr **ITS15ATEX18302X**



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

5. **Manufacturer:** **Rose Systemtechnik GmbH**

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

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

8. INTERTEK ITALIA S.p.A., Notified Body n° 2575 in accordance with article 17 of the Directive 2014/34/EU of the European Parliament and Council of the 26 February 2014, certifies that the equipment or protective system has been found to comply with the essential Health and Safety Requirements relating to the design and construction of equipment and protective system intended for use in potentially explosive atmosphere, given in Annex II of the Directive.

The examination and tests results are recorded in confidential technical evaluation Intertek Report Nr. CE-JOB-DEL-14-000469-008 to 011 (Intertek UK Certification Report Reference No. G101942441) dated July 2015, Intertek UK Certification Report Reference No. G102517397 dated April 2016, Intertek India Report Reference no. CE-JOB-DEL-17-000103-001 to 004 (Intertek UK Certification Report Reference No. G102913924) dated March 2017 and Intertek Report Nr. CE-JOB-NDA-21-000189-001 to 002 (Intertek UK Certification Report Reference No. G104569381) dated 25th February 2021.

9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN IEC 60079-0:2018, 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 Special Conditions for 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. The marking of the product shall include the following:



II 2 G Ex db IIB or IIB+H₂ [1] Gb
II 2 D Ex tb IIIC [2] Db IP 66
-20°C ≤ Ta ≤ [3]

See Schedule

Certificate issue date

11 June 2021



Fabrizio Massei

Certification Officer

Intertek Italia S.p.A. (NB 2575)



PDR N° 277B

Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC

Signatory of EA, IAF and ILAC Mutual Recognition Agreements

This certificate has been issued by Intertek Italia S.p.A. NB 2575 on transfer from Intertek Testing & Certification Ltd. (NB 0359) using the same issued original certificate number.



This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Intertek Italia S.p.A. Via Miglioli, 2/A - 20063 Cernusco sul Naviglio, Milano - Italy

LFT-EMEA-IT-ATEX-OP-23a (29 August 2019)

Page 1 of 5



SCHEDULE

EU TYPE EXAMINATION CERTIFICATE NUMBER: ITS15ATEX18302X

13. DESCRIPTION OF THE EQUIPMENT OR PROTECTIVE SYSTEM

The apparatus is a series of six enclosures for Power Distribution and Control Assembly - EFJB Series (EFJB 01, EFJB 02, EFJB 03, EFJB 06, EFJB 09 & EFJB 10). The material of construction of enclosure assembly is EN AC-AISI12 (a) (EN AC 44200) for EFJB 01, EFJB 02, EFJB 03 and EN AC-AISI7Mg (EN AC 42000) heat treated for EFJB 06, EFJB 09, EFJB 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 IPX6 in accordance with EN 60529 and IP6X in accordance with EN 60079-31. O ring of Silicon may be provided between base & lid as an option for ingress protection of IPX6 in accordance with EN 60529 and IP6X in accordance with EN 60079-31. 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 ²)
	W	H	D		
EFJB 01	170	220	152	76	16
EFJB 02	220	270	158	125	35
EFJB 03	270	320	166	232	95
EFJB 06	440	490	250	415	240
EFJB 09	580	780	440	935	630
EFJB 10	680	980	485	1055	1000

Permissible entries from each side		EFJB 01	EFJB 02	EFJB 03	EFJB 06	EFJB 09	EFJB 10
M20 or ½" NPT	Short Side	04	06	08	21	54	55
	Long Side	06	08	10	24	84	90
M25 or ¾" NPT	Short Side	02	04	06	17	33	45
	Long Side	04	05	08	20	54	75
M32 or 1" NPT	Short Side	01	03	04	11	28	30
	Long Side	02	04	05	12	43	50
M40 or 1 ¼" NPT	Short Side	-	02	03	08	18	21
	Long Side	-	03	03	10	28	33
M50 or 1½" NPT	Short Side	-	-	02	04	12	18
	Long Side	-	-	03	05	21	27
M63 or 2" NPT	Short Side	-	-	-	03	11	12
	Long Side	-	-	-	04	17	20
M75 or 2½" NPT	Short Side	-	-	-	03	06	08
	Long Side	-	-	-	03	09	14
M90 or 3" or 3½" NPT	Short Side	-	-	-	-	05	07
	Long Side	-	-	-	-	08	11
M100 or 4" NPT	Short Side	-	-	-	-	05	06
	Long Side	-	-	-	-	07	08



SCHEDULE

EU TYPE EXAMINATION CERTIFICATE NUMBER: ITS15ATEX18302X

These enclosures can be used as control panel or terminal box for power, control, instrumentation, heat trace, battery charger and UPS etc. 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.) and or terminals of size and combination as required. The rating of components and terminals will generally be up to 1.1kV 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.

[4] 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	+60°C	+40°C	+50°C	+60°C
EFJB 01	[5] Max. Watt Dissipation	60 W	-	36W	-	-	-	-	-	-
EFJB 02		76W	-	42W	-	-	-	-	-	-
EFJB 03		87W	-	60W	-	-	-	-	-	-
EFJB 06		209W	166W	114W	338W	260W	206W	584W	514W	436W
EFJB 09		467W	319W	236W	728W	555W	353W	1238W	1145W	956W
EFJB 10		726W	568W	400W	1085W	864W	712W	2038W	1709W	1454W

Note: The watt dissipation values for T6 at 40°C, 50°C and 60°C can be used by extrapolation for marking T5 at higher ambient of 55°C, 65°C and 75°C and similarly watt dissipation values for T5 at 40°C can be used by extrapolation for marking T4 at higher ambient of 75°C.

Lid may be populated with ITS16ATEX18397U ATEX certified control accessories (combination of various types of PB actuators, rotary actuator for Switch, MCB, MPCB, MCCB, 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. Smaller size display window can be provided e.g. 120x90 mm instead of 140x140 mm without altering glass thickness.

Type No.	Max Number of control components	Display Window (mm)							
		44 x 44	92 x 92	140 x 140	186 x 186	234 x 234	280 x 280	328 x 376	376 x 376
EFJB 01	04	01	-	-	-	-	-	-	-
EFJB 02	09	01	01	-	-	-	-	-	-
EFJB 03	16	01	01	01	-	-	-	-	-
EFJB 06	49	01	02	01	01	01	-	-	-
EFJB 09	88	01	03	01	01	01	01	01	-
EFJB 10	150	01	04	01	01	01	01	01	01

Power distribution, switchgear and control assembly may be formed consisting of one or more enclosure of this EFJB 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.



SCHEDULE

EU TYPE EXAMINATION CERTIFICATE NUMBER: ITS15ATEX18302X

CE Marking shall be accompanied by the identification number of the Notified Body responsible for surveillance of production.

14. DRAWINGS AND DOCUMENTS

TITLE	DOCUMENT Nr	LEVEL	DATE
* POWER DISTRIBUTION, SWITCHGEAR AND CONTROL ASSEMBLY - EFJB SERIES SHEET 1 of 4	EX.PMI.EFJB.201	3	01.12.2020
*POWER DISTRIBUTION, SWITCHGEAR AND CONTROL ASSEMBLY - EFJB SERIES SHEET 2 of 4	EX.PMI.EFJB.201	3	01.12.2020
*POWER DISTRIBUTION, SWITCHGEAR AND CONTROL ASSEMBLY - EFJB SERIES SHEET 3 of 4	EX.PMI.EFJB.201	3	01.12.2020
*POWER DISTRIBUTION, SWITCHGEAR AND CONTROL ASSEMBLY - EFJB SERIES SHEET 4 of 4	EX.PMI.EFJB.201	1	01.12.2020
*Instruction Manual for Power Distribution, Switchgear and Control Assembly - EFJB Series	Ex.PMI.EFJB.IM	-	12.2020

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

Copies of the above listed documents are kept at Intertek Italia S.p.A. archive.

15. SPECIAL CONDITIONS FOR SAFE USE

1. Only suitably rated and certified bushings shall be selected referring to the equipment marking.
2. 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 EN 60079-14.
7. In the Ex enclosure, equipment may be placed in any arrangement provided that an area of at least 20% for Group IIB or 40% for Group IIB+H₂ of each cross-sectional area remains free to permit unimpeded gas flow and, therefore, unrestricted development of an explosion.
8. Yield strength of cover fixing fasteners shall be ≥ 450 MPa with the tolerance limit 6g.
9. The LED Indicating lamps assembled on EFJB enclosures are suitable for low risk of mechanical danger i.e. 2 Joules.
10. When EFJB enclosures are assembled with Control Accessories i.e. Indicating lamps, Push button and Rotary actuators; may pose risk of electrostatic discharge for Group III applications, hence clean with damp cloth only.
11. The Control accessories – LED Indicating lamp service temperature is -60°C to +100°C, Hence Indicating lamps can be used for T Class T5 and T6; and shall not be used on EFJB enclosures with T Class T4.

16. ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

The relevant essential Health and Safety Requirements have been identified and assessed in Intertek Report Nr. CE-JOB-NDA-21-000189-001 to 002 (Intertek UK Certification Report Reference No. G104569381) dated 25th February 2021.



SCHEDULE

EU TYPE EXAMINATION CERTIFICATE NUMBER: ITS15ATEX18302X

17. ROUTINE (FACTORY) TESTS

A routine overpressure test in accordance with EN 60079-1:2014 Clause 16 shall be carried out by the manufacturer on EFJB Series enclosures 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 the type of protection observed, the joints shall in no place have been permanently enlarged and no leakage through the walls of the enclosure shall be observed.

18. DETAIL OF CERTIFICATE CHANGES

11 June 2021 (R.0):

This variation comprises the following changes to the Equipment:

1. Initial release by Intertek Italia S.p.A. NB 2575 based on the assessment performed on February 2021 and on the certificate legal ownership transferred from Intertek Testing & Certification Ltd. (NB 0359); the same issued original certificate number is used.
2. Revision as per EN IEC 60079-0:2018.
3. Re-designation of the Power Distribution, Switchgear and Control Assembly as EFJB Series instead of EJB series.
4. No. of glass windows on each enclosure have been reduced.
5. Added the following in the Condition of safe use.
 - In the Ex enclosure, equipment may be placed in any arrangement provided that an area of at least 20% for Group IIB or 40% for Group IIB+H₂ of each cross-sectional area remains free to permit unimpeded gas flow and, therefore, unrestricted development of an explosion.
 - Yield strength of cover fixing fasteners shall be ≥ 450 MPa with the tolerance limit 6g.
 - The LED Indicating lamps assembled on EFJB enclosures are suitable for low risk of mechanical danger i.e. 2 Joules.
 - When EFJB enclosures are assembled with Control Accessories i.e. Indicating lamps, Push button and Rotary actuators; may pose risk of electrostatic discharge for Group III applications, hence clean with damp cloth only.
 - The Control accessories – LED Indicating lamp service temperature is -60°C to +100°C, Hence Indicating lamps can be used for T Class T5 and T6; and shall not be used on EFJB enclosures with T Class T4.
6. Update of the drawings to reflect above changes since previously certified drawings were having manufacturing (Related) details in schedule drawing.