

# Intertek



## 1. EC-TYPE EXAMINATION CERTIFICATE

2. **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**

3. **EC-Type Examination Certificate Number:** ITS14ATEX18169X Issue 1

4. **Equipment or Protective System:** Flameproof Terminal Box Enclosures –TBE Series (Rose Brand)

5. **Manufacturer:** Rose Systemtechnik GmbH

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

7. This equipment or protective system 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 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this 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 systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Intertek Report Ref. No.CE-JOB-DEL-16-000001-009 to 012 and Intertek UK Certification report no. G102499878 dated March 2016 and Intertek Report Ref CE-JOB-DEL-14-000469-002 to 004 and Intertek UK Project G101942414 dated February 2015.

9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with standards 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 equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

11. This EC Type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

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



II 2 GD

Ex db IIC [1] Gb -[3] ≤ Ta ≤ +[4]

Ex tb IIIC [2] Db -[3] ≤ Ta ≤ +[4] IP66 **See Schedule**

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V K Varma  
Certification Officer  
19<sup>th</sup> April 2016

This certificate may only be reproduced in its entirety and without any change, schedule included and is subject to Intertek Testing and Certification's Conditions for Granting Certification.



**SCHEDULE**

EC-TYPE EXAMINATION CERTIFICATE NUMBER ITS14ATEX18169X Issue 1

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

The apparatus is a Threaded Flameproof Terminal box Enclosures - TBE Series (Rose Brand) made of aluminium alloy EN AC-AISI12(a) (EN AC 44200) as per EN 1706 or alternate suitable material of SS 304 or 316L or Cast Iron. The enclosure is provided with threaded lid and moulded "O" ring of Silicon (-60°C ≤ ta ≤ +60°C) or NBR (-20°C ≤ ta ≤ +60°C) provided between enclosure base and lid for Ingress protection IP66 in accordance with IEC 60529 only.

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

Type No	Permissible Cable Entries			
	M20 or ½" NPT	M25 or ¾" NPT	M32 or 1" NPT	M40 or 1 ¼" NPT
TBE 100T	4	4	X	X
TBE 130T	6	6	2	X
TBE 160T	8	8	2	2

Type No.	Permissible Terminals (mm <sup>2</sup> )							
	Size	2.5	4	6	10	16	25	35
	Rating (A)	20	26	33	45	60	75	95
TBE 100T	No of Terminals	08	06	04	03	X	X	X
	Power Dissipated (W)	2.2	2.0	1.4	1.2	X	X	X
TBE 130T	No of Terminals	16	12	10	06	04	X	X
	Power Dissipated (W)	8.6	7.5	6.7	4.5	3.4	X	X
TBE 160T	No of Terminals	20	16	12	08	06	04	04
	Power Dissipated (W)	10.7	10.0	8.1	6.0	5.0	2.4	2.7

Type No.	TBE 100T	TBE 130T	TBE 160T
Permissible wattage of component for Temp Class T6 @ ambient temperature 60°C	12 W	15 W	24 W

**14. Report Number**

Intertek India Report Reference No. CE-JOB-DEL-16-000001-009 to 012 and Intertek Certification report No. G102499878 dated March 2016.

Intertek Certification Report No. G101942414.

Intertek India Report reference No CE-JOB-DEL-16-000001-009 to 012 dated February 2015.

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### 15. Conditions of Certification

#### (a). Special Conditions for safe use

1. Suitably rated and certified Ex d IIC Gb IP66 cable glands, blanking elements and thread adaptors to be used.
2. Suitably rated and certified Ex d IIC Gb IP66 bushings to be used to connect two flameproof enclosures and minimum distance of obstructions from flameproof "d" opening of 40mm to be maintained.
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.

#### (b). Conditions of Manufacture

A routine overpressure test in accordance with EN 60079-1:2014 Clause 15.2.3 shall be carried out by the manufacturer on each Flameproof Terminal box enclosures - TBE Series at a pressure of 17 bar / 246.56 PSI for a period of at least 10 seconds and test results must be 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 observed.

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

The relevant EHSR's have been identified and assessed in Intertek Report Ref. CE-JOB-DEL-14-000469-002 to 004 and Intertek UK Project G101942414 dated February 2015.

### 17. Drawings and Documents

Title	Drawing No.:	Rev.	Date:	Sheet
FLAMEPROOF TERMINAL BOX ENCLOSURE – TBE SERIES	EX.PMI.TBE.201	0	22.09.2014	1 of 8
FLAMEPROOF TERMINAL BOX ENCLOSURE – TBE SERIES	EX.PMI.TBE.201	0	22.09.2014	2 of 8
TBE 100T LID (MACHINED CASTING)	Ex.PMI.TBE.201	0	22.09.2014	3 of 8
TBE 100T BASE (MACHINED CASTING)	Ex.PMI.TBE.201	0	22.09.2014	4 of 8
TBE 130T LID (MACHINED CASTING)	Ex.PMI.TBE.201	0	22.09.2014	5 of 8
TBE 130T BASE (MACHINED CASTING)	Ex.PMI.TBE.201	0	22.09.2014	6 of 8
TBE 160T LID (MACHINED CASTING)	Ex.PMI.TBE.201	0	22.09.2014	7 of 8
TBE 160T BASE (MACHINED CASTING)	Ex.PMI.TBE.201	0	22.09.2014	8 of 8

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### 18. Revision

**Issue 1:** Intertek India Report Reference no. CE-JOB-DEL-16-000001-009 to 012 and Intertek Certification Report No. G102499878 dated March 2016;

To Permit the following Changes:

1. Change of Certificate Holder from Pheonix Mecano (India) Pvt. Ltd. to Rose Systemtechnik GmbH.
2. Re-assessment of the Threaded Flameproof Terminal Box Enclosures -TBE Series for Dust as per EN 60079-31:2014.
3. Re-assessment of the Threaded Flameproof Terminal Box Enclosures -TBE Series to the additional ambient temperatures +40°C, +55°C and +75°C leading to following marking :

Ex db IIC [1] Gb -[3] ≤ Ta ≤ +[4]

Ex tb IIIC [2] Db -[3] ≤ Ta ≤ +[4] IP66

TYPE NO. [5]	T Class [1]	T6	T5	T6	T5	Min Ambient Temperature [3]
	Dust Temp Marking [2]	T80°C	T95°C	T80°C	T95°C	
	Max Ambient Temp [4]	+40°C	+55°C	+60°C	+75°C	
TBE 100T	Max Watt Dissipation [6]	20W	20W	12W	12W	-20°C or -60°C
TBE 130T		29W	29W	15W	15W	
TBE 160I		41W	41W	24W	24W	

4. Gasket of NBR Material removed.

5. Conditions of Manufacture

A routine overpressure test in accordance with EN 60079-1:2014 Clause 15.2.3 shall be carried out by the manufacturer on each Flameproof Terminal box enclosures - TBE Series at a pressure of 10.41 bar / 150.98 PSI for ambient -20°C or 17 bar / 246.56 PSI for ambient -60°C for a period of at least 10 seconds and test results must be 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 observed.

6. Changes in the drawings:

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TERMINAL BOX ENCLOSURE –TBE SERIES	EX.PMI.TBE.201	1	29.10.2015	1 of 8
TERMINAL BOX ENCLOSURE –TBE SERIES	EX.PMI.TBE.201	1	29.10.2015	2 of 8
TBE 100T LID (MACHINED CASTING)	Ex.PMI.TBE.201	1	29.10.2015	3 of 8
TBE 100T BASE (MACHINED CASTING)	Ex.PMI.TBE.201	1	29.10.2015	4 of 8
TBE 130T LID (MACHINED CASTING)	Ex.PMI.TBE.201	1	29.10.2015	5 of 8
TBE 130T BASE (MACHINED CASTING)	Ex.PMI.TBE.201	1	29.10.2015	6 of 8
TBE 160T LID (MACHINED CASTING)	Ex.PMI.TBE.201	1	29.10.2015	7 of 8
TBE 160T BASE (MACHINED CASTING)	Ex.PMI.TBE.201	1	29.10.2015	8 of 8

*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.*

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