



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx BVS 14.0010X Issue No: 0 Certificate history:  
Issue No. 0 (2014-02-04)

Status: **Current** Page 1 of 4

Date of Issue: **2014-02-04**

Applicant: **TECTUS Transponder Technology GmbH**  
Eurotecring 39  
47445 Moers  
**Germany**

Electrical Apparatus: **Transponder Reader type TPF-35Ex-45, Antennas type TPA-\*\*\***  
*Optional accessory:*

Type of Protection: **Equipment protection by flameproof enclosures "d", Equipment protection by encapsulation "m",  
Equipment protection by increased safety "e"**

Marking: Ex de IIB T4 Gb Transponder Reader type TPF-35Ex-45  
Ex de I Mb Transponder Reader type TPF-35Ex-45  
Ex mb IIB T4 Gb Antennas type TPA-\*\*\* (except for 530-\*)  
Ex mb I Mb Antennas type TPA-\*\*\* (except for 530-\*)  
Ex e IIB T4 Gb Antennas type TPA-530-\*

*Approved for issue on behalf of the IECEx  
Certification Body:*

H. Ch. Simanski

*Position:*

Head of Certification Body

*Signature:  
(for printed version)*

*Date:*

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**DEKRA EXAM GmbH**  
Dinnendahlstrasse 9  
44809 Bochum  
Germany

 **DEKRA**  
DEKRA EXAM GmbH



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Manufacturer: TECTUS Transponder Technology GmbH  
Eurotecring 39  
47445 Moers  
Germany

Additional Manufacturing  
location(s):

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 electrical apparatus 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:

<b>IEC 60079-0 : 2011</b> Edition:6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2007-04</b> Edition:6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-18 : 2009</b> Edition:3	Explosive atmospheres Part 18: Equipment protection by encapsulation "m"
<b>IEC 60079-7 : 2006-07</b> Edition:4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

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

#### TEST & ASSESSMENT REPORTS:

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

Test Report:

[DE/BVS/ExTR14.0013/00](#)

Quality Assessment Report:

[DE/BVS/QAR11.0010/01](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

#### Subject and type

Transponder Reader type TPF-35Ex-45  
Antennas TPA-\*\*\*

#### Description

The Transponder Reader type TPF-35Ex-45 is intended for reading and analysing transponder. For this purpose, suitable control electronics are installed into an enclosure type of protection flameproof enclosure "d". The electronics are connected to the peripherals by means of two terminal boxes in type of protection Increased safety "e". Different Antenna types in type of protection Encapsulation "m" and Increased safety "e" could be connected to the Transponder Reader.

#### CONDITIONS OF CERTIFICATION: YES as shown below:

In the vicinity of the transponder reader a separator must be installed in order to switch all input leads to neutral.

The antenna type TPA-\*\*\* may only be used in conjunction with the transponder reader type TPF-35Ex-45.

The change of the fuses arranged within the transponder reader may take place only via the manufacturer of the equipment or if expressly authorized via the manufacturer of the equipment.



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## EQUIPMENT (continued):

### Parameters

Transponder reader type TPF-35Ex-45

Supply circuit of transponder reader (terminal X1, terminals X1.1-X1.4)

Supply voltage	up to AC	230	V
Network frequency		50 up to 60	Hz
Power input	up to	15	W

Remote data transmission RS485 or TCPIP, RS232

(terminal X2, terminals X2.1-X2.4 and X2.9-X2.11)

Voltage	up to DC	15	V
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Antenna outputs

(Output A: terminal X3, terminals X3.1-X3.3)

(Output B: terminal X3, terminals X3.4-X3.6)

Output values for each antenna output:

Voltage	up to AC (120 up to 140 kHz)	110	V
Transmission power	up to	2.5	W

Opto-coupler connections (terminal X4, terminals X4.1-X4.2 and X4.4-X4.5)

Voltage	up to DC	30	V
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Relay contact connections (terminal X5, terminals X5.1-X5.3 and X5.5-X5.7 and X5.9-X5.11)

Voltage	up to UC	60	V
Current	up to	2	A