

# 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 15.0119 issue No.: 0 Certificate history: \_\_\_\_\_

Status: **Current**

Date of Issue: 2016-02-11 Page 1 of 3

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

Electrical Apparatus: **Transponder type TID-tt-\*\*\*\*\***  
Optional accessory:

Type of Protection: **Equipment protection by intrinsic safety "i"**

Marking: Ex ia IIC T4 Gb  
Ex ia IIB T4 Gb  
Ex ia IIC T4/T3 Gb  
Ex ia I Mb  
Ex ia IIIC T70°C Db  
Ex ia IIIC T120°C/T150°C Db

Approved for issue on behalf of the IECEx  
Certification Body:

H.-Ch. Simanski

Position:

Head of Certification Body

Signature:  
(for printed version)

Date:

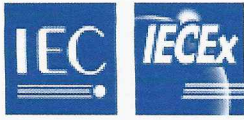
1.2.2016

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.

Certificate issued by:

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

**DEKRA**  
DEKRA EXAM GmbH



# IECEx Certificate of Conformity

Certificate No.: IECEx BVS 15.0119

Date of Issue: 2016-02-11

Issue No.: 0

Page 2 of 3

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:

**IEC 60079-0 : 2011** Explosive atmospheres - Part 0: General requirements  
Edition: 6.0

**IEC 60079-11 : 2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition: 6.0

*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/ExTR15.0110/00

Quality Assessment Report:

DE/BVS/QAR11.0010/03



# IECEx Certificate of Conformity

Certificate No.: IECEx BVS 15.0119

Date of Issue: 2016-02-11

Issue No.: 0

Page 3 of 3

## Schedule

### EQUIPMENT:

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

#### General product information:

See annex

#### Description

The intrinsically safe transponders of type TID-tt-\*\*\*\*\* are used for the marking of equipment; they can be e.g. vulcanized into conveyor belts and thus serve the purpose of controlling the belt slot or the speed. The transponders are activated by an external magnetic field and then send a response signal.

#### Technical Parameters

1. Transponder type TID-TP-\*\*\*\*\*  
operating frequency f 120 to 140 kHz  
max. radiant power P 125 mW
2. Transponder type TID-HF-\*\*\*\*\*  
operating frequency f 13 to 14 MHz  
max. radiant power P 156 mW
3. Transponder type TID-UHF-\*\*\*\*\*  
operating frequency f 900 MHz  
max. radiant power P 156 mW
4. Ambient temperature range
  - 4.1 For transponders type TID-\*\*-\*\*\*\*\*  
For temperature class T4 and T70 °C  
 $-45\text{ °C} \leq T_a \leq +60\text{ °C}$
  - 4.2 For transponder type TID-\*\*-\*\*\*\*\*HT  
For temperature class T4 and T120 °C  
 $-45\text{ °C} \leq T_a \leq +110\text{ °C}$   
For temperature class T3 and T150 °C  
 $-45\text{ °C} \leq T_a \leq +140\text{ °C}$

CONDITIONS OF CERTIFICATION: NO





# IECEX Certificate of Conformity



**Certificate No.:** IECEx BVS 15.0119

**Annex**

**Page 1 of 2**

Intrinsically safe transponder type TID-tt-\*\*\*\*\*

For the designation, the letters 'tt' and the asterisks shall be replaced by the following combinations of letters and numbers:

letters 'tt'

tt

TP = transponder for a frequency range of 120 to 140 kHz

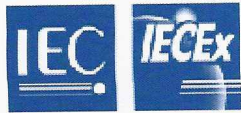
HF = transponder for a frequency range of 13 to 14 MHz

UHF = transponder for a frequency range of 900 MHz

For the TP, HF and UHF transponder

Asterisks 1 to 4

|        |                          |                      |
|--------|--------------------------|----------------------|
| 3      | 12.3 x 2.2 x 3 mm        | PA6/Ceramic          |
| 6      | d = 6 mm, h = 2.5 mm     | PA6/Ceramic          |
| 12     | 12 x 7 x 3 mm            | PA6/Ceramic          |
| 17     | 17.7 x 10.9 x 4.8 mm     | PA6/Ceramic          |
| 31     | 31.7 x 12.8 x 5 mm       | PA6/Ceramic          |
| 51     | 51 x 36 x 7.5 mm         | PA6 GF 50 %          |
| 52OM   | 52 x 43 x 10 mm          | PA6 GF 50 %          |
| CL20   | d = 20 mm, h = 0.6 mm    | clear Disc           |
| CL22   | d = 22 mm, h = 0.6 mm    | clear Disc           |
| CL30   | d = 30 mm, h = 0.6 mm    | clear Disc           |
| CL51   | d = 51 mm, h = 0.6 mm    | clear Disc           |
| CY13   | l = 34 mm, d = 9 mm      | mount                |
| CY22   | l = 26 mm, d = 9 mm      | mount                |
| CY34   | l = 31 mm, d = 9 mm      | mount                |
| EL10   | d = 10 mm, h = 6 mm      | epoxy with glasfiber |
| EL20   | d = 20 mm, h = 1 mm      | epoxy Disc           |
| EL30   | d = 30 mm, h = 1 mm      | epoxy Disc           |
| EL50   | d = 50 mm, h = 1 mm      | epoxy Disc           |
| FO     | d = 50.5 mm, h = 7.8 mm  | PA6 GF 50 %          |
| GL12   | l = 12 mm, d = 2.1 mm    | glastransponder      |
| GL13   | l = 13.3 mm, d = 3.15 mm | glastransponder      |
| GL22   | l = 22 mm, d = 4 mm      | glastransponder      |
| GL22PK | d = 24 mm, d = 8 mm      | glas/PEEK            |
| GL34   | l = 34 mm, d = 4 mm      | glastransponder      |
| IS85   | 85.6 x 54 x 0.76 mm      | ISO Card             |
| LO120  | d = 12 mm, h = 2 mm      | logitag              |
| LO160  | d = 16 mm, h = 3 mm      | logitag              |
| M24    | d = 23 mm, h = 8 mm      | PEEK                 |
| MT148  | 148 x 22 x 18 mm         | long enclosure       |
| ROS    | 48 x 22 x 11 mm          | stainless steel      |
| OT     | 104 x 21 x 10 mm         | PA6 GF 50 %          |
| PA30   | d = 30 mm, h = 3 mm      | PA6 GF 50 %          |
| PA34   | d = 34 mm, h = 6 mm      | PA66                 |
| PU30   | d = 34 mm, h = 6 mm      | PU Tag               |
| PU30HT | d = 34 mm, h = 6 mm      | PU Tag               |
| PU50   | d = 50 mm, h = 15 mm     | PU Tag               |
| PU50HT | d = 50 mm, h = 15 mm     | PU Tag               |
| PU70   | 70 x 100 mm, h = 10 mm   | PU Tag for CO filter |
| PU70HT | 70 x 100 mm, h = 10 mm   | PU Tag for CO filter |
| PU90   | d = 90 mm, h = 24 mm     | PU Tag               |
| PU90HT | d = 90 mm, h = 24 mm     | PU Tag               |
| VO30   | d = 26 mm, h = 4 mm      | Vulcano              |
| WT20   | d = 20 mm, h = 2.15 mm   | World Tag            |
| WT30   | d = 30 mm, h = 2.15 mm   | World Tag            |
| WT50   | d = 50 mm, h = 2.25 mm   | World Tag            |
| XP     | d = 30 mm, h = 8.5 mm    | stainless steel      |



# IECEX Certificate of Conformity



**Certificate No.:**

**IECEX BVS 15.0119**

**Annex**

**Page 2 of 2**

Asterisks 5 and 6

RW for Read Write

RO for Read Only

Asterisks 7 and 8

HF

high temperature variant only for \*-PU30, \*-PU50, \*-PU70 and \*-PU90