



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

Certificate No.: IECEx IBE 10.0009X

Issue No: 7

Certificate history:

Status: **Current**

Issue No. 7 (2018-02-06)

Issue No. 6 (2015-12-22)

Date of Issue: **2018-02-06**

Page 1 of 5

Issue No. 5 (2013-08-27)

Issue No. 4 (2012-07-11)

Applicant: **ecom instruments GmbH**
Industriestrasse 2
97959 Assamstadt
Germany

Issue No. 3 (2012-04-05)

Issue No. 2 (2010-12-22)

Issue No. 1 (2010-10-01)

Issue No. 0 (2010-08-24)

Equipment: **Digital TETRA Radio THR9 Ex**

Optional accessory:

Type of Protection: **Intrinsic safety 'ib'**

Marking:

Ex ib IIC T4 Gb
Ex ib IIIC T135 °C Db

Approved for issue on behalf of the IECEx
Certification Body:

Dipl.-Ing. Alexander Henker

Position:

Deputy Head of Certification Body

Signature:
(for printed version)

Date:

2018-02-06

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:

IBExU Institut für Sicherheitstechnik GmbH
Certification Body
Fuchsmühlenweg 7
09599 Freiberg
Germany





IECEX Certificate of Conformity

Certificate No: IECEx IBE 10.0009X

Issue No: 7

Date of Issue: 2018-02-06

Page 2 of 5

Manufacturer: **ecom instruments GmbH**
Industriestrasse 2
97959 Assamstadt
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/IBE/ExTR10.0009/00

DE/IBE/ExTR10.0009/01

DE/IBE/ExTR10.0009/02

DE/IBE/ExTR10.0009/03

DE/IBE/ExTR10.0009/04

DE/IBE/ExTR10.0009/05

DE/IBE/ExTR10.0009/06

DE/IBE/ExTR10.0009/07

Quality Assessment Report:

DE/PTB/QAR07.0004/03



IECEx Certificate of Conformity

Certificate No: IECEx IBE 10.0009X

Issue No: 7

Date of Issue: 2018-02-06

Page 3 of 5

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The digital handheld Radio THR9 Ex is used for communication in hazardous areas Zone 1 and 2 as well as zone 21 and 22. The Equipment is supplied by an intrinsically battery pack that can be replaced in hazardous locations. All inputs and outputs are limited to permissible values by power limiting components.

Ambient temperature range: -20 °C to +55 °C

Supply: The Equipment is supplied by a rechargeable Battery-Pack type "BLN Ex-2 U" by ecom instruments GmbH

Interface circuits: in type of protection Ex ib IIC

Frequency range: The THR9 Ex is available in frequency variations RC-49, R-50 and RC-51. A Bluetooth module and a GNSS module have been integrated. RFpower < 2 W

Charger: for charging- and communication-connections, the Maximum voltage of $U_m = 60$ VDC applies.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Battery:	Only the battery pack "BLN-Ex 2 U" shall be used with the variants RC-49, RC-50 and RC-51. This battery pack can also be used in older THR9 Ex Versions type RC-27, RC-31 and RC-40.
Battery replacement:	The battery module can be changed inside hazardous gas-explosive locations Zone 1 and 2. During battery replacement it must be assured that the connections are free from dust or dirt. In hazardous dust-explosive locations the battery module shall not be replaced.
Battery storage:	Replacement of the battery modules between the safety-bag and the Equipment shall be carried out immediately and no spare module shall be left out of the safety bag "SBC-Ex".
Battery charging:	The battery shall be charged only outside hazardous locations. The Output of the charger shall comply with the maximum voltage of $U_m = 60$ VDC.
Accessories:	Inside hazardous locations, only accessories that connect to the Top-connector are allowed. The accessory must fulfill the requirements given in the users manual and in the interface description 500022EX05A05G.
Dust Ex-locations:	If there is no approved accessory connected to the Top-Connector the interface must be covered with the "SCL" cover
Bottom connector:	The plug interface "Bottom Connector" shall not be used in hazardous Locations.
Electrostatic:	Close to stronger charging processes only suitable for explosion group IIB.



IECEX Certificate of Conformity

Certificate No: IECEx IBE 10.0009X

Issue No: 7

Date of Issue: **2018-02-06**

Page 4 of 5

Enclosure:	The test for impact according to EN 60079-0 Clause 26.4.2 was only done with the low impact energy. Therefore it has to be assured that the risk of mechanical danger is at a low level.
------------	--



IECEX Certificate of Conformity

Certificate No: IECEx IBE 10.0009X

Issue No: 7

Date of Issue: 2018-02-06

Page 5 of 5

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Change of glue type for the enclosure add on parts to ergo 3110 as per data sheet D001DB26A.
Minor interior adaptations on the enclosure rear and front part.