



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX CSA 25.0094X** Page 1 of 4 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2025-12-22

Applicant: **Hanwei Electronics Group Corporation**
No. 169, Xuesong Road, National Hi-Tech Zone,
Zhengzhou, 450001 Henan
China

Equipment: **Portable Gas Detector or Combustible Gas Detector BTYQ-E110 and BM-E110**

Optional accessory:

Type of Protection: **Intrinsic Safety 'i', Optical radiation 'op is'**

Marking: When with NDIR sensor:
Ex ia op is IIC T4 Ga

When without NDIR sensor:
Ex ia IIC T4 Ga

-20°C ≤ Tamb ≤ 55°C

Approved for issue on behalf of the IECEx
Certification Body:

Dave Magee

Position:

Senior Director of Operations

Signature:
(for printed version)

Date:
(for printed version)

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 www.iecex.com or use of this QR Code.



Certificate issued by:

CSA Group
178 Rexdale Boulevard
Toronto, Ontario M9W 1R3
Canada





IECEX Certificate of Conformity

Certificate No.: **IECEX CSA 25.0094X**

Page 2 of 4

Date of issue: 2025-12-22

Issue No: 0

Manufacturer: **Hanwei Electronics Group Corporation**
No. 169, Xuesong Road, National Hi-Tech Zone,
Zhengzhou, 450001 Henan
China

Manufacturing locations: **Hanwei Electronics Group Corporation**
No. 169, Xuesong Road, National Hi-Tech Zone,
Zhengzhou, 450001 Henan
China

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 equipment 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 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

[IEC 60079-28:2015](#) Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
Edition:2

This Certificate **does not** indicate compliance with 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:

[CA/CSA/ExTR25.0065/00](#)

Quality Assessment Report:

[NL/CNEX/QAR20.0001/04](#)



IECEX Certificate of Conformity

Certificate No.: **IECEX CSA 25.0094X**

Page 3 of 4

Date of issue: 2025-12-22

Issue No: 0

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

BTYQ-E110 and BM-E110 are portable single gas detectors and for a continuous display of gas concentration. These two models are identical and they are designed to be intrinsically safe.

The gas detector is powered by a rechargeable Li-ion battery whose rating is 3.7Vdc/1050mAh. The enclosure is constructed from PC covered partially covered with TPE. The gas detector is provided with one sensor socket which can support EC sensor, NDIR sensor and PID sensor. The front has an LCD display and four buttons for users to operate functions and change settings. The back of the enclosure is equipped with a metallic alligator clip. There are three status LEDs, audible alarm and vibration alarm.

Internally, the electronics consist of a battery pack, a main printed circuit board, a power printed circuit board and a sensor printed circuit board. The battery pack and power printed circuit board are completely encapsulated except for the connectors that are connected with main board.

The gas detector has no electrical connections while in the hazardous area. It may be charged in the non-hazardous area only: $U_m = 6.5Vdc$, $I_m = 2A$.

The BTYQ-E110 and BM-E110 have been tested to comply with IP67 and IP66 in accordance with the EN/IEC 60529.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The product shall only be charged in safe area using a charger approved as SELV or Class 2 equipment against IEC 62368 or an equivalent IEC standard.
The maximum voltage U_m and current I_m from the charger shall not exceed 6.5VDC and 2A respectively. The ambient temperature during charging shall be in the range 0°C to +45°C.
2. Any Data transfer devices via the contact ports shall be approved as SELV or Class 2 equipment against IEC 62368 or an equivalent IEC standard. The maximum voltage U_m from the device shall not exceed 5VDC.



IECEX Certificate of Conformity

Certificate No.: **IECEX CSA 25.0094X**

Page 4 of 4

Date of issue: 2025-12-22

Issue No: 0

Equipment (continued):

Conditions Of Manufacture

1. The product incorporates previously certified sensor, certified under IECEx CSAE 22.0071U and CSANe 22ATEX1158U, IECEx CSAE 23.0039U and CSANe 23ATEX1151U. It is therefore the responsibility of Hanwei Electronics Group Corporation to continually monitor the status of the certification associated with this device. Hanwei Electronics Group Corporation shall inform CSA of any modifications to the device that may impinge upon the explosion safety design of the product.