



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 TUR 22.0077X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2023-08-08

Applicant: **TOP HI-TECH CO., LTD**
9F, No. 1, Zhongshan Road
Tucheng Dist.
New Taipei City, 23680
Taiwan

Equipment: **Explosion-proof daylight sensor and Explosion-proof occupancy sensor,model THTS1912A Series and THTS1912B Series**

Optional accessory:

Type of Protection: **Equipment protection by type of protection "nR" and Equipment dust ignition protection by enclosure "tb"**

Marking: Ex nR IIC T6 Gc
Ex tb IIIC T80°C Db
(-40°C ≤ Ta ≤ +70°C)

Approved for issue on behalf of the IECEx
Certification Body:

Dipl.-Ing. Yang Wang

Position:

Assigned Certifier

Signature:
(for printed version)

Date:
(for printed version)

2023-08-08

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Certificate issued by:

TUV Rheinland Industrie Service GmbH
Am Grauen Stein
51105 Cologne
Germany





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Manufacturer: **TOP HI-TECH CO., LTD**
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Tucheng Dist.
New Taipei City, 23680
Taiwan

Manufacturing locations: **TOP HI-TECH CO., LTD**
9F, No. 1, Zhongshan Road
Tucheng Dist.
New Taipei City, 23680
Taiwan

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 60079-15:2017](#) Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition:5.0

[IEC 60079-31:2022](#) Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
Edition:3.0

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:

[DE/TUR/ExTR22.0077/00](#)

Quality Assessment Report:

[DE/TUR/QAR13.0016/04](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The explosion-proof daylight sensor, model THTS1912A series, is a line voltage daylight sensor designed for automatic daylighting control. This sensor is able to continuously measure the ambient light level in the controlled area and respond with switched line voltage output to control the connected lighting accordingly.

The explosion-proof occupancy sensor, model THTS1912B series, is an occupancy sensor designed to provide switched line voltage power to switch on the controlled lighting when it detects the presence of occupant. The sensor will automatically turn off the light after the area is no longer occupied for a period of time. An ambient light sensor is built-in to inhibit switching on the light if daylighting level is higher than the threshold set.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Do not clean or rub when an explosive atmosphere may be present.
2. Electrostatic charging hazard - Clean only with a damp cloth.
3. S1912 series shall only be mounted where the risk of mechanical impact is low.

Annex:

[DE-IECEX_TUR_22.0077X_00_Attachment_2023-08-08.pdf](#)



Attachment to Certificate IECEX TUR 22.0077X

Device: Explosion-proof daylight sensor and Explosion-proof occupancy sensor
Models: THTS1912A Series and THTS1912B Series

Manufacturer: TOP HI-TECH CO., LTD.

Address: 9F, No.1, Zhongshan Rd., Tucheng Dist., New Taipei City 23680,
Taiwan

General product information:

General description:

The explosion-proof daylight sensor, model THTS1912A series, is a line voltage daylight sensor designed for automatic daylighting control. This sensor is able to continuously measure the ambient light level in the controlled area and respond with switched line voltage output to control the connected lighting accordingly.

The explosion-proof occupancy sensor, model THTS1912B series, is an occupancy sensor designed to provide switched line voltage power to switch on the controlled lighting when it detects the presence of occupant. The sensor will automatically turn off the light after the area is no longer occupied for a period of time. An ambient light sensor is built-in to inhibit switching on the light if daylighting level is higher than the threshold set.

The enclosure of these two series sensors is constructed by aluminum alloy with a glass light-transmitting element. It successfully passed the tests for the ingress protection level IP67 / IPX4 to IEC 60079.

The explosion-proof daylight sensor, model THTS1912A series, and the explosion-proof occupancy sensor, model THTS1912B series, are constructed in types of explosion protection 'nR' and 'tb' for use in gas explosive atmospheres (Zone 2) and dust explosion hazard (Zone 21).

Model designation:

Model code								
THT	S	1912	A	J	S	Z	H	00
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Brand name, THT = Top Hi-Tech Co., Ltd (2) Category of product, S = Explosion-proof Sensor (3) Model name, 1912 = Model S1912 series (4) Function, A = Daylight Sensor B = Occupancy Sensor (5) Appearance type, J = 1 hub K = 2 hub (6) Lamp type, S = Not applicable (7) CCT, Z= Not applicable (8) Voltage, H = 100-277V (9) Sub-Series, 00								

Technical Data

Electrical data:

Explosion-proof daylight sensor:



Attachment to Certificate
IECEX TUR 22.0077X
Revision 0

Power supply	100~277VAC, 50/60 Hz
Maximum Load	@-40°C~55°C Incandescent/Halogen – 800/1200W(VA) Fluorescent Ballast/CFL – 800/1200W(VA) Ballast Electronic (LED) – 540/1200W(VA)
	@ 55°C~70°C Incandescent/Halogen – 500/750W(VA) Fluorescent Ballast/CFL – 500/750W(VA) Ballast Electronic (LED) – 500/750W(VA)

Explosion-proof occupancy sensor:

*@-40°C~55°C **@ 55°C~70°C	100/120VAC	240VAC	277VAC
Incandescent/Halogen	800W(VA)* 500 W(VA)**	5A	1200W(VA)* 750W(VA)**
Fluorescent Ballast/CFL	800W(VA)* 500 W(VA)**	5A	1200W(VA)* 750W(VA)**
Ballast Electronic (LED)	540W(VA)* 500 W(VA)**	5A	1200W(VA)* 750W(VA)**

Environmental data:

1. Ambient temperature range: -40°C to +70°C(See technical data as above).
2. Zone 2 and Zone 21.
3. Temperature class: T6 for gas explosive atmospheres, T80°C for dust explosion hazard.

Routine test at manufacturer and end user:

Under constant temperature conditions, the time interval required for an internal pressure of 0.3 kPa^{+10%}(30 mm water gauge) below atmospheric to change to half the initial value shall be not less than 180 s.

Alternatively one of the following test procedures may be used.

- a) Under constant temperature conditions, the time interval required for an internal pressure of 3.0 kPa^{+10%} (300 mm water gauge) below atmospheric to change to at most 2.7 kPa (270 mm water gauge) below atmospheric shall be not less than 27 s.
- b) Under constant temperature conditions, the time interval required for an internal pressure of 0.3 kPa^{+10%} (30 mm water gauge) below atmospheric to change to at most 0.27 kPa (27 mm water gauge) below atmospheric shall be not less than 27 s.