UK-TYPE EXAMINATION
CERTIFICATE

Product or Protective Systems Intended for Use in Potentially Explosive Atmospheres

UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

1. **UK-Type Examination Certificate Number:** **ITS21UKEX0066X** **Issue 1**

2. **Product:** EVC-PY-IS INTRINSICALLY SAFE OPTICAL SMOKE DETECTOR

3. **Manufacturer:** NITTAN EUROPE LIMITED

4. **Address:** Old Woking, Surrey, GU22 9LQ, UK.

5. This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

6. Intertek Testing and Certification Limited, Approved Body number 0359, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

   The examination and test results are recorded in the confidential report 09040506 dated June 2010, G101798991 dated September 2014, G102601787 dated June 2016, 104617911LHD-001 dated 9th December 2021 and 105215661LHD-001 dated 14th February 2023.

7. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN IEC 60079-0:2018 and EN 60079-11:2012 except in respect of those requirements referred to within item 14 of the Schedule.

8. If the sign "X" is placed after the certificate number, it indicates that the product is subject to the special conditions of use specified in the Schedule to this certificate.

9. This UK-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

10. The marking of the product shall include the following:

II 1 G Ex ia IIC T4 Ga
-20 °C ≤ Ta ≤ +50 °C

Certification Officer: Mark Newman **Date:** 28th February 2024

SCHEDULE:

UK-Type Examination Certificate Number: ITS21UKEX0066X Issue 1

11. Description of Product or Protective System

The EVC-PY-IS Intrinsically Safe Optical Smoke Detector is a low profile photoelectric smoke detector designed for use in conventional fire detection system.

The EVC-PY-IS comprises a printed circuit board (PCB) containing electronic components including a photoelectric sensor housed in a plastic enclosure. The enclosure is fitted to the mounting base Type UB-4-IS or Type EV-SPB-IS, which contains a PCB with terminal blocks.

The enclosure provides a Degree of Protection of at least IP20.

Connections to external circuits are made to the terminals located in the mounting base.

Intrinsic safety is assured by limitation of voltage, current and power, limitation of capacitance, infallible current limiting resistors and infallible segregation.

The maximum intrinsically safe input parameters at terminals 1 and 2 are as follows:

U_i = 28 V
I_i = 93 mA
P_i = 0.65 W

The equivalent parameters are:

C_i = 0
L_i = 0
C_o = 83 nF
L_o = 3.5 mH
L_o / Ro = 46 µH / Ω

12. Report Number

Intertek Report: 105215661LHD-001 dated 14th November 2023.

13. Special Conditions of Certification

(a). Special Conditions of Use

- Users shall be provided with instructions to minimize risk from electrostatic discharge.

(b). Conditions of Manufacture - Routine Tests

- None.

14. Essential Health and Safety Requirements (EHSRs)

The relevant Essential Health and Safety Requirements (EHSRs) have been identified and assessed in UKEX Report 105215661LHD-001 dated 14th November 2023.

SCHEDULE:

UK-Type Examination Certificate Number: ITS21UKEX0066X Issue 1

15. Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
EVC-PY-IS Assembly	102217	1	21/10/09
External Appearance	102274	1	21/05/10
*COVER LOGO EVC-PY-IS	102209	3	01/04/21
EV-SPB-IS Base Appearance	102280	1	25/05/10
*EVC-PY-IS Label	102160	9	15/11/21
EV-SPB-IS Base Label	102279	1	25/05/10
Schematic	102224	1	13/11/09
PCB Artwork Details	102225, shts 1 to 7	2	26/05/10
*SA01/EVC-PY-IS (4 SHEETS)	EVC-PY-IS-01	4	11/01/2023
UB-4-IS Specification Sheet	102233	2	11/06/10
UB-4-IS Label	102232	1	23/11/09
EV-SPB-IS Base Parts List	F03N82029	1	28/05/10
NS-ADAPT-IS Circuit Diagram	069947	1	20/06/96
NS-ADAPT PCB Details	095025, shts 1 to 6	1	20/06/96
*EVC-PY-IS CONSILIUM LABEL	102342	8	01/12/21
*Instruction manual	NISM/EVC-PY-IS/07	7	29/08/2023
EVC-PY-IS Assembly	102217	1	21/10/09

Drawings marked with a * are new or revised.

16. DETAIL OF CERTIFICATE CHANGES

Issue 1 (28th February 2024):

- Update ATEX and UKEX certification to the latest standard EN IEC 60079-0:2018.
- Update to the certification documentation.
- Replacement of signal diodes D1 – D6 and D13.
- Addition of alternative components for Zener diodes Z1, Z4 – Z12.
- Changes to other components which do not affect level of protection of the equipment.
- Removal of EN 60079-26 standard from scope of certification.