

1 **UNITED KINGDOM CONFORMITY ASSESSMENT**
2 **UK TYPE EXAMINATION CERTIFICATE**

3 **Product Intended for use in Potentially Explosive Atmospheres**
4 **UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1**

5 Type Examination Certificate Number: **ExVeritas 21UKEX0786X** Issue: **0**

6 Product: Motion Detector System SX-ID-1XXXXXA

7 Manufacturer: Wath Group Ltd.

8 Address: Unit 1 Bedford Park, Barnsley Road, Wath-Upon-Dearne, Rotherham, S63 6DQ, UK

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

10 ExVeritas Limited Approved Body number 2585, 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 by UKSI 2019:696), 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.

11 Compliance with the applicable Essential Health and Safety Requirements has been assured by compliance with:



EN IEC 60079-0: 2018 **EN IEC 60079-7:2015+A1:2018** **EN 60079-11:2012**
EN 60079-18:2014 **EN 60079-31:2014**

Except in respect of those requirements listed at section 16 of the schedule to this certificate.

12 If the sign “X” is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

13 This 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.

14 The marking of the equipment shall include the following:

 II 2G Ex eb ib mb op is IIC T4 Gb T_{amb} -30°C to +60°C
 II 2D Ex ib tb op is IIC T85°C Db T_{amb} -30°C to +60°C



No. 8613

On behalf of ExVeritas

S Clarke CEng MSc FIET
Managing Director

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The status of this certificate can be verified at www.exveritas.com

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Schedule

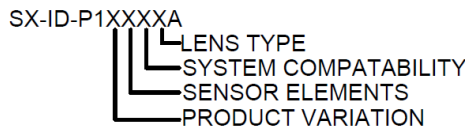
13 Description of Product

The PIR detector is a movement sensor that detects a moving body heat (infrared) signature and provides an alarm output signal to the alarm/monitoring system accordingly. The range also incorporate Anti-Mask and Anti-Tamper technology.

The PIR detector comprises an enclosure made in 316 Stainless Steel where the electronic parts are situated, the boards are either encapsulated (“Ex mb”) or exposed and protected by limiting circuits in the encapsulated area according to the protection concept intrinsic safety. The connections to the external circuits are through approved “Ex eb” block terminals. Therefore, the PIR detector is designed for areas with explosive atmospheres Group II (IIC, IIB or IIA), Zone 1, EPL Gb and temperature class T4.

When the PIR detector is installed in areas with combustible dust, the enclosure provides an ingress protection rating IP55 according to the requirements for the protection concept “Ex tb” for the area with the terminals and encapsulated board, the exposed sensing devices are covered by the protection concept intrinsically safe. Therefore, the PIR detector is designed for areas with explosive atmospheres Group III (IIIC, IIIB or IIIA), Zone 21, EPL Db and marked surface temperature T85°C.

The following part number rule is covered:



PRODUCT VARIATION ¹		
CODE	TYPE	INPUT
1	G3 ALARM	9-36VDC
2	AC LIGHTING	230VAC
3	CCTV	9-36VDC
4	AC CONTACT	230VDC

SENSOR ELEMENTS ²	
CODE	LENGTH
1	SINGLE SENSOR
2	DOUBLE SENSOR

LENS TYPE ⁴	
CODE	LENS
1	DENSE SHORT WIDE-ANGLE
2	MEDIUM WIDE-ANGLE
3	VERTICAL BARRIER

SYSTEM COMPATIBILITY ³			
CODE	R1	R2	R3
0	N/A	N/A	N/A
1	2K2	4K7	2K2
2	1K	1K	1K
3	8K2	8K2	8K2
4	5K6	5K6	5K6
5	4K7	6K8	4K7
6	3K9	8K2	3K9
7	1K	13K	1K
8	2K2	2K2	2K2
9	4K7	4K7	4K7
S	≥1K	≥1K	≥1K

Ratings relevant for the protection concept, the ratings apply for the single or dual sensor versions:

Part number	Description	Electrical ratings
SX-ID-11XXXXA	G3 ALARM	Input nominal (V+/V-): 9-36 Vdc (Um = 250 V) “TEOL OUTPUT”: 36 Vdc (Um = 250 V), minimum 1 kΩ, externally fused to 1.3 A max <i>(refer to “X” conditions)</i>
SX-ID-12XXXXA	AC INLINE CONTACT	Input nominal: 110-240 Vac (Um = 250 V) Output “AC L O” / “AC N O”: 16 A max (fused)
SX-ID-13XXXXA	CCTV	Input nominal (V+/V-): 9-36 Vdc (Um = 250 V) Output “A” / “B”: 50 Vdc or 240 Vca max, externally fused to 16 A max <i>(refer to “X” conditions)</i>
SX-ID-14XXXXA	AC ISOLATED CONTACT	Input nominal: 110-240 Vac (Um = 250 V) Output “A” / “B”: 50 Vdc or 240 Vca max, externally fused to 16 A max <i>(refer to “X” conditions)</i>

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Issue **0**

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Schedule

14 Descriptive Documents

14.1 Associated Report and Certificate History:

Report Number	Cert Issue Date	Issue	Comment
R2834/A/1		0	Initial issue of the Prime Certificate

14.2 Compliance Drawings:

Title:	Drawing No.:	Rev. Level:	Date:
SX-ID-P1XXXXX HAZARDOUS AREA PIR CERTIFICATION GA	SX-ID-P1XXXXX-GA	1.0	2022/01/26
SX-ID-P1XXXXX HAZARDOUS AREA PIR CERTIFICATION CL	SX-ID-P1XXXXX-CL	1.0	2022/01/26
SX-ID-P1XXXXX HAZARDOUS AREA PIR CERTIFICATION MB	SX-ID-P1XXXXX-MB	1.0	2022/01/26
SX-ID-P1XXXXX HAZARDOUS AREA PIR CERTIFICATION EB	SX-ID-P1XXXXX-EB	1.0	2022/01/26
SX-ID-P1XXXXX HAZARDOUS AREA PIR CERTIFICATION PCB SPECIFICATION	SX-ID-P1XXXXX-PCBS	1.0	2022/01/26
SX-ID-P1XXXXX HAZARDOUS AREA PIR CERTIFICATION CP	SX-ID-P1XXXXX-CP	1.0	2022/01/26
SX-ID-P1XXXXX HAZARDOUS AREA PIR CERTIFICATION IB	SX-ID-P1XXXXX-IB	1.0	2022/01/26
Instructions			

15 Specific Conditions of Use

15.1 Special Conditions for Safe Use

- The two M20 x 1.5 entries must be closed by suitably approved devices. These devices must be in accordance to the requirements for “Ex eb” when the equipment is installed in Group II areas or requirements for “Ex tb” when the equipment is installed in Group III areas.
- For the models SX-ID-12XXXXA, SX-ID-13XXXXA and SX-ID-14XXXXA, the cable insulation and entry devices as cable glands must be rated for service temperature greater than +80 °C.
- The following models must have the outputs provided in the installation with a suitable fuse to the maximum current the following values. This fuse must be situated in safe area, or it must be in a suitably approved equipment covered by an adequate protection concept for the installation area. The fuse must provide an adequate breaking capacitive (voltage and current) according to the installation ratings.

15.2 Routine tests

- Visual inspections

Each piece of “m” equipment shall be subjected to a visual inspection. No damage shall be evident, such as cracks in the compound, exposure of the encapsulated parts, flaking, inadmissible shrinkage, swelling, decomposition, failure of adhesion (separation of any adhered parts) or softening.

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- Dielectric strength test

The test shall be carried between the SX Motion Detector input circuit (including the IS ground) and the external main enclosure earthing circuit connected to the intrinsically parts. The test voltage shall be 1500 V r.m.s.^{+5%}_{-0%} at 48 Hz to 62 Hz. Alternatively, the test voltage is increased by a factor of 1.2 times, then the test time can be reduced to 100 ms.

16 Essential Health and Safety Requirements (Regulations Schedule 1)

Essential Health and Safety Requirements are addressed by the standards listed in section 9 and where required the report listed in section 14.1

The manufacturer shall inform ExVeritas of any modifications to the design of the product described by this schedule.