1 # UK-TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres**
UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

3 UK-Type Examination Certificate Number: **BAS23UKEX0063X Issue 0**

4 Product: **MOTION ALIGNMENT SENSOR TYPE WDA4**

5 Manufacturer: **Don Electronics Limited**

6 Address: **Westfield Industrial Estate, Kirk Lane, Yeadon, Leeds, LS19 7LX**

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

8 SGS United Kingdom Ltd. (formerly SGS Baseefa Ltd.), Approved Body number 1180, in accordance with Regulations 42 and 43 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.

8.1 The BAS prefix to the Certificate Number indicates that the certificate was issued by SGS Baseefa Ltd. prior to the name change to SGS United Kingdom Ltd. Such certificates remain valid with their original number. (Delete row if not needed)

The examination and test results are recorded in a confidential report identified in the revision table at item 20.

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

EN IEC 60079-0:2018 IEC 60079-31: 2022

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

11 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.

12 The marking of the product shall include the following:

Ex **II 1D Ex ta IIIC T_{200} (see schedule)°C Da IP66 Tamb -20°C to +50°C**

SGS Customer Reference No. **4340** Project File No. **21/0616**

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UKAS PRODUCT CERTIFICATION
0191

R S SINCLAIR
TECHNICAL MANAGER
On behalf of SGS United Kingdom Limited

13 # Schedule

14 ## Certificate Number BAS23UKEX0063X – Issue 0

15 Description of Product

The Don Electronics Motion Alignment Sensor type WDA4 has two options:
Type WDA4****AI
Type WDA4****AI-HT

The WDA4 consists of an inductive sensor and control circuit within a 1.5mm thick stainless steel enclosure. The enclosure is in the form of a cylinder ø51mm x 153mm long incorporating a ø56mm x 23mm long end plug at one end, and a stainless steel 1.5mm thick circular end cap at the other. The end plug has two small holes to allow access to a potentiometer for the adjustment of the sensitivity of the device and an LED which indicates motion detection. The potentiometer and the LED are recessed below the metal surface of the enclosure. The enclosure is filled with resin.

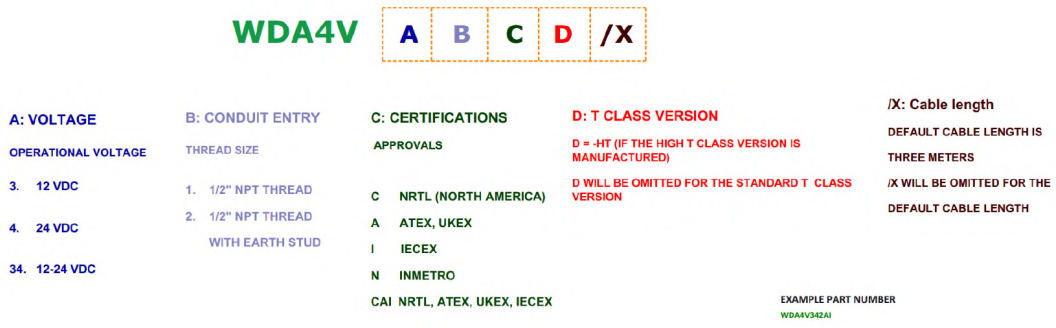
An integral cable is provided for connection to a 12-24V DC supply. An internal earth connection is provided to the inside of the enclosure for connection by the end user via one of the wires in the integral cable. The sensor is provided with one of three external earth options, via the end users' earthed metal conduit, via an external metal earth stud assembly on the sensor end cap, or via Don Electronics' metal mounting bracket.

The maximum power supplied to the sensor circuit is controlled by a 50mA fuse, zener diode and thermal fuses rated at either 76°C or 102°C (dependent on the T Class). A thermal fuse is on the input, and another is located on the output, both fuses are located within 24 mm of the critically defined input and output components.

MARKING:
WDA4****AI (fitted with 76°C thermal fuse)
Ex ta IIIC T_{200} 120°C Da IP66 Tamb -20°C to +50°C

WDA4****AI-HT (fitted with 102°C thermal fuse)
Ex ta IIIC T_{200} 150°C Da IP66 Tamb -20°C to +50°C

PRODUCT NOMENCLATURE



16 Report Number

See Item 20 – Certificate History

17 Specific Conditions of Use

1. The integral cable shall be terminated in a suitably certified junction box or in a safe area.
2. The sensor shall be internally earthed via the green wire of the integral cable.

3. The sensor shall be externally earthed via one of the following three methods:
   i) Via the ½" NPT threaded entry in the metallic end cap of the WDA4 sensor that is fitted with metal conduit by the end user. The conduit shall be earthed by the end user and they shall check that the earth connection is less than 500 Milli Ohms, between the metallic end cap of the WDA4 sensor and the metallic conduit.
   ii) Via the Don Electronics WDA4 metallic mounting bracket, that is fitted around the sensor housing. The mounting bracket is fitted directly to the end users earthed machine housing, via the mounting brackets' 4 off bolts complete with anti-rotation and anti-vibration fixings. The end user shall check that the earth connection is less than 500 Milli Ohms, between the metallic body of the WDA4 sensor and the metallic mounting bracket, and between the mounting bracket and machine housing.
   iii) Via a wire and ring crimp fitted on the external earth stud arrangement located on the WDA4 sensor end cap and wire connection to the site earth point.
4. The supply circuit of the system where the equipment is connected shall be protected by a suitably rated fuse capable of interrupting a prospective short circuit current of 1.5 kA.

18 Essential Health and Safety Requirements

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	Subject
13	LVD type requirements
14	Overloading of equipment (protection relays, etc.)
21(1)	External effects
21(2)	Aggressive substances, etc.

19 Drawings and Documents

Other than for Issue 0, Drawings and Documents that are introduced at a new edition of the certificate are marked with an asterisk symbol:

Number	Sheet	Issue	Date	Description
DE8038-4-001-S	1 of 1	4	09/11/23	WDA4 sensor label Zone 20

Baseefa05ATEX0088X

All drawings are common to Baseefa05ATEX0088X, BAS21UKEX0063X and IECEX BAS 05.0031X and held on the latter.

20 Certificate History

Certificate No.	Date	Comments
BAS23UKEX0063X Issue 0	8 December 2023	**Prime Certificate** **Report Number: GB/BAS/ExTR23.0049/00** **Project Number: 21/0616** **Original issue of the certificate**
For drawings applicable to each issue, see original of that issue.		