1 # EU - TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU**

3 EU - Type Examination Certificate Number: **Baseefa05ATEX0088X – Issue 3**

3.1 In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.

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

5 Manufacturer by: **Don Electronics Limited**

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

7 This re-issued certificate extends EC Type Examination Certificate No. Baseefa05ATEX0088X to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

8 SGS Fimko Oy, Notified Body number 0598, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, 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 Annex II to the Directive.

8.1 The original certificate was issued by SGS Baseefa Ltd (UK Notified Body 1180). It, and any supplements previously issued by SGS Baseefa Ltd have been transferred to the supervision of SGS Fimko Oy (EU Notified Body 0598). The original certificate number is retained.

The examination and test results are recorded in confidential Report No. **See certificate History**

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 EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive 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:

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

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

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13 **Schedule**

14 **Certificate Number Baseefa05ATEX0088X – Issue 3**

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.

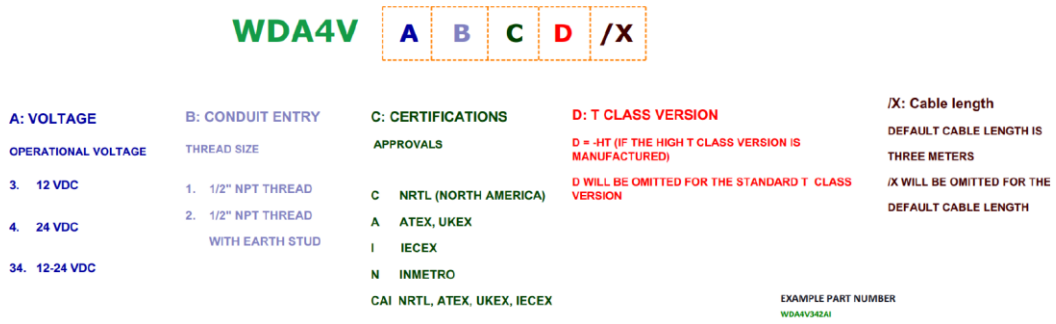
An integral cable is provided for connection to a 12-24V DC supply. An internal earth connection is provided to the inside of the enclosure for connection by the end user via one of the wires in the integral cable. The sensor is provided with one of three external earth options, via the end users' earthed 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
1.2.7	LVD type requirements
1.2.8	Overloading of equipment (protection relays, etc.)
1.4.1	External effects
1.4.2	Aggressive substances, etc.

19 Drawings and Documents

New drawings submitted for this issue of certificate:

Number	Sheet	Issue	Date	Description
DE8038-5-001	1 & 2	9	22/11/23	WDA4 Zone 20 sensor general arrangement
DE8038-2-001-S	1 & 2	5	30/05/18	WDA4 (Schematic only)
DE8038-4-001-S	1 of 1	4	09/11/23	WDA4 sensor label Zone 20

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

The above drawings now replace all previous drawings listed. All previous drawings are now considered as superseded and withdrawn.

20 Certificate History

Certificate No.	Date	Comments
Baseefa05ATEX0088X	1 July 2005	The release of the prime certificate. The associated test and assessment against the requirements of EN 50281-1-1:1998+Amd 1 is documented in Test Report No. 04(C)0835. The marking was as follows: Ⓔx II 1D T120ºC T_{amb} -20ºC to 50ºC
Baseefa05ATEX0088X/1	31 October 2005	To permit the use of an alternative resin.
Baseefa05ATEX0088X/2	5 April 2011	To add minor drawing modifications.

Certificate No.	Date	Comments
Baseefa05ATEX0088X Issue 3	8 December 2023	This issue of the certificate incorporates previously issued primary & supplementary certificates into one certificate and confirms the current design meets the requirements of EN IEC 60079-0: 2018 and IEC 60079-31: 2022 (considered State of the Art) including the revision of the equipment marking in accordance with these standards. Also, to include 2 new external earth options. The sensor can now be earthed via one of the following 3 options: via Metal Bracket (existing), ½" NPT conduit entry or Earth stud on the end cap. Also, to include minor modifications to the sealing method, a redesign of the circuit layout and thermal protection, and to conduct full testing. Also, to update the Specific Conditions of Use. Also, to change the product name from Motion Alignment Sensor type WDA3 to Motion Alignment Sensor type WDA4.
For drawings applicable to each issue, see original of that issue.		