EU Type Examination Certificate CML 23ATEX3223X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **Encoder Flex**

3 Manufacturer **Don Electronics Limited**

4 Address **Westfield Industrial Estate,**
Kirk Lane,
Yeadon, Leeds,
LS19 7LX, UK

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 Eurofins CML B.V., Chamber of Commerce No 67386717, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, 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 equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-31:2024

10 The equipment shall be marked with the following:

Ex II 1 D

Ex ta IIIC T_{200}100°C Da

-30°C ≤ T_a ≤ +50°C

IP66

11 Description

The Encoder Flex is a rotary shaft encoder designed to measure angle and speed. The Encoder Flex is powered between 10 – 26.4V and has the following outputs:

- Quadrature Pulse
- 4-20mA
- RS485 Modbus

The device can be configured for a range of different applications by setting its resolution and frequency ranges. Additionally, it can be calibrated to measure rotation across a fixed range of multiple turns.

EFLEX1024 2 V34 C /1

Device Code

EncoderFlex-1024

Entry Type

1 = Cable Only Entry

2 = Conduit Entry

Voltage Input

V34 = 12V and 24V Operation

Approvals

C = NRTL

AI = ATEx/UKEx and IECEx

CAI = NRTL, ATEx/UKEx, and IECEx

Shaft Type

0 = Metric M12x1.75 Thread, 15mm Length

1 = Imperial ½"-13 UNC Thread, 15mm Length

2 = D-Type 10mm Diameter Shaft with Flat, 15mm Length

3 = Imperial ⅜"-16 UNC Thread, 15mm Length

[Other shaft types to be added]

The equipment may also be referenced as:

Encoder-Flex1024, EncoderFlex-1024, EFLEX1024, EncoderFlex 1024

Variation 1

This report assesses the following modifications to the Encoder Flex.

i. Change to the name and compound of the silicon sealant AS5600.
ii. Modification of the DAC on the Magnetic encoder bottom PCB.

12 Certificate history and evaluation reports

Issue	Date	Associated Report	Notes
0	26 Jul 2022	R16504A/00	Issue of Prime Certification
1	27 Jan 2025	R18222A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

None.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. 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 1.5kA.

ii. The Encoder Flex shall be connected to a suitable external earth via the mounting holes or via the mounting screws and a suitable ring crimp.

iii. The integral flying lead/cable shall be terminated in a suitably certified enclosure or in a safe area.

Certificate Annex

Certificate Number	**CML 23ATEX3223X**
Equipment	**Encoder Flex**
Manufacturer	**Don Electronics Limited**

The following documents describe the equipment defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved Date	Title
DE8135-4-004-S	1	5	26 Jul 2023	4B KNUCKLE DESIGN LABEL AI VERSION
DE8135-5-001-S	4	3	26 Jul 2023	ENCODER GENERAL ASSEMBLY
DE8135-2-001-S	2	2	26 Jul 2023	ENCODER BOTTOM SCHEMATICS
DE8135-2-002-S	3	3	26 Jul 2023	ENCODER TOP SCHEMATICS

Issue 1

Drawing No	Sheets	Rev	Approved Date	Title
DE8135-2-001-S	1 to 2	3	27 Jan 2025	Magnetic Encoder Bottom PCB (Schematic Only)
DE8135-5-001-S	1 to 4	4	27 Jan 2025	ENCODER GENERAL ASSEMBLY