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CONFORMITÉ EUROPÉENNE

EU - TYPE EXAMINATION CERTIFICATE

2 **Product or Protective System Intended for use in Potentially Explosive Atmospheres**
Directive 2014/34/EU – Annex III

3 EU - Type Examination Certificate No.: **TRAC14ATEX0007X (incorporating variations V1 to V3)**

4 Product: **Flameproof Encoder Model M6C Series**

5 Manufacturer: **Nidec Conversion**

6 Address: **243 Tuxedo Avenue, Cleveland, Ohio 44131, United States of America**

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

8 Element Materials Technology, Notified Body number 2812, 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. The examination and test results are recorded in the confidential report **TRA-017681-33-00A, TRA-047283-33-00A, TRA-053525-33-00A and TRA-065540-33-00A.**

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

EN IEC 60079-0:2018**EN 60079-1:2014****EN IEC 60079-7:2015+A1:2018**

Except in respect of those requirements listed at section 18 of the schedule.

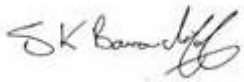
10 If the sign "X" is placed after the certificate number, it indicates that the product is subject to specific conditions of use specified in the schedule to this certificate.

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 this product shall include the following:

 **II 2 G Ex db eb IIB T4 Gb****Tamb : -20 °C to +80 °C (standard range)****Tamb : -40 °C to +80 °C (with modification codes 001, 005)**

This certificate and its schedules may only be reproduced in its entirety and without change. This certificate is issued in accordance with the Element Materials Technology Ex Certification Scheme.



S K Barrowcliff, Deputy Certification Manager

Issue date: 2026-09-09

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13 SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE

14 CERTIFICATE NUMBER TRAC14ATEX0007X (incorporating variations V1 to V3)

15 Description of Product

The M6 range of encoders are rotary speed and position transducers. The output from the units is directly proportional to shaft position (pulse count) or speed (pulse rate). The encoder is designed to be used for both control and instrumentation applications and is powered by a DC supply not exceeding 24 Volts. The device consists of a cast aluminium flameproof enclosure and up to two increased safety terminal housings, separated by cemented seals. The flameproof enclosure is secured by 12 M4 x 0.7 cap screws with a tensile strength of 1220 N/mm² (property class 12.9) with a torque of 2.82 N-m.

M6C PART NUMBERS AND AVAILABLE OPTIONS								
Model	Bore Size	Mounting Style	Line Driver	Left & Right Output Range	Base PPR	Marker	Connector	Modifications
M6C-	0- Non-Standard 4- 1" 5- 1 1/8"	S- End of Shaft	1- 5 to 24 VDC 2- 5 to 18 VDC 3- 12 to 24 VDC 8- 6.5 to 24 VDC	X- None L- Low Range (Base PPR x 1/2) M- Medium Range (Base PPR x 1) H- High Range (Base PPR x 2)	48- 480 51- 512 60- 600	Z- Marker -- None	T- Conduit Box, Terminal Block, 3/4" NPT W- Conduit Box, Terminal Block and Wire Gland	000- None 001- Low Temp (-40°C) 003- Torque Arm B28390 005- Low Temp (-40°C) & Torque Arm

16 Test Report No. (as added for this issue of the certificate): TRA-065540-33-00A

17 Specific Conditions of Use:

1. Installation should only be performed by qualified personnel. Safety precautions must be taken during use to ensure that flameproof joints on the Cover and Housing are not damaged. Repair of flameproof joints is not permissible. Contact the original manufacturer for information on the flameproof joints.



Attention is drawn to the operating and installation instructions which may contain useful information in relation to conditions of use.

18 Essential Health and Safety Requirements (Directive Annex II)

Element Materials Technology has conducted a gap analysis between the standards applied within the reports listed under section 8 and the latest versions of the corresponding harmonised standards (as listed in section 9). This analysis has confirmed continued compliance with the Essential Health and Safety Requirements. The analysis is detailed in report: TRA-053525-33-00A.

In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated in the relevant reports.

19 Drawings and Documents

The list of controlled technical documentation is given in TRA-065540-00-SDL, dated 2026-08-26.

20 Routine Tests

1. An electrical strength test of 500 V rms shall be applied between the terminals and chassis in accordance with clause 7.1 of IEC 60079-7.

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21 Photographs



22 Details of Markings

INCREMENTAL ENCODER				
	NIDEC CONVERSION 243 TUXEDO AVE. BROOKLYN HEIGHTS, OH 44131 USA			0539
Type	Option Code	Rev	Ser. No.	Date Mfg
	PPR		VDC	
Imax= 160mA, Pmax= 4.48W Ea Output				
Ex db eb IIB T4 Gb (Tamb to +80°C)				
0539		II 2 G		
Cert No.	TRAC14ATEX0007X			IP66
IECEx TRC 14.0005X				
WARNING: DO NOT OPEN IN AN FLAMMABLE ATMOSPHERE OR WHEN ENERGIZED. WIRING AND CABLE GLANDS USED FOR THE ENCODER MUST BE RATED 100°C OR HIGHER.				
B36356				

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23 Certificate History

Original certificate	2014-06-19	First issue. The certificate was originally issued by Notified Body number 0891 under Directive 2014/34/EU. The technical file has been transferred to Element Notified Body number 2812, including a company name change, label correction to CE mark font and replacement instructions drawing.
Variation V1	2020-01-17	
Variation V2	2022-04-19	Change of address
Variation V3	2026-09-09	Manufacturer name change, new material, fabrication method and internal construction for Ex db protected parts. Additional preapproved parts. Markings updated to remove UKEX. Modification to Specific Conditions of Use listed.

This certificate is a consolidated certificate and reflects the latest status of the certification, including all variations and amendments.

24 Notes to CE marking

In respect of CE Marking, Element Materials Technology accepts no responsibility for the compliance of the product against all applicable Directives in all applications.

25 Notes to this certificate

Element Materials Technology certification reference: ERO050735P83 (GU-NISQ-0005).

Throughout this certificate, the date format yyyy-mm-dd (year-month-day) is used.

Notified Body number 2812 is the designation for Element Materials Technology Rotterdam BV.

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. Variation 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.

26 Conditions for the validity of this certificate

This certificate remains valid for so long as:

- (i) The equipment listed in section 4 is manufactured in accordance with the documents listed in TRA-065540-00-SDL, dated 2026-08-26.
- (ii) The standards listed in section 9 of this certificate continue to satisfy the Essential Health and Safety Requirements of Annex II of Directive 2014/34/EU and the generally acknowledged state of the art (e.g. as determined by the publishers of those standards).