



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx TRC 14.0005X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 2	Issue 1 (2020-01-17) Issue 0 (2014-06-19)
Date of Issue:	2022-04-19		
Applicant:	Nidec Industrial Solutions 243 Tuxedo Ave. Brooklyn Heights, OH 44131 United States of America		
Equipment:	Flameproof Encoder Model M6C series		
Optional accessory:			
Type of Protection:	Flameproof db , Increased Safety eb		
Marking:	Ex db eb IIB T4 Gb $T_{amb} = -40/-20^{\circ}\text{C}$ to $+80^{\circ}\text{C}$		

Approved for issue on behalf of the IECEx
Certification Body:

S P Winsor

Position:

Certification Manager

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

Element Materials Technology
Unit 1 Pendle Place
Skelmersdale
West Lancashire





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Manufacturer: **Nidec Industrial Solutions**
243 Tuxedo Ave.
Brooklyn Heights, OH 44131
United States of America

Manufacturing
locations: **Nidec Industrial Solutions**
243 Tuxedo Ave.
Brooklyn Heights, OH 44131
United States of America

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2011](#) Explosive atmospheres - Part 0: General requirements
Edition:6.0

[IEC 60079-1:2007-04](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:6

[IEC 60079-7:2006-07](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:4

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[GB/TRC/ExTR14.0005/00](#)

[GB/TRC/ExTR14.0005/01](#)

[GB/TRC/ExTR14.0005/02](#)

Quality Assessment Report:

[US/UL/QAR12.0002/08](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

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 24Volts. 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 Nm.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Contact the manufacturer for information on the dimensions of the flameproof joints.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Address change. Marking updated with the alternative protection concepts db, eb.

Annex:

[Annex to IECEx TRC 14.0005X issue 2.pdf](#)



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Annex to IECEx Certificate of Conformity

IECEx TRC 14.0005X issue No.: 2

Table of entity parameters

N/A

"Special conditions for manufacture"

1. The products covered by this certificate incorporate previously certified devices, it is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with these devices and to ensure the correct instruction documents/information is provided to the end user.

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.

Part number Configuration

PART NUMBER CONFIGURATION:

M6C-X X X X X XX X X XXX

SPECIAL MODIFICATIONS:

000 - NO MODIFICATIONS
SEE M6CMOD-XXX WHERE XXX IS THE MODIFICATION CODE

OUTPUT CONNECTION:

T - TERMINAL BLOCK
W - TERMINAL BLOCK WITH CABLE GLAND

MARKER

BASE PPR

RIGHT OUTPUT RANGE

LEFT OUTPUT RANGE

LINE DRIVER

SHAFT STYLE:

SHAFT SIZE:
ALLOWABLE RANGE OF SIZES
SHOWN ON SHEET 3

Manufacturer's Documents			
Title:	Drawing No.:	Rev. Level:	Date:
M6C Explosion-Proof Pulse Encoder (3 Sheets)	D52332	C	2021-09-08
M6C Certification drawing- User Instructions	B38053	A	2022-01-13

* Denotes information not provided by manufacturer



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