[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: **DEMKO 17 ATEX 1880X Rev. 9**

[4] Product: **Series XP5 and XPH Modular Encoders and Parts Kit**

[5] Manufacturer: **Nidec Conversion**

[6] Address: **243 Tuxedo Ave., Brooklyn Heights, OH 44131 USA**

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

[8] UL International Demko A/S, notified body number 0539 in accordance with Article 17 of the 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 no. **US/UL/ExTR17.0051/09.**

[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 60079-0:2018/A11:2024
EN 60079-11:2012

Where additional criteria beyond those given here have been used, they are listed at item 18 in 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" listed under item 17 of this certificate.

[11] This EU-Type Examination Certificate relates only to the technical design of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by the certificate.

[12] The marking of the product shall include the following (marking is provided in the Schedule as a part of item 15, if applicable):

II 2 G Ex db ia IIB T4 Gb

Certification Manager
Thomas Wilson

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2017-10-23
Re-issued: 2025-10-15

Notified Body UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
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[13] [14]

Schedule
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[15] Description of Product

The XP5 is a series of magnetic flameproof and intrinsically safe encoders designed for rotational sensing. The equipment is comprised of two compartments, a flameproof enclosure housing the galvanic isolator (associated apparatus) and drive electronics, and a second compartment containing the intrinsically safe sensor circuitry. The flameproof enclosure of the XP5 is comprised of the housing and cover secured together by four metal M5 cover screws. Encapsulation is provided within the flameproof enclosure and completely fills the intrinsically safe compartment. The XPH is an assembly of components including the series XP5 sensor, rotor, adapter bracket/housing, adapter housing cover, and sensor cover.

I	II	III	IV	V	VI
XP5	2	6	AY	A	000

I – Model Designation	Code	Description
	XP5	
II - Style		
	* -	Rotor Size and Adapter Configuration
III - Line Driver		
	2 -	5 to 24V in / OC out
	6 -	5 to 24V in / 5 to 24V out
	8 -	5 to 24V in / 5 to 24V out high power
IV- PPR Left		
	** -	Pulse Per Revolution to Drive
V - Connector		
	** -	M25, ½ NPT, ¾ NPT Connection on the Left, Right, or Both Sidewalls of Housing
VI - Mod Code		
	*** -	Optional Features

I	II	III	IV	V	VI	VII	VIII	IX
XPH	1	TM	F	6	AY	AY	A	000

I – Model Designation	Code	Description
	XPH	
II - Style		
	* -	Rotor Size and Adapter Configuration
III – Rotor Type & Size		
	** -	Rotor Bore Size and Connection to Shaft
IV – Housing Cover Type		
	* -	XPH Cover Configuration
V – Line Driver		
	2 -	5 to 24V in / OC out
	6 -	5 to 24V in / 5 to 24V out
	8 -	5 to 24V in / 5 to 24V out high power
VI – PPR Left		
	** -	Pulse Per Revolution
VII – PPR Right		
	** -	Pulse Per Revolution
VIII – Connector		
	** -	M25, ½ NPT, ¾ NPT Connection on the Left, Right, or Both Sidewalls of Housing
IX – Mod Code		
	*** -	Optional Features

* - A single number or letter
** - Any two-digit combination of numbers and letters
*** - Any three-digit combination of numbers and letters

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[13] **Schedule**

[14] **EU-TYPE EXAMINATION CERTIFICATE No.**

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Performance testing
The optical radiation output of the product with respect to explosion protection, according to Annex II clause 1.3.1 of the Directive 2014/34/EU is not covered in this certificate.

Temperature range
The ambient temperature range is -50°C to +85°C.

Electrical data
24V, 500mA
Intrinsically safe specifications:
Um : 250 V

Routine tests
No routine tests required.

[16] Descriptive Documents
The scheduled drawings are listed in the report no. provided under item no. [8] on page 1 of this EU-Type Examination Certificate.

17] Specific conditions of use:
This product has no user serviceable parts. Care 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 Nidec Industrial Solution for dimensions of flameproof joints.

The circuits shall be limited to overvoltage category I/II/II as defined in EN 60664-1.

The four screws that secure the XP5 cover onto the XP5 enclosure require the minimum tensile strength shown below:

MATERIAL	GRADE	MINIMUM TENSILE STRENGTH
A2 Stainless Steel	A-70	700 MPa (101.5 KSI)
A4 Stainless Steel	A-80	800 MPa (116.0 KSI)
Carbon Steel	8.8	800 MPa (116.0 KSI)
Alloy Steel	12.9	1220 MPa (176.9 KSI)

Protect the cover seal from sunlight during storage and installation.

[18] Essential Health and Safety Requirements
The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.

Additional information

The trademark Nidec will be used as the company identifier on the marking label.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in Annex III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.

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