UL Type Examination Certificate

ATEX Directive 2014/34/EU

Certificate

UL 23 ATEX 3086X
Rev. 2

Issue date
2024-05-23

Re-issued
2025-10-16

This is to acknowledge that

Nidec Conversion 243 Tuxedo Ave., Brooklyn Heights, OH 44131 USA

has had

XR series encoders

evaluated and meets the requirements of the standards

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

Test Report No. **US/UL/ExTR23.0083/02**

Certification Manager
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This is to certify that the sample(s) of the product described herein ("Certified Product") has been investigated and found in compliance with the above mentioned harmonized Standard(s) per Article 12 of Directive 2014/34/EU of the European Parliament and of the Council relating to equipment and protective systems for use in potentially explosive atmospheres indicated on this Certificate, in accordance with the UL Type Examination Certificate Scheme Requirements.
The responsibilities of manufacturers, their authorized representatives are provided in Articles 6 and 7 of the Directive 2014/34/EU. This remains the responsibility of the manufacturer and authorized representative and is not covered as part of this certificate.
This certificate and test results obtained apply only to the product sample(s) submitted by the Applicant. UL International Demko A/S (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 for inspection or other surveillance of the product. The Certificate Holder is solely and fully responsible for conformity of all products to all applicable Standards, specifications, requirements or Directives/Regulations. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

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UL TYPE EXAMINATION CERTIFICATE

TECHNICAL DETAILS/SCHEDULE

Description of product

Encoder Overview:
The encoders are made from a selection of five simple board combinations depending on the application. The boards in combination are effectively simple apparatus as the capacitance and inductance under mass fault are less than the permitted isolator value. In addition, the boards are potted into a solid block and mounted in metal cases (offering ingress protection IP54).

Encoder models covered are:

XR4F	XR56A	XR485
XR5	XR67A	XR685
XR12	XR85A	XR850
XR45	XR115	XR56S
XR47	XR125	XR97

Nomenclature

N/A

Ex marking

II 3G Ex ic IIC T4 Gc

II 3D Ex ic IIIC T200°C Dc

Temperature range

The relation between ambient temperature and the assigned temperature class is as follows:

Models	Ambient temperature range	Temperature class
All Encoders except XR485N and XR685N:	-40°C to +80°C	T4 T200°C
Encoders XR485N or XR685N:	-20°C to +80°C	T4 T200°C

Trademark

N/A

Ratings

Electrical data

Zone 2 Encoder Parameter shall be according to the table below:

	Ui		Ci
Ii	IIC	IIB	
250mA	15V	25V	
1A	-	15V	1.8uF
5A	-	12V	
Zone 2			

Routine tests

N/A

Descriptive documents

The scheduled drawings are listed in the report no. provided under item “Test Report No.” on page 1 of this UL Type Examination Certificate.

Specific Conditions of Use

- When the encoder is marked as “ic”, the power supply situated in safe area must be limited to the levels listed on this certificate and cable must be selected and installed in accordance with EN 60079-14 and EN 60079-25.
- The equipment should be mounted to avoid electrostatic charging.

Additional Information

The XR series of encoders has in addition passed the tests for Ingress Protection to IP 54 in accordance with EN60529:1991+A1:2000+A2:2013.

All models for the encoder are covered by this.

The trademark AVTRON ENCODERS 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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