



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx SIR 05.0059X issue No.:3

Status: **Current**

Date of Issue: **2013-06-21** Page 1 of 4

Certificate history:
Issue No. 3 (2013-6-21)
Issue No. 2 (2010-5-26)
Issue No. 1 (2009-12-3)
Issue No. 0 (2006-8-8)

Applicant: **Hohner Automation**
Units 14-16 Whitegate Industrial Estate
Wrexham
LL13 8UG
United Kingdom

Electrical Apparatus: **R and M Series Optical Shaft Encoder**
Optional accessory:

Type of Protection: **Flameproof**

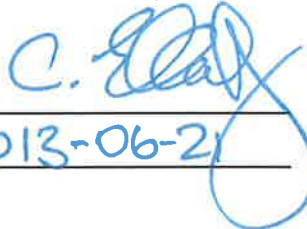
Marking: Ex d IIC T5 (Ta -20°C to +60°C) or (Ta -40°C to +60°C)
Ex d I (Ta -20°C to +60°C) or (Ta -40°C to +60°C)
Ex tD A21 T92°C (Ta -20°C to +60°C) or (Ta -40°C to +60°C)

Approved for issue on behalf of the IECEx C Ellaby
Certification Body:

Position: Deputy Certification Manager

Signature:
(for printed version)

Date:


2013-06-21

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 the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

SIRA Certification Service
Rake Lane
Eccleston
Chester
CH4 9JN
United Kingdom

sira
CERTIFICATION



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Manufacturer: **Hohner Automation**
Units 14-16 Whitegate Industrial Estate
Wrexham
LL13 8UG
United Kingdom

Additional Manufacturing location
(s):

These products may be
manufactured at any Hohner
Automation Facility listed on
Quality Assessment Report
GB/SIR/QAR06.0038/06 that
has been audited for the
manufacture of the type of
protection listed

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 electrical apparatus 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 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-1 : 2003 Edition: 5	Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof enclosure 'd'
IEC 61241-0 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
IEC 61241-1 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"

*This Certificate **does not** indicate compliance with electrical 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

IECEx ATR:	File Reference:
GB/SIR/ExTR06.0075/00; GB/SIR/ExTR09.0182/00	R51L14237B; GB/SIR/QAR06.0038/00;
GB/SIR/ExTR10.0107/00; GB/SIR/ExTR13.0170/00	GB/SIR/QAR06.0038/01; GB/SIR/QAR06.0038/02; GB/SIR/QAR06.0038/03
	GB/SIR/QAR06.0038/04; GB/SIR/QAR06.0038/05; GB/SIR/QAR06.0038/06



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The R and M Series Optical Shaft Encoders are manufactured from stainless steel; they are cylindrical in shape and comprise a main body and a cover. The cover is secured to the main body by five, M3, socket head cap screws. The main body contains a PCB assembly and has an M16 threaded hole on its sidewall, towards the base, that will accommodate a suitable cable entry device. The cover contains a shaft and bearing assembly to facilitate the equipment's measuring function.

Design options

* The Optical Shaft Encoders may be manufactured from aluminium (not Group I).

* The cable entry point may be in the base of the main body.

Fasteners used to secure the end caps which form spigot joints on the enclosures are of the hexagon socket head type and are made of 316 stainless steel (A4-70) with a minimum yield stress of 450 N/mm Squared.

CONDITIONS OF CERTIFICATION: YES as shown below:

1. Fasteners shall be hexagon socket head type, 316 stainless steel (A4-70) and with a minimum yield stress of 450 N/mm Squared.
2. Cable entries are M16x1.5 or M20x1.5.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1 – this Issue introduced the following changes:	
1.	The title of the equipment and the description were modified to include the M Series Encoder that was previously omitted in error.
2.	The products were allowed to be used in the presence of combustible dust; the marking of the equipment now shows the following information: Ex tD A21 T92°C (Ta -20°C to +60°C) or (Ta -40°C to +60°C) In consequence, the list of assessment standards now includes: IEC 61241-0:2004 Ed 1 IEC 61241-1:2004 Ed 1
Issue 2 – this Issue introduced the following changes	
1.	The reduction of the outside diameter of the enclosure
Issue 3 – this Issue introduced the following changes:	
1.	The addition of an end-cap to one end of the enclosure. This forms a spigot joint at the opposite end of the enclosure to the existing end-cap which employs the rotating shaft. There are five M3 fasteners securing the end-cap and up to three M16 entries threaded into the side. There is a recess at the base of the cylindrical part of the spigot joint into which an O-ring is fitted. The new end-cap is made of 316 stainless steel.
2.	Clarification of the fastener type and required minimum yield stress. The minimum yield stress of any fasteners replaced by the end user is 450 N/mm squared. Replacement fasteners shall have hexagon socket heads and shall be made of 316 stainless steel (A4-70), the description was amended to reflect this, as a result the certificate number now includes an 'X' suffix with the introduction of two new Conditions of Certification.
3.	Clarification of the minimum wall thickness surrounding threaded fasteners.
4.	Removal of the aluminium enclosure material option.
5.	Minor changes to marking drawing. The certification code is unchanged.