



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.: issue No.:

Status:

Date of Issue: **2013-06-19** Page 1 of 4

Applicant: **Rotex Automation Limited**
987/11, GIDC, Makarpura, Vadodara – 390 010
India

Electrical Apparatus: **Ex d Junction Box for Solenoid - BCE**
Optional accessory:

Type of Protection: **Flameproof and dust ignition protection by enclosure**

Marking: Ex d IIC T6~T3 Gb, Ex t IIIC T80°C~T155°C Db IP67, -60°C ≤ Ta ≤ +100°C for ≤ 20W
Ex d IIC T4~T3 Gb, Ex t IIIC T130°C~T155°C Db IP67, -60°C ≤ Ta ≤ +70°C for 30 W

Approved for issue on behalf of the IECEx Certification Body: Bjørn Spongsveen

Position: Certification manager

Signature:
(for printed version)

Date:

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:

DNV
Det Norske Veritas AS
Veritasveien 1
1322 Hovik
Norway





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Manufacturer: **Rotex Automation Limited**
987/11, GIDC, Makarpura, Vadodara – 390 010
India

Additional Manufacturing location
(s):

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 : 2007-10 Explosive atmospheres - Part 0: Equipment - General requirements
Edition: 5

IEC 60079-1 : 2007-04 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition: 6

IEC 60079-31 : 2008 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
Edition: 1

*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

Test Report:

[NO/DNV/ExTR12.0017/00](#)

[NO/DNV/ExTR12.0017/02](#)

Quality Assessment Report:

[GB/BAS/QAR13.0001/00](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Explosion proof cum Weather proof Solenoid has 3 different coil size of II/III & IV which are designed to operate 2 / 3 / 4 / 5 port single or double solenoid valve.

The solenoid has Bottom Cable Entry and has integral terminals for terminating cable. The enclosure has a threaded joint only for the cable entry, where an adaptor of various size M20 x1.5/ 1/2" NPT & 3/4" NPT is used to suit the entry of M25x1.5 of the enclosure. LED can be optionally provided to check the availability of the electrical supply to the solenoid.

Solenoid is Enameled Copper wire when wound on the bobbin. When electrical power supply passes through the winding it produces magnetic flux due to which plunger which remains in the center of the solenoid get attracted by which flow of the fluid can be controlled.

These solenoids are suitable for varies wattages restricted up to 30W maximum. The related ambient temperature is $-60^{\circ}\text{C} \leq T_a \leq +100^{\circ}\text{C}$ for power up to 20W, and $-60^{\circ}\text{C} \leq T_a \leq +70^{\circ}\text{C}$ for power up to 30W. The Solenoid Enclosure normally constructed in Aluminum cast (ADC12) and the alternate material used is stainless steel cast (CF8M).

CONDITIONS OF CERTIFICATION: YES as shown below:

- Repairs of the flameproof joints must be made in compliance with the structural specifications provided by the manufacturer. Repairs must not be made on the basis of values specified in tables 1 and 2 of EN/IEC 60079-1.

- Special type of cables/cable glands suitable for temperature higher than 70°C or as appropriate specified by manufacturer at the cable entry point shall be used.



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Additional information:

Temperature classification chart

Coil Size	Max.Power	Max. Ambient Temperature				Max.AC voltage	Max DC Voltage
		T6 (80)	T5 (95)	T4(130)	T3 (155)		
III	5	65	80	100		240	256
	8	60	75	100		440	256
	15	50	65	100		240	256
II	8	65	80	100		240	256
	13	60	75	100		240	256
	20		45	80	100	240	256
	30			60	70	240	256
IV	5	70	85	100		240	256
	11	65	80	100		240	256

Degrees of protection (IP Code): IP 67