



# 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](http://www.iecex.com)

Certificate No.: **IECEx PRE 19.0097X** Page 1 of 4 [Certificate history:](#)  
Status: **Current** Issue No: 0  
Date of Issue: 2021-01-22  
Applicant: **Avcon Controls Pvt. Ltd.**  
Plot No. 65, Road No. 13 M.I.D.C ,  
Andheri (East),  
Mumbai 400 093  
**India**  
Equipment: **Flameproof and Weatherproof Solenoid Coil Enclosure**  
Optional accessory:  
Type of Protection: **Ex d, Ex m**  
Marking: Ex db mb IIC T6 Gb  
-20°C to +40°C

Approved for issue on behalf of the IECEx  
Certification Body:

**Asle Kaastad**

Position:

**Certification Manager**

Signature:  
(for printed version)

Date:

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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.
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Certificate issued by:

**DNV GL Presafe AS**  
**Veritasveien 3**  
**1363 Høvik**  
**Norway**





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Additional manufacturing locations:

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 60079-0:2017** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

**IEC 60079-1:2014-06** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

**IEC 60079-18:2017** Explosive atmospheres - Part 18: Protection by encapsulation "m"  
Edition:4.1

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:

[NO/PRE/ExTR19.0097/00](#)

[NO/PRE/ExTR20.0052/00](#)

[NO/PRE/ExTR20.0053/00](#)

Quality Assessment Report:

[NO/PRE/QAR19.0023/00](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

Solenoid Coil Enclosure comprises a cast housing with an integral terminal enclosure and a cover. The enclosure constructed in aluminium cast alloy LM6, alternate material can be stainless steel casting CF8 or CF8M. The cover on the coil enclosure provides access to the terminal compartment and is fitted with an O ring to provide ingress protection IP67. The cover is secured on the integral terminal enclosure with 4 nos. of M6 X 16L socket head cap screws. A two-way terminal block is fitted within the terminal enclosure.

The coil enclosure has side cable entry. Coil is wound on a non-metallic bobbin and is fully encapsulated with a thermal fuse within a metallic case. Solenoid coil actuates a mechanical solenoid valve mechanism

## **SPECIFIC CONDITIONS OF USE: YES as shown below:**

1. The coil leads for connection of the Input supply has to be terminated within the flameproof terminal compartment.
2. The fastening screws for the cover with spigot joint shall be carbon steel socket head cap screws of property class 8.8 and yield stress 640 N/mm<sup>2</sup>.

For M45 & M50: (Below Special Condition apply in addition to the above)

1. The manufacturer has maintained more flamepath length than required by the standard. The user must refer to the manufacturer before carrying out any repairs or refurbishment to the equipment.



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**Additional information:**

**Routine tests:**

1. The integral terminal enclosure has not been subjected to 4 times overpressure test and hence manufacturer needs to conduct routine pressure test at 8.4 bar for M36 & 8.8 Bar for M45, M50 for period of 10 seconds on terminal enclosure of each Solenoid Enclosure.
2. Manufacturer should carry out visual inspections to ensure encapsulated coils are free from any damage such as cracks, flaking, swelling, inadmissible shrinkage, decomposition and failure in adhesion or softening.
3. An electric strength test of  $2U+1000V$ , for coil voltage equal to and above 110 V and 500 Vrms (for coil voltage up to 24 V), shall be applied between the coil leads and casing for at least 1 second. Alternatively 1.2 times this test voltage may be applied for at least 100ms. No breakdown shall occur.