

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**IEC 60079-14**  
Edition 5.0 2013-11

**EXPLOSIVE ATMOSPHERES –**

**Part 14: Electrical installations design, selection and erection**

**INTERPRETATION SHEET 1**

This interpretation sheet has been prepared by subcommittee 31J: Classification of hazardous areas and installation requirements, of IEC technical committee 31: Equipment for explosive atmospheres.

The text of this interpretation sheet is based on the following documents:

ISH	Report on voting
31J/268/ISH	31J/270/RVD

Full information on the voting for the approval of this interpretation sheet can be found in the report on voting indicated in the above table.

<https://standards.iteh.ai/catalog/standards/iec/1142f26e-b3d5-491d-973f-0fbb69d100ad/iec-60079-14-2013-ish1-2017>

**INTERPRETATION SHEET**

**Interpretation sheet for IEC 60079-14:2013, Explosive atmospheres – Part 14: Electrical installations design, selection and erection**

Following decision No 1 of the SC 31J meeting in Frankfurt in 2016, the issuing of an Interpretation Sheet for IEC 60079-14:2013 was requested, in order to clarify the issues relating to the installation of the converter supply or reduced voltage starting of electric motors.

**Details of interpretation:**

**Interpretation of sub clauses 11.2.1 b), 11.2.2 b), 11.3.5 b), 11.4.1 b) 11.4.2 b), 11.5.1 b), 11.5.2 b), 11.6.1 b) and 11.6.2 b) for Motors with converter supply or reduced voltage starting**

The motor has not been type-tested for this duty as a unit in association with the converter. In this case, means (or equipment) for direct temperature control by embedded temperature sensors specified in the motor documentation or other effective measures for limiting the surface temperature of the motor housing shall be provided. The effectiveness of the temperature control shall take into consideration power, speed range, torque and frequency for the duty required and shall be verified and documented. ***The action of the protective device shall cause the motor to be electrically disconnected.***

**Question**

Is physical disconnection, such as a switch (circuit breaker) or contactor, required to accomplish the intent of this requirement ?

**Interpretation**

The intention of this requirement is to protect the machine from excessive surface temperatures.

Any action within the control circuit for the motor that accomplishes one of the following satisfactorily meets the intent of this requirement:

- direct physical disconnection resulting in no output voltage to the motor, or,
- control circuit intervention such as ceasing modulation, resulting in the motor not operating.

NOTE In this case, voltage to a motor may still exist, but the motor does not operate.

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