

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**Explosive atmospheres -
Part 11: Equipment protection by intrinsic safety “i”**

INTERPRETATION SHEET 5

This interpretation sheet has been prepared by subcommittee 31G: Intrinsically-safe apparatus, of IEC technical committee 31: Explosive atmospheres.

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

DISH	Report on voting
31G/424/DISH	31G/431/RVDISH

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/64ead8bc-1aca-432e-84cd-7eba48e5a23d/iec-60079-11-2023-ish5-2025>

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EXPLOSIVE ATMOSPHERES – Part 11: Equipment protection by intrinsic safety “i”

Background

Figure D.1 of Annex D shows a possible circuit configuration that defines measuring points for current (8) and voltage (12) at the output of an intrinsically safe source. Clause D.2 describes U_{LIM} as the voltage value used for the steady state assessment limited at (5). Clause D.8 defines that the energy is determined during the time when U_{LIM} or I_{LIM} is exceeded.

Depending on the load (9) or (11), the voltage level U_{LIM} could be exceeded at (5) even when the voltage at (12) is below the level of U_{LIM} . In this case, there might be transient energy even when the voltage at (12) is below U_{LIM} .

Question 1

When does the determination of transient energy start and when does it end?

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