



TECHNICAL DATASHEET

IRE Rupture Indicators

Precision Detection for Enhanced Safety

DonadonSDD IRE rupture sensors are simple and efficient instruments for recording the bursting of a rupture disc.

The detector is installed between the container on the discharge side and the flange downstream from the safety device replacing the traditional seal. The alarm indicator cables are connected to the plant safety system with an intrinsically safe barrier that conforms to the electrical characteristics of the sensor (max voltage 24V DC and max current 50 mA) and the hazardous area classification.

The detector is composed of an electric sensor simply mounted on a target made up of:

- a stainless steel ring
- a perforated PTFE membrane
- seals: standard aramid fibre available also in graphite, PTFE

When the disc bursts, the copper circuit of the IRE alarm system opens and as a result of this the flow of current is cut off, allowing the connected equipment to signal that the disc has opened.

The IRE sensor fully complies with the European Directive 2014/34/EU (ATEX) and CU TR 012 (EAC), showcasing its dedication to maintaining the highest standards of reliability and safety. This compliance ensures that the sensor is well-suited for application in hazardous environments, affirming its capability to operate effectively and safely under challenging conditions.

The IRE sensor is classified as "basic electrical material" and is certified according to European Directive 94/9/EC (ATEX). Zone installation depends on barrier type:

- Ex ia barrier --> zone 0; 20; 1; 21; 2; 22
- Ex ib barrier --> zone 1; 21; 2; 22

Installation must be according to standard EN 60079-14.

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MODEL	IRE
OPERATING TEMPERATURE	From -20°C up to +265°C (depending on the seal used)
ENCAPSULATING MEMBRANE	Polyimide (Kapton®)
PRINTED CIRCUIT	Copper
MAX SUPPLY VOLTAGE	24 V DC
MAX SUPPLY CURRENT	50 mA
CABLE	Standard, 2 m
COMPATIBILITY WITH HOLDER / RUPTURE DISCS	HIA , HRA , HIP , HRP DCD , DIF , SCD , SCR , Y90 , KRD , GM , GA , GR