



TECHNICAL DATASHEET

IR2C Rupture Indicator Advanced Detection for Sanitary Rupture Disc

The DonadonSDD IR2C Rupture Indicator is a streamlined and efficient device designed for the precise detection of sanitary rupture disc fractures. This indicator is strategically positioned on the drain side, downstream from the spacer fitting, to ensure optimal performance.

The IR2C sensor is composed of two primary components:

- An active element featuring a flexible copper track encapsulated between two insulating layers of Kapton, coupled with a perforated PTFE membrane and two PTFE gaskets. These components are specifically designed for compatibility with sanitary connection installations.
- An interface cable, available in a standard configuration with dual ferrules or an option with a connector, facilitates versatile connections.

Connection to the plant's safety system is achieved through an alarm indicator cable, which is linked via an intrinsic safety barrier. This setup adheres to the sensor's specified electrical characteristics (maximum voltage of 24V DC and maximum current of 50mA) and is tailored to meet zone classification requirements.

In the event of a disc rupture, the IR2C indicator's copper circuit is disrupted, thereby halting the current flow. This interruption enables the connected devices to effectively signal the activation of the rupture disc.

The IR2E sensor is fully compliant with the European Directive 2014/34/EU (ATEX), the UK's Statutory Instrument 2016 No. 1107 (UKCA), CU TR 012 (EAC), and is certified under the IECEx scheme. This adherence underscores its reliability and safety for use in hazardous environments.

The installation zone for the sensor is determined by the type of barrier used:

- For an Ex ia barrier, installation is permitted in zones 0, 20, 1, 21, 2, 22.
- For an Ex ib barrier, installation is permitted in zones 1, 21, 2, 22.

Installation procedures must be in accordance with EN 60079-14 and the latest national electrical standards to ensure safety and compliance.

TECHNICAL DATA

Model	IR2C
Operating temperature	Active part: from -196 °C to 260 °C Interface cable: from -40 °C to +70 °C
Membrane Encapsulation	Polyimide (Kapton®)
Printed Circuit Board	Copper
Cable	Standard, 2 m - available with two ferrules or with connector Max length 15 m
Electrical parameters of power supply (max)	Voltage: 24 V CC Current: 50 mA Power: 0.3 W Capacity: 780 pF Inductance: 7.2 µH
Process fluid	Gas, liquid, powder
IP degree	67
Compatibility with Holder / Sanitary Discs	HTC DCD , SCD , SCR , Y90 , KRD
Interface Cable Configuration Options	Cable Terminated with Dual Ferrules Cable Equipped with Connector

Minimum operating pressure depending on diameter

DN (MM)	32	40	50	65	80	100	125	150	200
NPS (INCHES)	1 1/4	1 1/2	2	2 1/2	3	4	4 1/2	6	8-14
Minimum Pressure (BAR G)	0,3	0,25	0,18	0,15	0,11	0,09	0,08	0,06	0,05