



TECHNICAL DATASHEET

IR2A Rupture Indicator

Precision Detection for Enhanced Safety Compliance

The DonadonSDD IR2A Rupture Indicator is a straightforward and effective device designed for detecting fractures in rupture discs. This detector is directly mounted on top of the rupture disc using a metal ring actuator usually in 316L. It features an active component comprised of a flexible copper track, which is securely encapsulated between two insulating layers of Kapton and comes with an interface cable. This cable can either be the standard type with dual ferrules or equipped with a connector.

The alarm indicator cable is integrated into the plant safety system through an intrinsic safety barrier, ensuring compliance with the sensor's electrical specifications (a maximum voltage of 24V DC and a maximum current of 50mA) and appropriate zone classification.

In the event of a disc rupture, the IR2A indicator's copper circuit is disrupted, interrupting the current flow. This interruption signals the connected equipment to indicate the rupture disc has indeed been activated.

The IR2A 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 suitable installation zone for the sensor varies depending on the barrier type used:

For an Ex ia barrier, it's suitable for zones 0, 20, 1, 21, 2, 22.

For an Ex ib barrier, it's suitable for zones 1, 21, 2, 22.

Installation procedures must align with EN 60079-14 and the most current version of the national electrical standard to ensure compliance and safety.

TECHNICAL DATA

MODEL	IR2A
OPERATING TEMPERATURE	Active part: from -196 °C to 280 °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 RUPTURE DISCS	DCD , DIF , 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	200-350	400	>500
NPS (INCHES)	1 1/4	1 1/2	2	2 1/2	3	4	4 1/2	6	8-14	16	>20

DonadonSDD is now part of **Baker Hughes** >

MINIMUM PRESSURE (BAR G)

0,3

0,2

0,07

0,06

0,05

0,04

0,03

0,02

0,015

0,01

0,005