

### BURST INDICATOR TYPE RI & RI2

#### DESCRIPTION

The RI / RI 2 rupture indicator consist of an insulated electrical conductive strip, installed onto an explosion vent panel or rupture disc during the manufacturing process. When the vent/disc opens, the RI / RI 2 circuit breaks and an alarm signal is initiated to shutdown the process or to generate a trouble condition. Compared to the standard RI, the RI 2 includes additional series and end of line resistors to provide a full wiring supervision. The RI 2 burst indicator offers a high Safety Integrity Level: SIL 2 according to IEC61508.

#### FEATURES AND BENEFITS

- Outstanding chemical corrosion resistance
- High mechanical rigidity
- Simple 'plug and play'-design
- Integral self-resetting electrical fuse
- Complete wiring supervision (RI2 only)
- IEC61508-SIL2 approved (RI2 only)



#### APPROVALS:

- ATEX
- IECEx
- EAC

## SPECIFICATIONS

Model	RI / RI2
<b>Materials</b>	Indicator: Copper (Cu) Substrate: Kapton (sealed envelope) Enclosure: Zamak 5
<b>Process Temperature</b> <sup>1</sup>	-40°C up to +260°C
<b>Ambient Temperature</b>	-15°C up to +80°C
<b>Available on Explosion Vent &amp; Bursting Disc Models</b>	(HI-) CV / (HI-) CV-S / (HI-) CV-CF / CV-(S)-I / CV-(S)-I-HT / Sani-V(S) / EleGuard / Flex-V / AD-V-RI
<b>Electrical Connection</b>	Cable type Belden 9463NH, length 3m Conductor: 2 x 20AWG / 2 x 0.5 mm <sup>2</sup> tinned Cu Drain wire 20AWG tinned Cu Braid: Tinned Cu, 55% coverage Shield: Aluminium-Polyester, 100% coverage Overall diameter 6.35 mm (Pg9) Jacket material: FRNC / Blue (RAL 5012) Flame resistance: IEC 332-3-C
<b>ATEX Approval RI</b> ISSEP02ATEX047X  II 1 GD EEx ia IIC T6	Supply and signal circuit Voltage U <sub>i</sub> = 28.4V Current I <sub>i</sub> = 93mA Power P <sub>i</sub> = 0.67W Inductance L <sub>i</sub> = 5.6µH Capacitance C <sub>i</sub> = 1.8nF
<b>ATEX Approval RI2</b> INERIS 07ATEX0014X  II 1 GD Ex ia IIB T4 Ga Ex ia IIIC T135°C Da -20°C < T <sub>amb</sub> < +80°C	Supply and signal circuit Voltage U <sub>i</sub> = 18V Current I <sub>i</sub> = 93mA Power P <sub>i</sub> = 0.616W Inductance L <sub>i</sub> = 5.6µH Capacitance C <sub>i</sub> = 1.8nF
<b>IECEx approval RI / RI2</b> IECEx INE 12.0004X Ex ia IIB T4 Ga – Ex ia IIIC T135°C Da	Supply and signal circuit Voltage U <sub>i</sub> = 28.4V Current I <sub>i</sub> = 93mA Power P <sub>i</sub> = 0.615W Inductance L <sub>i</sub> = 5.6µH Capacitance C <sub>i</sub> = 1.8nF
<b>CE Approval</b> <b>Ingress Protection</b>	IP 68

(1) Maximum process temperature 600°C for use on type CV-I and CV-S-I.



## BURST INDICATOR TYPE MRI MAGNETIC RUPTURE INDICATOR

### DESCRIPTION

The Fike magnetic rupture indicator (MRI) is available for use on Fike rectangular-shape explosion vents and on circular vents with light angular frames.

The MRI consists of a permanent magnet, sealed in a corrosion resistant and waterproof holder, which can be conveniently attached to the explosion vent's atmospheric side. A reed switch is positioned against the explosion vent mounting frame, facing the magnet on the opening side of the vent opposite the hinged side. When the vent opens, the magnet element will move away from the reed switch and an alarm signal is initiated to shutdown the process or to generate a trouble condition.

### FEATURES AND BENEFITS

- Rigid construction
- Corrosion resistant / weatherproof concept – IP65
- Easy installation and replacement
- Provided with normally closed contact (NC) rated for 24 V AC/DC, 50 mA (resistive load only). Normally open contacts available on request
- Ambient temperature may be as high as 80°C
- Supplied with 3 meters of connecting cable allowing highest flexibility with regard to on-site electrical connection



#### APPROVALS:

- ATEX
- EAC



## SPECIFICATIONS

Model	MRI
<p><b>ATEX Approval MRI</b> ISSEP02ATEX047X</p> <p> II 1 G/D EEx ia IIB T6</p>	<p>Supply and signal circuit Voltage <math>U_i = 28.4V</math> Current <math>I_i = 93mA</math> Power <math>P_i = 0.67W</math> Inductance <math>L_i = 5.6\mu H</math> Capacitance <math>C_i = 1.8nF</math></p>

## RI / RI2 / MRI SELECTION

**RI:** For general purpose without wiring supervision to initiate an alarm signal OR to generate a trouble condition.

**RI2:** For general purpose with full wiring supervision to initiate an alarm signal AND to generate a trouble condition.

For explosion detection with full wiring supervision to initiate an alarm signal AND to generate a trouble condition (only with explosion panels).

**MRI:** For implementing a rupture indicator (without wiring supervision) on an installed vent panel (without RI) to initiate an alarm signal OR to generate a trouble condition.

