BURSTCHECK LINE OF RUPTURE DISC BURST INDICATORS

INTRODUCTION
Rupture discs are often used to isolate pressure relief valves. This removes valves from contact with harsh process conditions and helps prevent fugitive emissions. In this application, the ASME code, Section VIII, Div. 1, requires that the space between the disk and the valve must be provided with a suitable telltale assembly capable of detecting a rupture or pin hole leak. This is but one application for burst indication devices, others include:

- Annunciation of a burst disc or vent in a remote area
- Safety warning (horns, flashing lights, etc.)
- Process control via link to PLC or DCS

Fike has a wide range of rupture disc burst indication devices, use this selection guide to determine the best one for your application.

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¹ When properly installed with an appropriate intrinsic barrier and in accordance with local and national electric codes.
² Pressure limits may be a function of size and media. Consult factory for other pressures.
³ Will not detect pinhole leakage through the disc.
⁴ Consult factory for minimum burst pressures when using graphite rupture discs.
BURSTCHECK (BC) AND BURSTCHECK PLUS (BCP)

DESCRIPTION
BurstCheck and BurstCheck Plus install between a rupture disc and a safety relief valve. They provide positive indication of any pressure build-up due to leakage through the disc, or disc burst due to overpressure.

Because their contacts are either normally open or normally closed, BurstCheck and BurstCheck Plus can be wired in a "fail-safe" configuration for continuous supervision of intact circuitry.

BurstCheck is designed as a single unit and incorporates a 1/2" conduit connection. The internal sensor is constructed of 303 stainless steel with a Viton® pressure sensing diaphragm.

BurstCheck is suitable for intrinsically safe applications when properly installed with an appropriate intrinsic barrier and in accordance with local and national electric codes.

BurstCheck Plus is designed as a single unit and incorporates a 1/2” conduit connection. The hermetically sealed switch is rated for use in hazardous locations.

Both units are supplied with a stainless steel pipe nipple for standoff mounting.

BURSTCHECK PLUS SPECIFICATIONS

Hazardous Area Rating
Nema 4, 7, 9, 13
UL/CSA Listed Div. I, Class 1, Groups A, B, C, and D;  
Class II, Groups E, F, and G

Contact Arrangement
SPDT Hermetically sealed

Contact Electrical Rating
120 VAC + 10% @ 11 amperes resistive load
30 VDC + 10% @ 5 amperes resistive load

Seal
Switch hermetically sealed from process
Environmentally sealed NEMA 4, 7, 9, 13

Materials of Construction
Wetted parts: 316 SST, Viton®

Activation Pressure
Set point @ 6 PSIG/.41 BARG

Max. Operating Pressure
500 PSIG/34 BÅRG

Housing Proof Pressure
750 PSIG/51 BARG

Process Temperature Range
-40 to 400°F (-40 to 204°C)

Ambient Temperature Range
-30 to 160°F (-34 to 71°C)

BURSTCHECK SPECIFICATIONS

Contact Arrangement
SPDT

Contact Electrical Rating
120 VAC @ 5A

Intrinsic Safety
The BC is intrinsically safe for Class I, Groups A, B, C, and D when connected through a CSA certified shunt diode safety barrier. Intrinsic Safety Barrier available from Fike, P/N 02-8353.

Seal
Environmentally sealed (NEMA 4)

Materials of Construction
High impact plastic
303 SST wetted parts
Viton diaphragm

Activation Pressure
Set point @ 6 PSIG/.41 BAR

Housing Proof Pressure
1000 PSI/68.95 BAR

Process Temperature Range
-40 to 400°F (-40 to 204°C)

Ambient Temperature Range
-40 to 165°F (-18 to 74°C)
**DESCRIPTION**

The BC2 is a rupture disc burst indicator that uses a break in electrical continuity to signal the burst of a rupture disc. Upon disc rupture, a thin Teflon® membrane is bulged into a flexible circuit, causing the circuit to be physically broken. This open circuit condition can be used to activate alarms, bells, remote annunciators or interfaced with process control systems. This provides process operators with immediate annunciation of an overpressure event so that appropriate measures can be taken.

The circuit conductive loop is protected with Kapton®, providing excellent corrosion resistance.

*NOTE: While similar in appearance, the BC2 is not a rupture disc and cannot be used as such. There should be no pressure differential across the BC2.*

**BC2 SPECIFICATIONS**

<table>
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<th>Listing</th>
<th>CSA certified</th>
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<tr>
<td>Sizes</td>
<td>1/2 thru 24&quot;</td>
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<tr>
<td>- ANSI, DIN, JIS, etc.</td>
<td></td>
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<tr>
<td>Contact Arrangement</td>
<td>Normally closed</td>
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<tr>
<td>Intrinsic Safety</td>
<td>The BC2 is intrinsically safe for Class I, Groups A, B, C, and D when connected through a CSA certified shunt diode safety barrier. Maximum resistance across the circuit prior to rupture is 2.0 OHMS. Intrinsic Safety Barrier available from Fike, P/N 02-8353.</td>
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<td>Electrical Rating</td>
<td>24 VAC/DC @ 50mA</td>
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**Materials of Construction**

- Indicator circuit: Copper foil laminated between Kapton®
- Membrane: PTFE Teflon® with Nylon connector (4" and up)
- Support Frame: 316 SST
- Gasket: Compressed arimide fiber in nitrile binder

**Process Temperature Range**

-40 to 500°F (-40 to 260°C)

**Atmospheric Temperature Range**

-40 to 165°F (-40 to 74°C)

**Wiring**

- Two conductor 20 AWG with shield and 20 AWG drain
- Blue PFA jacket

**Cable Connection**

The BC2 comes with 18" of 20 AWG cable equipped with a 3 pin quick disconnect weatherproof receptacle. A lead cable can be purchased in lengths of 10' and 25' with quick disconnect plug to connect to customer monitoring systems.
BURSTCHECK HYGENIC™ (BCH)

![BCH burst indicator](image)

**DESCRIPTION**

The BCH Burst Indicator is specifically designed for use with the Tri-Clover™ ferrules and clamps. It provides instantaneous notification of rupture disc activation. Upon disc rupture, the BCH's thin Teflon® seal is bulged into a flexible circuit, causing the circuit to be physically broken. This open circuit condition can be used to activate alarms, bells, remote annunciators or interfaced with process control systems. This provides process operators with immediate annunciation of an overpressure event so that appropriate measures can be taken.

The circuit conductive loop is protected with Kapton®, providing excellent corrosion resistance.

The flexible circuit is physically attached at two locations and is broken in a predetermined pattern. This eliminates the possibility of the conductive loop remaining intact after disc rupture.

The BCH is installed downstream of the rupture disc.

**NOTE:** While similar in appearance, the BCH is not a rupture disc and cannot be used as such. There should be no pressure differential across the BCH.

**SPECIFICATIONS**

**Disc Compatibility**

SR-H, S3, SHX

**Intrinsic Safety**

The BCH is intrinsically safe for Class I, Groups A, B, C, and D when connected through a CSA certified shunt diode safety barrier at levels of 50 mA @ 24 VAC/DC. Maximum resistance across the circuit prior to rupture is 1.0 OHMS. An intrinsic Safety Barrier is available from Fike, P/N 02-8353.

**Process Temperature Range**

-40 to 350°F (-40 to 177°C)

**Atmospheric Temperature Range**

-40 to 165°F (-40 to 74°C)

**Gasket Temperature Range**

*EDPM: -40 to 300°F (-40 to 149°C)

Silicone: -40 to 450°F (-40 to 232°C)

Viton®, *PTFE Teflon®: -20 to 450°F (-28 to 232°C)

* USP Class 6

**Cable Connection**

The BCH comes with 18" of 20 AWG cable equipped with a 3 pin quick disconnect weatherproof receptacle. A lead cable can be purchased in lengths of 10' and 25' with a quick disconnect plug to connect to customer monitoring systems.

**Materials of Construction**

Indicator circuit: Copper foil laminated between Kapton®

Membrane: PTFE Teflon®