INSTALLATION AND MAINTENANCE INSTRUCTIONS

BC2 & BC2 LP Indicator
BCH & BCH LP Indicator

06-255-1

WARNING
Read these instructions carefully and completely before attempting to unpack, install or service the indicator.

- This indicator is not a rupture disc and must be installed downstream of the rupture disc.
- Do not vent rupture disc/indicator assembly to an area where it would endanger personnel or equipment. A baffle plate on the outlet end of vent piping does NOT necessarily prevent potentially dangerous discharge.
- Always handle the indicator with extreme caution. Nicks, scratches or foreign material may result in leakage or affect indicator operation.
- The indicator is designed for clean-in-place applications, however no brush, jet stream or other cleaning mechanism should make contact with the indicator.
- Specific attention must be paid to the circuit. Special care must be taken to avoid applying any force to the circuit or TEF actuator.
- The BC2/BC2 LP is only suitable for bolted flange joint installation with a flat face or raised face surface. Other flange faces such as RTJ are not suitable.
- The BC2/BC2LP is not suitable for full bolting holder designs. If a BC2/BC2LP is required for a full bolting holder design, consult factory.
- When the BC2/BC2 LP is used with a conductive fluid, the control system should incorporate a latching mechanism to continue to indicate the open circuit.

Following **2014/34/EU Directive for European countries**, the installation of burst indicator and the barrier has to comply with EN 60079-14 standard. The equipotentiality of the grounding between the place of installation of the barrier and the indicator needs to be checked at the installation and periodically.

BC2/BC2 LP INSTALLATION

1. Assemble the bolt-type disc holder assembly per Fike installation instructions.
2. Read the BC2/BC2 LP tag completely to verify that the size and type are correct for your system.
3. Check the BC2/BC2 LP to make sure there are no tears in the diaphragm or any breaks in the indicator circuit.
   Note:
   Designs with PTFE diaphragm will have a small hole and may have an “X” pattern thru the hole. Designs with PFA strip will have slit near circuit connection. Sizes ½” and ¾” may not have a diaphragm.
4. Install the BC2/BC2 LP with bolt-type holder in companion flange as shown in Figure 1. Gaskets are supplied attached to the BC2/BC2 LP, no additional gaskets are required. Do not install any spiral wound gaskets in the BC2/BC2 LP flange joint.
5. Verify that the BC2/BC2 LP is downstream of the rupture disc.
6. Connect the BC2/BC2 LP receptacle to lead wire with electrical plug connector as shown in Figure 2.

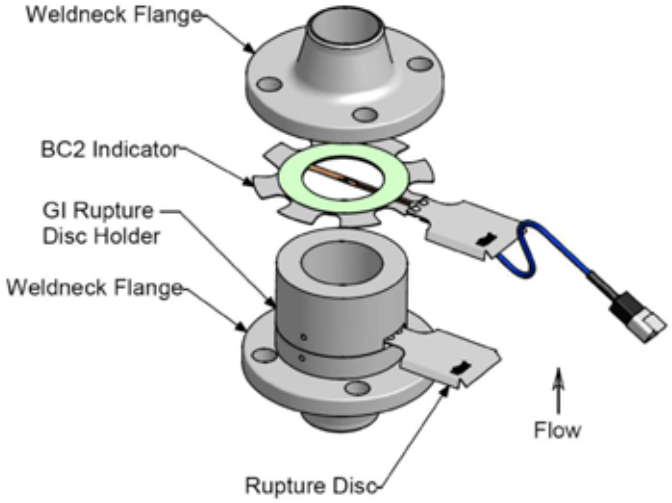

Figure 1 - BC2/BC2 LP Installation into Bolt-Type RD Holder

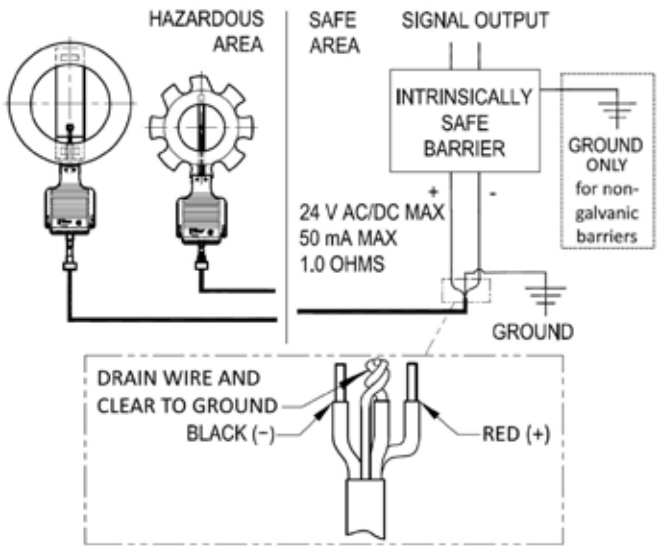

Figure 2 - BC2/BC2 LP Wiring Diagram

NOTE: The burst indicator is intrinsically safe for Class I, Division 1, Groups C & D, and Class II, Groups E, F, & G, and Class III when connected through a listed safety barrier (CSA, FM, UL) with entity parameters:
U_i = 28.4 V, P_i = 0.615 W, I_i = 93 mA, L_i = 5.6 µH, C_i=1.8 nF.
NOTE: For hazardous locations, barriers must be CSA, FM, or UL certified and must be installed in accordance with barrier manufacturer’s instructions. Barrier parameters are as follows: 28 V (max), 300 ohm (min).
NOTE: For the Low Pressure (LP) integrated Burst Indicators the safety barrier shall be galvanically isolated.

Fike CSA approved intrinsically safe barriers:
02-16086 Safety Barrier (no galvanic isolation)
Galvanic Isolated intrinsically safe barriers:
02-9884 Switching Repeater
02-12110 Isolating Switch Amplifier
02-13775 Isolating Switch Amplifier

BCH/BCH LP INSTALLATION

The following instructions assume the rupture disc has been installed per Fike installation instructions. The indicator should be located downstream of the rupture disc.

1. Confirm that the indicator size matches the Tri-Clover ferrule size.
2. Verify the process flow direction.
   Note:
   Designs with PTFE diaphragm will have a small hole and may have an “X” pattern thru the hole. Designs with PFA strip will have slit near circuit connection. Sizes 2” and small may not have a diaphragm.
3. Place indicator into the ferrule with flow arrow on tag pointing in the same direction as the process. Install the Tri-Clover 13MHHM clamp around the ferrules so that the wing nut is on the same side of the indicator tag as shown in Figure 3.
4. Hand-tighten the wing nut so that the indicator is held in position (Recommended torque: 25 in-lb).
5. Double check the orientation of the indicator. Verify flow arrows on the holder, rupture disc tag and indicator are pointed in the same direction as the process flow.
6. A tie strap is recommended to hold the wiring secure to the piping, as shown in Figure 4.

Figure 3 - Exploded View of BCH/BCH LP Assembly

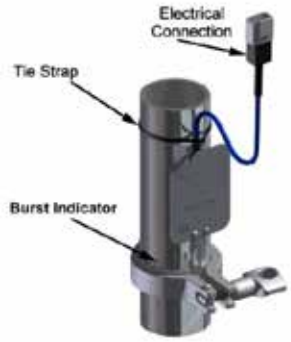

Figure 4 - Tie Strap Installation

NOTE: For hazardous locations, barriers must be CSA, FM, or UL certified and must be installed in accordance with barrier manufacturer’s instructions. Barrier parameters are as follows: 28 V (max), 300 ohm (min).

BCH/BCH LP WIRING

The indicator should be wired per the wiring diagram illustrated in Figures 2 and 5. Install in accordance with all applicable local and national codes (in Canada, Canadian Electrical Code, Part 1).

Fike lead cable D3513-115-X is ordered separately

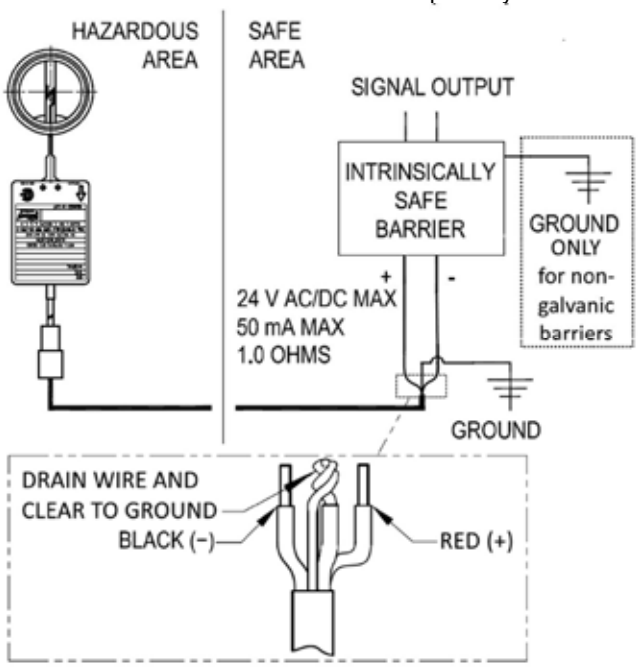

Figure 5 - BCH/BCH LP wiring diagram

NOTE: The burst indicator is intrinsically safe for Class I, Division 1, Groups C & D, and Class II, Groups E, F, & G, and Class III when connected through a listed safety barrier (CSA, FM, UL) with entity parameters:
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NOTE: For hazardous locations, barriers must be CSA, FM, or UL certified and must be installed in accordance with barrier manufacturer’s instructions. Barrier parameters are as follows: 28 V (max), 300 ohm (min).
NOTE: For the Low Pressure (LP) integrated Burst Indicators the safety barrier shall be galvanically isolated.

Fike CSA approved intrinsically safe barriers:
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02-12110 Isolating Switch Amplifier
02-13775 Isolating Switch Amplifier

BC2 and BCH families are rated for intrinsic safety in dust explosion risk environments up to 135°C (275°F) for IECEx compliance. However, the maximum operating temperature marked on the tag is for non-dust applications.

CERTIFICATION FOR INTEGRATED BURST INDICATOR

Standards:	ATEX 2014/34/EU
IEC 60079-0	EN 60079-0
IEC 60079-11	EN 60079-11

Note - see Fike.com Approvals for current year references for each Standard.

Protection marking:	Certificates:
II 1G Ex ia IIB T4 Ga II 1D Ex ia IIIC T135°C Da Ta -40°C to 80°C	IECEx TPS 21.0007X TÜV IT 18 ATEX 057 X IECEx INE 12.0004X (Europe) For BC2(LP), BCH(LP) only
II 1G Ex ia IIB T6 Ga II 1D Ex ia IIIC T85°C Da Ta -40°C to 70°C	IECEx TPS 21.0007X TÜV IT 18 ATEX 057 X

NOTE: The year of manufacture can be found on the tag, per the first 2 digits of the Fike lot number.

Explanation of Markings

II 1G Ex ia IIB T4 Ga				
	II 1G Ex ia IIB T6 Ga			
		II 1D Ex ia IIIC T135°C Da		
			II 1D Ex ia IIIC T85°C Da	
II	II	II	II	Product Group
1G	1G	1D	1D	Product Category
Ex	Ex	Ex	Ex	Explosion Protection Symbol
ia	ia	ia	ia	Intrinsic Safety
		IIIC	IIIC	Explosion Gp; Dust & Fibers
IIB	IIB			Explosion Gp: Ethylene and other gases
T4	T6	T135°C	T85°C	Max Surface Temperature
Ga	Ga	Da	Da	Equipment Protection Level (EPL)
	Ta -40°C to 70°C			Ambient Temperature
Ta -40°C to 80°C				Ambient Temperature

For use under special conditions; intrinsic safety when connected through a listed safety barrier.

The **"Ambient" temperature rating** (Ta) for the burst indicator is defined on the Fike IECEx Certificate and refers to the Surrounding Area per ATEX 2014/34/EU Guidelines (2nd ed. December 2017) Section 143 and per CSA definition.

CSA Standards:
CAN/CSA C22.2 No. 60079-0:19 & 60079-11:14 (R2018)
CAN/CSA-C22.2 No. 61010-1-12
ANSI/UL 61010-1 (3rd Ed) & 60079-11-2014 (6th Ed)
ANSI/UL 60079-0-2020 UL 913 (8th Ed.)

CSA Marking
Class I, Division 1, Groups C and D:
Ex ia IIB T6/T4 Ga
Class I, Zone 0 AEx ia IIB T6/T4 Ga
Class II, Groups E, F and G; Class III
Ex ia IIIC T85°C/T135°C Da
Zone 20 AEx ia IIIC T85°C/T135°C Da
(where AEx refers to "America")
Where Temperature class is:
T4/ T135°C for an ambient temperature from -40°C to +80°C
T6/ T85°C for an ambient temperature from -40°C to +70°C