



BURST ALERT LEAK DETECTOR

**BULLETIN
77-10101 LD**

BS&B SAFETYSYSTEMS, INC.
BS&B SAFETYSYSTEMS LTD.

INSTALLATION INSTRUCTIONS

CAUTION

Do not remove Leak Detector from its package until it is required for installation. Handle the Leak Detector with care. Do not fold, twist or stretch the detector as this may break or weaken the conductive circuit and cause a false signal.

SELECT PROPER LOCATION

Do not locate where the plastic membrane may be exposed to snow, ice, heavy rain or subjected to pressure or pressure evacuation in the vent piping.

Do not locate where the Leak Detector to cable connection may be damaged resulting from bending or stress.

BEFORE YOU INSTALL THE DETECTOR

Examine the plastic membrane and conductive circuit before installing. Do not install if the circuit has been severed or if there is any damage to the plastic membrane. Insure that the size and pressure rating shown on the detector gasket are identical to those of the companion flanges.

The shape of the detector matches the shape of the Safety Head for easy alignment.

NOTE: The flat design of the Leak Detector makes it unsuitable for applications where the dome of the disk protrudes outside the Safety Head outlet. A specially designed Leak Detector is required for these applications.

INSTALLATIONS

The gaskets of the Leak Detector are marked VENT SIDE and PROCESS SIDE. Install the Leak Detector between the Safety Head outlet and the companion flange outlet (Figure 1) with the side marked VENT SIDE in contact with the outlet companion flange.

As the Leak Detector is already fitted with hard compressed fiber gaskets no additional gaskets are necessary.

Follow the procedure as indicated in the rupture disk Installation Instructions and tighten the flange stud nuts to the specified torque value. Contact BS&B for torque values for companion flange ratings above 600 ANSI (DIN 25).

Do Not Overtorque.

NOTE: At process temperature above 175° F (80° C) the torque value should be checked and if necessary the stud nuts tightened to the correct torque value.

Any rain, water, ice or other liquids trapped accidentally between the disk and the Leak Detector may vaporize at elevated temperatures and rupture the Leak Detector. DO NOT LOCATE cable on or near hot surfaces. Cable temperature specification -58°F (-50°C) TO 194°F (90°C)

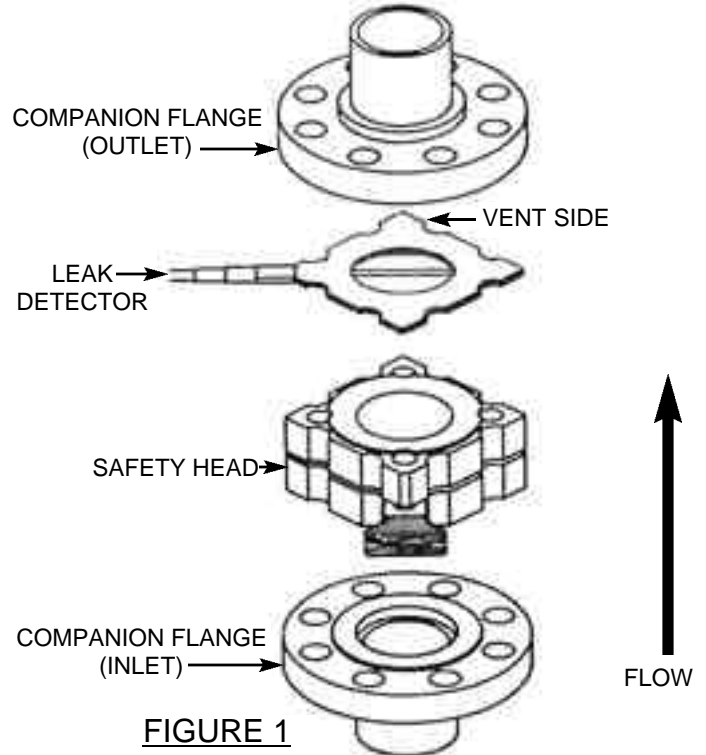


FIGURE 1

Back pressure on the Rupture Disk

When a rupture disk leaks, the pressure in the chamber between the disk and the Leak Detector will increase and act as back pressure on the disk. The back pressure may increase to the values shown in the table before the Leak Detector ruptures. Under these conditions the rupture disk will burst at its rated burst pressure plus the back pressure.

ELECTRICAL SPECIFICATIONS

The rupture disk Leak Detector is a simple device and is suitable for use in hazardous locations provided it is used with other certified electrical apparatus (i.e. Zener Barrier). All equipment should be installed and maintained to a recognized national standard.

Maximum Current 500 mA
Maximum Voltage 24VDC

TEMPERATURE RANGE

-58° F (-50° C) to 250° F (121° C) at the Leak Detector.

PRESSURE RANGE

15 psig minimum. At burst pressures below 15 psig the disk may not provide a full relief opening.

RE-ORDERING

Order replacement Leak Detectors by part number.

See our web site at www.bsbsystems.com for updates

LEAK DETECTOR RUPTURE PRESSURE (PSIG) AT VARYING TEMPERATURES

Size		Temperatures							
in	mm	-46 °C	-50 °F	-18 °C	0 °F	24 °C	75 °F	121 °C	250 °F
1	25	19		14		9		9	
1.5	40	13		10		6		6	
2	50	9		7		5		4	
3	80	7		5		5		4	
4	100	6		5		5		4	
6	150	6		5		5		4	
8	200	6		5		5		4	
10-24	250/600	6		5		5		4	

LIMITATIONS OF WARRANTIES

BS&B Safety Systems, Inc. warrants its products against defective workmanship and material under normal and proper use in service for a period of twelve (12) months from the date of shipment, when owned by the original buyer and only when subject to normal operating conditions outlined by Buyer when the order is placed; except that, rupture disks are not guaranteed except to burst within specified pressure ranges at temperatures specified at the time of sale.

Where the products involved include a rupture disk inside a rupture disk holder, each must be of the proper type to be utilized with its mating part as otherwise recommended by and manufactured by BS&B. BS&B specifically disclaims any warranty and any and all liability for damages, either direct or indirect, incidental or consequential, arising from the use of rupture disk assemblies not wholly comprised of BS&B manufactured products.

Any article not manufactured by BS&B and which is sold hereunder is sold only under such warranties as the manufacturer thereof extends to BS&B and which BS&B can pass through to the Buyer and enforce with reasonable effort.

Because of the effects of corrosion or erosion caused by acids, chemicals, fumes, rust, dirt, debris and other factors of storage, use, and installation, over which BS&B has no control, BS&B makes no other warranties beyond those expressly stated in this limited warranty.

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