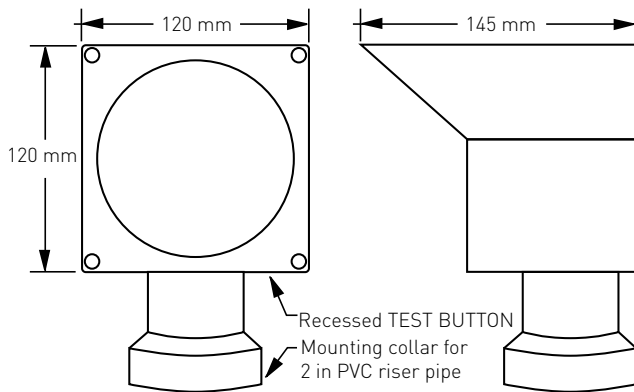


# TraceTek TT-FLASHER-BE

## HAZARDOUS AREA, BATTERY POWERED FLASHING LED ALARM SIGNAL



TT-FLASHER-BE with protective rain hood/shadow box for enhanced daylight visibility



### PRODUCT OVERVIEW

#### Simple, effective leak indication

The TT-FLASHER-BE is an inexpensive, battery powered device that provides an easy-to-see flashing light signal whenever a TraceTek sensor cable or probe detects a leak. Because it is completely self contained and requires no external connections, it is simple and inexpensive to install.

#### Intrinsically safe and rated for hazardous areas

TT-FLASHER-BE operates on two "AA" Alkaline, long-life batteries. Because the available voltage is limited to 3.3 V and because the TraceTek sensor cables and probes require very limited energy, this device is approved as intrinsically safe. The sensor cable, probes, jumper cable and the TT-FLASHER-BE itself can be installed in most hazardous area classifications (see approvals section for details). TT-FLASHER-BE can monitor any of the TraceTek family of sensor cables including TT3000, TT5000, TT5001 and TT7000. The device will also monitor the TT-FFS fast acting fuel detection probe. No external zener safety barriers are required; sensor cable or probes are connected directly to the TT-FLASHER-BE.

#### Visual indication only

TT-FLASHER-BE provides the ultimate in simple operation: A flashing RED light indicates that a leak has been detected. There are no external relay signals and no connections to other alarm systems.

A TEST button is provided so that the battery voltage and integrity of the sensor wiring can be easily verified.

TT-FLASHER-BE will signal a low battery condition with a double-flash signal for about 1 month before the battery voltage drops to an unusable level. However, batteries should be changed as part of an annual preventive maintenance schedule.

#### Trade off: simplicity vs. human factors

Because TT-FLASHER-BE is designed to be seen by an operator, it is not suitable for all installations. There is no provision for relay contacts or other means of remote alarm indication. The TT-FLASHER-BE must be seen and the local facility staff must respond to the visual signal for the system to be effective. Likewise if the batteries are allowed to go completely dead, the TT-FLASHER-BE will be unable to signal a leak situation.

**OPERATION AND INDICATIONS**

|                                       |  |   |
|---------------------------------------|--|---|
| Normal operation                      | Normal indication is no flashing light   |   |
| Leak detected                         | Flashing red light (3 high intensity LEDs)<br>Flashing interval at once per second |   |
| Low battery                           | Double flash at 2 second interval  |   |
| Leak detected and low battery         | Alternating single and double flash at 1 second interval                           |   |
| <b>When test button is pushed</b>     | Single flash at 1 second interval  | Battery voltage is ok and wiring to sensor cable is good. This is the normal "good test" indication               |
|                                       | No flash   | Sensor wiring is damaged, sensor is disconnected or battery is completely dead. Immediate servicing is required!* |
| * Weekly interval test is recommended |  |   |

**Special Operating Note** The TT-FLASHER-BE must be seen in order to be effective. The TT-FLASHER-BE body is often mounted on a vertical riser pipe and the head should be rotated so that the lens is easily seen by facility personnel from their normal work stations or as they walk or drive by the TT-FLASHER-BE location. When used together with TraceTek sensor cables or probes, the TT-FLASHER-BE is very effective at providing early indications of underground or concealed leaks, but it not effective if it is not seen or if the plant personnel do not report and respond to the flashing leak signal. When TT-FLASHER-BE is first installed in a new facility, the operating staff should be briefed in how the new equipment is intended to operate and what to do if a flashing LEAK signal is detected.

**Caution** Do not use TT-FLASHER-BE in a plant safety or emergency shut-down application that requires immediate response. TraceTek offers other monitoring and telemetry solutions for situations that require immediate feedback to the control room.

**ORDERING INFORMATION**

| Catalog number | P/N        | Description   |
|----------------|------------|---|
| TT-FLASHER-BE  | P000000837 | Battery powered, flashing light, leak detection indicator |

**PRODUCT CHARACTERISTICS**

|  |  |
|--|--|
| Enclosure rating                         | NEMA-4X, IP66 anti-static materials                |
| Weight (with rain hood and leader cable) | 1.4 kg nominal                                     |
| Light source                             | 3 high intensity, high efficiency red LEDs         |
| Battery information                      | 2 "AA" Alkaline Long Life Duracell MN 1500         |
| Projected battery life                   | 2 years – nominal                                  |
| Recommended battery replacement interval | 1 year or whenever low battery signal is detected  |
| Duration of leak detected signal         | Minimum 30 days at 20°C                            |
| Duration of low battery signal           | Minimum 30 days at 20°C                            |
| Rain/UV resistance                       | Suitable for outdoor installations                 |
| Maximum ambient temperature              | 40°C   |
| Minimum ambient temperature              | -20°C (operational with limited duration to -40°C) |

**APPROVALS AND CERTIFICATIONS**



Intrinsically Safe Apparatus  
Class I Div 1 Groups A, B, C & D  
AEx ia IIC T4

Baseefa09ATEX0150X  
IECEX BAS 09.0064X

II 1G  
Ex ia IIC T4 Ga (-20°C ≤ Ta ≤ +40°C)

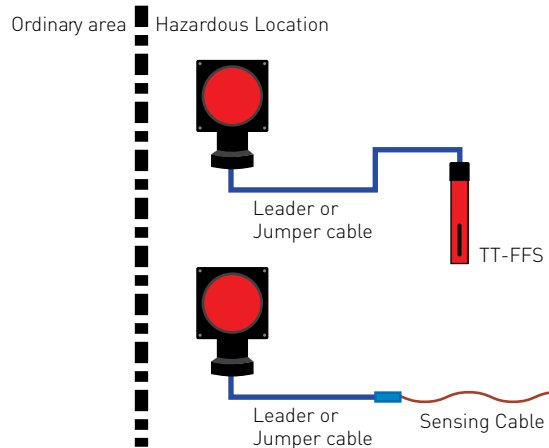


Ex ia IIC T4  
Enclosure Type: 4X, IP66  
Temp Code T4

Entity parameters:  
U<sub>o</sub> = 3.3V I<sub>o</sub> = 7.3mA P<sub>o</sub> = 6.02mW C<sub>o</sub> = 100µF L<sub>o</sub> = 200mH

**HAZARDOUS AREA INSTALLATIONS**

The TT-FLASHER-BE is approved for use in hazardous areas. The module can monitor intrinsically safe TraceTek sensors located in hazardous locations, as shown below.





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