Overview

Element-B (Model EB1 / EB2) is a battery-operated Internet of Things (IoT) smart sensor that connects to a dry contact on an instrument and can detect whether its assigned instrument has an open or a closed state. The device can be used to help protect your valuable assets from risk through smart alerts if there is a status change. The Element-B device includes a specific cable to interface with its assigned lab equipment, which it transmits securely to the Elemental Insights™ Dashboard via the Elemental Gateway.

Performance Highlights

- Wireless, battery-operated device that reduces the number of wires in crowded spaces
- An alarm triggers smart alerts notifying the right people
- Expandable platform can easily add more devices
- Installation takes less than one minute
- Mounts magnetically with no mounting screws

Communication

- **Wireless Communication**: Data transmission via low energy 2.4 GHz requires the Elemental Gateway connected to the WiFi/Ethernet network
- **Wireless Range**: ~100 ft (~33 m)
- **Data Sampling Rate**: 15 seconds
- **Security**: Google Cloud Platform's (GCP) SOC2 compliant services keeps data safe
- **Connectivity**: Application Programming Interface (API) sends data to 3rd party software platforms

Device Readout

- **Alarm Status**: Alarm/No Alarm

Insights Reporting

- **Smart Alerts** sends automated messages to pre-defined users with escalation
SENSOR SPECIFICATIONS

Size: 2.25 in x 1.6 in x 1.0 in (5.7 cm x 4.0 cm x 2.5 cm)

Power Requirements: 2 AAA Lithium Batteries

Estimated Battery Life: Model EB1: 1 Year (13 Months Typical), Model EB2: ~1.5 Years

Equipment Specific Cable Termination Options

- Element-B Inputs
  - 2-prong quick connect

Lab Equipment Dry Contact Outputs

- Stereo Jack Cable
- RJ-11 Connector
- RJ-45 Con
- 7 Pin Audio/Video Connector
- Bare wire into a Terminal block
- Other custom connector

Dry Contact Compatibility and Configuration

Normally Open or Normally Closed

Installation

Each Element-B device includes a data cable that connects to a specific lab equipment machine. The device contains strong magnets that hold it firmly in place. If attaching to a non-ferrous surface, you can request an Elemental Metal Mounting Plate.

Many Applications

- Cryogenic & Ultra Low freezers
- Cell & Tissue Processors
- CO₂ Incubator
- Gas Manifold
- Shaker
- Water Detector
- Water Quality Sensor
- Equipment with Alarm Outputs