

# Eden Safety Sensors

**Safety Facts**

## Inspired by Industry

The Eden Sensor was developed to eliminate the costly and potentially dangerous problems associated with using Mechanical Keyed Interlock Safety Switches and Non-Contact Magnetic Safety Switches. Eden offers control reliability and maintains the highest level of safety at reduced costs that allow companies to remain competitive in the global marketplace.



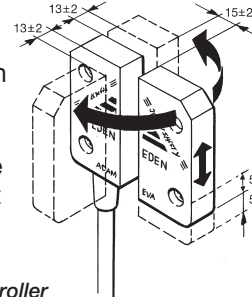
IP69K rated Eden E for harsh environments

## Unparalleled Value

- Eden reduces installation time and labor costs
- Plug-and-play technology reduces costs up to 60% compared to conventional machine wiring methods
- Built-in LED diagnostics reduce down time when troubleshooting
- Non-contact pulse technology systems reduce costly production stoppages
- Up to 75% less components needed to achieve the higher levels of safety
- Robust, reliable Eden offers a level of Control Reliability and uninterrupted production that mechanical/magnetic switches cannot match
- Universal capabilities — one switch, many solutions — reduce the number of application specific components required

## Unique Design

- The Eden Sensor pair comes standard with LED and output for diagnostics
- Adam is available with multiple quick disconnect options, eliminating the need for strain-relief and terminal wiring required on conventional type switches for both safety and diagnostics
- The Eden Sensor's flexible mounting allows for a wide range of mounting possibilities
- Easy mounting, no costly fabricated switch brackets required
- Up to 30 switches can be wired in series while maintaining the highest level of safety\*

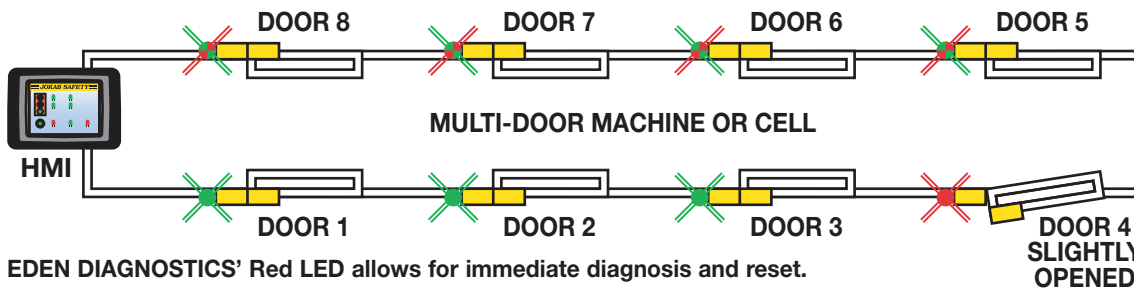


\* when used with Vital 1 Controller

## Increase Profits by Reducing Down Time

Eden diagnostics makes set up and troubleshooting quick and easy, unlike conventional systems that do not provide any visual indication. Without this feature, common system faults —

due to vibration, misalignment and single channel safety faults — can be a mystery to diagnose until doors are individually cycled and tested, resulting in extended downtime.



**EDEN DIAGNOSTICS' Red LED** allows for immediate diagnosis and reset.  
**Green LED:** Door closed and entire circuit up to this point is satisfied.  
**Red LED:** Door opened or out of alignment.  
**Flashing Green/Red LED:** Door closed, but door located before it is open.

VISION + VERSATILITY = VALUE

**JOKAB SAFETY**

A MEMBER OF THE ABB GROUP

## Increase Machine Reliability and Safety with Eden Sensors

Industry often struggles with maintaining both safety requirements, as well as machine reliability. In comparison to the switches below, Eden offers tremendous advantages in both of these

areas. Eden is a non-contact, non-magnetic, non-mechanical safety sensor designed using solid state technologies with no moving parts.

### Magnetic Switches

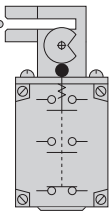
- Magnetic reed safety switches rely on the strength of the coded magnet to hold the safety contacts in their “safe” state
- Slight misalignment, machine vibrations or metallic interference reduces this holding strength
- Vibration can cause “contact bounce” meaning 1 of the 2 safety contacts has changed state for a brief moment resulting in costly down time
- Single channel lockups are very difficult to troubleshoot, identify and rectify—requiring the cycling of all doors until the fault is found

### Mechanical Switches

- Mechanical Keyed Interlock Switches are Safety Category 1 devices—keys can break, fall off, become lost or remain engaged causing the machine to continue to run in an unsafe condition
- Sagging doors can become misaligned and cause unwanted wear on components—heads can be broken, removed, loosened, rotated or fall off and the switch will again keep the system operational in an unsafe condition

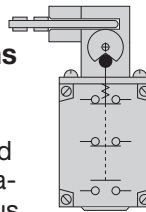
**Door Open: Machine Stops**

When the key is removed the rotational cam forces the armature down, opening the safety contacts.



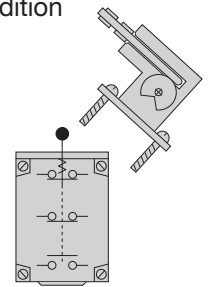
**Door Closed: Machine Runs**

When the key is inserted, the cam rotates and allows the armature to raise thus closing the safety contacts.



**Door Open: MACHINE RUNS**

Mechanical failure! When this occurs there is no force keeping the armature down which will allow the safety contacts to remain closed.



**Note:** When comparing pricing and reliability, you will require 2 individual mechanical switches per door monitored separately to achieve the same level of safety you would with 1 Eden Sensor. Some Eden applications may require additional devices for controlled motion.

### Designed for Universal Applications

- Doors and Hatches
- Harsh Environments
- Robot Zoning
- Door Lockout
- Machine Positioning
- Safe Bypass
- Coded Applications
- Unlimited Industries

