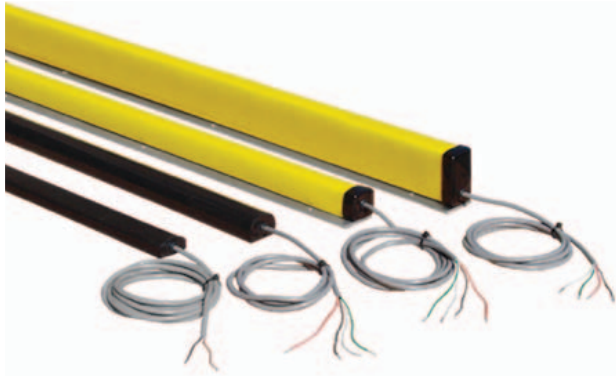


Safety Edges & Bumpers

XAE



SALIENT FEATURES

- ◆ Tear Resistant
- ◆ Active Corners
- ◆ 4- lead Wire Type
- ◆ Weather Proof IP-67
- ◆ Edge <1kg Activation
- ◆ Bumper <2kg Activation
- ◆ Upto 5 million Operations

Model Number Legend

XAE - -

1 2 3 4 5 6

1. Series

XAE

2. Type

E: Edge (1.25" Width)

B: Bumper (1" Width)

3. Height

5H: 0.5" ; 12mm

1: 1" ; 25mm

2: 2" ; 50mm

4. Length

06: 06" ; 150mm

12: 12" ; 305mm

24: 24" ; 610mm

36: 36" ; 915mm

48: 48" ; 1220mm

60: 60" ; 1530mm

72: 72" ; 1830mm

84: 84" ; 2135mm

96: 96" ; 2440mm

5. Mounting

N: None (Threaded Base)

L: L- Angle channel

F: Flat Channel

6. End Cap

N: None (Edges)

S: Standard (Bumpers)

M: Mittered (Bumpers)

Example:

XAE-B1-60LS

XAE Series - Safety Bumper of 1" height - 60" length, L angle aluminium channel, with standard straight end cap

NOTE: Contact us for models not shown in catalogue.

Product Highlights

Industrial grade Safety compliant pressure sensitive Edges and Bumpers. Mounted to moving parts of an industrial machine that may cause a hazardous work environment. Both safety edges and bumpers are to be used as 'Pinch Point' and "Collision" safety sensors. They are designed to detect contact of an object and to emit a signal to the machine controls in response.

When activated, the safety Edges and Bumpers act as an emergency stop that removes power from the machine. Safety edges and bumpers should be used as an integral part of the machine safety circuit.

◆ Upto 5 million Operations!

The XAE uses specially designed phosphor-bronze ribbon switches that are normally open.

The ribbon switch construction consists of a bottom conductor separated by an insulating strip from the upper conductor in an insulating housing. The design is self-bottoming, so the linkages, mounting, wiring and weather protection of conventional switches are rendered unnecessary. Simple pressure completes the electrical contact. The Specially designed, patented switch design ensures long life and ability to withstand high impact loads without deformation. The enables the mat to have a switching life of upto 5 million operations.



◆ Wide Selection

Select from four sizes, lengths in increments of 1 feet and a flexible mounting option. Custom sizes are also available.

◆ Tear Resistant

The bumper is covered by a special, reflective and tear resistant vinyl sheet that is durable and withstands impact.

◆ 4- Wires for Safety

The XAE series have Normally Open (NO) 4 wire construction for connection to safety controllers. Two wires are used for output and the other two for checking the integrity of the sensor.

◆ Chemical Resistant

The bumper is covered by a special vinyl materia that offers offers good resistance to spillage of Oils, Mineral & Organic acids, Alcohols, Caustic chemicals, Petroleum solvents, Aldehydes & Ketones.

◆ Applications

Safety edges and bumpers, mounted to moving parts such as doors of moving mechanical equipments, will stop hazards from moving parts by initiating shutdown of the system upon contact with person or any other object. The elastic cushioning material softens the impact at the same time protecting the sensor unit.

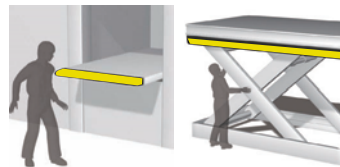
Automatic Shutter Door

The XAE-E (Edge) mounted the the end of a shutter door stops the downward motion of the shutter to prevent crushing of object/ person when it detects contact with the same



Moving Work Table

The XAE-B (Bumper) series mounted on the corners of moving tables in press and CNC machines prevent injury to personal and machine by stopping the machine when contact is detected



Machine Protective Door

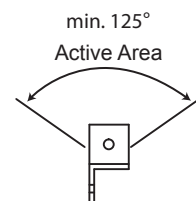
The XAE-E (Edge) fixed on the edge of access windows of automatic processing machines; prevents the door from automatically closing and machine starting when intrusion is detected

Hydraulic Lifts/ Platforms

The XAE-B (Bumper) when used in the base of moving platforms will detect human/ object upon impact and stop the downward movement. The cushioning will also help soften the contact impact on personnel

◆ Side Activation

Safety edges generally are made of hollowed out extruded rubber which makes their operation inconsistent when load is not applied perpendicularly. The XAE realizes this problem. The solid nitrile/ foam construction technique used in the XAE edges and bumpers is designed to maximize the active area of the sensor. A minimum of 125° active area is provided so that load from any direction actuates the sensor.





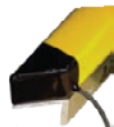
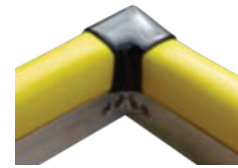
◆ Customized AGV & Forklift Safety Bumpers

AGVs and Forklifts are two of the most commonly used material transportation systems used in the industry. Accidents from the same can be prevented with the use of safety edges along the perimeter of the device with a circuit to engage the brakes and stop the vehicle if the bumper is engaged.

Specialized sensors for AGVs and Forklifts are available against request. The appropriate dimensions & placement of the safety bumpers will be informed based on the vehicle model/ dimensions.

◆ Customized Sensors with Active Corners

Often in the industry customized shapes are necessary, in most cases different edges are connected together to form the required shape; but the problem is the joints are not active (no activation under pressure). The XAE realises this problem by introducing active corners. End to end all the corners and joints are active irrespective of the angle of joint.



◆ Mittered Ends

XAE-B has the option of Mittered ends. The sensors with mittered ends have 100% activation area providing an advantage in areas with small obstructions.

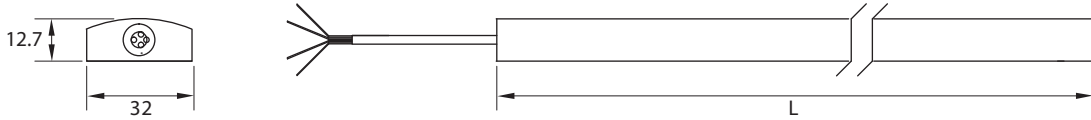
Ratings and Specifications

Type	Safety Edge		Safety Bumper	
Models	XAE-E5H- _ NN	XAE-E1- _ NN	XAE-B1- _ _ _	XAE-B2- _ _ _
Sensor Height	0.5" (12mm)	1" (25mm)	1" (25mm)	2" (50mm)
Mounting Arrangement	Threaded Base		Flat/ L- angle Aluminium Channel	
Detection Method	Pressure sensing switch			
Switch Type	4- Lead wire type			
Switch Function	Normally Open; Momentary Action			
Switch Activation Life	upto 5 million cycles			
Activation Force	<2 lbs (0.91 kg)	<3 lbs (1.36 kg)	<3.3 lbs (1.5 kg)	<4 lbs (1.814 kg)
Ambient Temperature	Operation: -18° ~ 50°C; Storage: -25° ~ 55°C (non- freezing; non- condensing)			
Ambient Humidity	Operation: 15 ~ 85% RH; Storage: 15 ~ 95% RH (non- condensing)			
Dielectric Strength	750 VAC for 1 minute			
Protection Class	IP67			
Compliance Standard	UL 508 standard for ICE; CSA C22.2 #14 ICE; DIN EN 1760-2:2009			
Weight	5.5 lbs (2.5 kg)/ meter	5.5 lbs (2.5 kg)/ meter	5.5 lbs (2.5 kg)/ meter	5.5 lbs (2.5 kg)/ meter
Chemical Resistance	Water, Oil & Gasoline		Water, Acids, Alcohols, Petroleum Solvents & Oils	
Material	Surface	Extruded Oil resistant Nitrile Rubber (BUNA-N)		Heavy duty Rip stop Vynil
	End Caps	-		Black PVC
	Mounting Channel	-		Aluminium
Mounting	.201 holes for #10 fastner, 8-32 Threaded inserts		.201 hole (Countersunk)	
Cables	2 meters, 22 AWG, 4 wire Oil Resistant PVC			

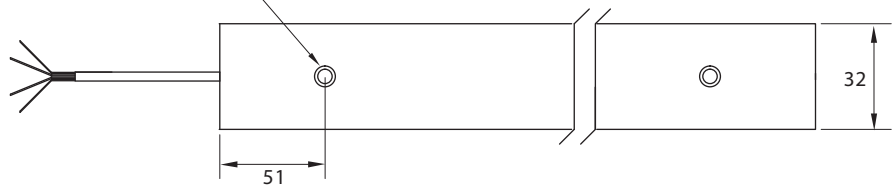
Sensor Dimension Drawing

XAE

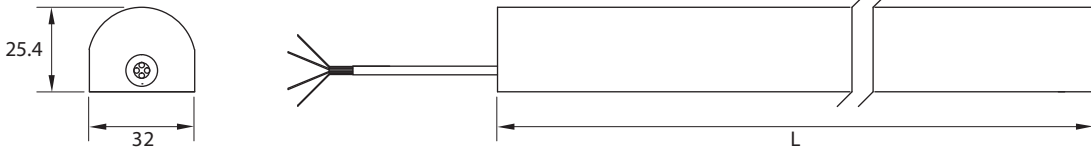
• XAE-E5H- _ NN



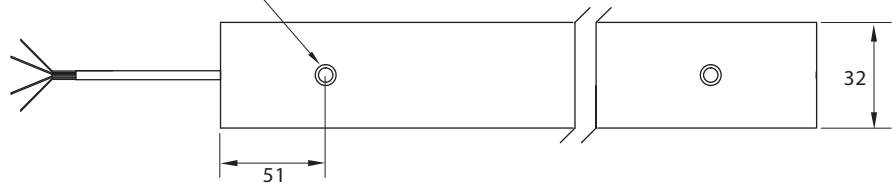
8-32 Threaded Internal Mounting Holes, 0.125 deep Max.



• XAE-E1- _ NN



8-32 Threaded Internal Mounting Holes, 0.125 deep Max.



Available Standard Lengths	
XAE-__ - 06 - __	150mm
XAE-__ - 12 - __	305mm
XAE-__ - 24 - __	610mm
XAE-__ - 36 - __	915mm
XAE-__ - 48 - __	1220mm
XAE-__ - 60 - __	1530mm
XAE-__ - 72 - __	1830mm
XAE-__ - 84 - __	2135mm
XAE-__ - 96 - __	2440mm

Note: Special lengths can be ordered; mittered edges have a slope of 45°

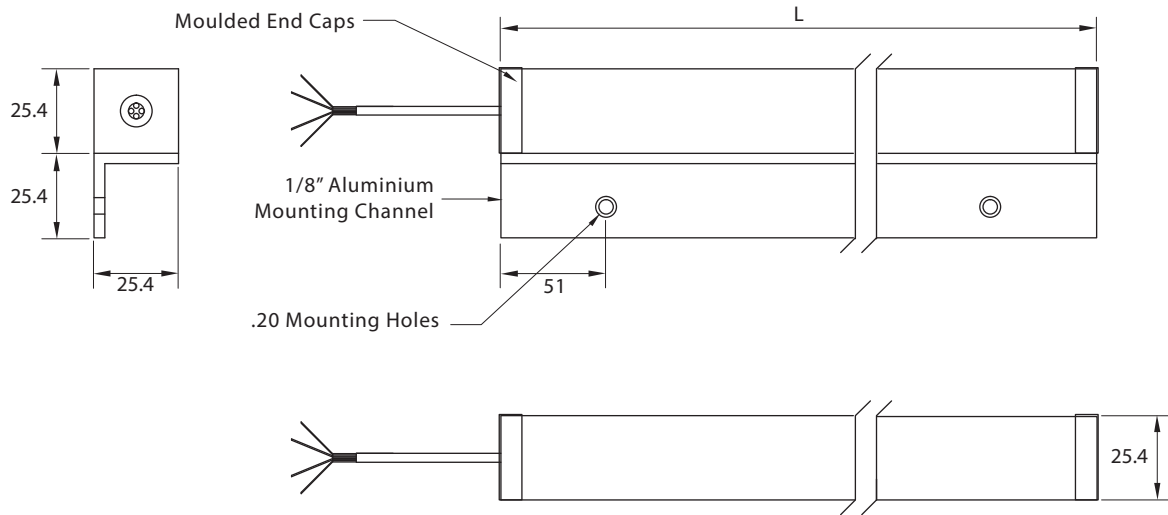
All dimensions are in mm

- Proximity Sensors
- Photoelectric Sensors
- Measurement Sensors
- Vision & Safety Sensors
- Control
- Weighing
- Automation
- Components

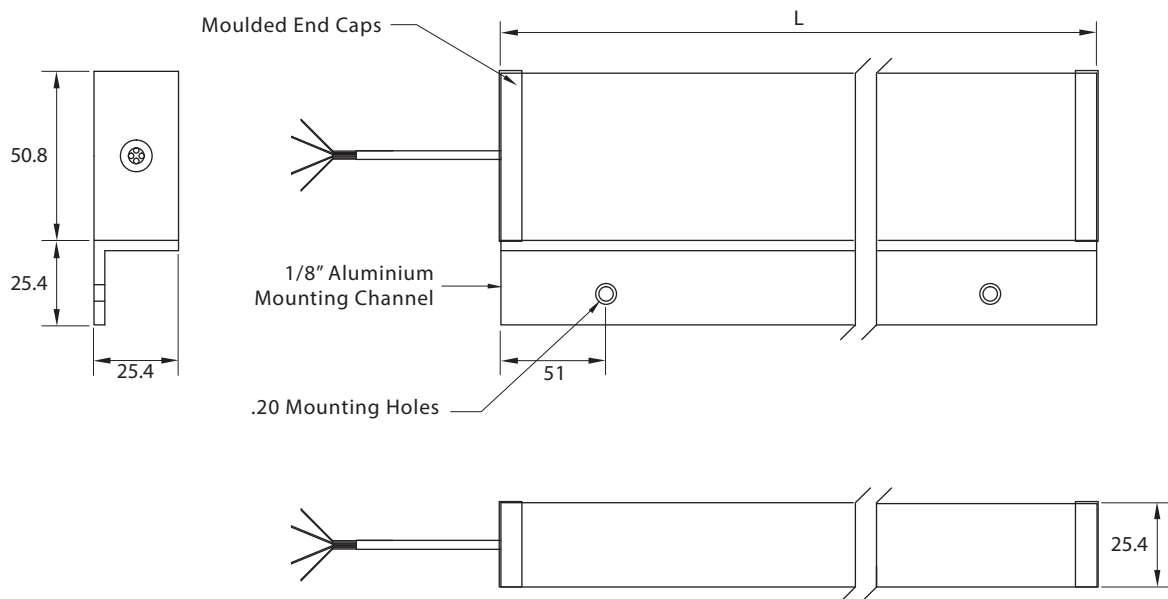
Sensor Dimension Drawing

XAE

• XAE-B1- _ L _



• XAE-B2- _ L _



XAE-B _ - _ M

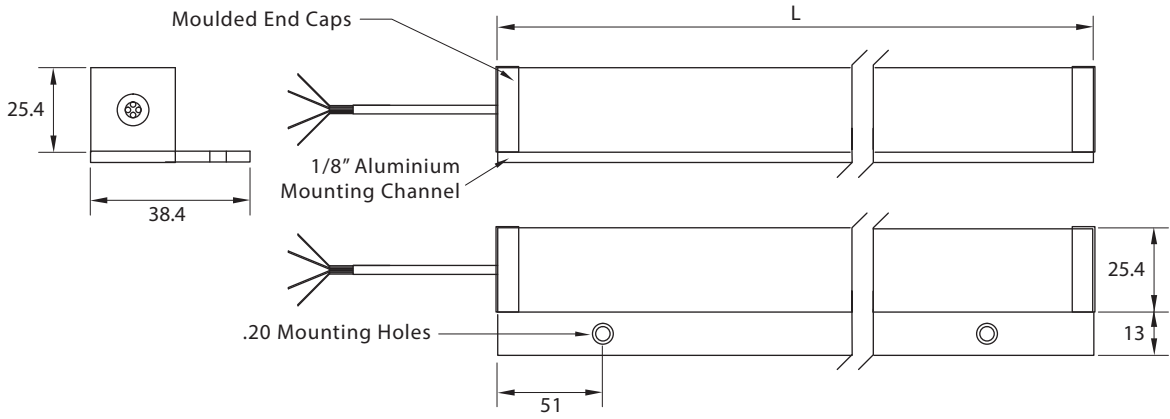
Models with Mittered edges; the edges are tapered at 45°. Rest stay the same

All dimensions are in mm

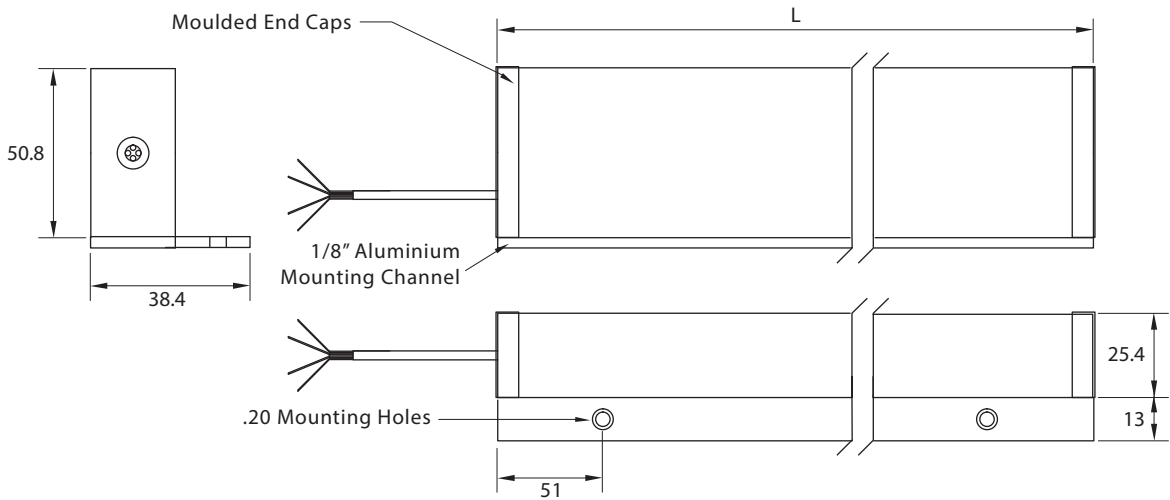
Sensor Dimension Drawing

XAE

• XAE-B1- _ F _



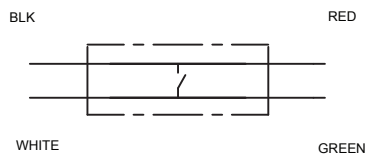
• XAE-B2- _ F _



All dimensions are in mm

Connections

The safety bumpers and edges provide contact outputs that can directly be connected to a relay coil or be used as input signal (current not exceeding 200mA). It is however recommended that the sensor be used in conjunction with a Safety Mat Controller when used for safety control and to comply with the local safety laws.



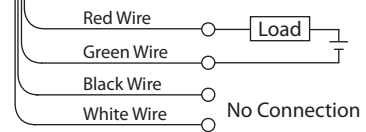
Connections

XAE

◆ 2 Wire Connection (Direct, no- safety)



For 4 wire connection to a Safety Mat controller Black is Red wire's pair and White is Green wire's pair. Pl. check for continuity before commencement of wiring. Wiring diagram between a Mat Controller and a 4-wire Mat is to be provided by the controller manufacturer.



Proximity Sensors

Photoelectric Sensors

Measurement Sensors

Vision & Safety Sensors

Control

Weighing

Automation

Components

Cat. No. XAE-213

Exclusively Represented by:

Intech Systems Chennai Pvt Ltd
 S-2, Guindy Industrial Estate
 Chennai - 600 032. Ph: 4353 8888
 Email: info@intechchennai.com

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