

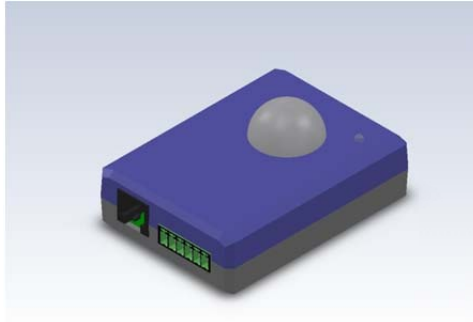
# IBE-1600™ Intelligent Motion Sensing

## Motion Sensing Device for CS-Bus™ Lighting and Shading Controllers

*Passive Infrared Motion Sensor  
Combined with Ambient Light  
Photosensor*

*Compatible with CS-Bus™ LED  
Lighting and Motor Controllers*

*Small Form Factor Device Can  
be Discretely Mounted*



*Single or Multi-Location*

*User-Selectable Ambient  
Light Sensing Override*

*Self-Powered from CS-Bus™*

### Product Description

#### Description

The IBE-1600™ is a standalone, microprocessor based passive infrared (PIR) motion sensor that senses occupancy within an interior coverage area (<2000 sq ft) and triggers any networked CS-Bus™ lighting or motor/shading controller to automatically adjust to a user-predefined level or position. An adjustable time delay setting maintains that triggered level or position for a predetermined period of time, then resets CS-Bus™ device(s) to their initial level or position. A built-in ambient light photosensor detects lux levels and disables auto-on operation until ambient light levels fall below preprogrammed levels.

#### Operation

The IBE-1600™ operates on Class 2 power supplied by the CS-Bus™ to the device. A built-in microprocessor broadcasts user-selected CS-Bus™ lighting or motor controller commands onto the CS-Bus™ to activate supported networked controllers. After the pre-programmed time is reached, another set of commands is transmitted onto the CS-Bus™ resetting networked devices to their former state.

#### Easy Setup and Configuration

Simply plug the IBE-1600™ into any Converging Systems' CS-Bus™ network up to 4000 feet from an intelligent lighting or motor controller and point device towards area to be monitored. No external power supplies or adapters are required. Built-in Plug-n-Play functionality automatically generates appropriate CS-Bus™ commands when motion is detected, and alternative commands after Time Delay is reached. Lighting thresholds as well as Time Delay periods can be easily customized using either the IBT-100™ (serial adapter) or the e-Node™ (Ethernet adapter).

#### Applications

The IBE-1600™ is ideal for exit lighting, hallway and stairway warning lighting and other applications where unattended operation of devices is desirable and where on/off switches are impractical.

### Features

- CS-Bus™ control accessory
- Triggers CS-Bus clients when motion is detected.
- Time Delay feature maintains activated state prior to reset commands being triggered
- Medium to large range (0 -2000 sq. ft)
- Build-in AC ripple/flicker filter
- Preprogrammed lighting and motor settings
- Can operate with 3<sup>rd</sup> party lighting panels
- Remote configuration available through e-Node™ and Pilot application software
- Can be located up to 4000' from CS-Bus™
- CS-Bus™ powered-no need for separate power

## Specifications

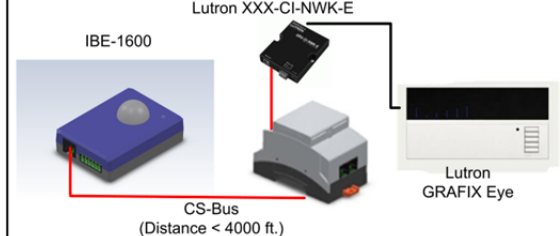
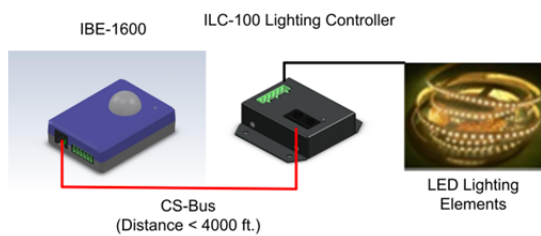
Feature	Detail
Passive Infrared Motion Sensor Combined with Ambient Light Photosensor CS-Bus Controllers	Measures occupancy within interior space. A built-in light photosensor detects lux levels and disables auto-on operation until ambient light levels fall below preprogrammed levels.
Coverage Limits Detection Range	Coverage Range 0 to 2000 square feet Detection to 10m (110° h x 93° v)
Lighting Control Modality	Senses occupancy status and transmits <i>lighting</i> control specific CS-Bus™ commands (factory default)
Motor Control Modality	Senses occupancy status and transmits <i>motor</i> control specific CS-Bus™ commands (field selectable)
Network Bus Type	One RJ-25 for CS-Bus™ or RS-485 communication
Network Pin-outs	Pin 3 RS485-, Pin 4 RS485+, Pin 2 Ground
User Interface	Discovery Button (for network identification)

Feature	Detail
Software Compatibility	CS-Bus customized commands
Power Requirements	Self powered from DC voltage available on standard CS-Bus™ lines (as well as commonly available RS-485 bus lines)
Operating Conditions	For indoor use only, 32-130° (0-54°C) less than 90% RH, non condensing
Size	3.06" x 2.25" x 0.875" (77.72 mm x 57.10 mm x 22.23 mm)
Enclosure	Molded plastic enclosure
Weight	1.7 oz. (.05kg)
Manufacturing	Made in the USA

### Standalone CS-Bus™ Applications

### Integration with 3<sup>rd</sup>-party Lighting Panels

#### Wiring



#### Overview

**Applications** The IBE-1600™ Intelligent Bus Encoder is ideal for a variety of applications. It has been optimized to work with compatible CS-Bus™ controllers (motor and lighting) to enable occupancy sensing with supplemental light sensing. For instance, if positioned near a set of stairs and connected to the ILC-100™ lighting controller, the sensor will detect motion and if there is not sufficient light present already, under-step LED lighting will turn on to guide visitors down the monitored steps safely. During the day, when sufficient lighting may already exist, the supplemental light sensing override locks out the auto-occupancy sensor, and keeps the LED lights off. Occupancy sensing can also be added to supported third-party lighting panels. See below for interesting applications. Your custom application may be easily adapted from our core technology. Contact us for more information.

Conditions Sensed		Type of System Connected			Action	Notes
Motion Sensed	Light Level > threshold	IMC-100	ILC-100	GRAFIX <sup>®</sup> Eye*		
✓	✗		✓		ILC-100 activated to Preset #x	Stumble lighting detector-goes on at night when needed
✓	✓		✓		No-action ILC-100	Stumble lighting detector – does not trigger LED lighting for there is sufficient ambient lighting not to require LED illumination
✓	Not configured			✓	Activates Specific Scene on GRAFIX Eye*	Occupancy upgrade primarily for GRAFIX Eye system*
✓	Not configured	✓			Activates Motor Direction	Useful for an automatic door opener when motion sensed

\*GRAFIX Eye QS system has built-in connector for Lutron Occupancy Sensor. GRAFIX Eye/QS mfg. by Lutron.