

MultiSensor

MBUS-MSENS-MT-R-01



The MultiSensor communicates to Lighting Control Panels and the Area Controller via the M-BUS. The manner in which the MultiSensor controls lighting is totally flexible. Each sensing element of the MultiSensor can be individually programmed to operate any light or output, or influence a control sequence. Settings are defined in the system configuration, no custom operation settings are stored in the sensor itself.

The Mode Lighting M-BUS MultiSensor contains three sensor functions:

- » Passive infrared (PIR) movement detector with adjustable sensitivity of both presence and absence detection.
- » Light-level sensor enables energy saving from day one design illuminance C. 20% and further enhanced up to C. 80% from daylight harvesting.
- » Infrared receiver for user override from the User IR Handset.

Motion Sensitivity

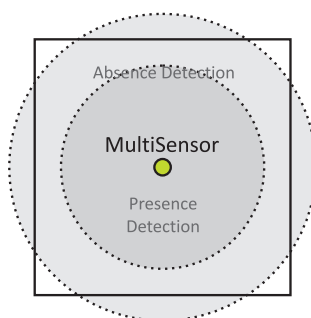


Figure 1.

Key Features

- » Three sensors in one: motion, light level and infrared override.
- » Flexible motion detection from 4m – 6m (at 2.4m floor to ceiling height) allows the use of a customised range setting to better serve the monitored space.
- » Dual motion detection allows two selectable sensitivity and range settings to be stored, i.e. Absence Detection and Presence Detection (see figure 1).
- » Configurable PIR expiry time (off-delay).
- » Uses SELV compliant communication bus; M-BUS.
- » Bi-colour diagnostic LED provides intuitive M-BUS installation feedback to assist the installer and end-user.
- » Occupancy walk test via LED flash
- » Compact form factor; 55mm mounting hole diameter, 90mm deep.
- » Supplied with fixing ring for easy mounting to a fibre or metal ceiling tile; plasterboard mounting kits are also available.
- » Quick installation with pluggable M-BUS Patch Lead.
- » 2 year warranty



System Architecture

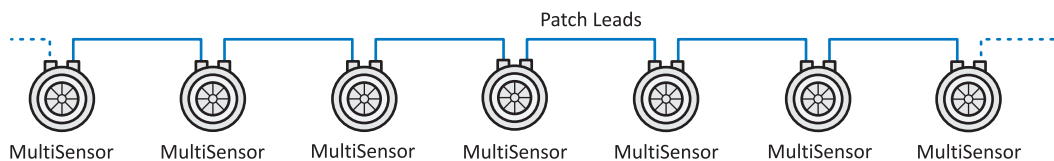
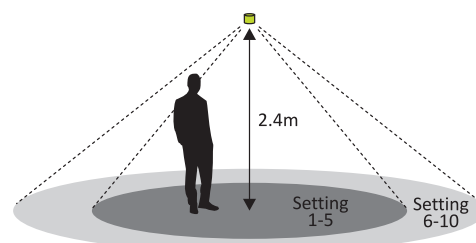


Figure 2. MultiSensor M-BUS wiring.

Further Information

- » The sensor should be mounted at least 1m away from an air-conditioning unit. If this is not possible then the sensitivity should be lowered appropriately to minimise false triggering.
- » If being used for daylight harvesting, the sensor should be positioned such that a mixture of daylight and artificial light is reflected into the sensor. Do not mount in direct sunlight or above artificial up-light.
- » Changes to the average reflectance of the surfaces below the sensor may change the maintained light level. For example; changes to the type and amount of furniture sitting in the detection diameter may change the average overall reflected light detected by the sensor.
- » When controlling a group of lights, the sensor should be positioned between them, trying to avoid spill from lights in adjacent areas that are independently controlled.



Technical Data

Power	
Power In	» 24V DC, Safety Extra Low Voltage (SELV) provided by an ECO-PSM-2401
Sensor	
PIR Motion Sensitivity	» Presence and absence sensitivities can be independently set to levels 1 – 10 via software. The default settings for these are 6 and 8 respectively.
PIR Expiry Time	» Configurable via software; 0 – 999mins
Diagnostic Feedback	» Bi-Colour LED (for commissioning and local fault identification)
Detection Diameter	» Up to 6m (at ceiling height of 2.4m)
Photocell Light Range	» 50 – 1000 lux at sensor
Handset Override IR	» Active Infrared - 15m range
Connections & Cable Specifications	
M-BUS	» M-BUS Patch Leads (ISO-11801), (1,3,5,7 & 10m leads available) » Safety Extra Low Voltage (SELV)
Mechanical	
Material	» Flame retardant ABS
Dimension	» 56mm Diameter Body x 65mm Deep x 74mm Diameter Flush Mount Bezel

