

e-Multisensor Lon TP/FT-10

EN

Motion sensor, light and temperature sensor for LonWorks® control networks

Product reference: MS.623000-000

e-Multisensor Lon TP/FT-10 is a multisensor designed to operate in LonWorks® control distributed networks, including three sensors in the same device: a motion sensor for zone occupancy detection, a light sensor for zone light level measurement and a temperature sensor to measure the ambient temperature of the zone.

The device has a twisted pair TP/FT-10 network interface for LonWorks® networks and several functional profiles to switch on, switch off and a constant light control dimming function to operate over lighting controllers with LonWorks® interface.

Instruction Sheet



Product description

The e-Multisensor Lon TP/FT-10 device is a multisensor designed to do automated functions like switching on and off in a lighting installation, and automatic light dimming. The device is including a constant light control system to dim the light level of the installation to keep a constant value predefined by a lighting setpoint. The product is including different functional profiles that are compliant with the LonMark® interoperability standard, which can be configured in different ways to make the device operate as a threshold switching on/off detector or as a constant light controller.

The multisensor should be installed in accordance to another device that makes the control and dimming of the luminaries, like a DALI Gateway, a 1-10V analog output device or a mains phase dimmer. Thanks to the constant light controller included in the multisensor, it is possible to do an installation based on multisensors and dimming lighting devices to operate in a stand-alone way, with no need to install any other device.

In installations where a monitoring system is requested to monitor the light levels, the occupancy status of the zones and the temperature levels of the installation, the multisensors can be connected to the BMS control system.

The device is including multiple value added functions like the light sensor calibration by lux level measured or by reflection level, or the possibility to adjust the sensitivity of the motion sensor remotely. Among this, the device has two different dimming output variables to control the lights in a near environment and neighbor environment and dim the lights with different values depending on the zone occupancy level in open spaces. It also has a second network variable output to control the window group lights and the aisle group lights from the same device.

Product installation

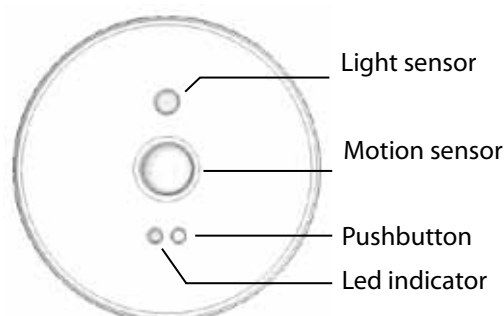
1. Drill a 65mm diameter hole on the ceiling.
2. Connect the wires in the corresponding terminals like shown in the installation drawing.
3. Clip the springs and insert the product into the hole,
4. releasing the springs when placed in.
5. Power up the supply voltage and check the front red led is switched on during the warm up time.
6. Configure the device with the help of a software application to commission LonWorks® devices.

Caution:

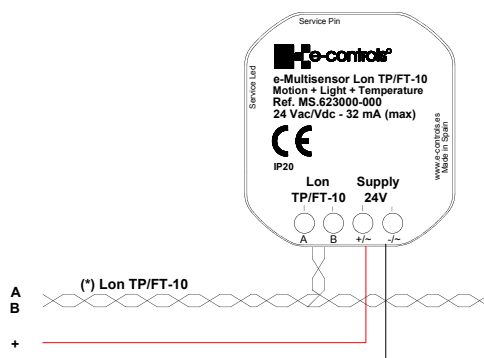
- The device can't be installed over shelves, behind curtains,
- near heat/cool air handling units and avoid direct sun
- radiation over the device.
- Disconnect the device from the power supply before
- mounting or moving the sensor.
- Do not leave cables peeled or turned around the device.
- Do not connect the device with the hands wet.
- Do not open or hole the device.
- Keep the device and cables away from humidity and dust.
- Clean the front cover with a water moisture soft cloth.

Mechanical description

Front view



Installation drawing

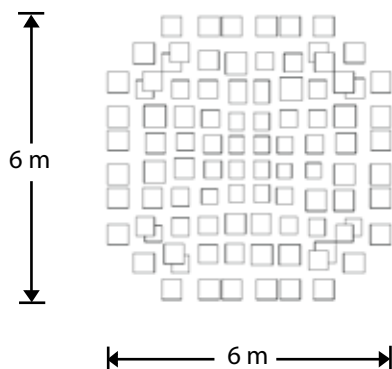


(*) Read the "LonMark® Interoperability Guidelines" for topology description and recommended wiring

Motion sensor

Detection diagram

Plant view (installed at 2,5 mts height)



Coverage area (*)

Altura Height (m)	Diámetro Diameter (m)	Area Area (m ²)
2,5	6	28
3,0	6,8	37
5,0	11	104
7,0	16	204
10,0	23	416

(*) In optimal sensitivity conditions

Technical features

Supply Power

Operating voltage. 24 Vac \pm 20%, 50/60Hz
24 Vdc \pm 20%
Operating nominal current 32 mA

Communication

Technology LonWorks®
Standard ISO/IEC 14908
Interface TP/FT-10
Transmission speed 78 Kbps
LonMark® compatible device

Motion sensor

Technology PIR (Infrared)
Detection zones 88
Detection angle (X, Y) \pm 50°
Detection area (at 2,5mts from floor) 6x6 mts
Maximum detection distance 10 mts
Sensitivity configuration Network variable
Stabilization time 60 s.

Light sensor

Measuring range. 0 to 1000 lux
Spectral bandwidth. 400 to 800 nm
Maximum sensitivity wavelength 570 nm
Calibration Network variable

Temperature sensor

Measuring range +5°C to +45°C (+41°F to 113°F)
Resolution. 0,5°C

Front led indicator

Motion detection Switched on, red

LonWorks® network commissioning (*)

Neuron ID pushbutton (Service Pin) SP
Status indicator LED SL

Operating temperature

Operating 0°C to +50°C (32°F to 104°F)
Storage. -20°C to +85°C (-4°F to +185°F)

Humidity (no condensation)

Operating 10% to 90% RH at 50°C
Storage. 95% RH at 50°C

Mechanical installation

Installation Flush mounting on ceiling
Fixing. 2 metal springs
Hole diameter 65 mm
Maximum ceiling thickness 19 mm
Internal height on ceiling 45 mm

Mechanical features

Dimensions 80x50mm (ØxH)
Weight 80 gr
Colour (front) RAL 9016
Enclosure material. PP
Wire section. 0,5 mm² - 2,5 mm² (14 AWG)
Terminals Screw type
Electrical security Class III
Protection degree IP20 (EN 60529:1991)

CE Conformity

Low Voltage Directive 2006/95/EC
Electromagnetic Compatibility Directive 2004/108/EC
Marking CE

Armonized standards

Product standard EN 60730-1:2011
Electrical security EN60730-1:2011
Electromagnetic compatibility EN61000-6-3
EN 61000-6-1

NOTES:

- 1) The device is not intended for use as part of a security system sensor.
- 2) For an optimal detection of the motion sensor, the installer must adjust the sensibility level through the corresponding network variable.

(*) Read the LonWorks® reference documentation.

Product reference

e-Multisensor Lon TP/FT-10, Motion, light and temperature sensor, LonWorks TP/FT-10 MS.623000-000
Flush mounting enclosure AC.000001-000

Related documentation

Installation drawing DEC
LonMark® Functional Profile DPF
LonWorks® commissioning document. XIF
Network variables bindings DSB

The package of this product is considered as industrial packaging intended for professional use only.
The manufacturer is not responsible of the incorrect installation or use of the product.
Specifications are subject to change without notice.

