

# MLS SERIES SPECIFICATIONS

## equipment description

### **MLS Series, Managed Lighting System**

#### **System Description**

The lighting control system shall provide full occupancy control of lighting in all areas and automatic regulating control of luminaire output based on the amount of light present in the area.

It shall be a fully networked and communicating system providing automatic synchronous switching of areas based on easily programmable parameters. The Lighting Control System shall be of type ECS Managed Lighting System (MLS) 2000 Series.

## system operation

#### **System Operation**

Lighting in all areas to be automatically controlled by movement. It shall be possible to configure each luminaire controller into one of the following zones:

- Group Zones
- Common Zones
- Building Zones

#### **These zones are described below.**

2.1 A group zone refers to a work area that may consist of one, two or more workstations situated closely together. When anybody is present anywhere in that area, the entire zone of lighting will be held ON. A group zone may also be assigned to an enclosed office, a conference room, tearoom, toilets or any other small area.

2.2 A common zone refers to an area such as a corridor or exit route that is used by multiple users. Lighting in a common zone area shall be ON whenever anybody is present within the common zone or any group zone.

2.3 A building zone refers to a building wide common area such as a stairwell or lift lobby. Lighting in a building zone will be held ON whenever somebody is present anywhere in the building zone, any common zone or any group zone.

## system components

#### **System Components**

The system shall consist of the following components:

- MLS2000 Luminaire Controllers
- RB2000 Bus Power Supply
- UBT2000 Universal Bus Transceiver
- MLS2000 Emergency Test Module
- HP2000 Hand Held Infrared Programmer
- MLS2000SSP Scene Select Panel
- MLSLCP Local Control Plate

Please check [www.ecsaustralia.com/productguide.php](http://www.ecsaustralia.com/productguide.php) to ensure this is the most recent issue

## luminaire controllers

### Luminaire Controllers

- 4.1 Luminaire controllers shall be of type ECS MLS2000 series. Luminaire controllers shall be positioned in order to obtain maximum detection coverage in the controlled area.
- 4.2 It shall be possible for each luminaire controller to automatically regulate light output to provide different illumination levels in each area. (Note: This requires electronic dimmable light fittings).
- 4.3 It shall be possible to program each integral control either to switch its lights off after it has dimmed to minimum output or to hold output at the minimum level providing ambient conditions are bright enough.
- 4.4 It shall be possible to program each luminaire controller to either switch its lights off when no movement is detected for the preset time delay, or dim them to a minimum level for safety or security reasons.
- 4.5 The luminaire controller shall be able to communicate with every other device on the network, in order to exchange occupancy information over the entire area.
- 4.6 Each luminaire controller shall utilise presence detection to switch both its own luminaire and other specified luminaires within its zone, on and off according to occupancy. The time delay switching off after an area is vacated shall be adjustable.
- 4.7 It shall be possible to program each luminaire controller to a condition of either "power-up, lights-on", or "power-up, lights-off". With "power-up, lights-on", lights will switch on automatically when power is first applied, regardless of whether presence is detected in the area or not. With "power-up, lights-off", lights stay off when power is applied until presence is detected in the area.

## bus power supply

### Bus Power Supply

- 5.1 Network communications shall be powered by a Bus Power Supply of type ECS RB2000, which shall be connected via a 2-core 1.5mm<sup>2</sup> PVC/PVC cable in daisy chain formation to each Luminaire Controller.
- 5.2 The Bus Power Supply shall provide power to enable communications to a maximum of 200 Luminaire Controllers.
- 5.3 Bus Power Supplies shall have the ability to be linked together in order to provide a building wide common zone.
- 5.4 The Bus Power Supply shall be equipped with a test facility for checking the integrity of the bus network.
- 5.5 The Bus Power Supply shall be mounted in a suitable location within the Electrical Distribution Board Cupboard.
- 5.6 A fused 3A, 240 volt mains supply is required, which shall be dedicated to the RB2000 for maximum reliability

## universal bus transceiver

### UBT2000 Universal Bus Transceiver

- 6.1 Interface to external devices shall be provided by a Universal Bus Transceiver of type ECS UBT2000, which shall be connected via 2-core 1.5mm<sup>2</sup> PVC/PVC cable in daisy chain formation to the MLS network bus.
- 6.2 The Universal Bus Transceiver shall be able to respond to signals on the MLS bus network as part of a group, common, and / or building zone.
- 6.3 The Universal Bus Transceiver shall be able to transmit signals to the MLS bus following an external signal, and receive signals from the MLS bus to give an external output.
- 6.4 The Universal Bus Transceiver shall be mounted in a suitable location within the Electrical Distribution Board Cupboard, or ceiling space of a local zone.

### **MLS2000 Emergency Test Module**

- 7.1 Emergency lighting test facilities shall be provided by a MLS Emergency Test Module of type ECS MLS2000ETM, which shall be connected via a 2-core 1.5mm<sup>2</sup> PVC/PVC cable in daisy chain formation to the MLS network bus.
- 7.2 The Emergency Test Module shall enable emergency lighting tests to be carried out by the activation of the emergency test keyswitch on the front of the RB2000 Bus Power Supply.
- 7.3 The Emergency Test Module shall receive a signal over the lighting control bus from the Bus Power Supply to disconnect the maintained live supply to the emergency luminaires.
- 7.4 Emergency mode shall remain active for as long as the keyswitch remains closed, and for a period of 30 seconds after the keyswitch is turned off.
- 7.5 The Emergency Test Module shall be mounted in a suitable location within the Electrical Distribution Board Cupboard and connected to the emergency lighting circuits.

### **HP2000 Hand-Held Infrared Programmer**

- 8.1 All programmable features shall be set remotely with a hand-held transmission device utilising infrared transmission technology. Manual adjustment with screwdriver or similar tool is unacceptable. Adjustment using a personal computer is unacceptable. Programmer shall be of type ECS HP2000 Hand Held Programmer.
- 8.2 Programmable features shall include:
  - Designation of lighting zone or zones to which each luminaire is assigned.
  - Designation of "common zones" to which specified luminaires are assigned.
  - Designation of "building zones" to which specified luminaires are assigned.
  - Light Levels.
  - Up to six lighting scenes per MLS luminaire controller.
  - Power up ON or Power up OFF mode of operation.
  - Fully automatic or semi automatic occupancy detection mode of operation.
  - Designation of entry scene to be activated when occupancy is detected in area.
  - Designation of exit scene to be activated after an area has been vacated.
  - Minimum ON time of controlled luminaires when occupancy is detected in area.
  - Time delay to automatic switch-off after a lighting zone has been vacated.
  - "Bright-out" feature, whereby the controlled luminaires will switch off when there is sufficient natural light.
  - Ballast regulation range.
  - Global command transmit and receive ability.
  - Mode of switch-off after time delay has elapsed: instant off; fade to off; go to minimum for 3 hours then off; go to minimum until building is empty then off; or go to any scene.

scene  
switch panel

**MLS2000 Scene Switch Panel**

- 9.1 There shall be the option of a scene switch panel for use in areas where local override is required.
- 9.2 The scene switch panel shall consist of six buttons for selecting six separate scenes, as well as buttons for ON, OFF, and ramp UP and DOWN. Switch Panel shall be of type ECS MLS2000SSP.
- 9.3 Lighting scenes shall be set up using a hand held infrared programmer. Lighting scenes shall be stored locally in the scene switch panel via a long press on the selected scene button.
- 9.4 The scene switch panel shall be able to be assigned to any group, common, or building zone on the MLS2000 network.

local  
control plate

**MLS LCP Local Control Plate**

- 10.1 There shall be the option of a local control plate for use in areas where local override is required.
- 10.2 The local control plate shall consist of two buttons for local control of luminaires programmed to the same zone address.
- 10.3 The local control plate shall allow for the user to turn ON, turn OFF, raise and lower the lighting as required.

additional  
features

**Additional Features**

There shall be the option of a hand-held override device by which users may temporarily change the status of any luminaire to meet the demands of any non-routine activity. It shall be possible to: override on, override off, regulate the output of each luminaire, or go to any of six preset lighting scenes. This device shall be of type ECS HC5 Hand Held Controller.