Simple to install and set up, Modular Lighting Controls offer the opportunity to create individually tailored systems to meet the requirements of many types of applications. The controls provide up to three groups of dimming control, with the option of adding PIR detection as standard. To this basic module can be added daylight linking, scene setting, or a combination of both extra features. The modular design allows for the simple and straightforward future expansion or augmentation of the system, by supplementing existing modules and adding photocells or PIR detectors, without a costly full-scale re-wire. For ease of ordering, the modules are supplied as kits to meet specific project requirements.

- 3 channel dimming control as standard
- Facility to add PIR detectors to any channel
- Daylight linking system available
- Scene setting facility available
- Simple to install and set up
- Modular design for easy future expansion

System Operation

- Luminaires to be controlled should be fitted with digital high frequency regulating control gear.
- Each luminaire requires a standard, permanent live mains power supply.
- Luminaires should be designated into 1 of up to 3 groups for individual channel control. Each group is linked using a 2-wire DSI BUS cable, connected back to the appropriate channel output on the basic control module.
- Remote devices such as push buttons, PIR detectors, photocells or scene set switches are installed as appropriate to the system selected.
- Control system modules receive volt-free inputs from the remote devices installed, dependent on manual input, presence detection, available daylight or as selected scene set switch is pressed.
- A DSI control signal, providing on/off/dim/brighten control information, is distributed by the 2-wire BUS to luminaires on each individual channel as instructed by the module, based upon the information provided by the remote devices.
- Luminaires have 'soft on' and 'fade to off' operation.
- Manual override is available on all systems.
- Specific information follows for each system.

System Components

- Control Modules
  Moulded thermoplastic housings suitable for DIN rail mounting. Basic module requires mains power supply. Power to additional modules in the kit is provided by an interface cable link, which also shares data between components.
- Photocell
  Injection moulded thermoplastic in white.
- Switch
  Momentary push button fitted in a white single gang switch plate.
- Luminaires
  Compatible luminaires fitted with digital high frequency regulating control gear. To specify luminaires, change the 'S' or 'Z' suffix to 'RD'. A comprehensive list of luminaires suitable for use with Modular Lighting Controls can be provided by our Technical Support and Application department.
- Other accessories
  Proprietary PIR detectors, multi-gang push buttons, grid switches and scene indicators can be used with Modular Lighting Controls. Contact our Technical Support and Application department for advice on compatibility.
- Expansion module
  The introduction of the LCSDLC DIN rail mounted expansion module makes connection of proprietary mains rated detectors quick and simple converting the signal to potential free to suit this modular system. The mains sensors on page 474 may be used with this system through the LCSDLC.
- Relay module
  The LCSDRK relay module enables switching of loads such as magnetic or electronic non dimmable control gear within a DSI or switch dim installation.

System Design and Installation

- Lighting design is carried out exactly as a conventional system would be, to determine the quantity of luminaires required.
- Specify the luminaires to be fitted with digital high frequency regulating control gear.
- Connect all luminaires to a permanent live mains supply. It is recommended that a suitable means of isolation is provided for routine maintenance purposes.
- Connect a 2-wire DSI BUS cable from the control modules to each luminaire in a ring or combined ring/radial circuit. Maximum length of 250m per channel/group. DSI connection is polarity free. It is recommended that mains insulated cable is used.
- Install selected control system in a suitable housing and location. Add remote devices as required.
- Follow set up procedure provided with control system.
- Specific information follows for each system.

Options

Emergency converted luminaires can be used with this system, specifying the appropriate luminaire to be complete with digital high frequency regulating control gear. Contact Technical Support for full details.

Catalogue Numbers

Description	Cat No
3 channel dimming control module	LCSDMDC
3 channel dimming and daylight link module kit	LCSDMDD
3 channel dimming and scene setting module kit	LCSDMDS
3 channel dimming, scene and daylight module kit	LCSDMDT
Photocell - ceiling mounted	LCSDP
Momentary push button switch - on/off/dim/brighten control	LCSDPB
Expansion module for mains sensors	LCSDLC
DSI Relay module	LCSDRK

LCSDP Photocell

IP20 DIMMING CONTROLS

3 CHANNEL DIMMING CONTROL

System Features

- Separate control of up to 3 channels/groups of luminaires
- Precise adjustment of light levels to suit requirements
- Up to 100 luminaire ballasts per output channel
- Simple set up of required light level via push buttons
- On/off control via conventional switches or PIR detectors
- System remembers pre-set level each time it is switched on

System Installation

- System requires volt-free momentary push buttons for light level set up and volt-free conventional switches or PIR detectors for on/off control
- On/off control of groups can be linked or split as required
- Groups are set up individually, or linked and set up together
- Compatible transformers for low voltage lamps are available

Project Example

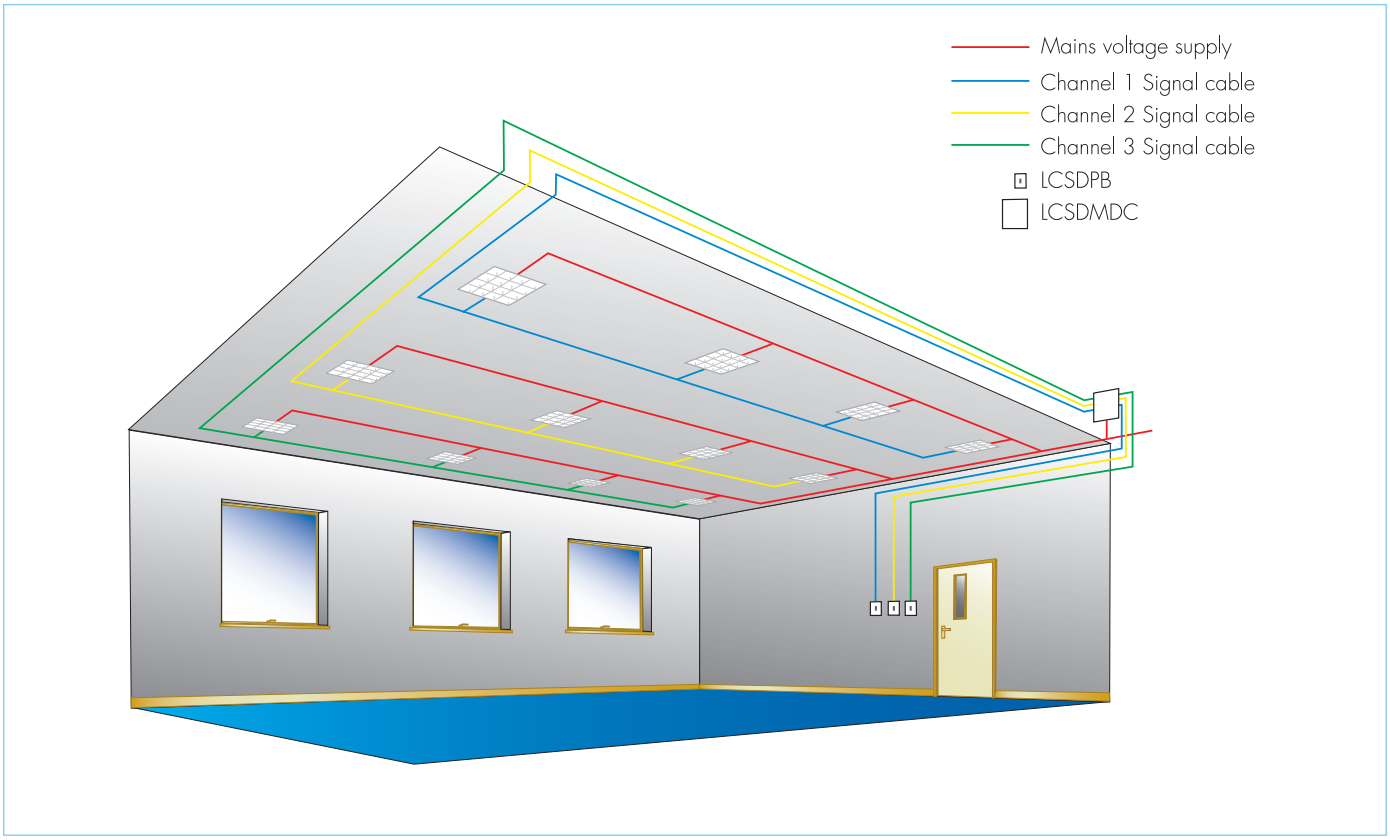
To provide the necessary equipment to achieve 3 channel manual dimming in the example below and using Lechenti luminaires, the following would need to be ordered:

1 - LCSDMDC
3 - LCSDPB (for light level set up)
12 - LCTL414RD

In addition, proprietary 1, 2 or 3 gang conventional switch(s) or PIR detector(s) may be used for on/off control.

Specification

To specify state: Manual dimming system providing on/off/dim/brighten functionality for up to 3 channels with 100 ballasts per channel maximum, using digital high frequency regulating luminaires, set up and controlled using momentary push buttons, with the option of on/off via PIR detectors, as Eaton's 3 Channel Dimming Modular Lighting Control System, part no. LCSDMDC.



DAYLIGHT LINKING CONTROL

System Features

- Daylight linking of up to 3 separate channels of luminaires
- System automatically compensates for changes in ambient daylight levels
- 50% - 70% energy saving in window zone
- Up to 100 luminaire ballasts per output channel
- Simple set up of light level via push buttons
- Manual/Automatic override facility
- On/off control via conventional switches or PIR detectors

System Installation

- Photocell to be ceiling mounted, aimed towards windows and connected to module using 2 core, 1.5mm^2 mains rated cable
- System requires volt-free momentary push buttons for set up and volt-free conventional switches or PIR detectors for on/off control
- On/off control of groups can be linked or split as required
- A manual/automatic override switch facility, using a volt free standard switch, is provided to disable or re-activate daylight linking response
- Minimum and maximum light levels are set for each group during full daylight and darkness respectively. Each group of luminaires will then respond automatically for all intermediate daylight levels, dimming or brightening the lamps accordingly
- Groups are set up individually, or linked and set up together
- Compatible transformers for low voltage lamps are available

Project Example

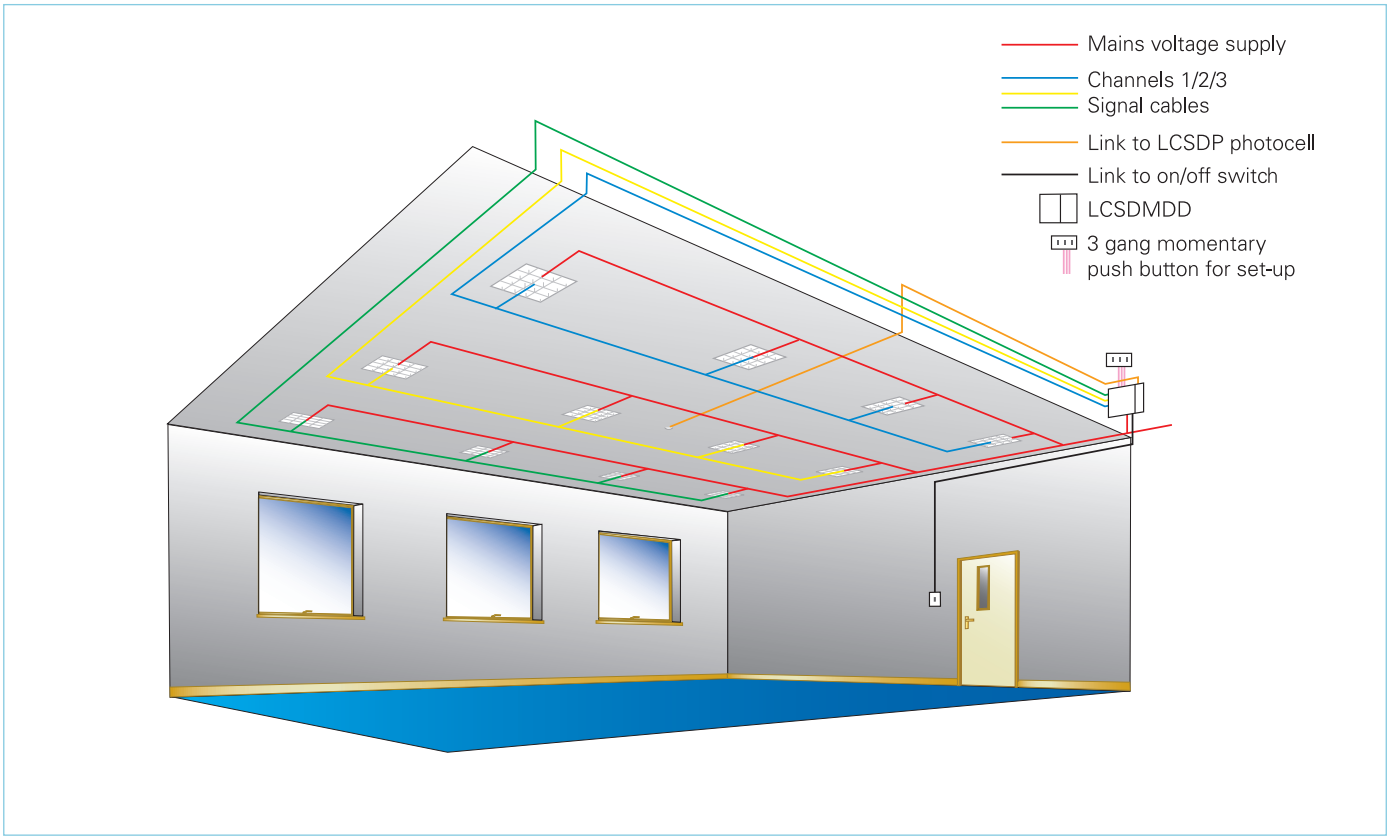
To provide the necessary equipment to achieve daylight linking in the example below and using Lechenti luminaires, the following would need to be ordered:

1 - LCSDMDD
1 - LCSDP
3 - LCSDPB (for light level set up)
12 - LCTL414RD

In addition, proprietary 1, 2 or 3 gang conventional switch(es) or PIR detector(s) may be used for on/off control. A conventional switch for the manual/automatic override function and a 1, 2 or 3 gang momentary push button for set-up are also required.

Specification

To specify state: Daylight linking system providing on/off/dim/brighten and automatic response to daylight level functionality for up to 3 channels with 100 ballasts per channel maximum, using digital high frequency regulating luminaires, set up and controlled using momentary push buttons and photocell, with the option of on/off via PIR detectors, as Eaton's Daylight Linking Modular Lighting Control System, part no. LCSDMDD.



IP20 DIMMING CONTROLS

SCENE SETTING CONTROL

System Features

- Program and recall up to 4 light scenes
- Choice of up to 3 channels of luminaires for scene flexibility
- Facility to add scene indicators
- Up to 100 luminaire ballasts per output channel
- Simple set up of light level and scenes via push buttons
- Easily expanded and re-configured
- On/off control via conventional switches or PIR detectors

System Installation

- Proprietary 4 button scene select push button plate or similar is required to activate programmed scenes
- System requires volt-free momentary push buttons for light level set up and volt-free conventional switches for on/off control.
  PIR detectors may be used for on/off control if appropriate
- On/off control of groups can be linked or split as required
- To program scene 1, firstly the light level (or off) for each channel is selected using the level set push buttons. Scene select button 1 is held until the luminaires flash to indicate the scene is stored. This is repeated for each scene required
- Scene indicators may be added if required, to provide visual signal of which scene is operating
- Groups are set up individually, or linked and set up together
- Compatible transformers for low voltage lamps available

Project Example

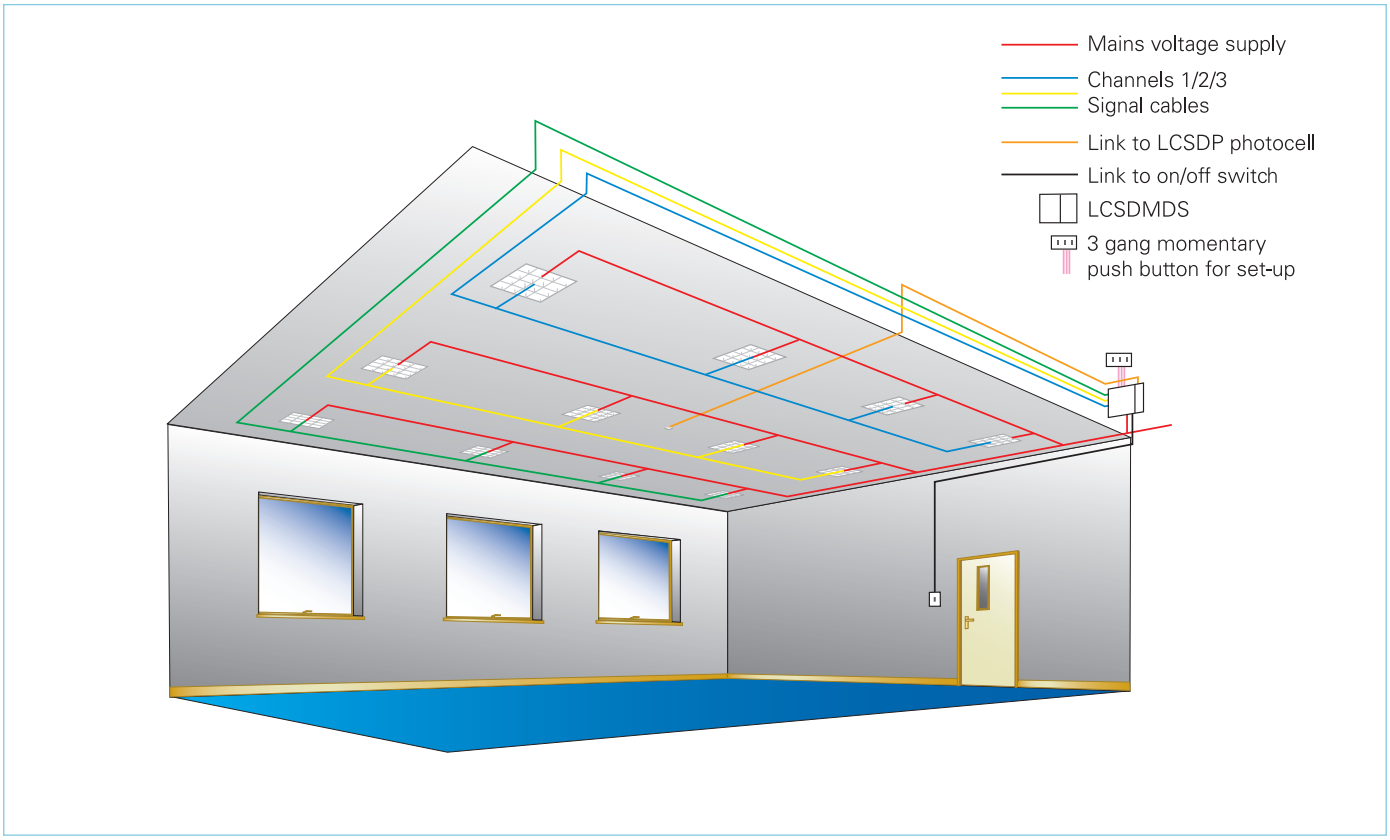
To provide the necessary equipment to achieve scene setting in the example below and using Lechenti luminaires, the following would need to be ordered:

1 - LCSDMDS
3 - LCSDPB (for light level set up)
12 - LCTL414RD

A 4 button scene select push button plate (alternatively 4 x LCSDPB push buttons or similar) is required for scene selection following programming. Scene indicators can also be added. In addition, proprietary 1, 2 or 3 gang conventional switch(s) or PIR detector(s) may be used for on/off control and a 1, 2 or 3 gang momentary push button is required for set-up.

Specification

To specify state: Scene set and dimming control system providing on/off/dim/brighten and 4 x scene recall functionality for up to 3 channels with 100 ballasts per channel maximum, using digital high frequency regulating luminaires, set up and controlled using momentary push buttons, with the option of on/off via PIR detectors, as Eaton's Scene Setting Modular Lighting Control System, part no. LCSDMDS.



COMBINED DAYLIGHT LINKING AND SCENE SETTING CONTROL

System Features

- Combines all features of Modular Lighting Controls
- Daylight linking with 50% - 70% energy saving in window zone
- Program and recall up to 4 light scenes
- Up to 100 luminaire ballasts per output channel
- Simple set up of light level and scenes via push buttons
- Manual/automatic override facility
- On/off control via conventional switches or PIR detectors

System Installation

- Photocell to be ceiling mounted, aimed towards windows and connected to module using 2 core, 1.5mm^2 mains rated cable
- Proprietary 4 button scene select push button plate or similar is required to activate programmed scenes
- System requires volt-free momentary push buttons for light level set up and volt-free conventional switches for on/off control.
  PIR detectors may be used for on/off control if appropriate
- On/off control of groups can be linked or split as required
- Refer to daylight linking/scene setting pages for set up details
- Use of scene select push buttons disables the daylight linking function and re-activated using the manual/automatic button
- Groups are set up individually, or linked and set up together
- Compatible transformers for low voltage lamps available

Project Example

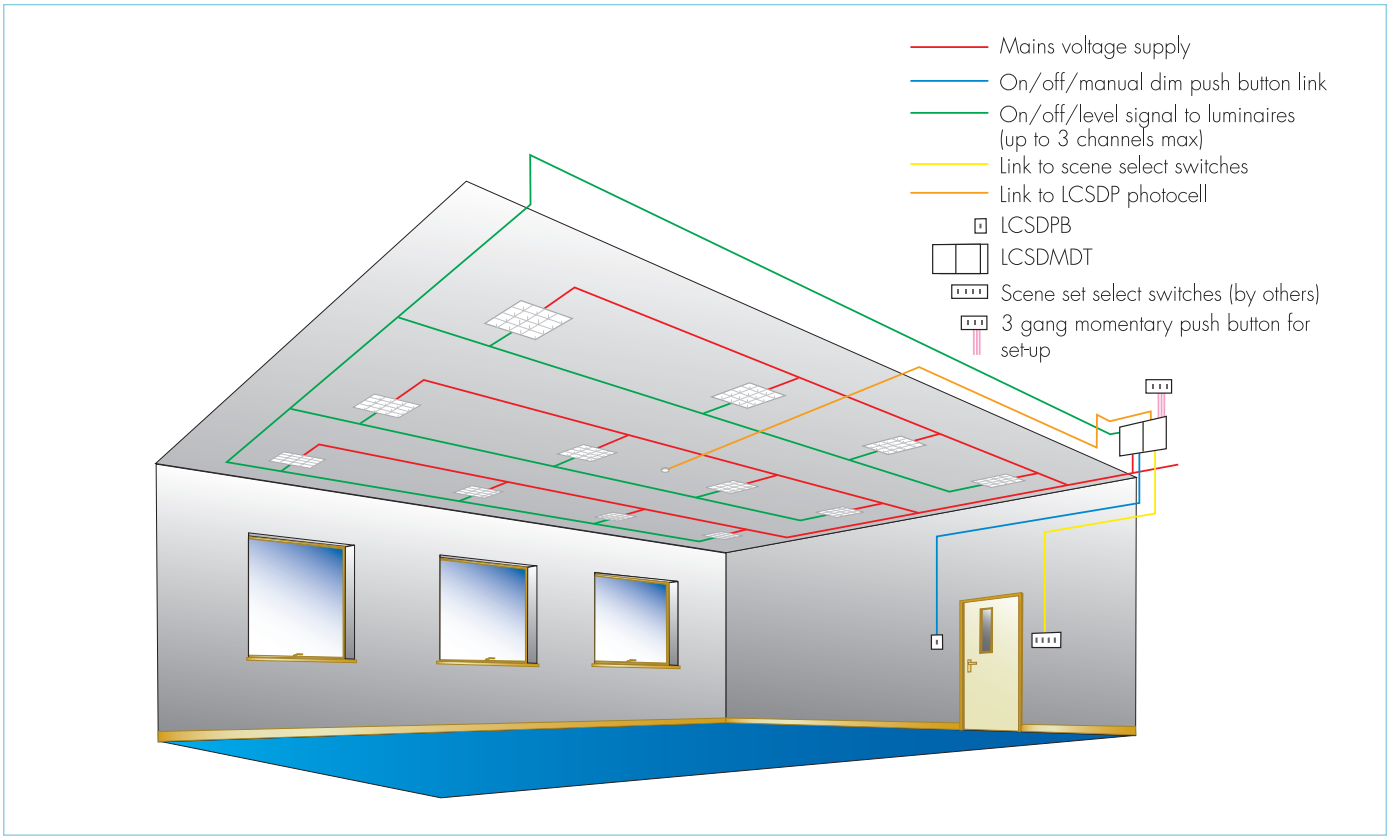
To provide the necessary equipment to achieve combined daylight linking and scene setting in the example below and using Lechenti luminaires, the following would need to be ordered:

1 - LCSDMDT
1 - LCSDP
3 - LCSDPB (for light level set up)
12 - LCTL414RD

A 4 button scene select push button plate (alternatively 4 x LCSDPB push buttons or similar) is required for scene selection following programming. Scene indicators can also be added. In addition, proprietary 1, 2 or 3 gang conventional switch(s) or PIR detector(s) may be used for on/off control. A conventional switch for the manual/automatic override function and a 1, 2 or 3 gang momentary push button for set-up are also required.

Specification

To specify state: Daylight linking and scene set dimming control system providing on/off/dim/brighten, 4 x scene recall and automatic response to daylight level functionality for up to 3 channels with 100 ballasts per channel maximum, using digital high frequency regulating luminaires, set up and controlled using momentary push buttons and photocell, with the option of on/off via PIR detectors, as Eaton's Combined Daylight Linking and Scene Setting Control System, part no. LCSDMDT.



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