



Multiload Contactor Controller

Product order code: MCC

The **Multiload Contactor Controller (MCC)** allows mains supply to lighting circuits and equipment, including Multiload's VoltMaster, to be switched ON and OFF by an isolated (SELV compatible) low voltage DC signal.

This allows contractors to reduce installation costs by providing remote mains switching using low-cost signal cable, and is particularly useful in safety-sensitive areas where wiring to SELV standards is specified.

Ideal for switching dimmed lighting circuits, and an internal switch selects between 0-10V and 1-10V operating mode depending on the dimming signal in use. The unit can be addressed by rotary modules or switches which fit into grid plate systems from leading manufacturers – giving a wide range of finishes.

In this case the MCC runs, and is controlled by, a Multiload Rotary Module connected to its signal input. Alternatively, it receives the analogue signal from an automated control system (0V - 10V or 1V-10V). The signal on the input is boosted and stabilised at the signal output, to provide an output signal which can control a large number of VoltMasters (up to 50).

When the control signal is reduced below minimum tell-tale brightness level, the MCC, for safety and economy, switches off the mains supply to VoltMaster dimmers connected to its principal mains output (up to 4 units). For larger numbers, see 'Use with Contactor'.

Rotary Modules for use with the MCC (LRM1 series) have a 'click' action at minimum rotation, providing tactile confirmation of the switching of lamps through the MCC.

Use with switched-only circuits

Where only switching of mains circuits is involved, the MCC (in its 0V-10V operating mode) can be controlled by a simple on-off grid switch, connected to its signal input by two-core cable and operating at low voltage. See Signal Connections overleaf.

Use with Contactor

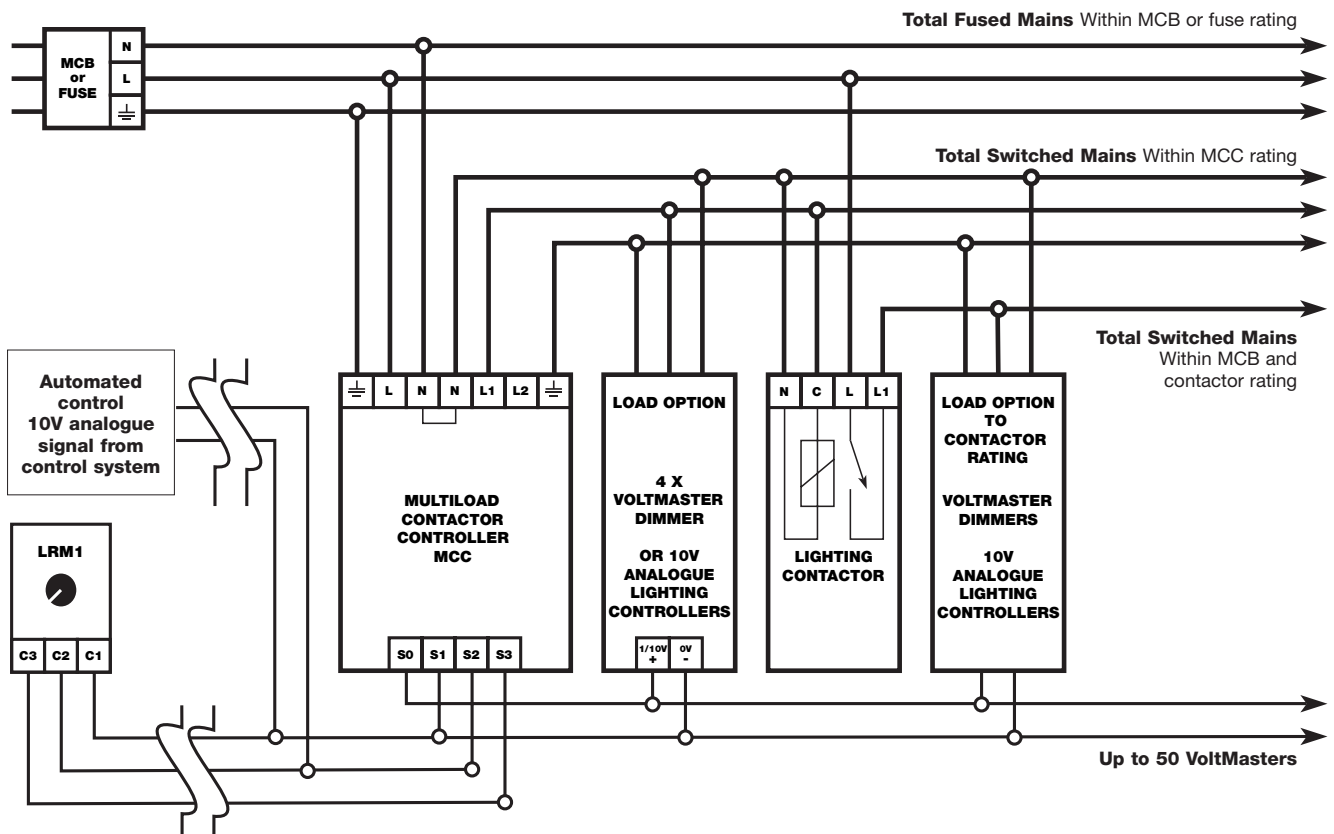
Where the loads to be switched exceed the rating of the MCC (10A resistive), the switched mains output of the unit may be used to control a lighting contactor or contactors of any rating, which can also provide neutral isolation or 3-phase switching where required.

Ancillary mains output

The unit also provides an ancillary mains output (rated at 10 Amp resistive) which switches on when the principal mains output (controlling the main lighting circuits) switches off, and vice versa. This output can be used to control standby security lighting, alarm circuits, etc, possibly via contactors.

Signal fault detection

When the unit is in its 1V - 10V operating mode, it reads any input signal below 1V as 10V. This means that if any of the three wires to the rotary module become disconnected or if the control system is below 1V DC, the unit holds the main lighting on and sends a 10V (full brightness) signal to VoltMaster Dimmers or other analogue signal lighting controllers (such as dimmers or ballasts) connected to its signal output.



Technical data

Terminal connections

Mains Input Terminals

- L Live
- N Neutral
- ≡ Mandatory Earth

Mains Input Voltage

230V +/- 10%, A.C. 50/60Hz

Signal Terminals

Low Voltage: Isolated from mains supply to SELV isolation standards.

Input A

- S1 0V (ground reference)
- S2 1-10V analogue signal
- S3 10V output to potentiometer.

Input B

- S1 0V (ground reference)
- S2 1-10V analogue signal
- S3 10V output to potentiometer.

Input C

- S1 0V (ground reference)
- S2 1-10V analogue signal
- S3 10V output to potentiometer.

Output

- S1 0V (ground reference)
- S00 Boosted signal output to lighting controllers.

Specifications

Fuse

50mA T 5X20mm Anti-surge.

Disconnection - Fault Detection Level

S2 less than 0.8V

Maximum Ambient Temperature

50°C

Size

H290: W140: D40.

Mounting Holes

4 of = 5mm : Centres 280mm x 95mm.

Finish

Matt Black; Powder Coated

Weight

1Kg.

Cable Entries

Each end 3 off 20mm holes fitted with blanking-off grommets.
Remove to install 20mm cable glands.

Standards:

Electrical Safety: conforms to EN60950, BS415 and IEC65 (with suitable cable entry, i.e. cable glands or conduit)

SELV Isolation to EN60742 and BS3535

Manufacture is to ISO9001 and BS5750 quality standards.

CE Marked

Installation Procedure

Preparation

Installation should be carried out by a suitably qualified person in accordance with good electrical practice and the appropriate national wiring regulations.

Do not insulation test circuit wiring with units connected.

Switch OFF mains electrical supply before commencement of installation. Using suitable fixing screws, secure the unit in a suitable position.

Wire in the unit as per the terminal connections given opposite and shown in the schematic diagram Fig. 1 overleaf.

Signal Connections:

Input Options

1 from Rotary Module

- C1 on rotary module to S1 on LTC
- C2 on rotary module to S2 on LTC
- C3 on rotary module to S3 on LTC

2 from Automated Control system (1-10V analogue)

- 0V Ground from control system to S1 on LTC
- Analogue signal from control system to S2 on LTC

Output Options

1 To Lighting Dimmer (1-10V analogue DC)

Connect S00 to analogue input terminal of lighting dimmer and S1 to dimmer Ground terminal.
For full SELV status verify isolation of lighting dimmer.

2 Fluorescent Ballasts (1-10V analogue DC)

Connect S00 and S1 to signal and ground ballast terminals.