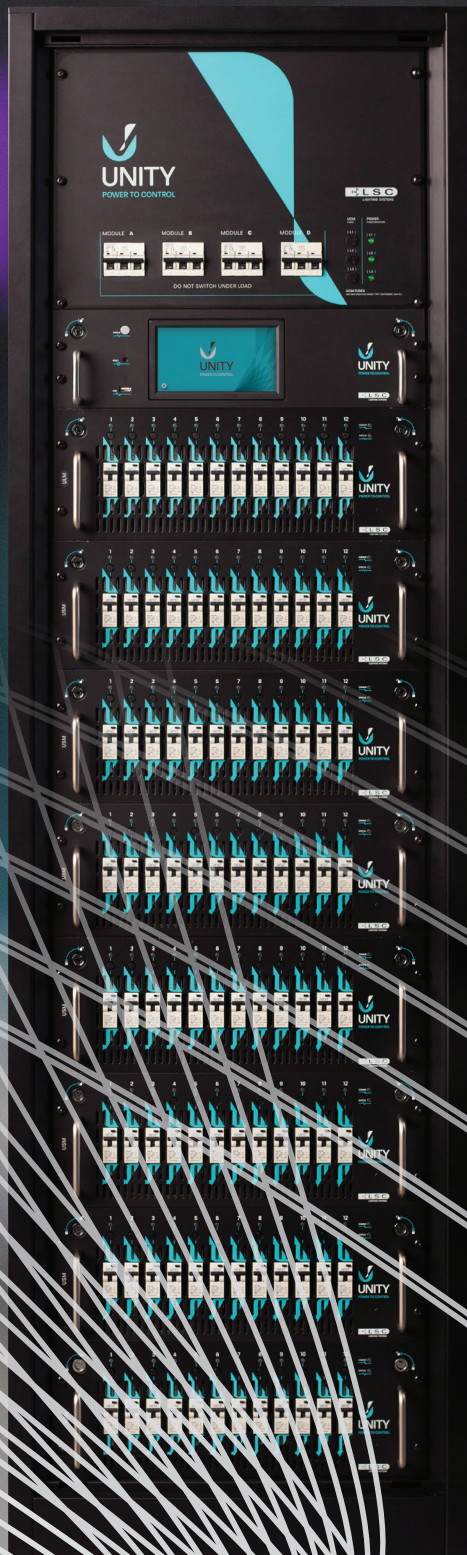




UNITY
POWER TO CONTROL



Designed for the next generation of lighting and power control





The UCM (UNITY Control Module) has a 18cm capacitive touchscreen and the software offers a comprehensive array of setup options for UNITY configuration. In the event of failure, the UNITY rack will continue to operate independently over DMX without the UCM connected.

Designed for the next generation of lighting and power control, UNITY is a modular hybrid dimming/power cabinet system that combines traditional dimming with the latest technologies of LED control and direct power relays.

UNITY provides the perfect solution for new installations or as an ideal retrofit for outdated systems. With the ability to control any load including LEDs, incandescent, neon and fluorescent fixtures, UNITY also allows the user to set any channel to become a TruPower relay – perfect for powering moving lights, AV equipment, video walls and special FX.

UIR

UNITY Installation Rack

The LSC UIR is a cabinet enclosure available in either a 48-way or 96-way format, prewired to accept any of the three 12-channel output modules – dimmer module (UDM), switching module (USM) and the LED module (ULM). 6-channel output modules are permanently installed in the UIR and cannot be interchanged into other positions.

The UIR provides a medium to high-density installation, each with a UNITY Control Module (UCM) installed (no redundant spare required when using DMX) and provision for up to four (48-way) or eight (96-way) output modules. The unique hinged termination panels permit full access to the wiring area at the rear of the cabinet from the front during installation.

- > Two sizes providing slots for fitting up to four or eight output modules
- > Each slot can accept a UDM, USM or ULM output module
- > Modules plug in with self-aligning connectors that allow for “hot disconnect” – the unit will automatically switch off when removed
- > Multiple low-speed fans for quiet operation
- > Individual 3-phase breaker for each module location
- > Operates with one or more phases present regardless of phase rotation
- > Only front access required for installation and service
- > Corrosion-resistant, powder-coated steel construction
- > Optional steel framed lockable cabinet door with bottom filtered vent and UCM observation window on top half

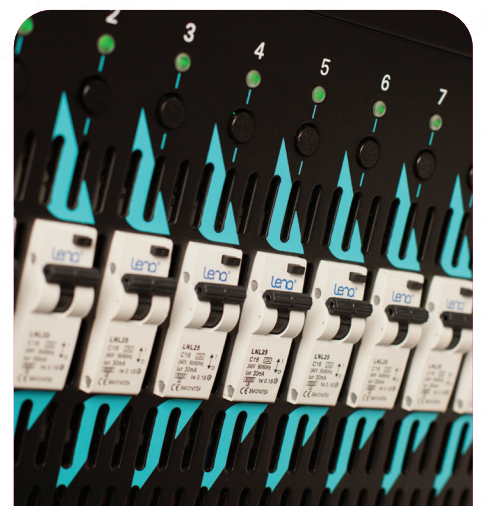
UCM

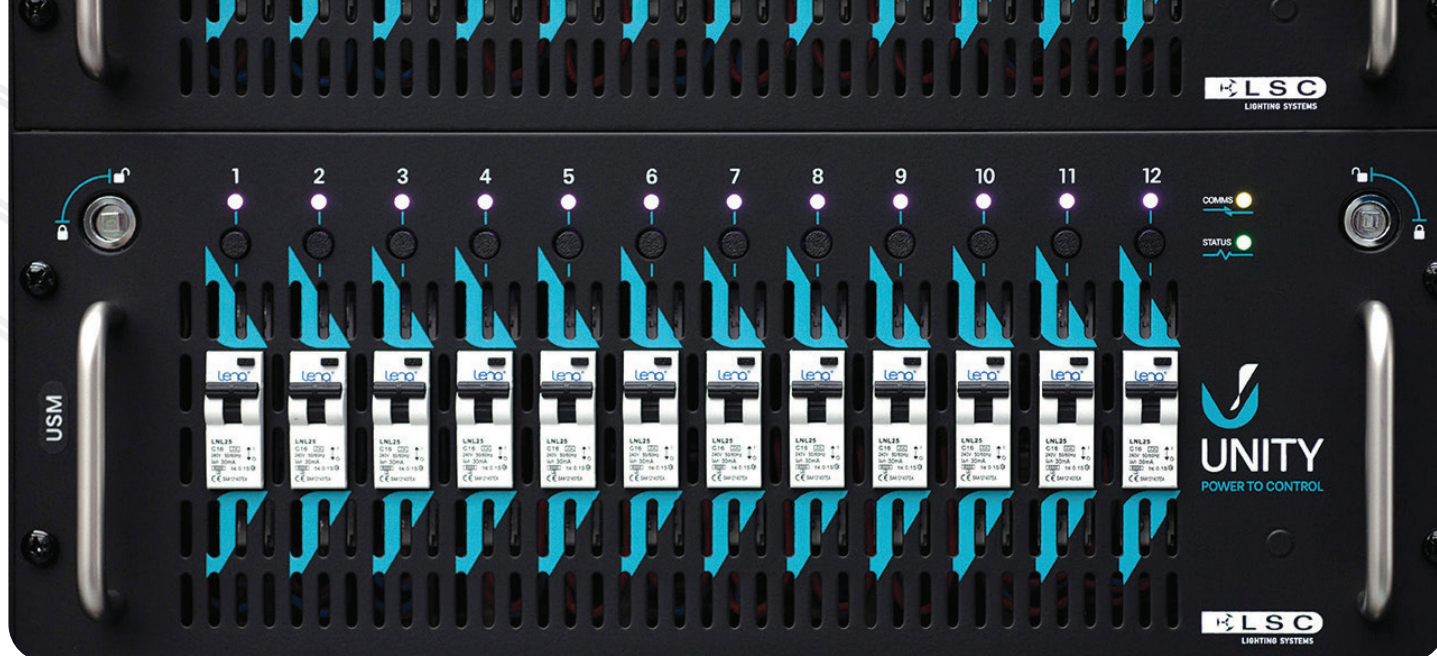
UNITY Control Module

With a large colour touchscreen and simple user interface (similar to most smartphones) the UCM is the heart of the UIR system – designed to configure and control the output modules, display the current system status, report any fault conditions and act as a control and reporting proxy to the outside world.

- > 18cm capacitive multitouch TFT colour display
- > Configurable warning alarms for over-current, over or under-voltage, temperature alarms, tripped breakers, phase loss and control signal loss
- > Real Time display of RMS voltage and currents on all three phases + Neutral in UIR cabinet
- > Configuration and control of all UDM, USM and ULM output modules in the cabinet
- > RDM (Remote Device Management) ability to remotely monitor and control rack cabinet as a whole

All modules fitted with Neutral disconnect MCBs with inbuilt 30mA RCD (RCBO) to provide the highest safety and electrical compliance.





The UDM, USM and ULM rackmount module range features RCBO breakers per channel, quick-release switched Camlocks for module removal and channel LED status indicators.

UDM

UNITY Dimmer Module

- > A push-button switch above each breaker on the output modules can be pushed to immediately bring the configuration for that channel onto the UCM's display
- > All relevant information can be reported to a central controller either via RDM or via LSC's Houston-X reporting system
- > UDM, USM and ULM output modules are detected and automatically reconfigured
- > Ability to select control inputs from Art-Net, sACN or dual DMX512-A
- > Softpatch of incoming control signals to all dimmer and switch channels
- > Ability to offer default static outputs in the case of control loss or emergency
- > Ability to save configuration off-site
- > Automatic reconfiguration of replaced modules
- > Software update function via USB to all internal modules ensuring that all modules are running the same software
- > System can be configured so that output modules operate even if the UCM fails

The UDM is a 12-channel x 10/16A or a 6-channel x 25A 4RU dimmer output module incorporating LSC's revolutionary and highly successful GenVI dimmer core. Utilising TruPower and PTFD (Pulse Transformer Fired Dimming) technology, each channel can be configured for direct power control or for dimming traditional fixtures.

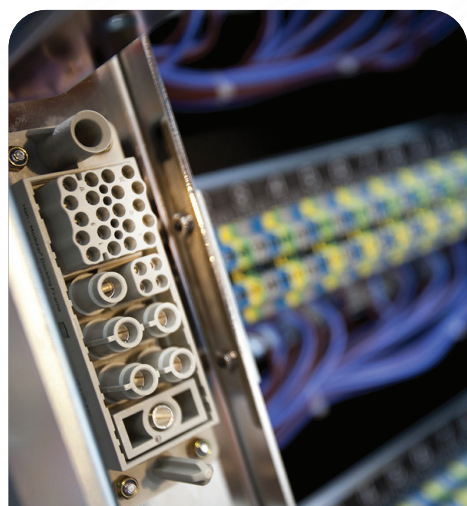
- > TruPower (relay switching that bypasses the dimmer circuitry) directly connects the output circuit to the incoming power via a mechanical relay, an LSC invention
- > PTFD allows control of tricky loads including neon, motors and low-wattage practicals without the need for connecting a dummy load
- > 8-bit or 16-bit DMX controlled dimming, allows for the precise control for dimming LEDs
- > Current Controlled Technology, an LSC-first in controlling the turn-on of high-powered loads to reduce nuisance tripping due to inrush currents

- > High-quality and virtually silent chokes with a Rise Time of 220µs (measured between 10% and 90% at 50% output level into maximum rated load)
- > Load detection per channel
- > Individually wired Neutrals per channel
- > RCBO per channel or optional Neutral Disconnect as required
- > Circuit breaker monitoring – any tripped circuit breaker is reported and indicated by a flashing red LED on the module's front panel
- > All configuration items are stored locally in the dimmer module and each module receives DMX, meaning the system is not dependent on the UCM for operation
- > Individual channel indicator LED on front panel showing mode (dimming or power), tripped circuit breaker, phase fail and channel drive
- > Front panel Camlocks to secure module in place and enable output module to power-up

Wieland industrial designed self-aligning back panel connectors allow for quick connect and disconnect under load conditions.

System configuration is simple and intuitive with the UNITY UCM module.

Custom-designed, high Rise Time inductors are utilised within the ULM and UDM modules.



USM

UNITY Switch Module

The USM is a 12-channel x 10/16A or a 6-channel x 25A 4RU relay only output module for direct power control.

- > Zero-cross switching – ensures that switched power circuits are turned on at the zero-cross point to minimise nuisance tripping when circuits are relay controlled
- > Individual channel indicator LED on front panel showing tripped circuit breaker, phase fail and channel drive
- > Selectable Auto Power Mode – channels can be set to switch on when DMX is applied and off (after a programmable delay of up to 60 minutes) when DMX is no longer present
- > Individually wired Neutrals per channel
- > RCBO per channel or optional Neutral Disconnect as required
- > Circuit breaker monitoring – any tripped circuit breaker is reported and indicated by a flashing red LED on the module's front panel
- > All configuration items are stored locally in the switch module and each module receives DMX, meaning the system is not dependent on the UCM for operation
- > Front panel Camlocks to secure module in place and enable output module to power-up



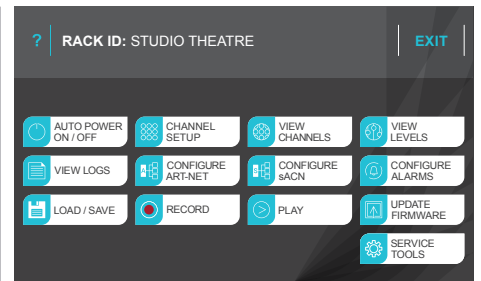
High-efficiency, low noise fans dissipate heat through the top of the cabinets and are auto-speed variable based on internal temperatures.

ULM

UNITY LED Module

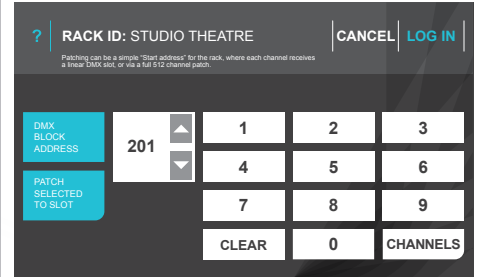
The ULM is a 12-channel x 6A 4RU LED dimmer and relay output module for power control providing all the key features and capabilities of the USM plus more.

- > Unique LED drive technology using dual SCRs
- > Each channel can be software configured to dim either a conventional load or an LED lamp
- > 16-bit DMX controlled dimming, an essential item for dimming LEDs
- > TruPower (relay switching that bypasses the dimmer circuitry) directly connects the output circuit to the incoming power via a mechanical relay, an LSC invention
- > Low-noise, high-quality filtering using toroidal inductors
- > PTFD ensures the control of dimmed outputs is independent of the load being controlled, an LSC invention
- > Current Controlled Technology, an LSC-first in controlling turn-on of high-powered loads to reduce nuisance tripping due to inrush currents
- > Load detection per channel
- > Individually wired Neutrals per channel
- > RCBO per channel or optional Neutral Disconnect as required
- > Circuit breaker monitoring – any tripped circuit breaker is reported and indicated by a flashing red LED on the module's front panel
- > All configuration items are stored locally in the LED module and each module receives DMX, meaning the system is not dependent on the UCM for operation
- > Front panel Camlocks to secure module in place and enable output module to power-up



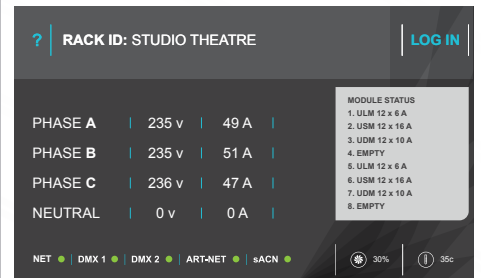
Main Menu

System configuration and set-up menu allowing you the option to set channel information and load/save show settings within the UNITY system.



Patch

Each UNITY rack can be given a simple block DMX Start address or each slot can be patched to a specific DMX address.



Rack Status

The status screen indicates phase voltage and current in Real Time, control input status and any fault conditions within the system.



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UNITY Order codes

Code	Description
Installation Racks	
UIR48	48Ch Unity Installation Rack
UIR96	96Ch Unity Installation Rack
Options	
/RDL	Installation Rack lockable door, left hand opening
/RDR	Installation Rack lockable door, right hand opening
Control Module	
UCM	UNITY Control Module – for system configuration and remote reporting
Output Modules	
UDM12/10	UNITY Dimming/Relay Module 12Ch x 10A – RCBO, TruPower
UDM12/16	UNITY Dimming/Relay Module 12Ch x 16A – RCBO, TruPower
UDM6/25	UNITY Dimming/Relay Module 6Ch x 25A – RCBO, TruPower
ULM12/6	UNITY LED Module 12Ch x 6A – for power, tungsten and LEDs
USM12/10	UNITY Switching Module 12Ch x 10A – RCBO, Relay
USM12/16	UNITY Switching Module 12Ch x 16A – RCBO, Relay
USM6/25	UNITY Switching Module 6Ch x 25A – RCBO, Relay