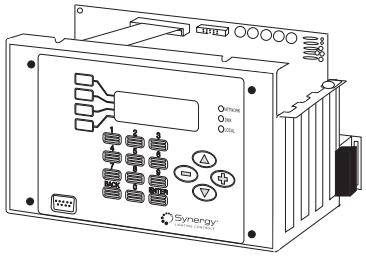
Synergy®
LIGHTING CONTROLS

Catalog Number	
Notes	Type

Lighting Control System

Network System Controller

SYSC MLX



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FEATURES

The Synergy® MLX system controller adds programming, automation and networking capabilities to a Synergy system. Capabilities include individual circuit switching control of lighting functions for a wide variety of applications. System outputs respond to time-of-day schedules via the internal time clock. Additionally, inputs can be accepted from external devices such as simple switches, photocells, occupancy sensors, digital remotes, telephones and other control systems to directly control lighting or override scheduled events. Over 4,000,000 Synergy MLX controllers may be interconnected to provide access to more than 500,000,000 control outputs from a single switch or schedule.

- Supports all Synergy power modules
- Seven-day scheduling with astronomic clock
- Holiday schedule dates
- Load prioritization setup
- Exclusive Script Logic Application Language
- Programmable switches with interpanel linking
- Support for SEQUEL® dimming control stations
- Support for Synergy® digital remote stations
- Timed switch overrides
- Analog source monitoring with multiple set points
- Integral keypad with backlit display
- All programming stored in non-volatile industrial flash memory card
- Automatic system event logging
- Integral lamp burn hours and start counters
- BACnet™ compliant network
- Integral RS232 ports
- Optional PC software
- Modem option (only one per Synergy system required) allows for remote dial up programming and troubleshooting.
- Optional touch-tone telephone interface for voice-prompted overrides.
- Optional support for Legacy MiniPac, Sequel, and MaxStar dimmer cabinets.
- English, Spanish or French operation
- UL and C-UL listed; CEC certified

Synergy Controller Features

System Functions	MLS Controller	MLX Controller
Relay Capacity *(No Breakers)*	48 96 Total w/ Secondary Cabinet	48 96 Total w/ Secondary Cabinet
Relay Capacity *(With Breakers)*	40 80 Total w/ Secondary Cabinet	40 80 Total w/ Secondary Cabinet
Dimmer Capacity	30 60 Total w/ Secondary Cabinet	30 60 Total w/ Secondary Cabinet
DALI Capacity (loops)	18 36 Total w/Secondary Cabinet	18 36 Total w/Secondary Cabinet
DMX512 Input	DMX Channel-to-Output Configured via controller software	DMX Channel-to-Output Configured via controller software
Scheduling	100 schedules/unlimited events	100 schedules/unlimited events
Analog Input	YES	YES
PC Support	YES	YES
Script Logic	YES	YES
Logging	YES	YES
Priority Logic	YES	YES
Network	NO	YES
Telephone Override	YES, optional	YES, optional
BACnet®	NO	YES
RS232	YES	YES
Modem	YES, optional	YES, optional
Sequel Stations	YES	YES
Legacy Dimmers	YES, optional	YES, optional
Digital Remotes	YES	YES

ORDERING INFORMATION

Example: **SYSC MLX**

Choose the boldface catalog nomenclature that best suits your needs and write it on the appropriate line. Order accessories as separate catalog number.

SYSC — **Series**

MLX — **Controller type**

- **MLX** Network system controller with programmer

Options

- **ISA** Three 16-bit ISA expansion slots
- **MODEM** Modem for remote dial-up access
- **PHONE** Modem for remote dial-up access and voice-prompted override (requires ISA option)
- **DMX** Dimming interface, required for connection to DMX 512 control signal
- **LEGACY** Allows control of one complete network (255 dimmers) of Legacy MiniPac, Sequel, and MaxStar dimmer cabinets. Replaces master controller on existing Legacy system.

SYSC network requires:
-Ethernet networks - CAT5 cable
-Twisted pair ARCnet network:
Synergy SYA CABLES2 (plenum rated)
OR
Belden 3105A (non plenum rated)

Accessories

Order as a separate item.

- **SYA SKIT** Permits two SYE enclosures to operate with a single MLX controller
- **SYSW CONFIG** Windows™ configuration software and cable
- **SYA CABLES2** Synergy plenum rated RS485 network cable (Specify length: 250', 500' or 1000')

SYSC MLX Network System Controller

SPECIFICATIONS

MECHANICAL

- Chassis: plug-in assembly with locking screws, field-installable in SYE enclosure.

ENVIRONMENTAL

- Operation and storage temperature: 32-104°F (0-40°C).
- Humidity: 10-90% non-condensing.

ELECTRICAL

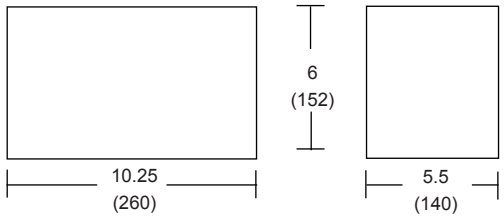
- Power input: 24VDC maximum, supplied by enclosure power supply.
- Data port: front-mounted DB9 RS232 serial communications connector accessible without removal of cover.
- Internal RS232 Port for connection to A/V systems.
- Internal RS485 Port for connection to SEQUEL control stations Synergy® digital remote stations, and other network devices.
- Internal RS485 ARCNET™ (ANSI 878.1) Port for connection to other Synergy controllers and BACnet™ systems.
- Internal Ethernet Port for connection to other Synergy® controllers and /or BACnet™ systems.
- Internal MSTP Port for connection to other Synergy® controllers and or BACnet™ systems. Disables use of digital control stations.

FUNCTIONAL

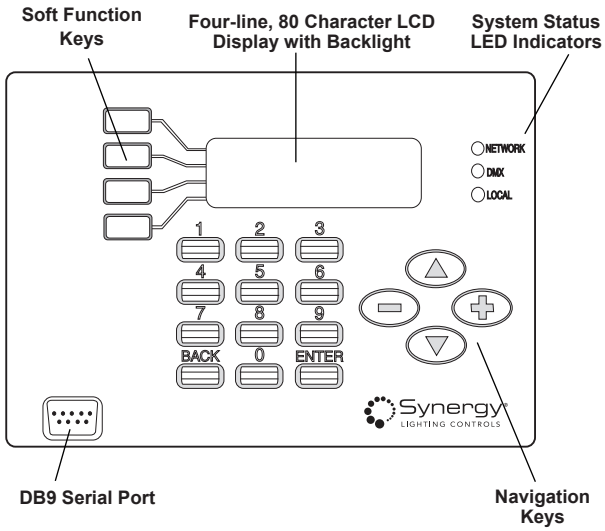
- Program entry: numeric keypad (0-9, back and enter), "soft" function keys, navigation key cluster (up, down, + and -) for menu navigation and logical entry selections.
- LCD display: four-line, 80-character with back light.
- LED indicators: network status, local status and DMX true indication.
- Outputs: 128 maximum per controller in typical configurations; map inputs and schedules to any combination of connected relays, dimmers or controllable circuit breakers.
- Groups: map output relays and dimmers into logical groups (zones) for association to inputs and schedules.
- Switch inputs: 128 maximum per controller, soft-linked through the program to control any combination of outputs; one minute to 100 hour time-out function per switch.
- Analog input: maximum of 48, each capable of multiple set-point operation or tracking operation.
- *Priority on* switch: switch input set to *priority on* cannot be overridden *off* by any other source until the *priority on* condition is removed.
- *Priority off* switch: switch input set to *priority off* cannot be overridden *on* by any other source until the *priority off* condition is removed.
- Four levels of priority provide for layering of manual and automatic functions, supports all 16 BACnet™ priority levels via network commands.
- Schedules: Maximum of 100 independent schedules of time events, number of events per schedule limited only by system resources. Schedules may be assigned to days of the week, days of the year, or recurring holiday dates through 12/31/2200.
- *Warn off:* automatic flash of lights at scheduled *off* to warn occupants of impending *off*; user selectable from one to 99 minutes.
- Logging: automatic logging of system events including *on* events, *off* events, relay run time, relay starts, alarms, power up, power down, override *on* and override *off*; 10,000 event maximum storage with automatic overwrite of oldest data, view log data on LCD display or printout.
- Telephone Override: override selected loads via touch-tone phone using programmable four-digit codes and voice prompts using optional PHONE interface.
- DMX Control: control connected loads with DMX control signal using optional DMX input card. May be configured via hardware settings or through controller software to provide prioritized and conditional control of loads along with other input devices and schedules.

DIMENSIONS

All dimensions are inches (millimeters).
Controller weight = 5.5 lbs. (2.6 kg)



FUNCTIONAL



- Legacy Dimmer Control: control up to 255 legacy MiniPac, Sequel, and MaxStar dimmers with optional LEGACY card. Synergy controller replaces function of master controller in existing systems. Legacy dimmers may be controlled by any input or schedule in the Synergy system.
- PC software: program the controller, download data, upload data and monitor status using optional Windows ™ 98, NT, 2000, XP or Vista software via front-mounted DB-9 RS232 port, network connection or optional modem connection.
- Sixty digital stations maximum per MLX controllers.
- Room Assignment: digital station control of up to a 4x8 room matrix that may be dynamically joined and separated to accommodate partitioned spaces. Join/separate action for each set of rooms may be triggered by switch input, digital station, time schedule, or partition sensor.

NETWORK

- Protocol: BACnet™, (ANSI / ASHRAE 135-1995) used for network communications.
- Hardware: RS485 ARCNET™ (ANSI 878.1) token passing, 156 Kbps transmission speed. **THE ONLY** cables approved are Synergy SYA CABLES2 (plenum-rated) or Belden 3105A (non plenum rated).

Synergy® LIGHTING CONTROLS

An AcuityBrands Company

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