



Acuity Brands Controls

At Acuity Brands, we're committed to delivering solutions that improve quality of lighting – everyday, everywhere, for every experience. To us, quality of lighting is about more than lumens per watt. Today it's about control and efficiency as much as it is about overall performance, purity and aesthetic. It's about maximizing the potential of technology to create the best possible lighting for every environment – because when the lighting is right, life's experiences become amplified.

Across our industry-leading portfolio of indoor and outdoor luminaries, controls, components, LED technology and daylighting, our proven history and expertise in delivering integrated, intelligent lighting networks are unparalleled and growing rapidly. Discover how we're expanding the boundaries of lighting.



- Architectural dimming systems
- Native BACnet® controls supporting dimming and switching
- Simple integration with DALI-based control systems
- Wallbox dimmers and scene controls



- Occupancy sensors and daylighting controls
- Stand-alone programmable relay panels
- Outdoor photocontrols



- Scalable centralized relay panel systems
- Distributed and fixture level relay systems



- Wireless relays and photocontrols for roadway, off-roadway, and other outdoor lighting
- Remote monitoring, control and diagnostics through hosted-web portal



- High-quality electronic outdoor photocontrols
- Patented photocontrol design meets or exceeds all existing and proposed ANSI photocontrol standards

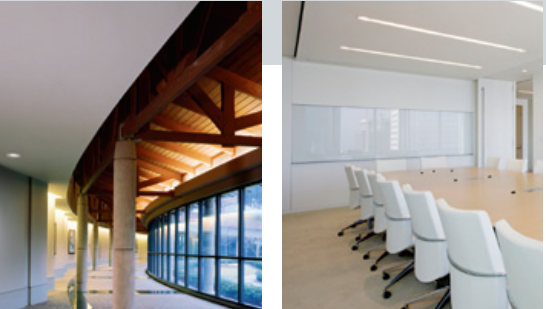


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Why Use Synergy?

Synergy Lighting Controls, a part of Acuity Brands®, is a leading provider of advanced lighting controls. Synergy unites all aspects of lighting control including switching, architectural dimming, intelligent ballast controls, occupancy sensing and daylight harvesting into a single system.

Flexible Control

Each zone, building or location can be customized to fit the project specifications through the use of flexible conditional logic, button-by-button wallstation programming, scheduling, and partitioning. Synergy systems are also easy to access through building networks or via the internet.

Interoperability & Scalability

Synergy provides a variety of integration options such as BACnet, Ethernet/IP, DMX-512, MS/TP and ARCNET. The system is scalable from simple to very large and may be expanded or added to at any time.

Maximum Energy Savings

Synergy meets the requirements of the US Green Building Council's LEED guidelines for lighting control, as well as those required by individual state and international energy codes such as IECC, California Title 24 and ASHRAE 90.1.

Advantages

Synergy has been designing lighting control solutions for over 20 years and has completed well over 60,000 projects installed in high-profile locations across North America. Our systems have been used in convention centers, stadiums, airports, federal and state government buildings. Discover how Synergy is expanding the boundaries of lighting by letting us design your next lighting control project.



Overview

enclosures

Synergy's enclosures provide housing and electrical support for the relay power modules, dimmer power modules and the system controller. Available in three sizes accommodating either two, four or six power modules.



power modules

Synergy's plug-and-play modules allow easy customization to create an ideal lighting control solution for any combination of load types, including digital control as well as 0-10V DC dimming, phase-control dimming and switching.



remote stations

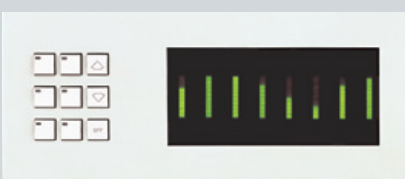
Digital remote stations provide users with local and global on/off, preset and raise/lower control of lighting zones. Remote stations are configurable with 1-9 buttons and offer occupancy sensor and photocell inputs as well as switched and 0-10V dimmed outputs.



SYRSP

control stations

Master controls stations provide manual dimming and preset recall of local and global lighting zones. Individual and master overrides, adjustable fade rates and user lockout features provide an easy to use interface for all architectural dimming needs.



SQCS



SYGS

accessories

From switches to dimmers to handheld remotes, Synergy's accessories provide extended capabilities such as manual override and preset control.



SYRSP EXT



LVPS



LVKS



SSPL



LVDS



SYWR

software

GREEN SCREEN DASHBOARD

The Green Screen energy reporting application is a highly-scalable, web-based application that monitors energy consumption within classrooms, buildings, floors and entire campuses.

- Calculates energy usages and savings
- Easy-to-use user interface for reporting
- Data is stored in a SQL Server in CSV format

SYSW GRAPHIC SOFTWARE MODULE

The SYSW Graphic software provides a flexible user interface that provides real-time control and monitoring capabilities to a Synergy system.

- Individual elements are sizable with various appearance options
- Simple user drag and drop interface
- BACnet compliant

SYSW CONFIG SOFTWARE

SYSW CONFIG software offers an easy to use interface for configuring a Synergy controller or network of controllers.

- Real-time monitoring
- Access to all system data
- Quickly locate configuration screens
- Password protection

How to Design

Synergy (MLX) systems can mix both centralized (panels) and distributed (SYRSP EXT) controls into a single system. Also supported are separate stand-alone centralized (MLS for panels) and distributed (SYRSP EXT) controls.

1

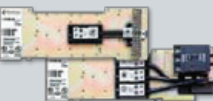


select your controller

Provides user interface, display, clock and programmable logic for a Synergy lighting control system and a means to set up lighting control functions, including manual switching, manual and preset dimming, schedules, astronomic time control, photosensor, switching and daylighting harvesting.

MLS = Stand-alone system controller
MLX = Network system controller

2



select your power module

(or select breaker panel and skip this step)

Relay Module

8 single-pole relays with zero-cross switching, plus 8 switch and 2 analog input terminals.

Relays with Breakers

Comes with either six 120V or four 277V branch circuit breakers.

Tap Feed Lug Option and Multi-Pole Relays

Allows enclosures to share a single main feed up to 400A, 3-phase. Multi-pole relays include up to four 30A contactors with 2-, 3- or 4-poles each.

Constant Breaker Module

Up to 4 or 6 circuit breakers per module with a main input power lug and sub-feed power lug per module.

Dimmer Module

6 universal load digital dimmers suitable for 120V/277V incandescent, fluorescent, low voltage, neon, cold cathode and non-dim loads.

SIMPLY5 Control Module

Network controllers and power supplies for SIMPLY5, DALI and ECO networks.

3



select your enclosure or controllable breaker panel

Synergy Lighting Control - panels come in 120/277V feed

Small	Up to 2 power modules
Medium	Up to 4 power modules
Large	Up to 6 power modules

Controllable Breaker Panel+ Enclosure

Small	Up to 18 breakers
Medium	Up to 30 breakers
Large	Up to 42 breakers

4



select your accessories

Whether it be contact closures, occupancy sensors (by Sensor Switch), switches, wall stations, preset control stations or a host of additional devices, the last step is to choose the accessories for your system.



Office Buildings

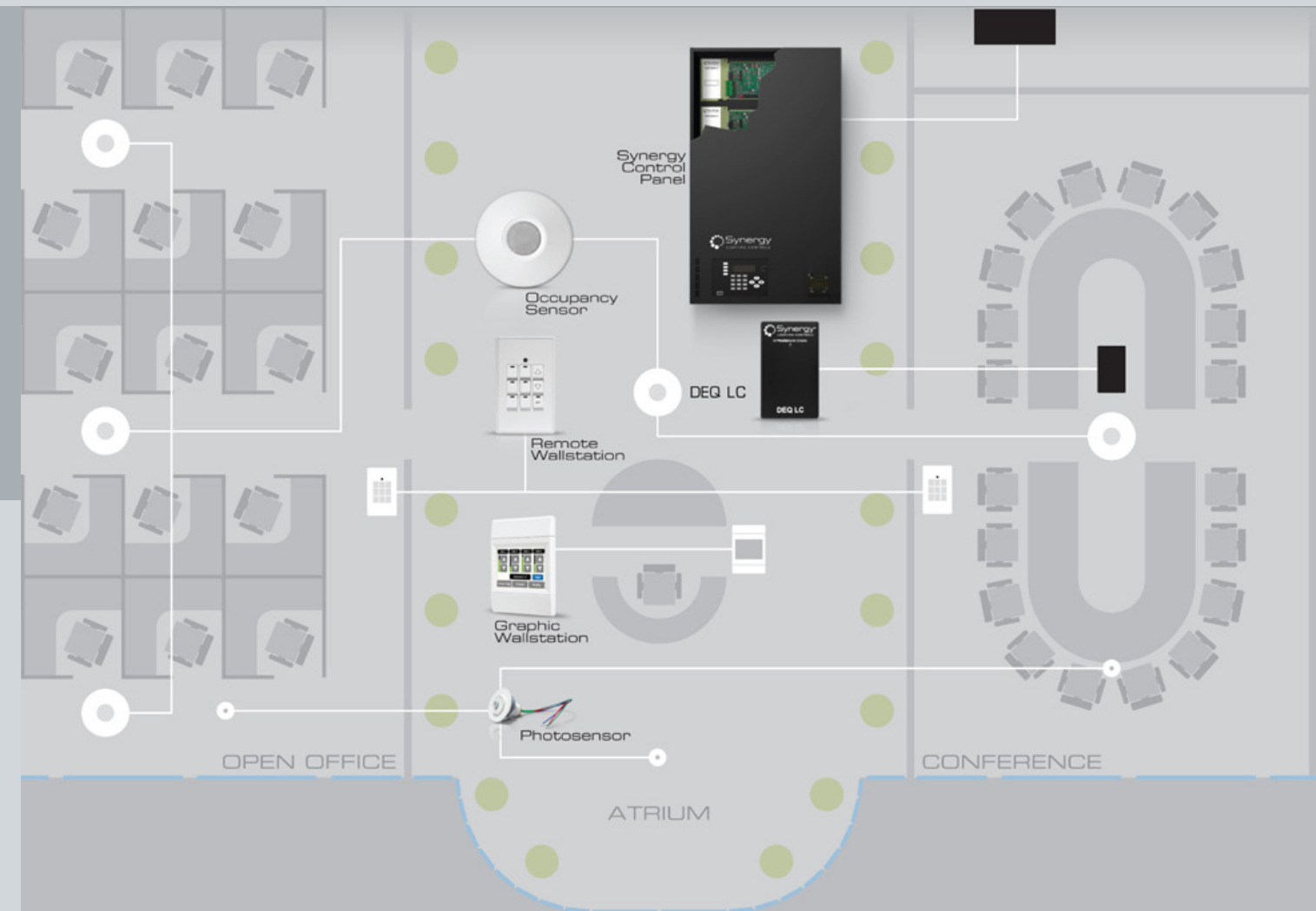


Synergy provides intuitive solutions to control lighting levels according to the time of day, presence of people in the building, area use and the amount of natural light available. Controls are automatic and include code compliant manual override.

Open Office Space: Quality lighting contributes to productivity and enhances the atmosphere of the workplace environment. Synergy solutions can utilize a number of strategies that automatically provide optimal lighting and allow the flexibility for people to control lighting in individual workstations.

Executive Offices: Synergy can tailor a solution to meet specific requirements of private offices by controlling light levels and dimming functions of multiple zones within the space. This makes the lighting enhance the interior design while providing a high level of user functionality.

Conference Rooms: User adjustable light levels provide the flexibility to meet a variety of different needs - From brightly lit for group discussions, to dimmed for audio visual presentations, to lights that turn off automatically.



Education Center

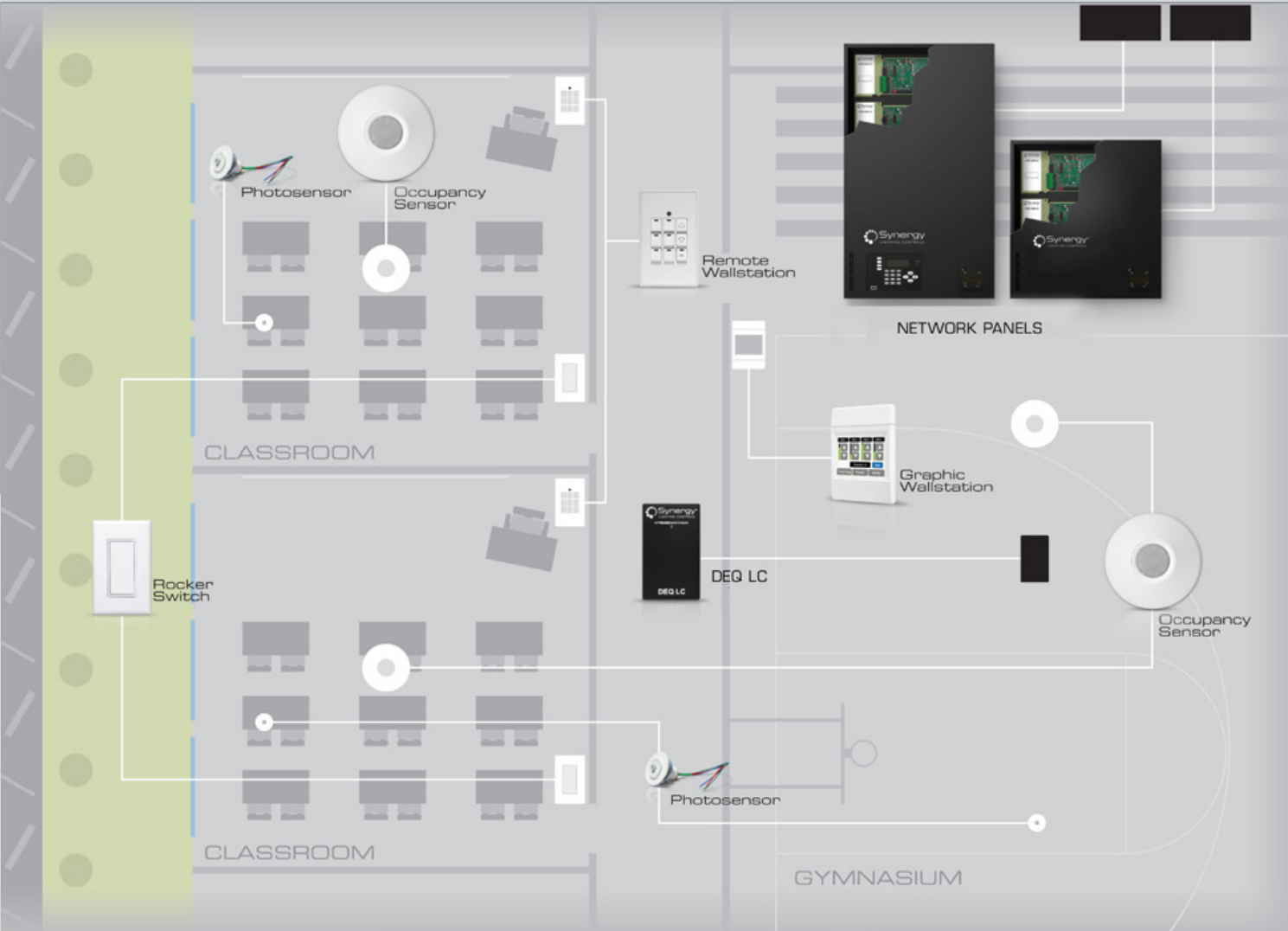


Lighting controls for schools and university campuses must meet a wide variety of needs. A system must comply with energy codes, provide security by assuring lighting is present where and when it is needed, and be flexible enough to accommodate varying operating schedules.

K-12 Classroom: Lighting control that makes it easy for teachers to adjust lighting to fit the curriculum is a necessity. Learning is enhanced by ensuring bright rooms for reading, concentrating the lighting on the white board during a lesson and dimming the lights during an audiovisual presentation. Synergy is a natural fit for classrooms because it provides the flexibility to tune the light levels and schedules to fit classroom requirements.

Colleges and Universities: Synergy Lighting Controls offers integrated solutions for larger classrooms and auditoriums, offices, student lounges, parking areas and outdoor walkways connecting the various dormitories and buildings on a university campus.

Campus-Wide Solution: Synergy’s highly-scalable lighting control solutions make it a natural fit for campuses that employ control strategies such as time-based schedules, occupancy sensing, use of natural light, and emergency lighting to create a complete solution for the entire campus. Educational facilities can operate with higher efficiency when lighting control systems are implemented.



Convention Facility



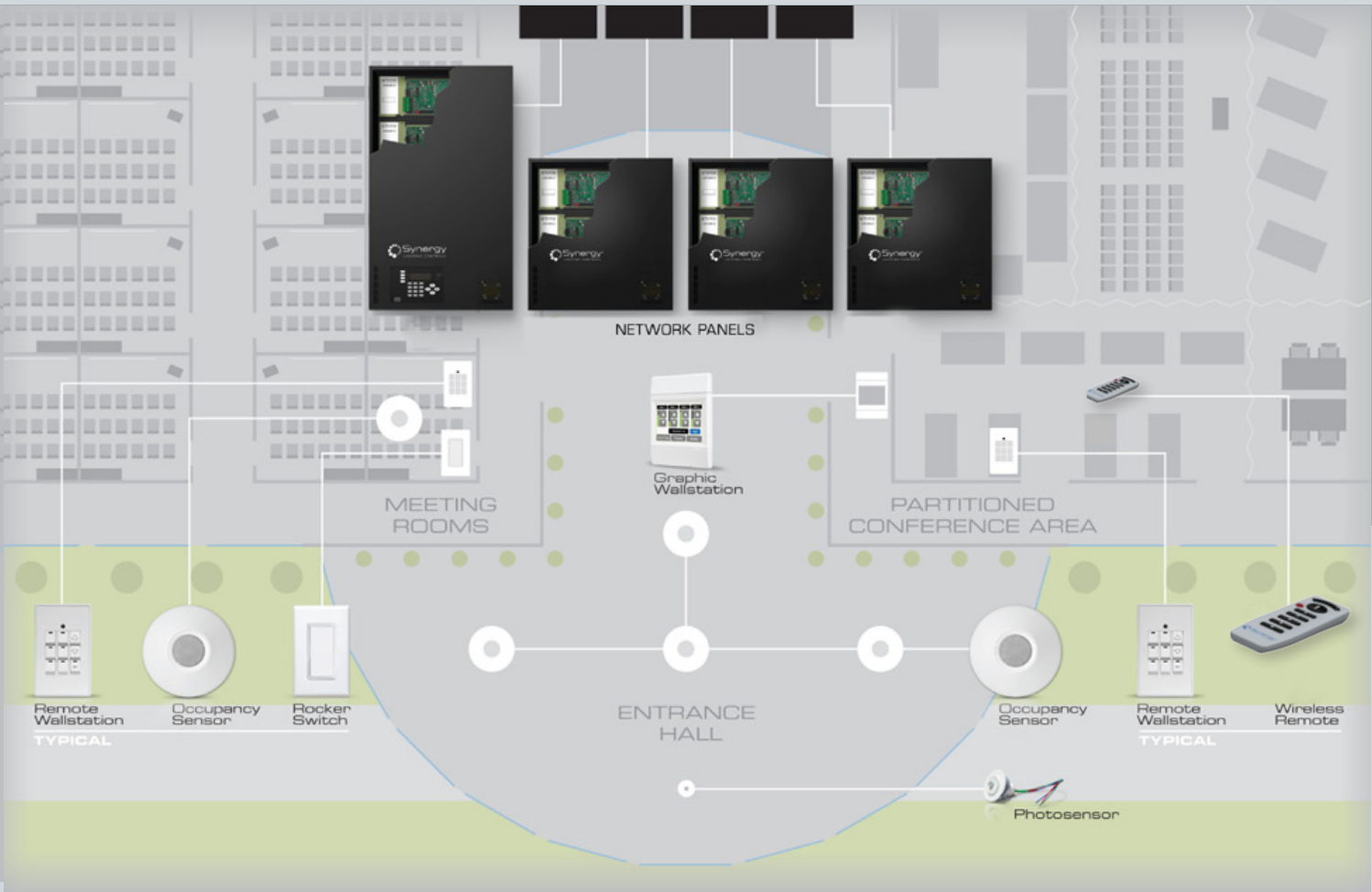
Convention Centers are made up of a variety of different spaces, each with lighting and control requirements that are unique to the location and the event. Synergy provides easy solutions for the lighting in large auditoriums, exhibit halls, meeting rooms and common areas. Synergy's flexibility provides quick changes to the lighting for event changes.

Entrance Area: Proper lighting levels create a first impression and set the tone for the entire event. Lighting can be softly dimmed for evening events or signal the end of intermissions in common areas outside of auditoriums.

Meeting Rooms: Lighting flexibility is essential in meeting rooms that may require bright or dim lighting to accommodate audiovisual presentations. Synergy seamlessly controls partitioned spaces where the use changes to meet meeting room requirements.

Exhibit Hall: Exhibitions halls require efficient control solutions to provide the lighting necessary for each phase of an event, from set-up to exhibition. In addition, Synergy's native BACnet compatibility ensures the control solution will seamlessly connect with the building automation systems to ensure a high level of integration.

Outdoor: Architectural lighting enhances the beauty of buildings, while outdoor lighting control systems provide the optimal amount of lighting to create safe, secure outdoor areas while lowering energy costs.



Specialty Retail



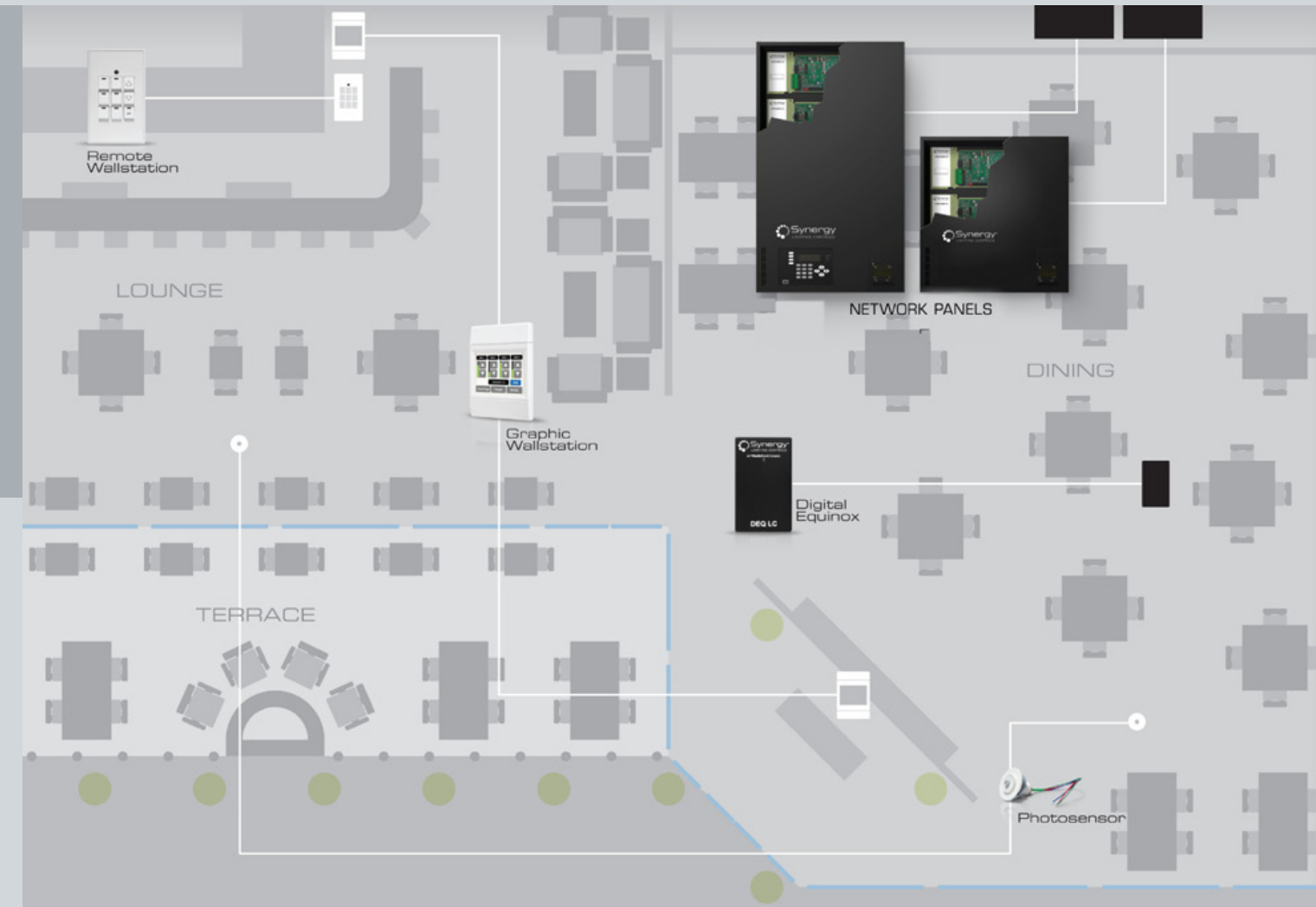
Every space has lighting requirements that are unique and different. A lighting control system should be designed so that the perfect amount of lighting is used creating an environmentally responsible solution.

Restaurants: The perfect dining experience relies on a lighting control system that seamlessly adjusts the lighting. Slow dimming as evening approaches creates the desired atmosphere without requiring manual adjustments.

House of Worship: Auditoriums, sanctuaries and meeting rooms can all utilize lighting control strategies that require automatic and manual controls to provide the appropriate atmosphere. Synergy is also compatible with DMX-based control devices for seamless integration with auxiliary control devices.

Retail: Lighting in retail may evoke a modern contemporary image or an elegant atmosphere and draw attention by creating dynamic displays.

Hospitality: Lighting can be enhanced by the selection of fixtures and colors and by the level of control. Luxurious lobbies utilize multiple zones of control and dimming to enhance grand displays of architecture. Kitchens, office spaces, outdoor parking and walkways require controls that provide lighting based on usage and the availability of natural light.



Synergy® Lighting Control System

Synergy®



Intended Use

A unique lighting control system that integrates all aspects of lighting control into a single system platform. Combines architectural dimming, switching, lighting automation and energy management functions into a single scalable package capable of meeting the requirements of virtually any lighting control application.

Features

Combines the most popular aspects of lighting automation with full-featured low voltage switching and architectural dimming functions.

Switching and dimming functions may be controlled manually or scheduled on a weekly or calendar date basis. Functions may be set up using the integral LCD alphanumeric display and keypad or through the use of a personal computer with optional SYSW graphic software.

Panels can operate individually as stand-alone lighting controllers or optionally in a network configuration with distributed intelligence. A choice of system controllers allows customization to best meet the requirements and budget of each project.

Provides capacity for a maximum of 48 relays or 30 dimmers per enclosure. Enclosures can operate in a master/secondary configuration, providing control of up to 96 outputs from a single controller. Relays and dimmers are each rated for control of one lighting circuit at the listed voltage.

Listings

UL Listed to US and Canadian safety standards. California Title 24 certified.

Intended Use

Provides housing and electrical support for the relay power modules, dimmer power modules and system controller in a Synergy® lighting control application.

Features

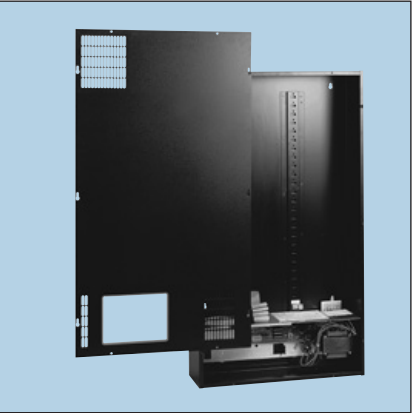
Synergy® system enclosures are shipped from factory stock in three sizes, accommodating either two, four or six SYPM power modules. The enclosures are fabricated from cold rolled steel, are designed for surface wall mounting and carry a NEMA 1 electrical rating. An optional recessed mounting kit permits the enclosure to be flush-mounted in a six-inch thick wall.

Listings

UL Listed to US and Canadian safety standards.

System Enclosures

SYE



Ordering Information

Example: SYELB 16LB1 18DB1 MLX NBAR DMX

Series		Output quantity/type		Main feed option	Options
SYES	Small enclosure, 2 modules max.	_DB1	Qty. 120V 2KW dimmers with six 20A circuit breakers, six dimmers per module	(blank)	No main lugs, no main breaker
SYEM	Medium enclosure, 4 modules max.	_DB2	Qty. 277V 3.5KW dimmers with four 20A circuit breakers, six dimmers per module	ML	Main lugs for 120V, 240V or 277V operation; requires 2 module positions; requires power modules with circuit breakers
SYEL	Large enclosure, 6 modules max.	_L	Qty. single-pole 30A relays @ 120, 230 and 277 volts, and 20A @ 347 volts. Eight low voltage dry contact inputs and eight 0-10VDC dimming outputs.	DMX	Dimming interface required for connection to DMXS12 control
SYESB	Small enclosure with breaker door, 2 modules max.	_LB1	Qty. single-pole 30A relays @ 120, 230 and 277 volts, and 20A @ 347 volts. Six 120V, 20A circuit breakers. Eight low voltage dry contact inputs and eight 0-10VDC dimming outputs.	ISA	Three 16-bit ISA expansion slots
SYEMB	Medium enclosure with breaker door, 4 modules max.	_LB2	Qty. single-pole 30A relays @ 120, 230 and 277 volts, and 20A @ 347 volts. Four 277V, 20A circuit breakers. Eight low voltage dry contact inputs and eight 0-10VDC dimming outputs.	MODEM	Modem for remote dial-up access
SYELB	Large enclosure with breaker door, 6 modules max.	_LB3	Qty. single-pole 30A relays @ 120, 230 and 277 volts, and 20A @ 347 volts. Six 120V, 15A circuit breakers. Eight low voltage dry contact inputs and eight 0-10VDC dimming outputs.	PHONE	Modem for remote dial-up access and voice-prompted override (requires ISA option)
		_LB4	Qty. single-pole 30A relays @ 120, 230 and 277 volts, and 20A @ 347 volts. Four 277V, 15A circuit breakers. Eight low voltage dry contact inputs and eight 0-10VDC dimming outputs.	LEGACY	Allows control of legacy MiniPac, Sequel, and Max-Star dimmer cabinets
		_CB1	Qty. 120V constant breakers, six breakers per module		
		_CB2	Qty. 277V constant breakers, four breakers per module		

NOTES:
1 Synergy panels with breakered power modules (8LB) require a SYPMB NBAR or SYPMB ML and consume at least one power module position in the synergy panel.
2 Main breakers are available in a 3POLE configuration from 30-100 amps only.

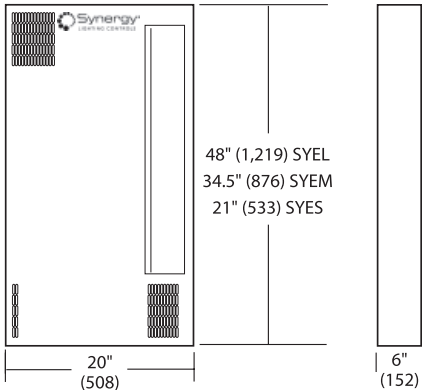
Ordering Information

Example: SYE M 120/277

Series	Capacity	Voltage
SYE	S Small enclosure. 2 power module spaces. No circuit breaker door. M Medium enclosure. 4 power module spaces. No circuit breaker door. L Large enclosure. 6 power module spaces. No circuit breaker door. SB Small enclosure. 2 power module spaces. Provision for circuit breakers¹. MB Medium enclosure. 4 power module spaces. Provision for circuit breakers. LB Large enclosure. 6 power module spaces. Provision for circuit breakers.	120/277 120/230/277V, 50 or 60Hz operation
NOTES: 1 Maximum one breakered dimming or switching module.		

Shipping Weight:
Small enclosure 30 lbs. (14 kg)
Medium enclosure 40 lbs. (18 kg)
Large enclosure 50 lbs. (23 kg)

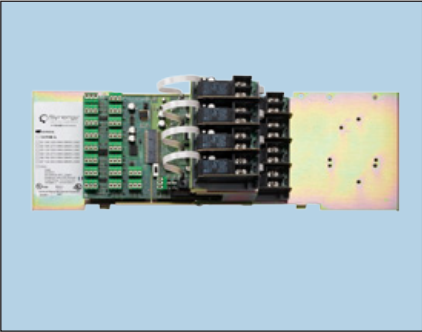
Dimensions are shown in **inches (millimeters)** unless otherwise noted. Add 1.5 (40) to height and width for recessed version.



Accessories (Order separately)	
SYA SRE	Recess kit for small enclosures
SYA MRE	Recess kit for medium enclosures
SYA LRE	Recess kit for large enclosures
SYPMB NBAR	Neutral bar assembly. Requires one module space.
SYPMB_MB_NBAR	Main breaker assembly with neutral bar, 3-pole. Specify capacity in amps (30, 40, 50, 60, 70, 80, 90, 100). Requires one module space.

Relay Power Modules

SYPM 8L



Intended Use

Used in conjunction with system enclosure and controller to provide manual and automatic on/off control of all types of lighting loads. Combine other Synergy® system SYPM Power Modules to create a complete integrated lighting control solution.

Features

Module is available in two versions, the SYPM 8L DSO and SYPM 8L. Both configurations provide eight mechanically latching, individually replaceable relays, one On-Off-Auto manual override switch, one removable terminal block for remote override and eight relay-status LEDs. The relays are rated for up to 30A @ 277V, 18000 SCCR, and up to 20A @ 347V.

The SYPM 8L version includes an Input/Output module to expand the relay module's capability to include eight 0-10VDC outputs to control dim-

mable ballasts, eight 3-wire switch inputs to override the outputs, eight pilot light outputs to power switch indicator LED's and two 0-10VDC inputs for photocells.

- Accepts maintained, momentary or alternate action switches and pilot lights

- Mounts in standard Synergy enclosure

- Available with circuit breakers if used with the Synergy SYPMB 6D Dimming Module

- Relays are individually replaceable

- Relays are mechanically latching

- Low voltage terminal blocks are removable for easy installation and troubleshooting

- 250,000 cycles @ 30A load

- UL and CUL listed

Example: SYPM 8L

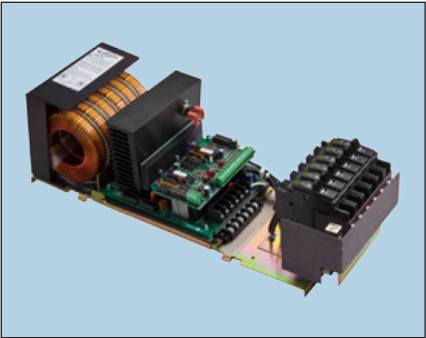
Ordering Information

Series		Type		Breakers/voltage			
SYPM	Module for use with external circuit breakers	8L	Relay module with eight mechanically latching, individually replaceable singlepole 30A relays @ 120, 230 and 277 volts, and 20A @ 347 volts. Eight low voltage dry contact inputs and eight 0-10VDC dimming outputs standard.	(blank)	No circuit breakers	DSO	Digital Switching Only. No switch inputs or 0-10VDC dimming.
SYPMB	Module with circuit breakers			B1	Six 20A, 120V, circuit breakers		
				B2	Four 20A, 277V, circuit breakers		
				B3	Six 15A, 120V, circuit breakers		
				B4	Four 15A, 277V, circuit breakers		
				B6	Four 20A, 347V, circuit breakers		
				B7	Four 15A, 347V, circuit breakers		

Shipping weight is 4lbs. (1.9kg) without breakers and 9lbs. (4.1kg) with breakers.

Line Voltage Dimmer Power Module

SYPMB 6D



Intended Use

Used in conjunction with system enclosure and controller to provide manual and automatic on/off and line voltage dimming control of a wide variety of lighting loads. Combine other Synergy system SYPM Power Modules to create a complete integrated lighting control solution

Features

Modules include six 20A line voltage dimmers with integral 15A or 20A circuit breakers and are available for 120V, 230V and 277V applications. Each dimmer is equipped with an air-gap relay and an architectural-grade toroidal filter.

All digital design ensures smooth, dependable performance without field calibration. Unique combination of analog circuitry and digital signal processing techniques minimize the effects of poor power quality and prevent noticeable flicker and drift.

Individual dimmer response curves are field configurable to accommodate most lamp and ballast types via the system controller. Once configured, all module settings are stored locally and the module will continue to operate in fail-safe mode even if the Synergy System Controller is removed from the system.

Listings

UL Listed to US and Canadian safety standards.

Example: SYPMB 6DB1

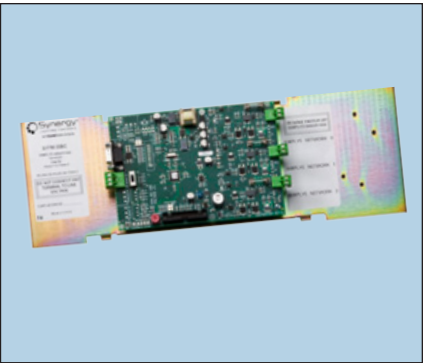
Ordering Information

Series		Dimmers		Circuit breakers/voltage	
SYPMB ¹		6D	Six dimmers per module	B1	Six integral 20A, 120V, 10 KAIC breakers
				B2	Four integral 20A, 277V, 14 KAIC breakers
				B3	Six integral 15A, 120V, 10 KAIC breakers
				B4	Four integral 15A, 277V, 14 KAIC breakers
				B5	Four integral 20A, 120V, 65KAIC breakers

NOTE:
1 Requires SYE enclosure and SYSC MLS or SYSC MLX Controller
Shipping weight is 22lbs. (10kg).

Intelligent Ballast Control Module

SYPM S5BC



Intended Use

Used in conjunction with system enclosure and SYSC MLX controller to provide manual and automatic control of compatible devices on a DALI network. Combine other Synergy® system SYPM Power Modules to create a complete integrated lighting control solution.

Features

Module includes network controllers and power supplies for three DALI networks (loops) of up to 64 devices each. Connected devices may be

configured via the Synergy System Controller for status monitoring and prioritized control by any Synergy® user interface, timeclock schedule or graphical workstation.

Listings

UL Listed to US and Canadian safety standards.

Example: SYPM S5BC

Ordering Information

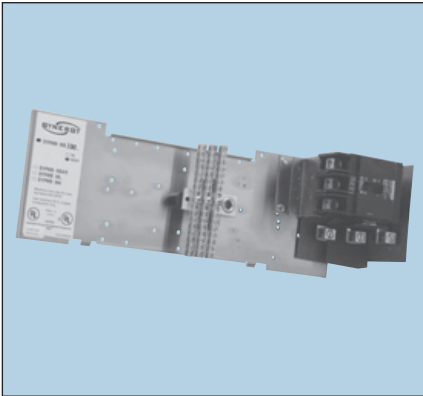
Series		Type	
SYPM		S5BC ²	Intelligent Ballast Control module with power supply and controller for 3 Dali or networks

Accessories		(Order separately)
SYSW CONFIG	Windows™ configuration software and cable ¹	
SYSW GRAPHICS	Floorplan and button-based graphical interface software	

NOTES:
1 SYSW CONFIG required for SYPM S5BC start-up
2 Requires SYE, SYSC and fixtures containing Dali or ballasts
3 Shipping weight is 4lbs. (1.8kg).

Main Breaker/Tap Feed Lug Module

SYPMB MB_NBAR



Intended Use

Used in conjunction with system enclosure and power modules equipped with branch circuit breakers to facilitate connection of an individual Synergy® cabinet to a three-phase, four-wire or single-phase, three-wire main feed.

Features

Modules include a 42 circuit neutral bar rated for a #6 to 2/0 AWG main feed and #14 to #4 AWG branch neutral conductors. The neutral bar can be used in 120V, 277V or 347V applications.

The optional main breaker is available in capacities up to 100A and is rated for 120V/240V, 120/208V and 277/480V feeds and conductor sizes up to 2/0 AWG.

Listings

UL Listed to US and Canadian safety standards.

Example: SYPMB MB 100 ML

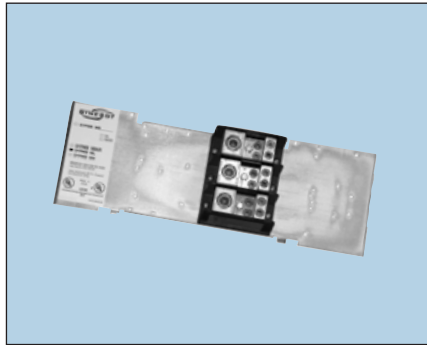
Ordering Information

Series		Main breaker		Lug Configuration	
SYPMB ¹		(blank)	No main breaker	ML	Main lug, one 380A primary, four secondary terminals per phase. Suitable for single- or three-phase applications.
		MB _	Main breaker, 3-pole, indicate capacity: 30, 40, 50, 60, 70, 80, 90 or 100 amps	MN	Main neutral, one 380A primary, four secondary terminals. Includes 42 circuit neutral bar. Not available with main breaker.
				NBAR	42 circuit neutral bar for individual or tap-fed cabinets.

NOTES:
1 Requires SYE enclosure and SYSC MLS or SYSC MLX Controller

Tap Feed Power Modules

SYPMB ML
SYPMB MB_ ML
SYPMB MN



Intended Use

Used in conjunction with system enclosures and power modules equipped with integral branch circuit breakers to facilitate connection of up to four Synergy® cabinets to a single three-phase, four-wire or single-phase, three-wire main feed.

Features

ML modules include a three-position power distribution block and optional main breaker. MN modules include a single-position power distribution block and a 42 circuit neutral bar. All distribution positions include one main lug rated for a single #4 AWG to 500 kcmil conductor and four tap lugs rated for a single #14 to 2/0 AWG conductor each.

One ML module and one MN module is required for each application. All units are rated for 120V/240V, 120/208V and 277/480V applications.

Listings

UL Listed to US and Canadian safety standards.

Ordering Information

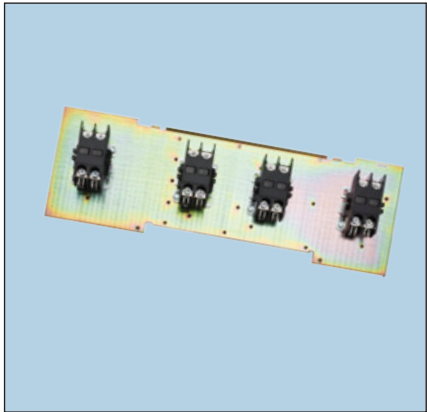
Example: SYPMB ML

Series	Main breaker	Lug Configuration
SYPMB ¹	(blank) MB _ No main breaker Main breaker, 3 pole, indicate capacity: 30, 40, 50, 60, 70, 80, 90 or 100 amps	ML Main lug, one 380A primary, four secondary terminals per phase. Suitable for single- or three-phase applications. MN Main neutral, one 380A primary, four secondary terminals. Includes 42 circuit neutral bar. Not available with main breaker. NBAR 42 circuit neutral bar for individual or tap-fed cabinets.

- NOTES:
- 1 Requires SYE enclosure and SYSC MLS or SYSC MLX Controller
 - 2 Shipping weights are 5 lbs. (2.3 kg) without main breaker and 8 lbs. (3.6 kg) with main breaker.

Multi-Pole Contactor Module

SYA 2POLE
SYA 3POLE
SYA 4POLE



Intended Use

Synergy® two-three and four-pole lighting contactors install in a Synergy enclosure via the SYPM PLATE accessory mounting plate and provide integral control of multi-phase lighting loads.

Features

Suitable for 120/208, 120/240 or 277/480 branch circuit control. Field replaceable 25 Amp contact rating (2 POLE version) 60 Amp contact rating (3 POLE version) 30 Amp contact rating (4 POLE version). Up to 4 contactors can be field installed on

a SYPM PLATE. A relay from a SYPM 8L Power Module will be required to control the contactor coils for each lighting zone, e.g. if four, 4-pole contactors are used for individual control of 4 lighting zones, then four relays from a SYPM 8L power module will be required.

Ordering Information

Example: SYA 4POLE 120

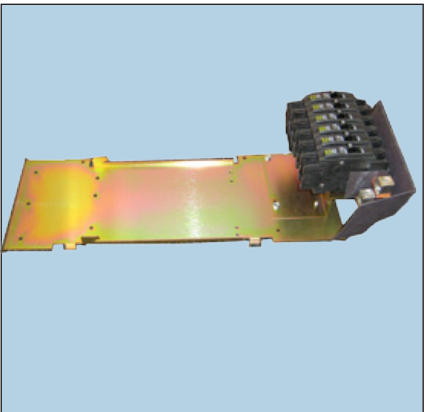
Series	Contacts ¹	Coil Voltage
SYA	2POLE 2 poles, 25 Amp contacts 3POLE 3 poles, 60 Amp contacts 4POLE 4 poles, 30 Amp contacts	120 120 volts 277 277 volts

- NOTES:
- 1 One or more relays from SYPM 8R, SYPM 8H, or SYPM 8F will be required to control the contactor coil.

Accessories (Order separately)
SYPM PLATE Required to mount multipole contactors in a Synergy SYE cabinet. Up to four contactors can be mounted on a SYPM PLATE

Constant Breaker Module

SYPMB Breaker Module



Intended Use

The constant circuit breaker module is used with the Synergy enclosure to provide branch circuit protection for lighting loads. The constant breaker module can be used in conjunction with dimmer modules to provide uncontrolled load outputs or in conjunction with relay modules to provide either controlled or uncontrolled load outputs. Power modules are interchangeable within the enclosure and may be ordered factory- or field-installed.

Features

- Four or six circuit breakers per module
- Main input power lug per module
- Sub-feed power lug per module

Listing

UL and C-UL listedFeatures

Ordering Information

Example: SYPMB 6CB1 NBAR

Series	No. of Breakers/ Type/ Amps-Voltage	Options
SYPMB	6CB1 Six 20A, 120V circuit breakers 4CB2 Four 20A, 277V circuit breakers 6CB3 Six 15A, 120V circuit breakers 4CB4 Four 15A, 277V circuit breakers 4CB6 Four 20A, 347V circuit breakers 4CB7 Four 15A, 347V circuit breakers	NBAR 42 circuit neutral bars

System Controllers

SYSC



Intended Use

Mounts in a Synergy SYE enclosure. Provides user interface, display, clock and programmable logic for a Synergy® Lighting Control system and a means to set up lighting control functions, including manual switching, manual and preset dimming, schedules, astronomic time control, photocell switching and daylighting.

Features

Constructed as a plug-in chassis to enhance initial installation and serviceability. Used to set up and save operational features of the system. Provides support for external control devices: SQCS Architectural Preset Control Station, SYRSP Digital Remote Wallstation, SYRSP EXT 0-10VDC Wallstation Distributed Controller and DEQ LC Distributed Controller.

User interface is designed for simple operation using soft keys. Large back-lit display provides text-based prompting and feedback for menu navigation as well as status, diagnostic information and alarms.

Astronomic feature built into Synergy's internal clock will calculate sunrise and sunset times for use in the lighting schedules. The controller can read values from accessory photocells and provide automatic switching or dimming of lighting based on the ambient light level.

See the matrix below for additional features and capacities specific to the controller type selected.



Ordering Information

Series	Controller type
SYSC	MLS Stand-alone system controller
	MLX Network system controller

Features Selection Matrix		
System Function	MLS Controller	MLX Controller
Relay Capacity (No breakers)	48 (96 total with secondary cabinet)	48 (96 total with secondary cabinet)
Relay Capacity (With breakers)	40 (80 total with secondary cabinet)	40 (80 total with secondary cabinet)
Dimmer Capacity	30 (60 total with secondary cabinet)	30 (60 total with secondary cabinet)
DALI CAPACITY (Loops)	18 (36 total with secondary cabinet)	18 (36 total with secondary cabinet)
DMX 512 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
Native 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

www.synergylightingcontrols.com, searchword: SYSC

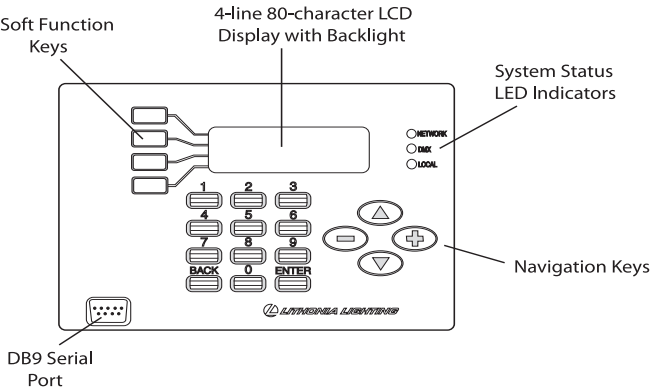
Example: SYSC MLX

Options
ISA Three 16-bit ISA expansion slots
PHONE Telephone interface for voice-prompted override and remote modem access (requires ISA option)
DMX Theatrical dimming interface, required for connection to DMX512 control signal
LEGACY Allows control of one complete network (255 dimmers) of legacy MiniPac®, Sequel® and MaxStar® dimmer cabinets. Replaces master controller on existing systems.
RS2324P Four port RS232 expansion card.
MODEM Modem for remote dial-up access.

Accessories (Order separately)

- SYA SKIT** Permits two SYE enclosures to operate with a single MLS controller.
- SYSW CONFIG** Windows™ configuration software and cable.
- SYA CABLEA4** Synergy Class 2, four-conductor, plenum-rated network cable for digital stations.
- SYA CABLES2** Synergy Class 2 plenum-rated RS485 network cable for MLX network controller only.

Functional



Shipping Weight is 5.5 lbs. (2.5 kg).

Synergy® Controllable Breaker Panel

SYBP



Intended Use

Ideal for applications requiring circuit level remote control or lighting automation. Combines the powerful capabilities of the Synergy® lighting control system with the familiar footprint of a standard circuit breaker panel. This unique concept provides fully automated lighting control without the need to install both a relay panel and a branch circuit breaker panel.

Features

Scheduling – Using integral astronomic clock capability, lighting can be fully automated to conform to a rotating seven-day schedule. Astronomic feature provides dusk/dawn operation, eliminating the need for photocells. Holiday schedule allows entry of up to 32 periods. Blink-warn feature can blink lights automatically prior to a scheduled off.

Overrides – Use Synergy® Digital Remote Wallstations or Distributed Controllers to provide manual control of any combination of breakers and override scheduled events. Each Wallstation can provide up to nine buttons with integral LED

status indicators. A single four-wire cable is all that is required for connection of up to 60 Digital Wallstations or Distributed Controllers. Optional switch input card also allows the use of traditional low voltage switches and other dry contact closures.

Networking – Panels can be networked together and used with other Synergy® switching and dimming panels to form a building-wide integrated lighting control system. Networked systems offer the flexibility of central control, monitoring and programming via PC software. SYBPC MLX Controller integrates with building automation systems via native BACnet™ protocol.

Capacity – Up to 42 circuits with 100, 225 or 400-amp bus. See Branch Circuit Breaker Selection Table below. Compatible with non-controllable breakers.

Listings

UL Listed to US and Canadian safety standards.

Ordering Information

Series	Voltage	Maximum rating	Main feed options
SYBP18 18-pole capacity¹	P1 120/208V P2 277/480V	100 100 amps 225 225 amps 400 400 amps	ML Main lug MB100 100A main breaker MB225 225A main breaker MB400 400A main breaker MBS _A/_AIC²
SYBP30 30-pole capacity¹			
SYBP42 42-pole capacity¹			

- NOTES:
- Order Branch Circuit Breakers separately. See Selection Table below.
 - Consult factory for series ratings options.



Branch Circuit Breaker Selection Table (Order as separate items.)			
Controllable Breakers		Standard Breakers (Non-Controllable)	
SYBPB BABRS1020	120V, 20A, 1POLE	SYBPB BAB1020	120V, 20A, 1POLE
SYBPB BABRS1030	120V, 30A, 1POLE	SYBPB BAB1030	120V, 30A, 1POLE
SYBPB BABRS2020	120V, 20A, 2POLE	SYBPB BAB2020	120V, 20A, 2POLE
SYBPB BABRS2030	120V, 30A, 2POLE	SYBPB BAB2030	120V, 30A, 2POLE
SYBPB GHQRS1020	277V, 20A, 1POLE	SYBPB GHB1020	277V, 20A, 1POLE
SYBPB GHQRS2020	277V, 20A, 2POLE	SYBPB GHB2020	277V, 20A, 2POLE
SYBPB GHQRS1030	277V, 20A, 1POLE	SYBPB GHB2030	277V, 30A, 2POLE
SYBPB GHQRS2030	277V, 20A, 2POLE		

NOTES: Contact factory for additional standard (non-controllable) breaker sizes.

Example: SYBP42 P2 225 ML B SS MLX PHONE

Series	Voltage	Maximum rating	Main feed options	Main feed locations	Door type/mounting	Controller type	Options
SYBP18 18-pole capacity¹	P1 120/208V P2 277/480V	100 100 amps 225 225 amps 400 400 amps	ML Main lug MB100 100A main breaker MB225 225A main breaker MB400 400A main breaker MBS _A/_AIC²	T Top feed B Bottom feed	SS Standard surface SFD Standard flush	MLS Stand-alone system controller MLX Network system controller SCP Secondary panel, less controller	DMX Interface for connection to DMX512 control ISA Three 16-bit ISA expansion slots PHONE Telephone interface for voice prompted override and remote modem access (requires ISA option)
SYBP30 30-pole capacity¹							
SYBP42 42-pole capacity¹							

Controller Selection Table

System Functions	SYBPC MLS Controller	SYBPC MLX Controller
Controllable Breaker	42 126 Total w/ Secondary Cabinets	42 126 Total w/ Secondary Cabinets
Dimmer Capacity	60 Total w/ Secondary Cabinets	60 Total w/ Secondary Cabinets
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	1	1
PC Support	YES	YES
Script Logic	YES	YES
Logging	YES	YES
Priority Logic	YES	YES
Network	NO	YES
Telephone Override	YES, optional	YES, optional
Native BACnet®	NO	YES
RS232	YES	YES
Modem	YES, optional	YES, optional
Sequel Stations	YES	YES
Digital Remotes	YES	YES

LVIN Sixteen low voltage switch and one analog input

Digital Wall Station

SYRSP



Intended Use

A microprocessor-based digital wallstation which provides a convenient means to add pushbutton controls for on/off, preset, raise/lower, partition control or other user interface to a Synergy® lighting control system.

Features

The SYRSP and SYRSP EXT remote stations are digital devices capable of stand-alone or networked operation. The SYRSP is intended for networked applications where distributed control and external I/O (input/output) is not required.

The EXT option adds external I/O which provides one photosensor and one occupancy sensor input, and two 0-10Vdc dimming outputs and two switched outputs which can be used for bi-level switching or two-zone control in distributed applications.

Ordering Information			Example: SYRSP 1G 3BT BJ4 EXT	
Series	Number of gangs	Number of buttons	Finish	Options
SYRSP ¹	1G 1 gang	_BT (1 to 9)	BJ4 Brushed stainless steel, black frame and buttons BL4 Painted black, black frame and buttons WC2 Painted white, white frame and buttons IE3 Painted ivory, ivory frame and buttons SK1 Painted silver, silver frame and buttons	EXT External input/output. Two switched outputs, Two 0-10Vdc dimming outputs. One photocell and one occupancy sensor input per station

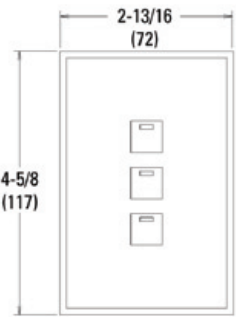
NOTES:

1 Requires Synergy all in one cable SYA CABLEA4 (plenum rated) OR Belden 3105A (non plenum rated) plus 2 #16 AWG conductors for power

Dimensions are shown in inches (millimeters) unless otherwise noted.

The clean styling is ideal for high-finish areas. For networked applications, stations are connected to the Synergy lighting control system controller via a four-conductor network bus.

- Single gang
- SYRSP available in 1 - 9 button configurations
- Infrared receiver for handheld remote standard
- Preset, on/off operation
- Can operate in stand-alone or network mode (Network requires SYSC, MLS or MLX)
- No exposed fasteners
- Metallic and painted finishes
- EXT option adds distributed control with external inputs and outputs
- Optional custom engraving



Accessories		(Order separately)
SYRS 1GR	Plaster ring, mounts to 4" box (by others)	
SYNERGY ENGRAVING		
SERVICES	Engraved button caps (Order 1 per button)	
SYA CABLEA4	Plenum rated network cable	

Architectural Preset Control Station

SQCS



Intended Use

Provide manual dimming and preset lighting control for architectural dimming applications. Offered in a variety of styles and architectural finishes suitable for virtually any application. May be daisy-chained together with SYRSP Digital Remote Wallstations and Distributed Controllers for multi-location control dimming.

Features

Functions – Master raise and lower buttons adjust the intensity of all lights dimmed from the station. Channel raise and lower buttons adjust the intensity level of individual channels. LED bar graph displays intensity level. Select button saves presets and fade time is adjustable for each preset scene. Preset button saves and

activates presets. Off function turns off all channels. Integral dry contact closure interface allows access to 16 presets and master raise/lower and off functions for A/V systems and auxiliary equipment.

Installation: 4- and 8-channel stations mount only in Synergy #SQCS 5GB or RACO 699 five-gang backbox; 12- and 16-channel stations mount in Synergy #SQCS 8GB backbox. Stations connect to a Synergy System Controller via the four wire A4 control station network wire which can be shared with up to 60 SQCS and SYRS or DEQLC per Synergy System Controller.

Classification – Class 2 low voltage device.

Ordering Information

Series	Number of presets and channels	Finish	Wallplate style
SQCS	6P 4C 6 presets, 4 channels	BJ4 Brushed stainless steel, black buttons	SD Solid
	6P 8C 6 presets, 8 channels	WC2 Painted white, white buttons ¹	TR Translucent
	6P 12C 6 presets, 12 channels	IE3 Painted ivory, ivory buttons ¹	
	6P 16C 6 presets, 16 channels	BL4 Painted black, black buttons ¹	
		BF4 Polished brass, black buttons ¹	

NOTES:

1 Additional delivery time and/or cost may be associated

Accessories		(Order separately)		
SQCS 5GB	5 gang backbox for 4-channel and 8-channel stations ²			
SQCS 8GB	8 gang backbox for 12-channel and 16-channel stations			
SQCS PR	Portable receptacle			
SYA CABLEA4	Control station network wire			
SQCS PE8	Portable console (4/8)			
SQCS PE16	Portable console (12/16)			
SYNERGY				
ENGRAVING				
SERVICES	Engraved button caps (Order 1 per button)			
<i>Series</i>	<i>Width</i>	<i>Thickness</i>	<i>Height</i>	<i>Weight</i>
SQCS 4C	10-1/8 (257)	1/4 (6)	4-5/8 (117)	2-1/2 (1.13)
SQCS 8C	10-1/8 (257)	1/4 (6)	4-5/8 (117)	2-1/2 (1.13)
SQCS 12C	15-7/16 (392)	1/4 (6)	4-5/8 (117)	4 (1.8)
SQCS 16C	15-7/16 (392)	1/4 (6)	4-5/8 (117)	4 (1.8)

Dimensions are shown in **inches (millimeters)** or **pounds (kilograms)** unless otherwise noted.

Graphical Control Station

SYGS



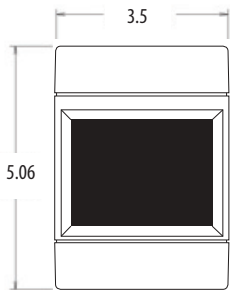
Example: SYGS WH

Intended Use

Provide manual dimming and preset lighting control for architectural dimming applications. Offered in a variety of styles and architectural finishes suitable for virtually any application. May be daisy-chained together with SYRSP Digital Remote Wallstations and Distributed Controllers for multi-location control dimming.

Features

The SYGS is a graphical touch screen control station for Synergy lighting control systems. The clean styling is ideal for high-finish areas and its high resolution screen is easy to view and simple to use. The SYGS station connects to the Synergy lighting control system via a four-conductor network bus. Any combination of current Synergy user interfaces (SQCS, SYRSP and DEQ) along with the SYGS is possible. Up to 60 devices per SYSC controller.

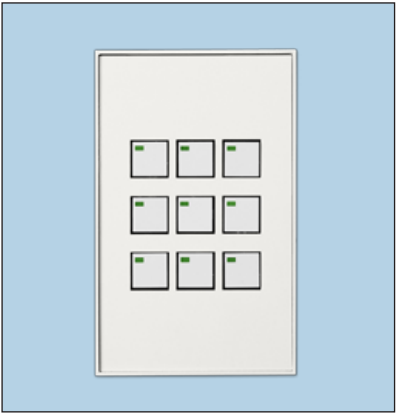


Ordering Information

Series	Finish
SYGS	WH White molded plastic IV Ivory molded plastic BLK Black molded plastic

Architectural Remote Station

SQRS



Intended Use

Activates control functions in conjunction with the Sequel MiniPac® dimming system or the Sequel IDC wallbox dimming system.

Features

Operation: Functions include preset recall, channel raise/lower, master raise/lower and off.

Classification

Class 2 low voltage device.

Ordering Information

Series	Number of buttons	Finish
SQRS	1S 1 button	BJ4 Brushed stainless steel, black buttons
	2S 2 buttons	WC2 Painted white ¹
	3S 3 buttons	IE3 Painted ivory ¹
	4S 4 buttons	BL4 Painted black ¹
	5S 5 buttons	BF4 Polished Brass, black buttons ¹
	6S 6 buttons	
	9S 9 buttons	

NOTES:

1 Additional delivery time and/or cost may be associated.

Accessories		(Order separately)
SYRS 1GR	Plaster ring, mounts to 4" box (by others)	
SYNERGY ENGRAVING		
SERVICES	Engraved button caps (Order 1 per button)	
SYA CABLEA4	Plenum rated network cable	

Low Voltage Override Switch

LVPS



Intended Use

The LVPS low voltage override switch provides a durable and attractive solution to override lights controlled by Synergy Lighting Controls systems. The LVPS is a Decora® style switch so it uses standard Decora wallplates for single or multi-gang applications. A pilot light is provided for both switches so it can be used as a single switch for ON (top push button) and

OFF (bottom push button) or it can control two separate lighting zones with each respective switch toggling the lights on and off. A terminal block is provided for all low voltage connections, eliminating the need for traditional spade-type connectors or wire nuts.

Use with Synergy® or SwitchPak® lighting control panels.

Ordering Information

Example: LVPS 2BT WH

Series	Number of buttons	Color
LVPS	2BT 2 buttons 4BT 4 buttons	IV Ivory WH White

Low Voltage Key Switch

LVKS



Intended Use

LVKS key switches provide a durable and attractive solution for providing a secure means to override lights. The user must have the LVKS Key (which is provided) to override lights. Switches are supplied with pigtail connectors for low volt-

age wire connections.

Use with Synergy® or SwitchPak® lighting control panels. Providing a secure means to override lights. The LVKS can be used with the LVPS in multi-gang Decora® wallplate.

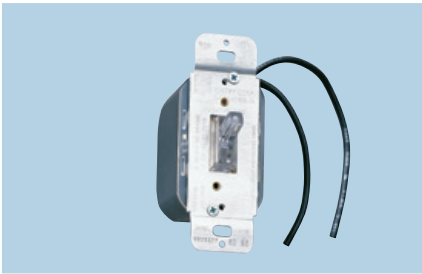
Ordering Information

Example: LVKS SPDT WH

Series	Options	Color
LVKS	HOA 3-position maintained for hand-off-auto operation SPDT MOM 3-position momentary center of SPDT 2-position maintained	IV Ivory WH White

SSPL

SweepSwitch®



Intended Use

Provides local line voltage override control of lighting in time-based control schemes. Can be used to manually turn lighting on and off. Resets itself automatically to the off position in response to a programmed power interruption signal provided by the lighting control panel.

Wires to a 120V or 277V circuit switched by a Synergy® or SwitchPak™ relay panel like a standard toggle switch, is not line/load sensitive and does not require a neutral connection.

Strap-mount device; mounts in a standard single gang switch box and uses a standard toggle opening wallplate (not included).

Works like a standard wall switch for on/off operation. Automatically resets to off when power is removed for approximately five seconds. Switch handle is lighted for easy location in the dark.

Listings

UL Listed. CSA Certified.

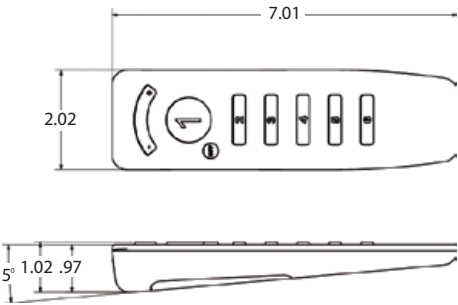
Ordering Information

Example: SSPL 203 277

Series	Load amperage	Voltage
SSPL	5 0.1 to 5 amps 20 1.0 to 20 amps 203 3-way operation	277 120 or 277 volts

Infrared Wireless Transmitter

SYWR



Intended Use

Used for wireless remote control of lighting functions in a Synergy® system. Operates in conjunction with the infrared receiver on the SYRSP digital remote wallstation. The HHP version is useful in providing preset dimming control without the need for an SQCS control station.

Features

The SYWR 6B six-button transmitter provides remote activation of four presets, master raise/lower and master on/off. The SYWR HHP hand-held programmer permits the saving and activation of 12 lighting preset scenes, the manual control of up to 12 dimming channels, master raise/lower and master on/off. Preset scenes configured and saved with the HHP may be recalled from buttons on the wallstation.

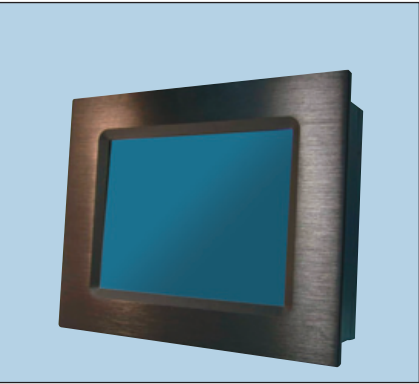
Ordering Information

Example: SYWR HHP

Series	Type
SYWR	6B 6-button remote transmitter HHP 12-button hand-held programmer

Graphical LCD User Interface

SYA LCD SCREEN



Intended Use

Used in conjunction with a Synergy® system equipped with SYSC MLX controllers to provide system-wide configuration, monitoring and override of lighting zones.

Features

Full-color TFT touchscreen graphical interface may be configured with floorplan-based or

button-based screens. Flexible control options allow graphical objects to monitor and override any system input, output or load group as needed to satisfy project requirements. Screens may be field or factory configured.

Listings

UL Listed to US and Canadian safety standards.

Ordering Information

Series	SYA LCD SCREEN Full color touchscreen user interface (May be wall or panel mounted) ¹
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Example: SYA LCD SCREEN

Accessories	(Order separately)
SYA LCD SCREEN MOUNT	Mounting enclosure - Mounts SYA LCD SCREEN to wall from finished wall side, rear mounting not required.

PC Interface

SYA DESKTOP



Intended Use

Provides the capability to program or override all features of Synergy Lighting Control panels when used in conjunction with the SynergySYSW CONFIG. Schedules and programs can be composed off-line and downloaded locally through the Synergy controllers or remotely through

the use of an optional modem. Direct network connections can be made via ethernet LAN or ARCnet network.

Features

Available as desktop, laptop or tablet PC.

Ordering Information

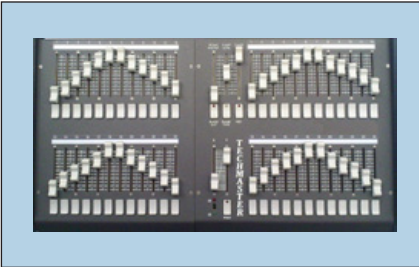
Series	Type
SYA	DESKTOP LAPTOP TABLET

Example: SYA DESKTOP

Accessories	(Order separately)
SYSW CONFIG	Synergy panel configuration software for personal computer
SYSW GRAPHICS	Graphics software for personal computer
SYA ETHERNET SWITCH 5PORT	Ethernet 5-Port 10 Base-T switch
SYA ROUTER	ArcNet to Ethernet Receiver

Stage Lighting and Controls

LSCC



Accessories (Order separately)

LSCC PR DMX Single gang plug-in receptacle

LSCC PRP DMX Single gang pass-through receptacle

Intended Use

Two-scene portable control console that offers simple, economical control for Synergy® in applications such as small stages, churches and presentation areas. Dual operation modes offer conventional two-scene preset or a “hold and fade” mode with a virtual second scene to double the effective number of control channels.

Features

- Power-On LED
- Dual-operation modes
- Split dipless crossfaders
- Grand master fader
- Blackout switch
- DMX-512 output signal
- Chase control module
- 25’ control cable included
- Heavy-duty construction

Ordering Information

Series	Configuration	Cable
LSCC	2S12C Two scene preset, 12 control channels 2S24C Two scene preset, 24 control channels 2S36C Two scene preset, 36 control channels	P25 DMX Low voltage control cable, 25 feet with connectors

Example: LSCC 2S12C P25 DMX

Graphical Interface Software

SYSW GRAPHIC



Intended Use

Adds real-time control and monitoring capabilities to a Synergy® system through the use of a flexible graphical interface. Runs as a fully integrated component of the SYSW CONFIG software (below) installed on a desktop, laptop, tablet or touchscreen PC connected to the system via an RS-485, Ethernet or wireless network connection.

Features

Provides intuitive and interactive point-and-click control of loads with status feedback and remote diagnostic capability. Simple setup and configuration options allow the creation of floorplan-based, button-based or combination screens. Flexible control options allow graphi-

cal objects to directly monitor and override all system inputs (switches, photocells, digital stations), outputs (relays, dimmers, controllable breakers, DALI devices) room partitions and load groups. Integrated scheduling module allows the creation of temporary, PC-based schedules for special events.

Over 32,000 screens may be configured and the number of control objects per screen is limited only by screen resolution. Control screens may be user-configured in the field or ordered factory-prepared to client specifications via the SYNERGY GRAPHICS SCREENS accessory.

Optional Trending/Usage software is available to provide the capability for facilities to log certain lighting loads for trending analysis. Provides automatic recording and archiving.

Ordering Information

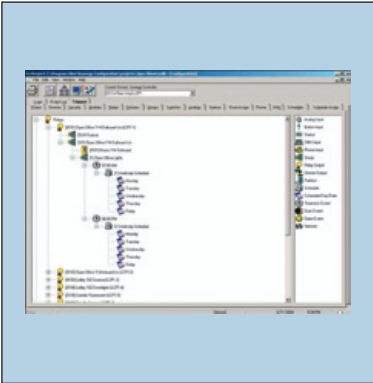
Series
SYSW GRAPHIC Synergy® graphical user software

Example: SYSW GRAPHIC

Accessories	(Order separately)
SYNERGY GRAPHICS SCREENS	Factory-prepared SYSW GRAPHIC screen per user specifications. Indicate quantity of screens required.
SYA DESKTOP	PC workstation suitable for system configuration or graphics. Contact factory for more options.

System Configuration Software

SYSW CONFIG



Intended Use

PC-based Windows™ application used to configure a Synergy® system equipped with MLS and MLX controllers. Allows on-site or remote programming and configuration of all system parameters and schedules.

Features

Utilizes a familiar Windows™ graphical user interface to provide easy access to all system data. A simple tab-based navigation scheme allows the user to reach most configuration screens with a single click of the mouse. Access privileges for different software features can be set up for multiple users through the use of administrator-defined login IDs and passwords.

Online mode allows real-time monitoring and override of input and load status as well as diagnostic functions.

Connection to the system can be made with the provided RS-232 serial communications cable utilizing the DB-9 connector on the face of the controller, to the Synergy panel’s built in Ethernet port (Crossover cable required), to the Synergy panels viaan Ethernet LAN or by using an SYA ROUTER connected to the Synergy ARCNET network and a Ethernet LAN.

The SYSW CONFIG application requires a minimum 1GHz Pentium™ class PC running Windows™ XP, or Vista or 7 (32 bit only) operation system, with 1GB RAM, 30 MB free disk space and 1024x768 video resolution.

Ordering Information

Series
SYSW CONFIG Synergy® configuration software

Example: SYSW CONFIG

Accessories	(Order separately)
SYA DESKTOP	Personal computer for lighting control
SYA LCD SCREEN	Touchscreen graphical user interface
SYA LAPTOP	Laptop computer for lighting control
SYA TABLET	Wireless tablet PC graphical user interface
SYSW GRAPHICS	Integrated graphic control and monitoring add-in
SYSW SCREEN	Factory-created floorplan graphic screen
SYA ROUTER	Ethernet-to-ARCNET network router

0-10VDC Remote Mount Distributed Controller

DEQ LC



Intended Use

Integrates a localized zone of fluorescent lighting equipped with compatible four-wire electronic dimming ballasts into a Synergy® system. Plenum-mounted DEQ LC Distributed Controller provides on/off, dimming and automated daylight dimming control for a single lighting zone when a wall-mounted control station is not desired.

Features

The DEQ LC installs in the plenum above the area to be controlled on a standard 4" or 5" square junction box.

The EXT option adds external I/O which provides one photocell and one occupancy sensor input, and two 0-10Vdc dimming outputs and two switched outputs which can be used for bi-level switching or two zone control in distributed applications.

When connected to a Synergy® system, the DEQ LC can share status, set point and override functions with all Synergy® system controllers, PC graphics and other building control systems through the BACnet™ protocol.

Ordering Information Example: DEQ LC

Series	Accessories
DEQ LC Distributed Controller	SYA CABLE A4 Control station network wire (Order separately)

NOTES:
Requires SYSC MLS or SYSC MLX

MiniPac® Remote High Power Dimmer Pack

SQMPDC



Intended Use

Remote dimmer pack for use with SQMPCS Control Station. Increases the individual channel capacity for SQIDC wall box dimming system or may be used as a remote dimmer pack for a Synergy® system equipped with the Legacy option.

Features

When used with SQIDC; An integral switch matrix allows dimmers to be flexibly assigned to SQIDC station channels. Up to four SQMPDC's may be used per SQIDC system.

When used with Synergy®, MLX controller with Legacy option required; up to 64 dimmer packs may be connected to each controller. Dimmers are fully configurable from system controller

and software and may be controlled by any Synergy® user interface or schedule.

High quality architectural-grade filters minimize lamp noise. Dimmers are cooled through natural convection flow provided by front cover venting and are available with or without positive air gap on/off relays.

Installation – NEMA 1 enclosure is suitable for surface or flush wall mounting. Dimmers are fed from individual 15A or 20A branch circuits. All dimmers in a single pack must be fed from a single phase; no phase relationship between different dimmer packs or SQIDC circuits. Connects to Synergy® cabinet or SQIDC via SYA CABLES2 network wire.

Listings

UL Listed to US and Canadian safety standards.

Ordering Information Example: SQMPDC 4UX2 M2 120

Series	Number of dimmers	Dimmer type	Wattage Capacity²	Type	Voltage	Options
SQMPDC	2 2 dimmers 4 4 dimmers	UX Two -Wire Loads¹ UF Two-Wire, Three Wire, & Four-Wire Loads¹	2 2000W, 120V 4 4000W, 277V	M2 Master S2 Secondary	120 120V 277 277V	EM Emergency pack. All dimmers are automatically set to full power upon loss of normal power. Type UX cabinet only. Transfer of emergency main feed by others.

NOTES:
1 Two Wire - Incandescent, Low Voltage, Neon, Cold Cathode, & Non-dim; Three Wire - Lutron Eco-10 (ECO) & Lutron Hi-Lume; Four Wire - Advanced Mark VII, Lutron Eco-10 (TVE), Sylvania Helios, & Universal SuperDim, Universal Ballastar.
2 Capacity listed is per dimmer. Maximum of four dimmers per pack.

Analog Photosensor

DEQ APS



Intended Use

Low voltage sensor used to provide ambient light level information to for indoor daylight harvesting applications.

Features

This speciality photosensor is factory calibrated to accommodate the relatively low light levels normally found on the ceiling in office applica-

tions. 360° lens allows the sensor to average the room light level, reducing the effect of reflective or lightly colored items brought into the room or placed on a desk.

Classification – Class 2 low voltage device.

Ordering Information Example: DEQ APS IN

Series	Mounting
DEQ APS Analog photosensor	IN Indoor

Dimensions are shown in inches (millimeters) unless otherwise noted.

Intended Use

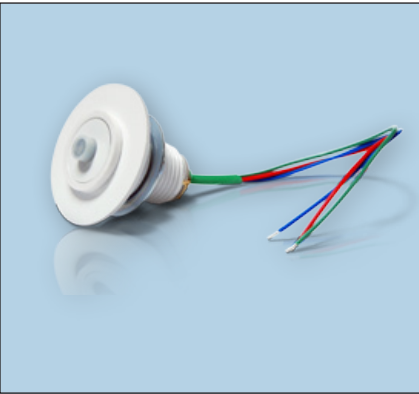
The SYA IPCL photosensor is an ambient light sensing device that connects to a Synergy™ panel, Synergy Remote Station (SYRSP EXT or DEQ LC), SwitchPak or SIMPLY5 Sensor Connector (S5SC), as an analog input. The photosensor provides control of lighting in response to ambient light conditions.

Features

- Indoor applications
- Color compensated to provide accurate readings
- Easy mounting
- Class 2 wiring
- Linear response curve
- Multiple set-points from a single photocell when used with Synergy or SwitchPak panels
- Ideal for Open Loop operation in Daylight Harvesting applications
- Switch or dim loads based on light level

Ordering Information Example: SYA IPCL

Series
SYA IPCL Analog photosensor



Intended Use

A low voltage system component that provides ambient light level information to a Synergy® or SwitchPak® lighting control system for use in dimming, switching or daylighting applications.

Features

Units for outdoor or skylight applications mount to J-box via integral 1/2" nipple. Unit for indoor applications mounts directly to ceiling tile via peel-and-stick adhesive backing or mounts to J-box using optional canopy. Units are factory-calibrated for the light levels indicted and connect directly to a Synergy® or SwitchPak® system analog input. Configuration, setpoints and deadband all are remotely configurable from the Synergy® or SwitchPak® controller keypad.

Classification – Class 2 low voltage device.

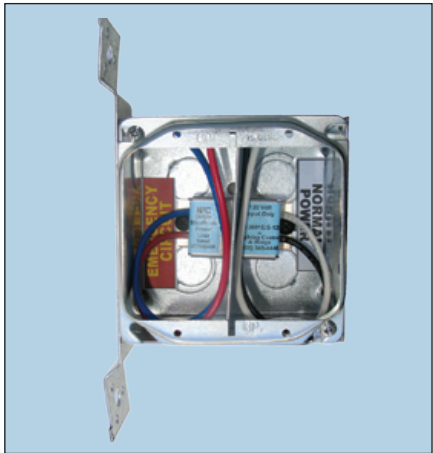
Ordering Information Example: LSA APS OL

Series	Photosensor	Mounting type
LSA Synergy System Accessory	APS Analog photosensor	OL Outdoor (0-100 FC) S Skylight/atrium (0-10,000 FC)

LSA APS



Emergency Shunt Relay



Intended Use	Features
Normally-closed, electrically-held relay to be wired in parallel with a wall switch. Manually controlled emergency lighting will be automatically shunted on during a power outage. The Emergency Shunt Relay comes in a two-gang junction box with a voltage-separating barrier and is shipped with a plaster ring separating normal and emergency power. The compact size allows wall switches to be mounted directly on the junction box.	<ul style="list-style-type: none">• Manual control of emergency lighting is safely accomplished• Not wattage-dependent, ideal for wall dimmers• Optional enclosure will hold up to eight shunt relays for feed-through dimming panels• ETL listed to UL 924 dropout, 90% pickup• Three-phase sense standard• Mechanically held in normal and emergency position.

Ordering Information		Example: GR2001 EMSHUNT 120 1SR	
Series	Voltage	Number of Relays per Enclosure	Enclosure Type
GR2001 EMSHUNT	120	1SR 1 Emergency Shunt Relays	NE1 NEMA 1
	277	2SR 2 Emergency Shunt Relays	NE4 NEMA 4
		4SR 4 Emergency Shunt Relays	
		6SR 6 Emergency Shunt Relays	
		8SR 8 Emergency Shunt Relays	
		DUAL 2 Emergency Shunt Relays to control normal and emergency lighting from single-pole wall switch	

RRU SPDT



Intended Use	Features
The RRU provides an interface between a line voltage normal power sense circuit and the low voltage remote override input on Synergy SYPM power modules with the RO option. All connected SYPM modules will be overridden to full ON if normal power falls below 90% of nominal voltage.	<ul style="list-style-type: none">• Works in conjunction with Synergy SYPM power modules containing the RO remote override option• One RRU is needed for each Synergy cabinet to be overridden• Available to sense either 120 or 277V normal power• 90% nominal input voltage drop out• SPDT low voltage dry contact outputs rated for 5 Amps• UL listed

Ordering Information		RRU SPDT 277	
Series	Voltage		
RRU SPDT	120		
	277		

Arcnet Repeater

SYA M1 ARCARC

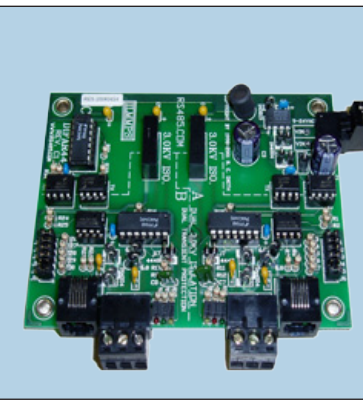


Intended Use	Features
The Synergy® system Arcnet-to-Arcnet network repeater provides a means of extending the Synergy® S2 network beyond 2000 feet, or for linking network segments that are wired with two different wire types (SYA CablesS2 or Belden 3105A only) or connecting more than 32 SYSC MLX controllers to a single network.	Enclosure may be desk or panel mounted. It connects to Synergy twisted pair networks via detachable terminal blocks. Low voltage power supply included. LEDs indicate network status and reconfiguration. Minimizes jitter with precision delay line timing, DC coupled. Network termination is jumper selectable.
Listings	
UL Listed, NEC type CL2P, rated for 75° C/300 Volts.	

Ordering Information		Example: SYA M1 ARCARC	
Series			
SYA M1 ARCARC			

RS485 Network Isolator and Repeater

LSA M1 RS4852



Intended Use	Features
The LSA M1 RS4852 network repeater provides a means of extending the Synergy® A4 digital control station network beyond 2000 feet.	Connects to SYA CableA4 networks via detachable terminal blocks <ul style="list-style-type: none">• Low voltage power supply included• LEDs indicate network status• 3,000V isolation between networks• Termination and biasing jumper-selected for each network

Ordering Information		Example: LSA M1 RS4852	
Series			
LSA M1 RS4852 ¹			

NOTES:
1 Enclosure not provided

Architectural Preset Dimming System

SQIDC
Sequel® IDC



Intended Use
Provides manual and preset dimming of most lamp types in wallbox applications. Offered in a variety of styles and architectural finishes. May be used singly, with matching remote stations or interfaced with external systems.
Features
Master raise and lower buttons adjust intensity of all lights dimmed from station. Channel raise and lower buttons adjust intensity level of individual channels. LED bar graph displays intensity level. Select button saves presets. Fade time is adjustable for each preset scene. Preset button saves and activates presets. Off function turns off all lighting. Low-end and high-end dimming limits

and dimmer curves are adjustable per channel.

Terminals on rear of station allow access from SQRS remote stations or momentary dry contact closures to: six presets, master raise/lower, channel raise/lower, select and off.

Overall maximum is 2000VA. Maximum per output (1-4) is 600VA electronic ballast or 800VA incandescent, magnetic low voltage and magnetic ballast, 600VA electronic two- and three-wire fluorescent ballasts.

Installation - Requires SQCS 5GB or RACO 699 five-gang backbox, 3-1/2" deep.

UL Listed to US and Canadian safety standards.

Ordering Information

Series	Capacity (VA)	Number of presets and channels	Finish	Wallplate style	Voltage
SQIDC	2000 2000 watts	6P 4C 6 presets, 4 channels 6P 8C 6 presets, 8 channels¹	BJ4 Brushed stainless steel, black buttons WC2 Painted white, white buttons² IE3 Painted ivory, ivory buttons² BL4 Painted black, black buttons² BF4 Polished brass, black buttons²	SD Solid TR Translucent	120

Accessories	(Order separately)
SQCS 5GB	5 gang backbox for 6P 4C and 6P 8C stations
SQRS	Remote station, specify 2, 4, 5, 6 or 9 buttons
SYRS 1GR	1 gang plaster ring.
SYNERGY ENGRAVING SERVICES	Engraved button caps (Order 1 per button)

NOTES:

1 8-channel unit requires SQMPDC® dimmer cabinet for control of loads on channels 5-8.

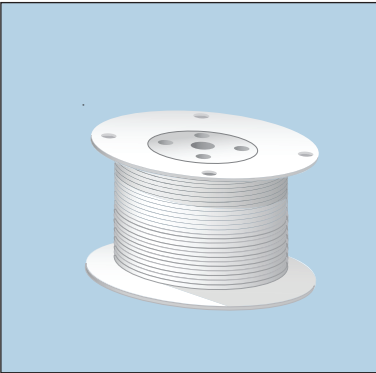
2 Additional delivery time and/or cost may be associated.

Series	Width	Thickness	Height
SQIDC	10-1/8 (257)	1/4 (6)	4-5/8 (117)
SQRS	2-7/8 (73)	1/4 (6)	4-5/8 (117)

Dimensions are shown in **inches (millimeters)** unless otherwise noted.

Network Cables

SYA CABLES2
SYA CABLEA4



NOTES:

1 Cannot be used underground

Intended Use
Plenum rated network cable suitable for use with industrial EIA RS-485 networks.
<i>SYA CABLES2</i> – Fully compatible with Synergy® MLX and SwitchPak® System Remote panel to panel networks.
<i>SYA CABLEA4</i> - Fully compatible for use with Synergy® digital networks.
Features
Factory approved network cables with conductor color coding consistent with all factory wiring diagrams and installation instruction for trouble-free network installations.

SYA CABLES2 – For use with industrial EIA RS-485 networks.

SYA CABLEA4 – Includes all required power and communication conductors.

UL Listed, NEC type CL2P, rated for 75° C/300 V.

Ordering Information

Series	Cable	Length
SYA	SYA CABLES2¹ SYA CABLEA4¹	1000FT 1000 feet 500FT 500 feet 250FT 250 feet

Example: **SYA CABLES2 1000FT**

Intended Use
The Synergy® system SYA M1 ARCFST provides a means of linking one duplex fiber optic network segment with one EIA-485 twisted pair network segment for Synergy ARCNET® networks.
The SYA M1 ARCFST2 network hub provides a means of linking two duplex fiber optic network segments. Enclosure may be desk or panel mounted.

Features
• Connects to Synergy twisted pair network segment via detachable terminal block
• Connects to duplex fiber optic network segment via ST connectors
• Low voltage power supply included
• LEDs indicate network status and reconfiguration.
• Minimizes bit jitter with precision delay line timing.
• Links one duplex fiber optic network with one EIA-485 twisted pair network
• Links one duplex fiber optic network together

Ordering Information

Series
SYA M1 ARCFST Fiber optic to EIA-485
SYA M1 ARCFST2 Two Fiber optic runs to EIA-485

Example: **SYA M1 ARCFST**

Intended Use
The SYA Ethernetswitch provides five 10/100Mbps plug and play shielded RJ-45 ports for Synergy SYSC MLX Controller applications. Each port is Auto-MDX compliant and can operate as an uplink port, eliminating the need for crossover cables. All ports automatically negotiate data rate, duplex, and flow control. Built-in broadcast storm control prevents excessive broadcasts from degrading network performance.

Features
Compact size, 10BASE-T/100 BASE-TX compliant. Auto-negotiated data rate, duplex and flow control. Panel and DIN-rail mountable versions. Powered from an unregulated DC power source (10-36V) or from an AC power source (8-24V, 47-63Hz). Power is provided through a quick disconnect terminal strip. Broadcast storm control, full or half duplex. Activity/link and data rate LEDs, industrial environment EMC and CE Mark.

Listings
UL 508 listed Industrial Control equipment.

Ordering Information

Series
SYA ETHERNET SWITCH 5PORT

Example: **SYA ETHERNET SWITCH 5PORT**

Intended Use
The SYA ROUTER is a high-performance, micro-processor-based network router designed to provide a simple, BACnet compatible bridge between the Synergy RS485 ARCNET network and an Ethernet LAN.
Features
• Native BACnet device
• Full 10 Base-T Ethernet compatibility

• Connects directly to Synergy ARCNET network
• Supports up to 100 Synergy controllers
• Compact steel enclosure.
• Minimizes jitter with precision delay line timing.
Listings
UL Listed, NEC type CL2P, rated for 75° C/300 Volts.

Ordering Information

Series
SYA ROUTER

Example: **SYA ROUTER**

Fiber Optic Repeater Network Hub

SYA M1 ARCFST
SYA M1 ARCFST2



Ethernet Switch

SYA Ethernet Switch 5Port



Ethernet Router

SYA Router



Occupancy Sensors

PP20



Intended Use

Power packs are the heart of the low voltage sensor system. A power pack may transform Class I high voltage (120/277 VAC or 347 VAC) to Class II 15 VDC for powering remote sensors. A power pack may also switch a lighting load on and off using its internal relay. Class II wire leads connect to 18 AWG or smaller low voltage cable running to the sensors, making installation easy and clean. Power packs also have an elongated mounting nipple that allows it to be mounted either directly through a ½ inch knockout into a junction box or inside an adjacent box for meeting specific local code requirements in ceiling plenums.

Features

- Powers low voltage sensors*
- Self-contained relay(s) switch
- Line voltage loads
- Relay contact protection*
- Plenum rated

MP20

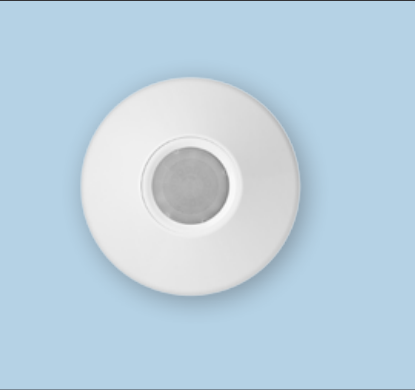


Ordering Information

Example: PP20 347 LT

Series	Voltage	Temp/Humidity
PP20	Blank 120/277 VAC	Blank Standard
MP20	347 347 VAC	LT Low Temp

LV STANDARD SENSOR



Intended Use

Low voltage sensors with the Standard Range 360° lens offer amazing performance and sensitivity to small motions (e.g., hand movements). A single sensor can cover entire private offices or smaller rooms by itself.

Features

- Indoor applications
- 100% digital PIR Detection
- 360° coverage pattern
- User adjustable time delays
- Push-button programmable
- 100 hr lamp burn-in timer
- Green LED indicator

Ordering Information

Example: CM PDT 9 R P LT

Series	Relay	Photocell	Temp/Humidity
CM 9	Blank	Blank	Blank
CM PDT 9	R	P	LT
RM 9			
RM PDT 9			
CMB 9			
CMB PDT 9			

LV WIDE VIEW SENSOR



Intended Use

Low voltage Wide View sensors are designed to mount in a corner and detect small motions up to 40 ft (12.19 m) away, and larger motions up to 70 ft (21.33 m) away. This makes them ideal for 30 ft (9.14 m) x 30 ft (9.14 m) classrooms or corridors up to 70 ft (21.33 m) long.

Features

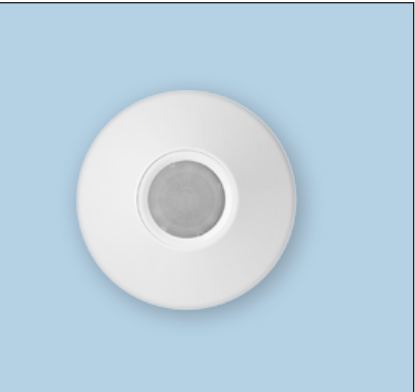
- Indoor applications
- Color compensated to provide accurate readings
- Easy mounting
- Class 2 wiring
- Linear response curve

Ordering Information

Example: WV PDT 16 P

Series	Relay	Photocell	Temp/Humidity
WV 16	Blank	Blank	Blank
WV PDT 16	R	P	LT

LV EXTENDED RANGE SENSOR



Intended Use

Sensors with the Extended Range 360° lens provide maximum viewing area from the ceiling. Designed to detect walking type motions, these sensors are ideal for placement along corridors or in rooms with ceiling heights as low as 7 ft (2.13 m).

Features

- 100% Digital PIR Detection
- 360° Coverage pattern
- User Adjustable time delays
- Push-button programmable
- 100 hr lamp burn-in timer

Ordering Information

Example: CM 10 P LT

Series	Relay	Photocell	Temp/Humidity
CM 10	Blank	Blank	Blank
CMPDT 10	R	D	LT
RM 10		P	
RM PDT 10		ADC	
CMB 10			
CMB PDT 10			

HIGH BAY 360° SENSORS



Intended Use

Designed for mounting heights of up to 45 ft (13.72 m), High Bay 360o sensors have a 15-20 ft (4.57-6.10 m) radial coverage pattern that overlaps the area lit by a typical high bay fixture

Features

- Convenient test mode
- Green LED indicator
- User adjustable time delays
- Excellent RF immunity

Ordering Information

Example: CM 6 P LT

Series	Relay	Photocell	Temp/Humidity
CM 6	Blank	Blank	Blank
RM6	R	D	LT
CMB 6		P	
		ADC	

Recent PROJECTS



Georgia Aquarium
Atlanta, Georgia



Calpine Center
Houston, Texas



Austin Convention Center
Austin, Texas

We currently have over 60,000 projects installed in various high-profile locations across North America.



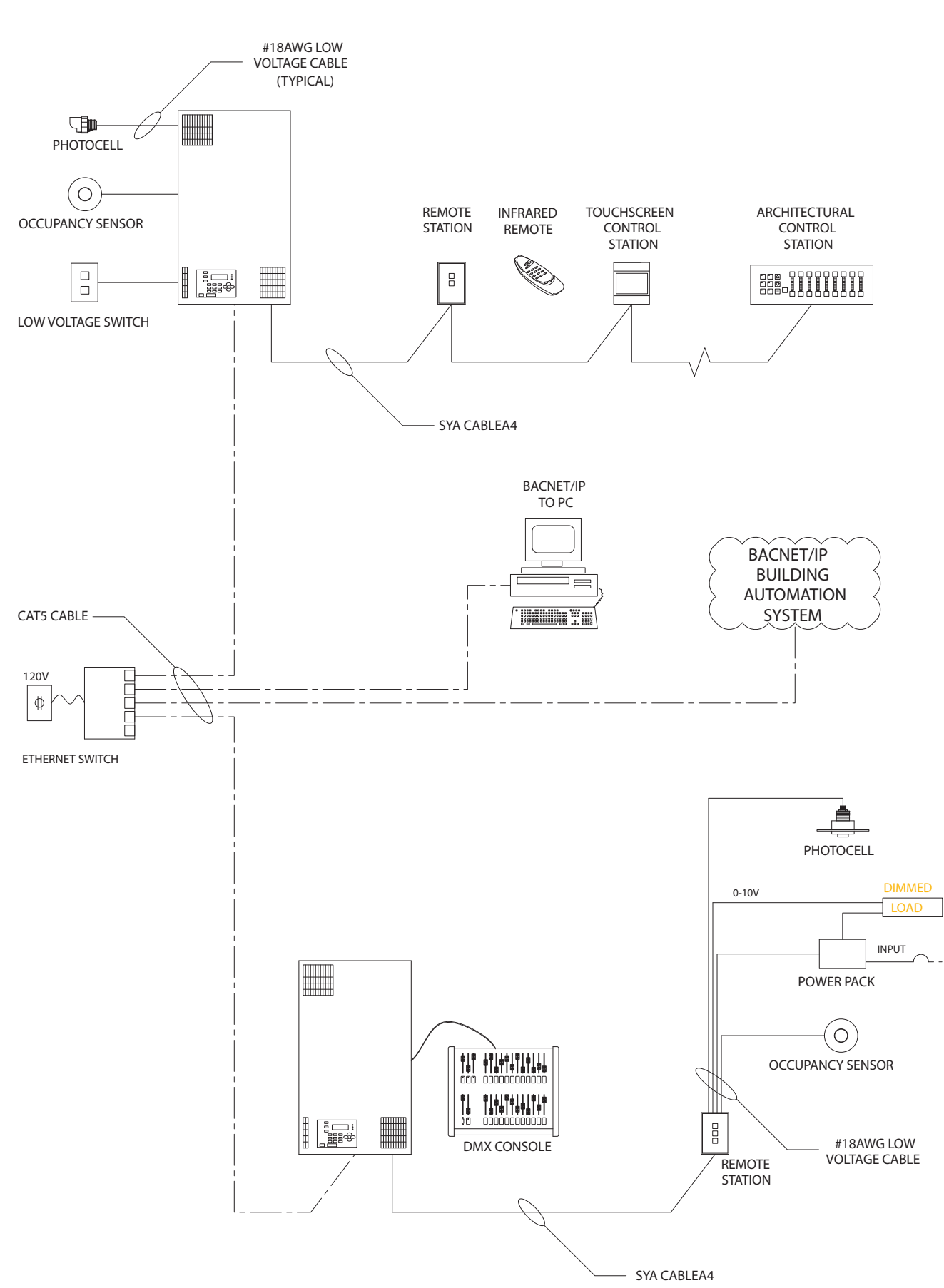
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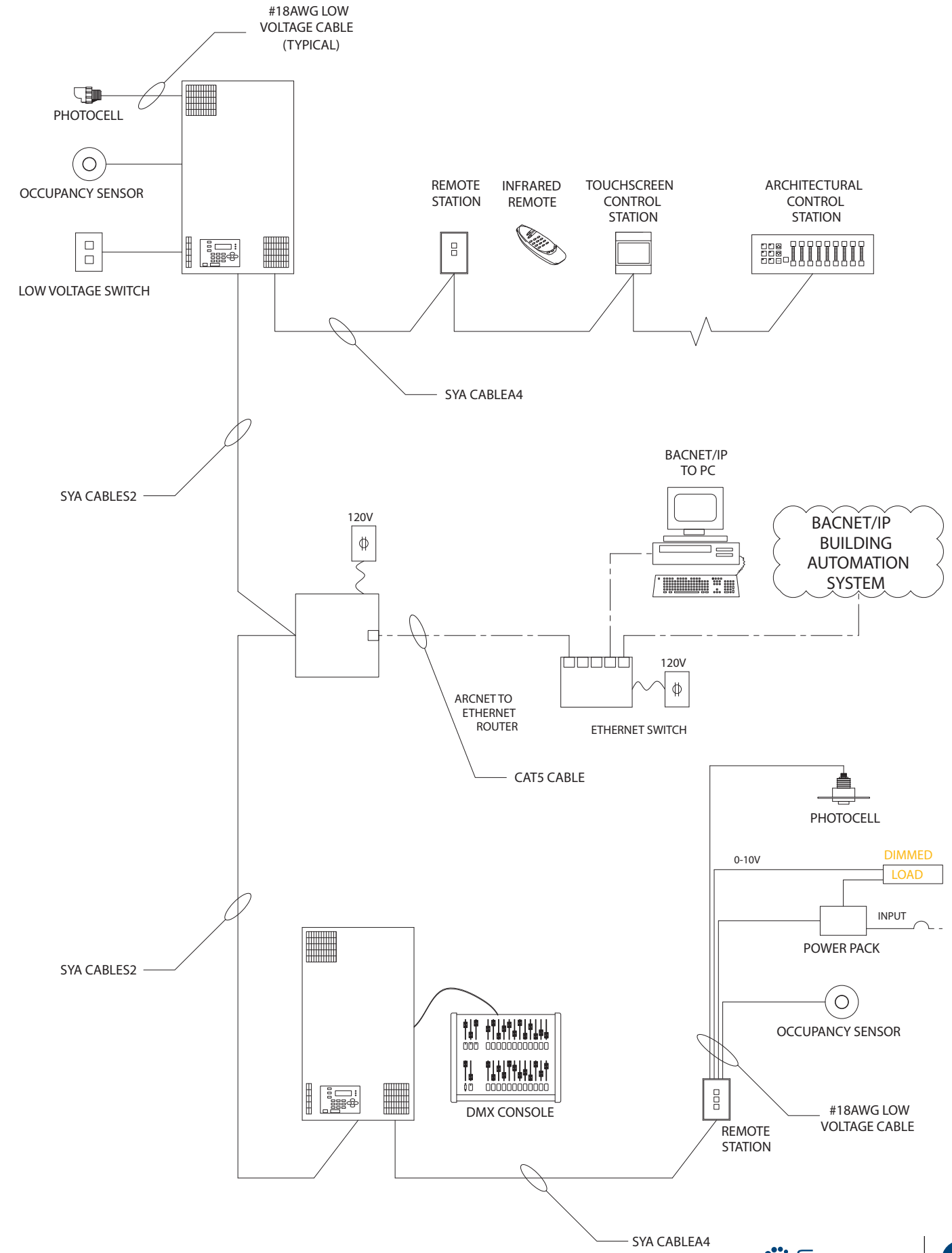
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SQIDC WITH MINIPAC® & RDM	55



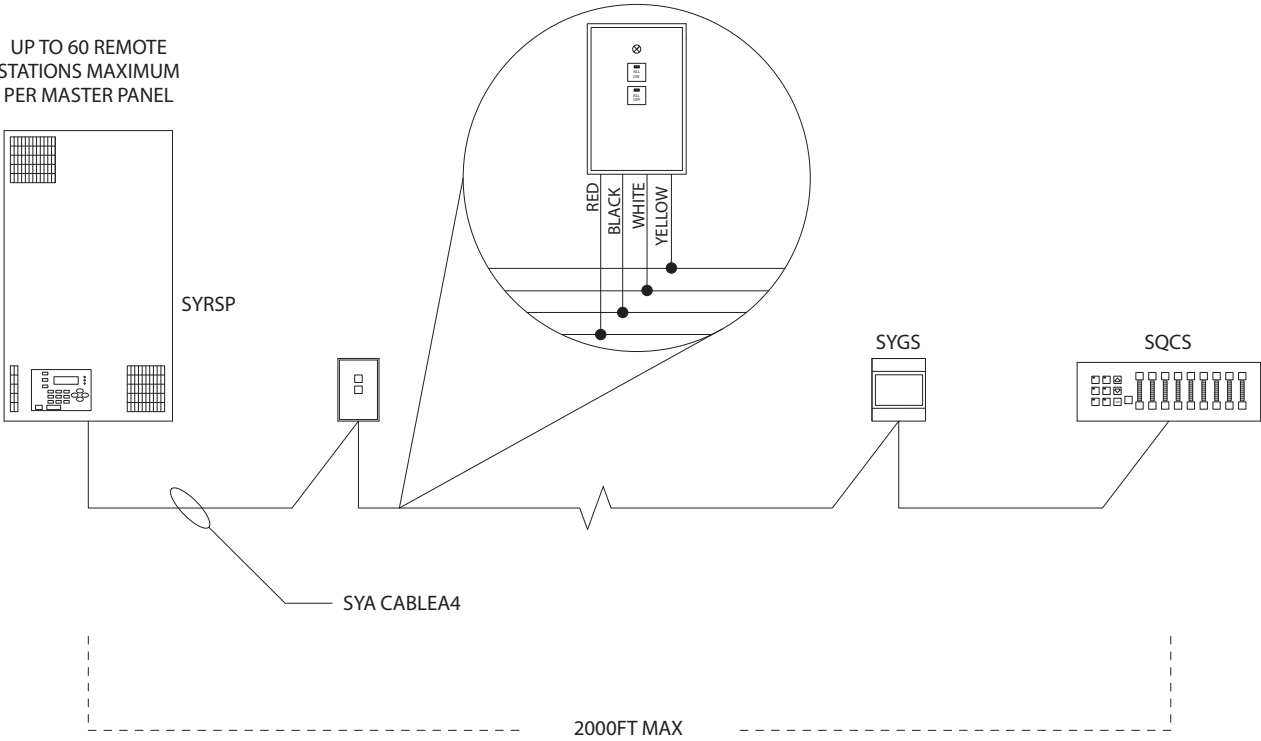
System Architecture using an Ethernet Network



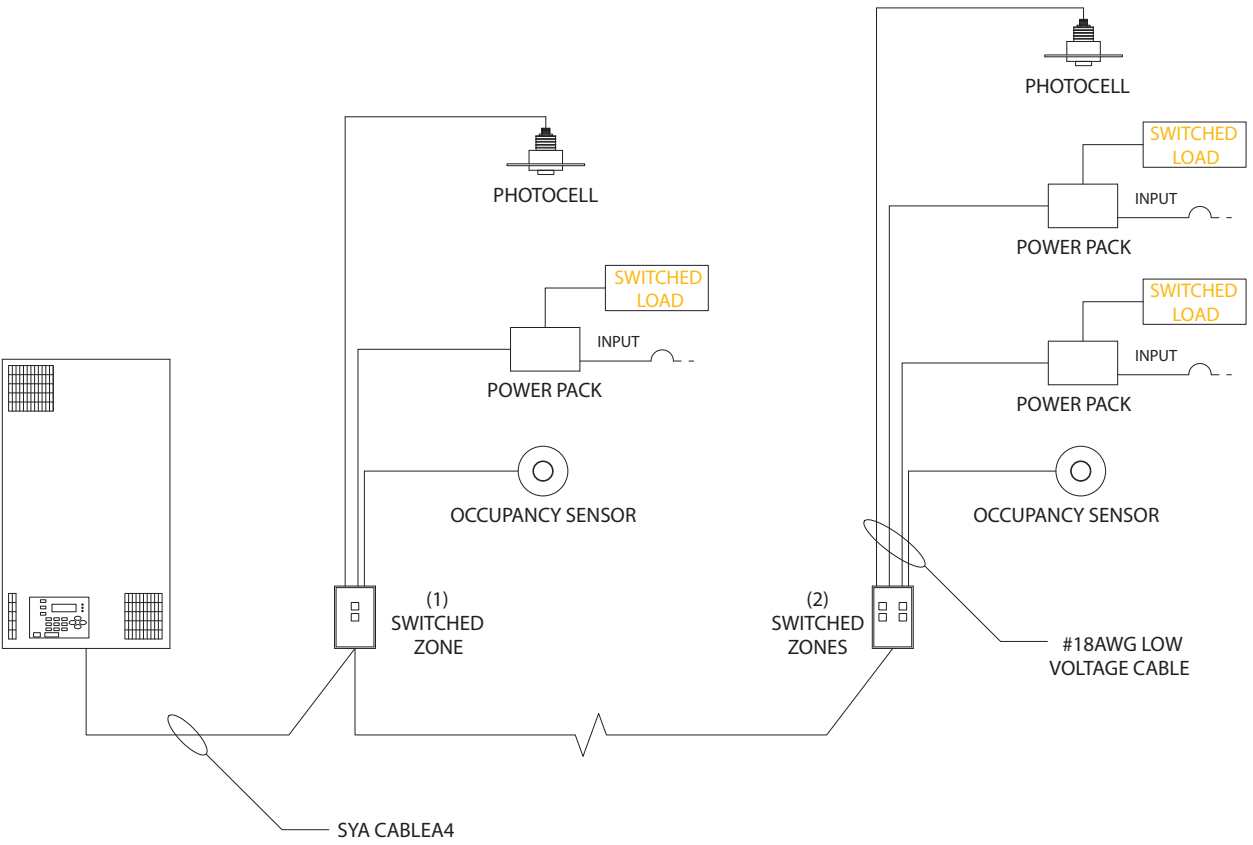
System Architecture using an Arcnet Network



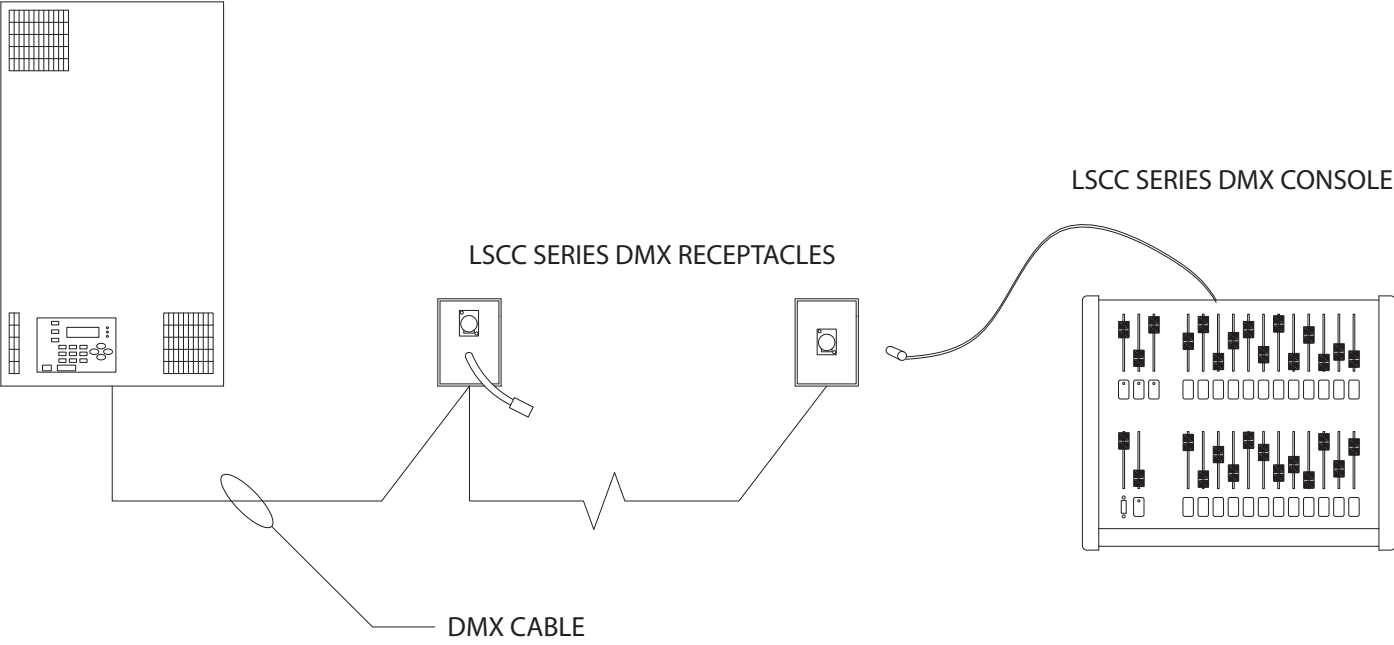
Remote Station Network



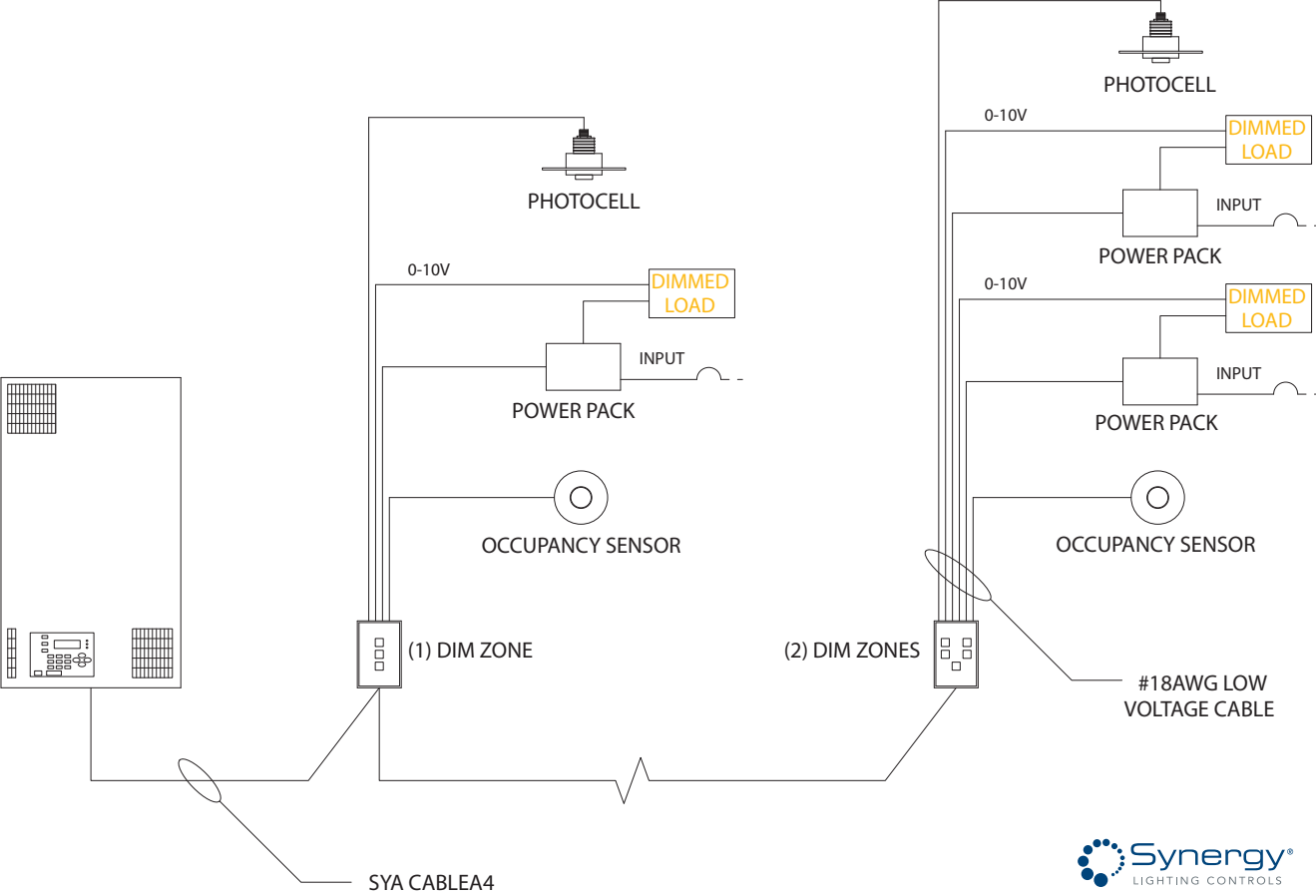
SYRSP_EXT, DEQ LC - Distributed Switching



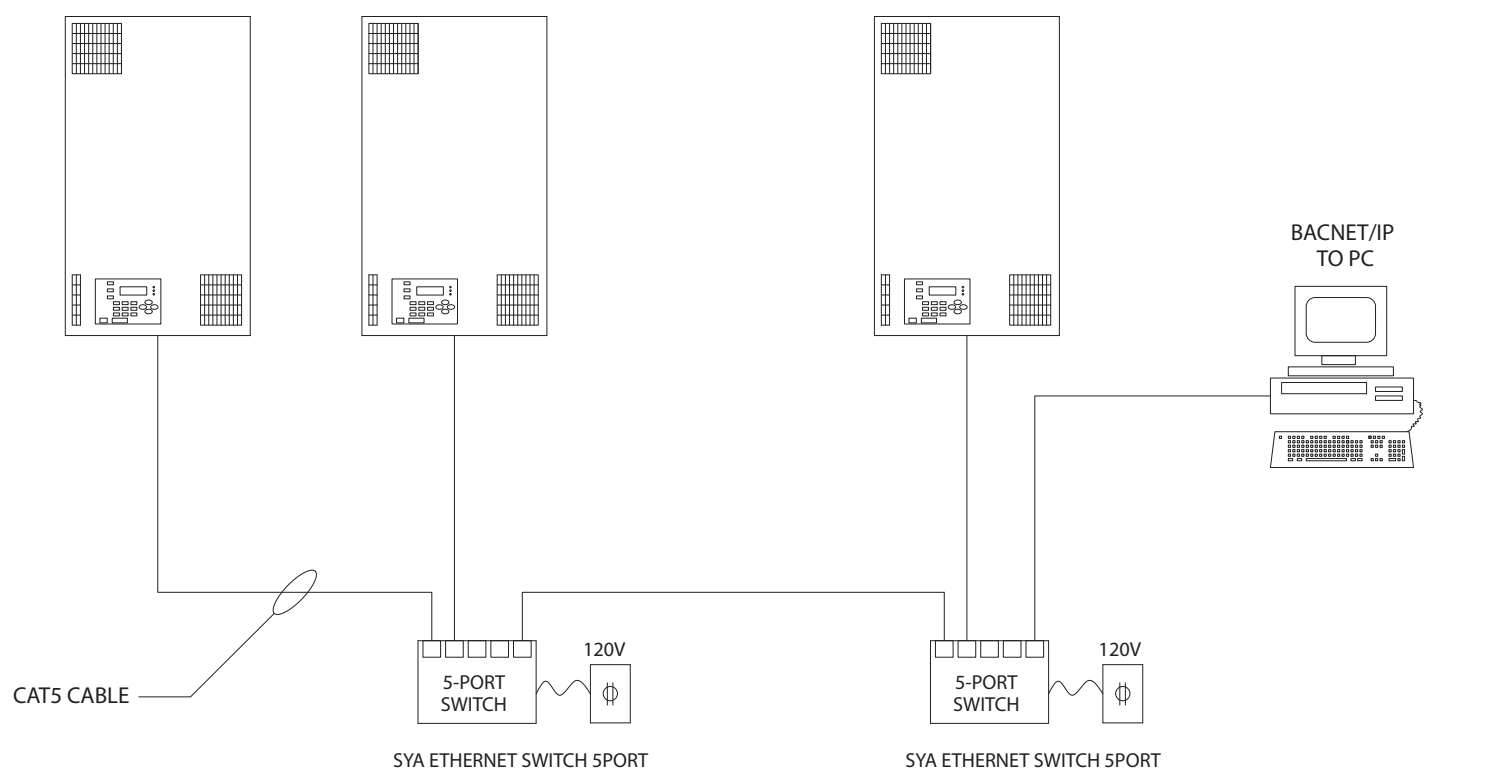
DMX Network



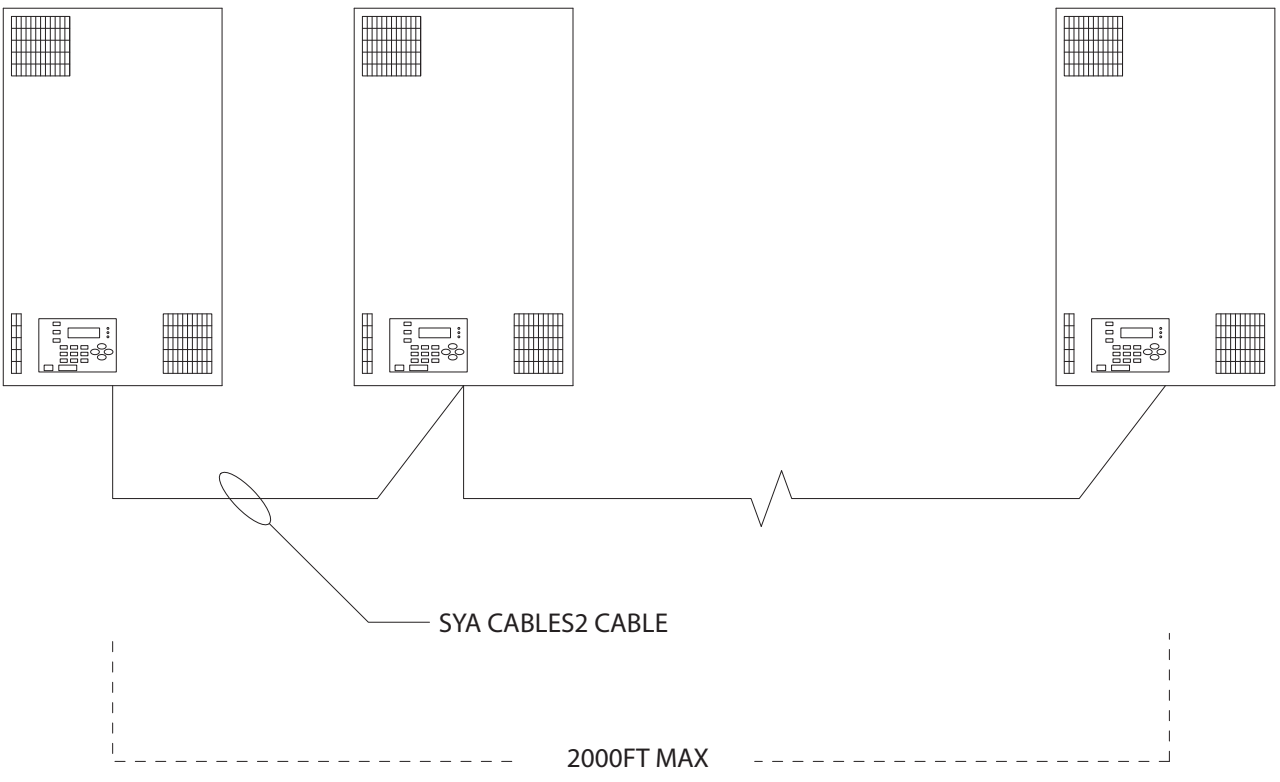
SYRSP_EXT, DEQ LC - Distributed Dimming



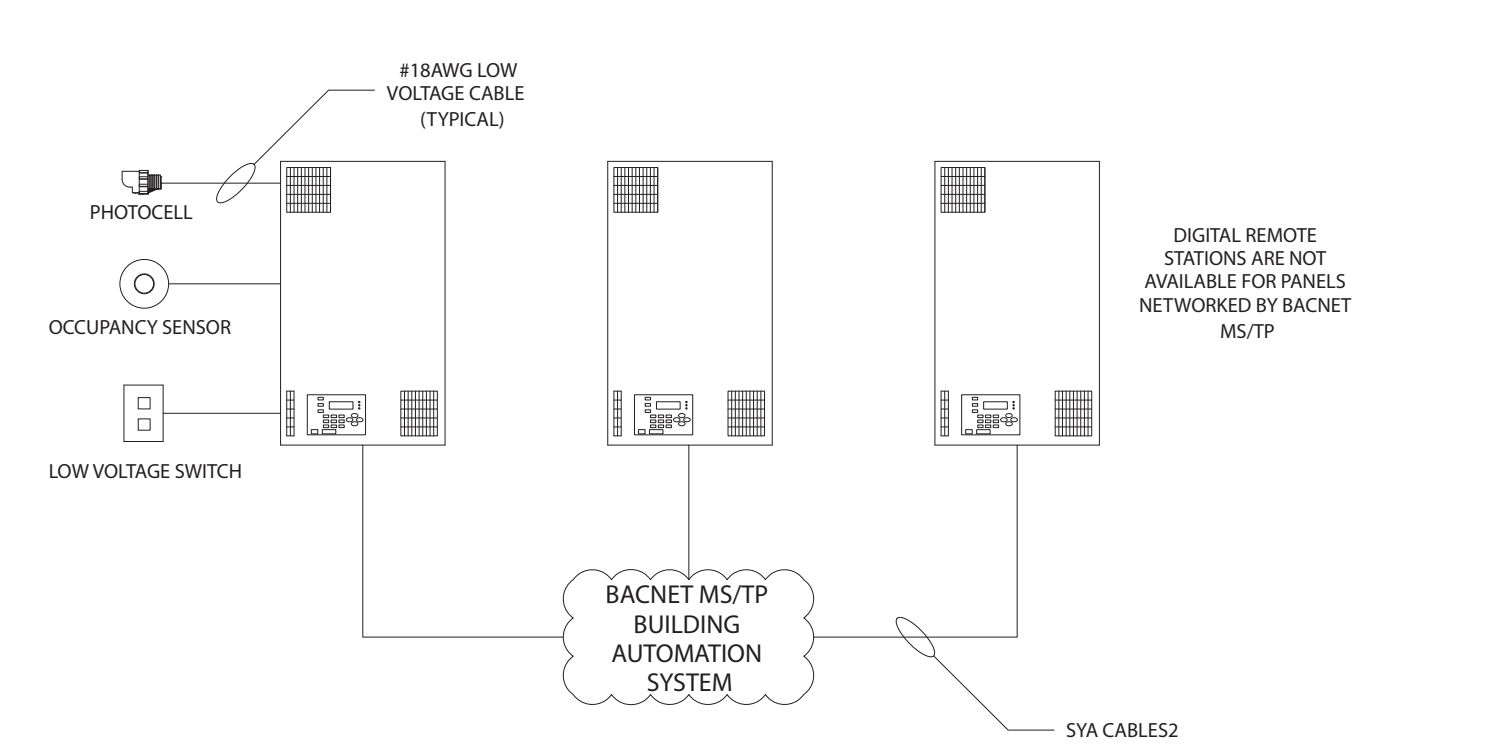
Ethernet Network



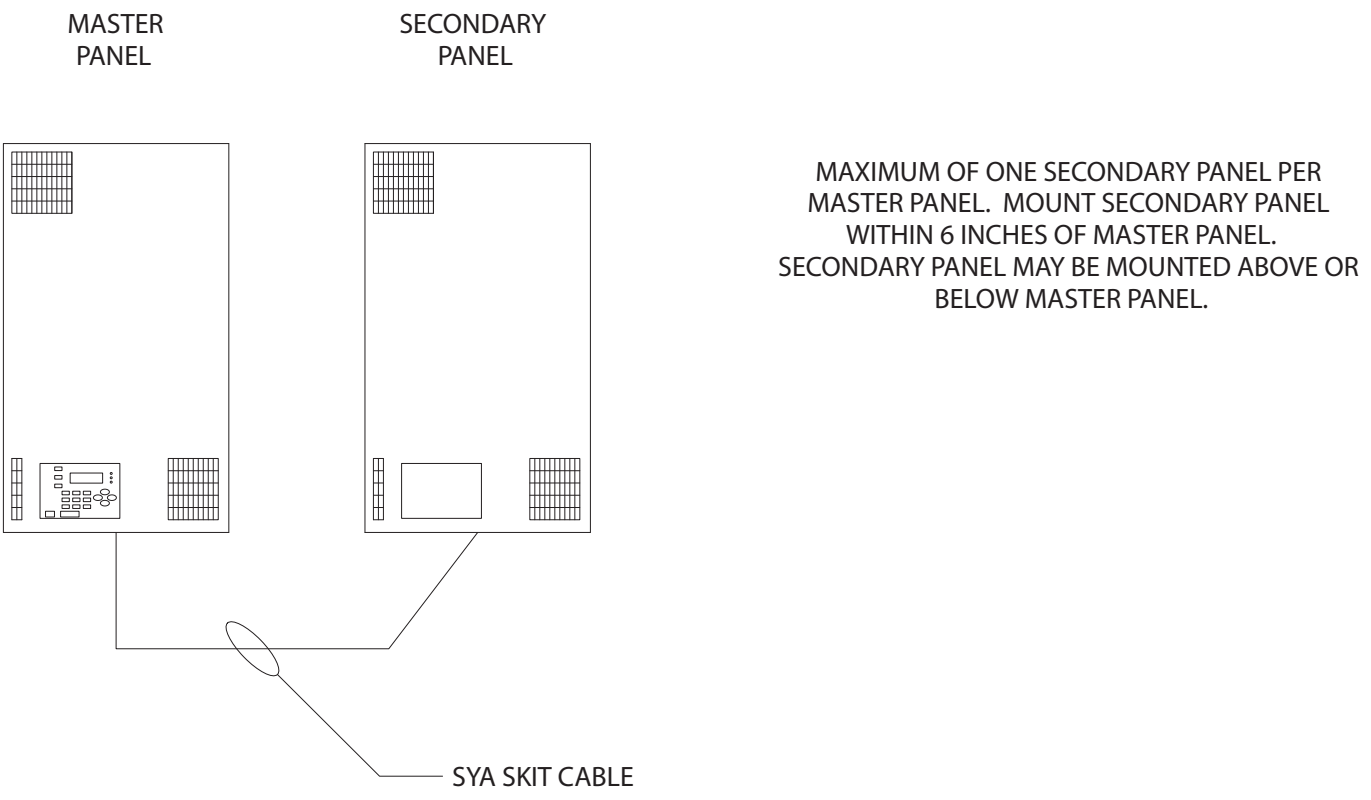
ARCNET Network



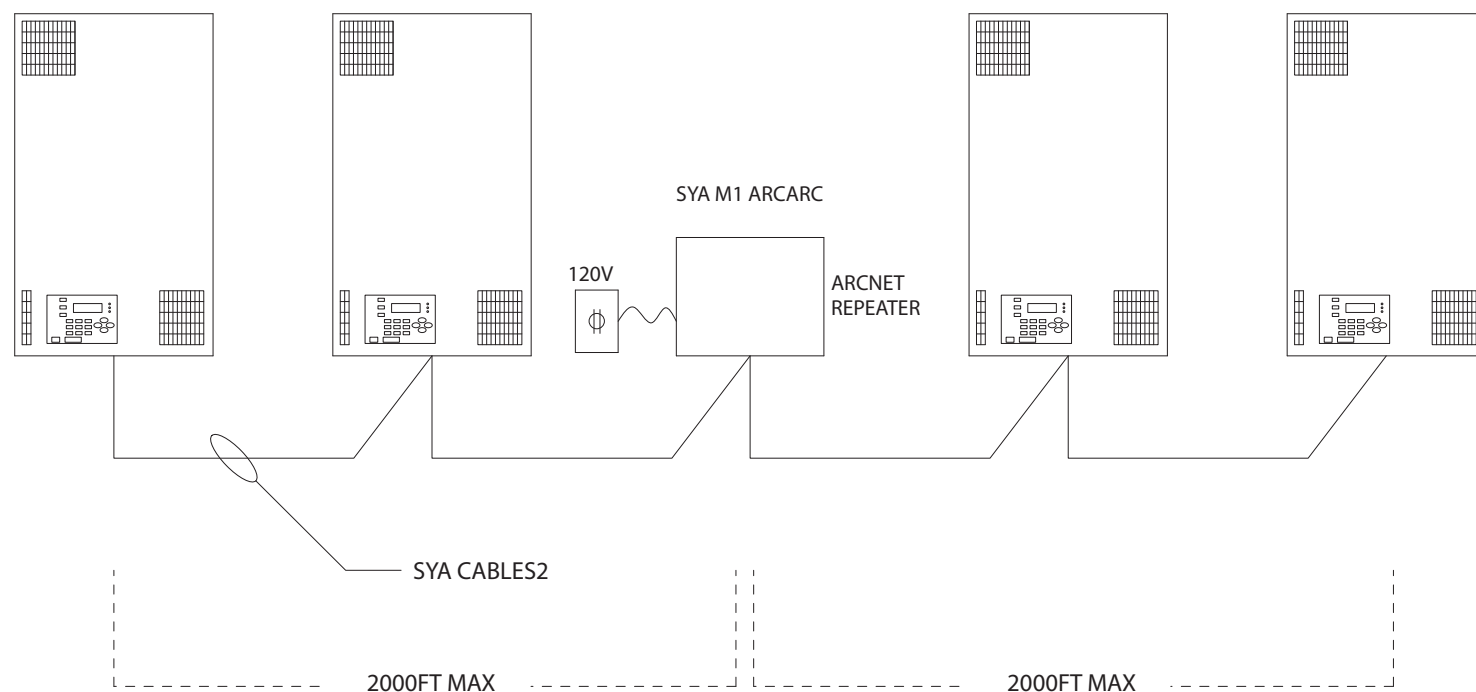
MS/TP Network



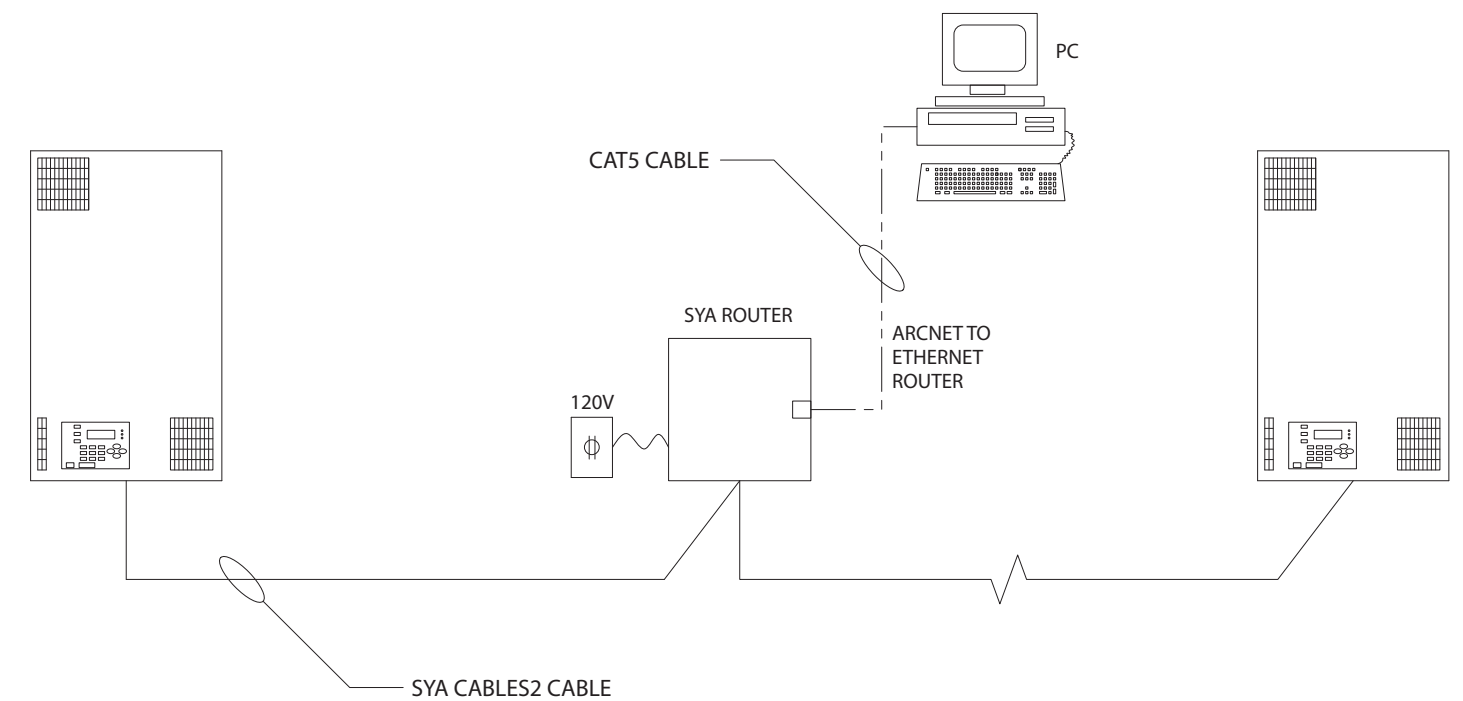
Master/Secondary Network



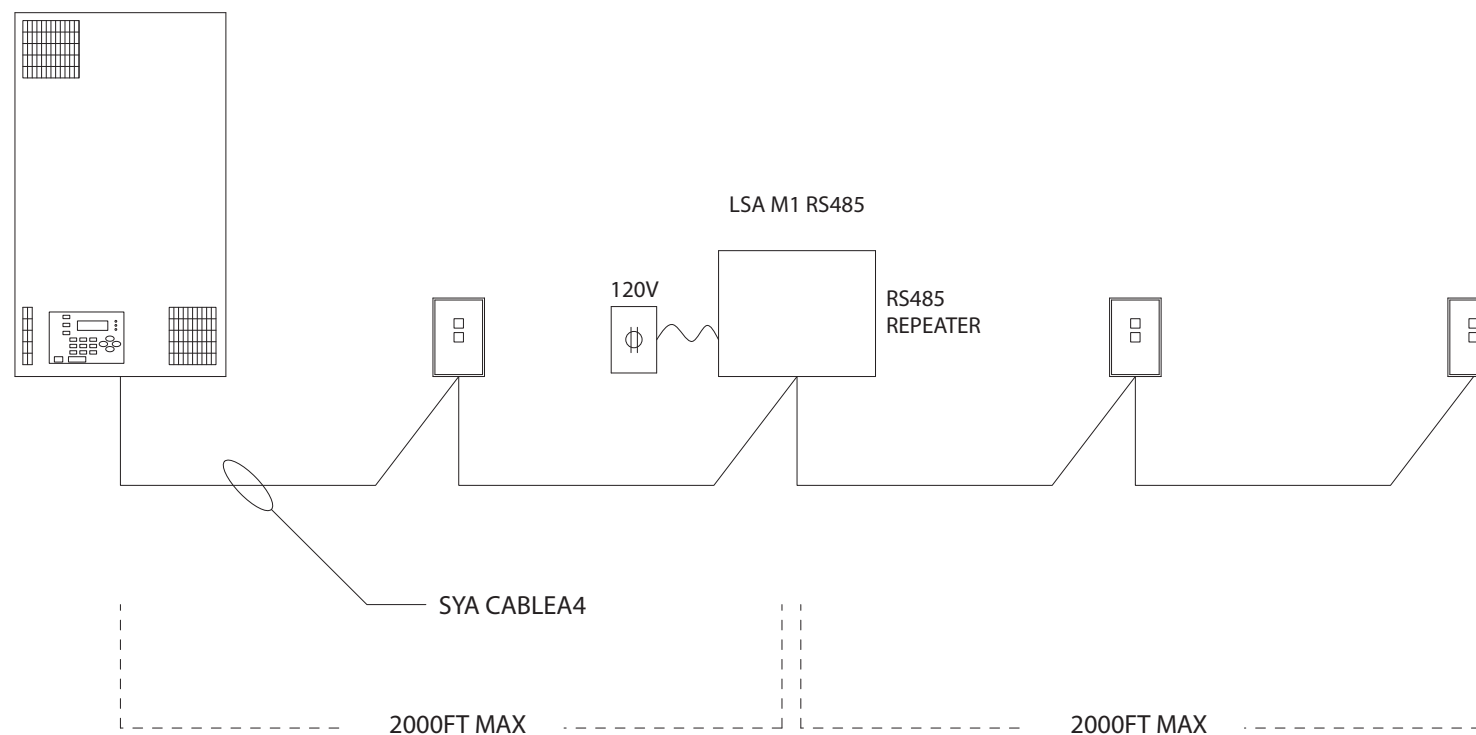
ARCNET Network with Repeater for Extending Panel Network an Additional 2000 FT



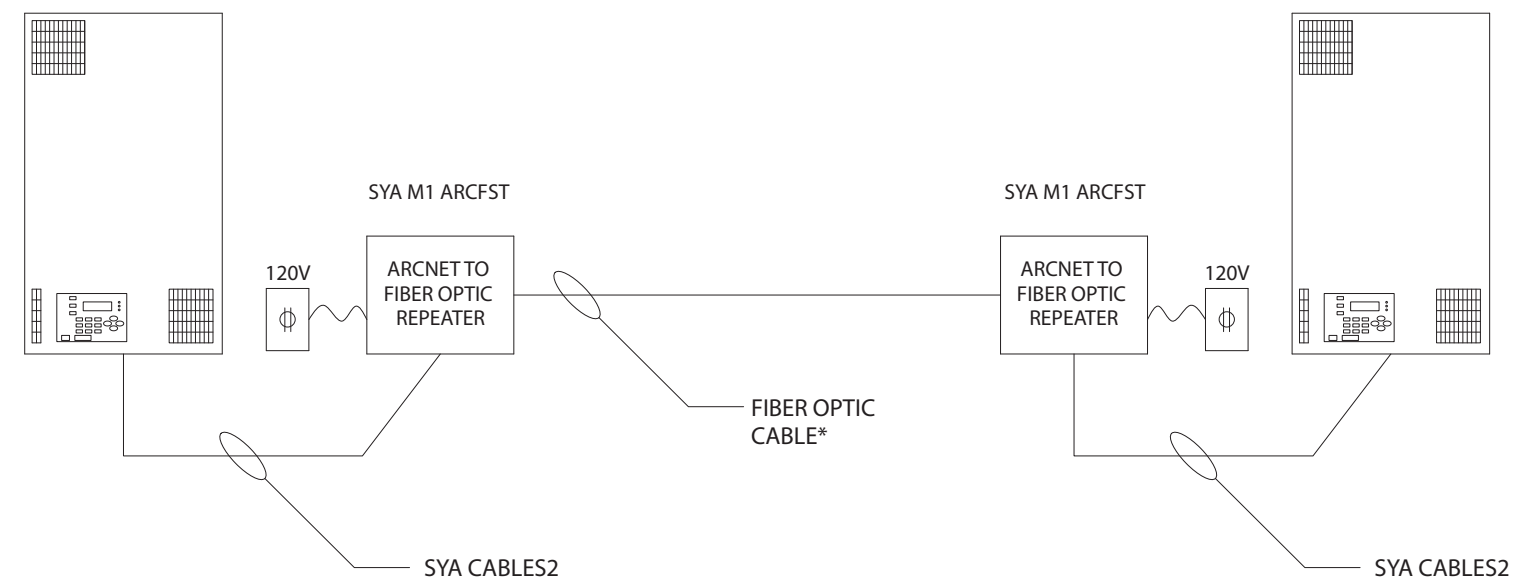
ARCNET Network with Ethernet Converter



Remote Station Network with Repeater for Extending Panel Network an Additional 2000 FT

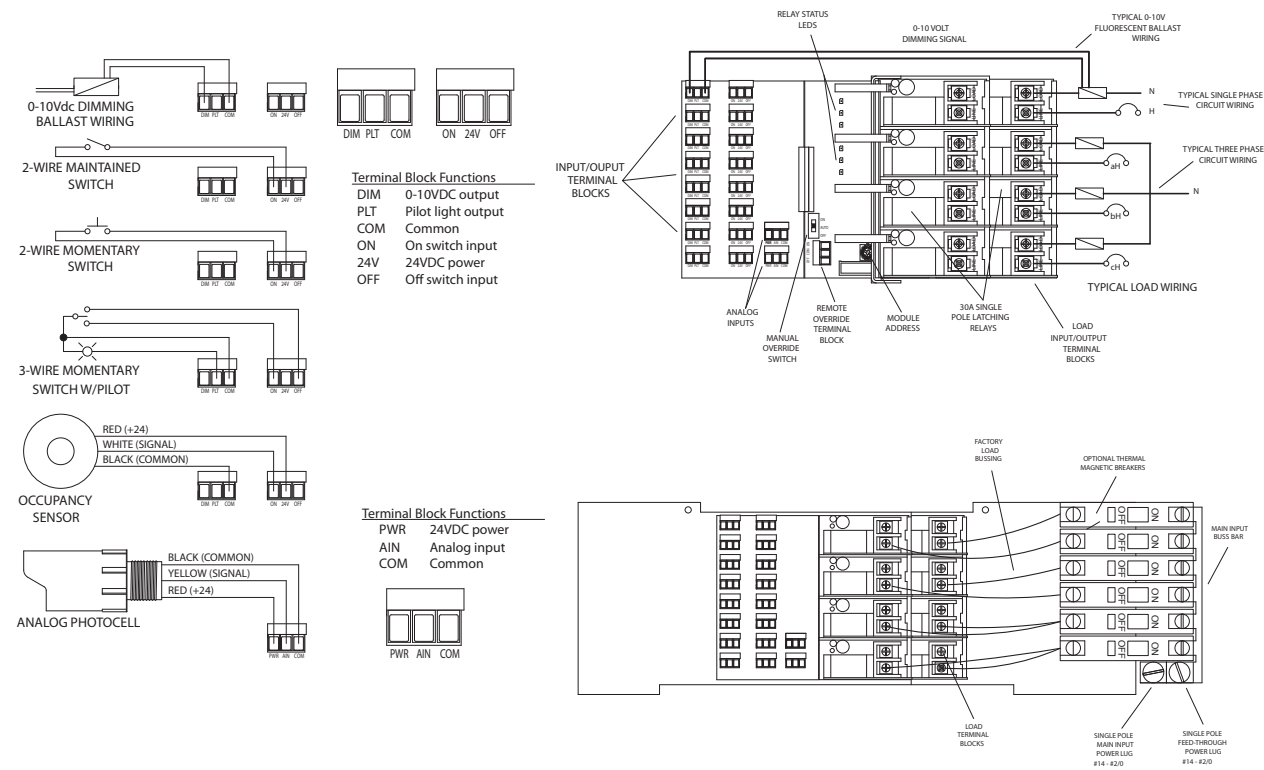


ARCNET to Fiber Network for Networking Between Disjoined Structures

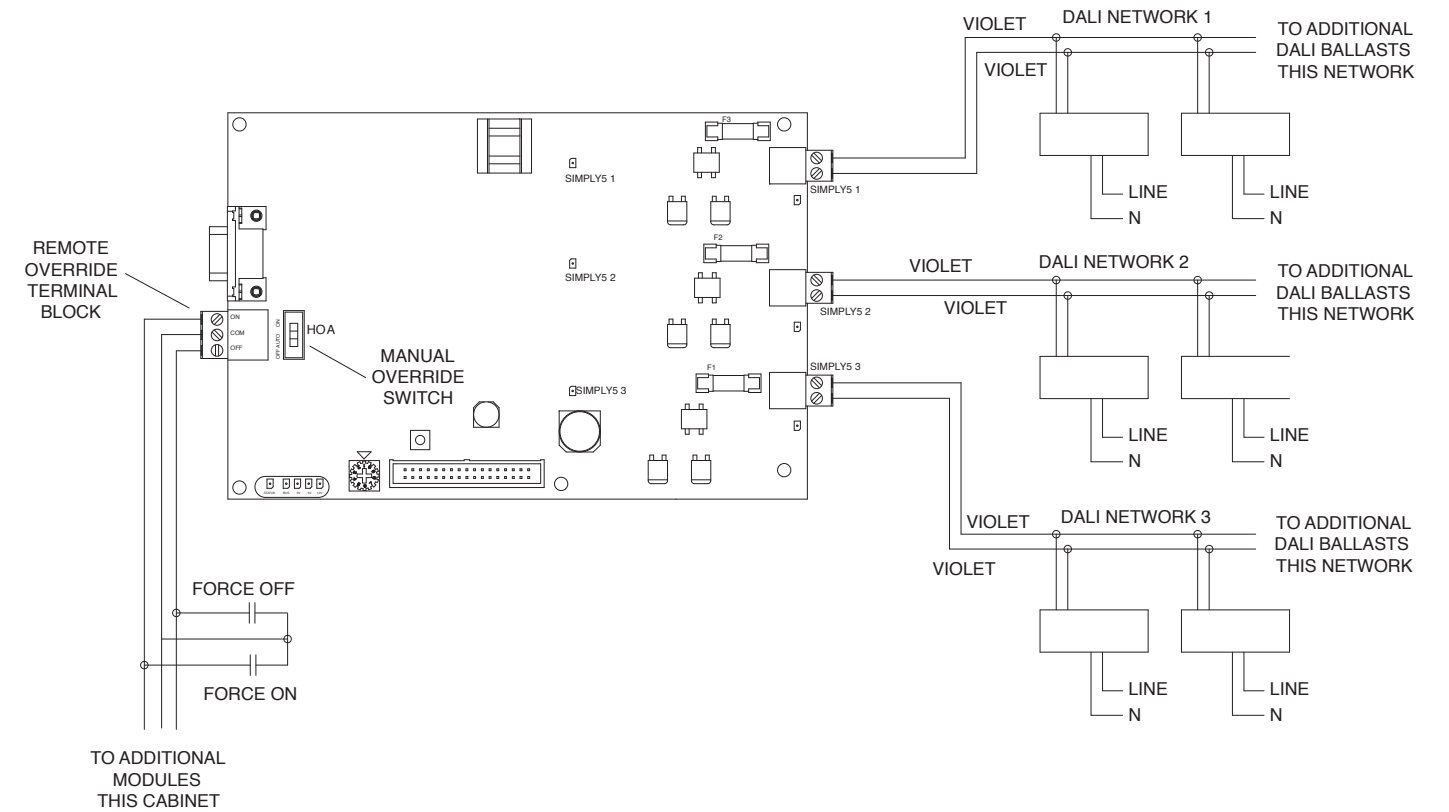


* DUPLEX FIBER OPTIC CABLE RAN IN UNDERGROUND CONDUIT BY CONTRACTOR BETWEEN DISJOINED STRUCTURES

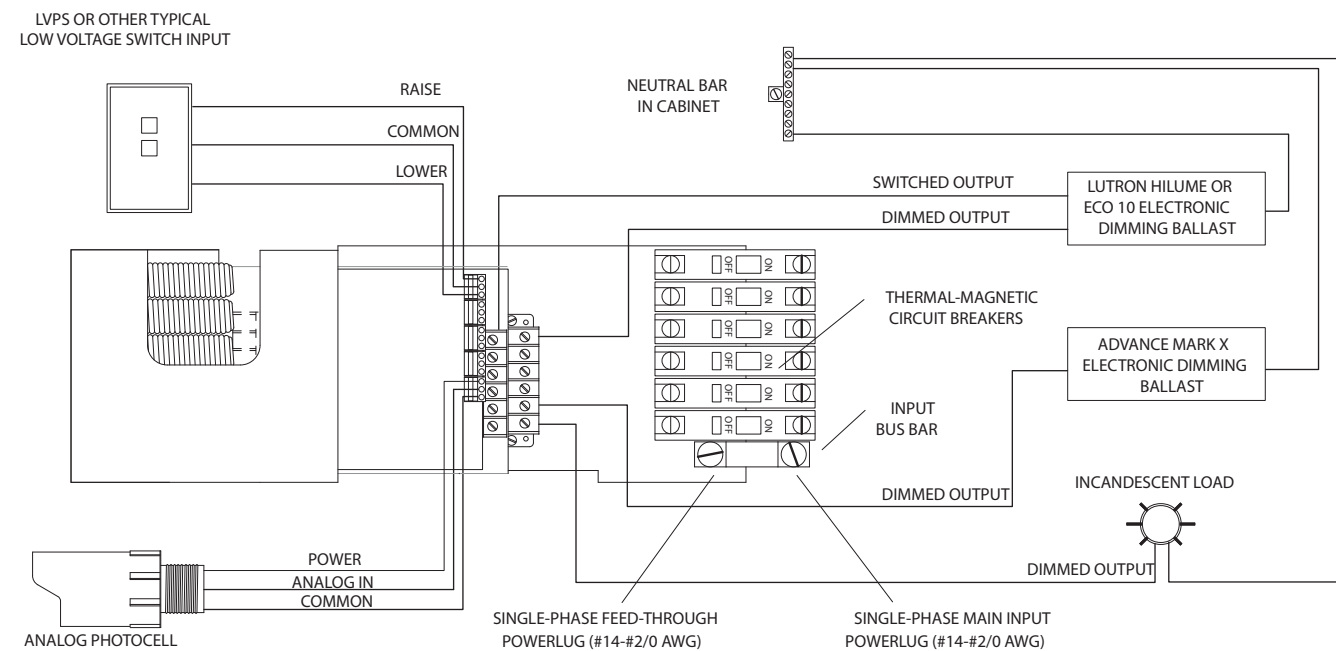
SYPM 8L, SYPM 8LB - Relay & 0-10V Dimming Module



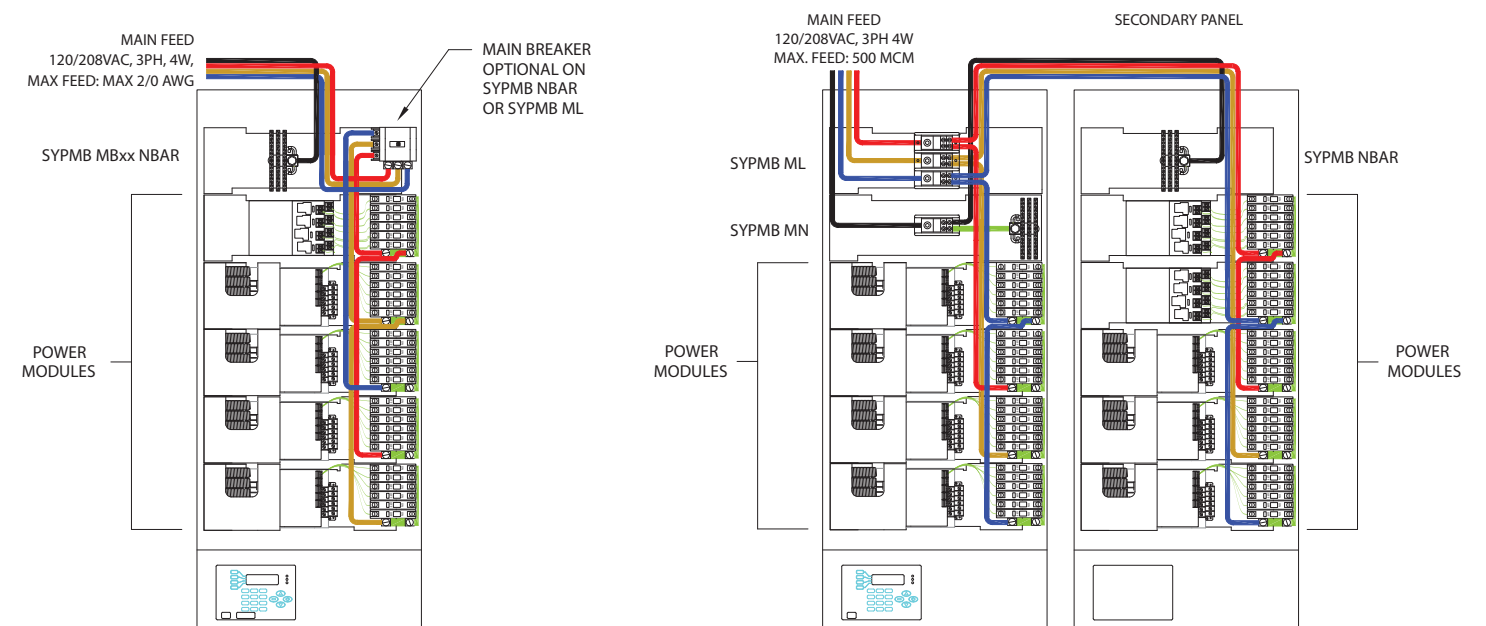
SYPM S5BC - Intelligent Ballast Control Module



SYPMB 6D - Universal Dimming Module

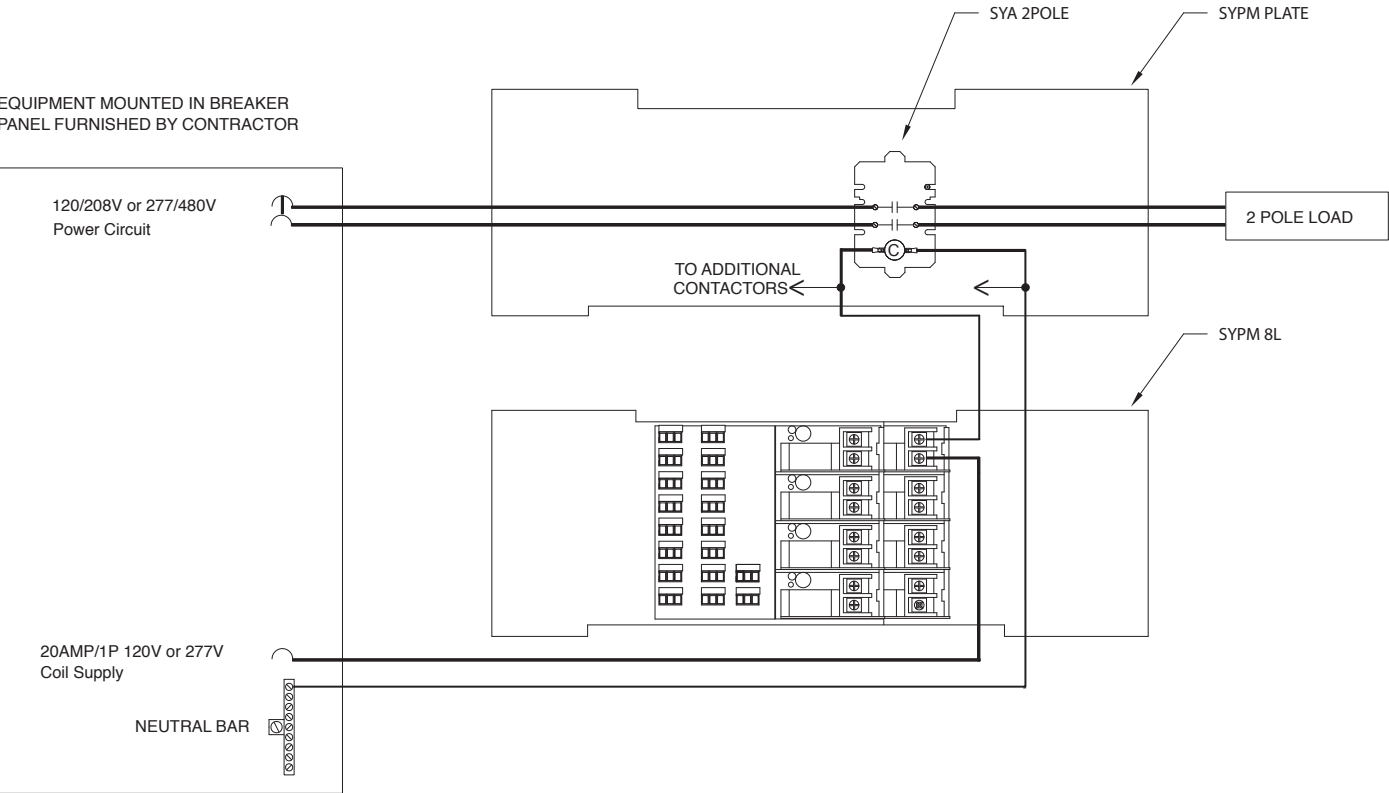


SYPMB NBAR, MB_, ML, MN - Neutral Bar and TAP-LUG Modules

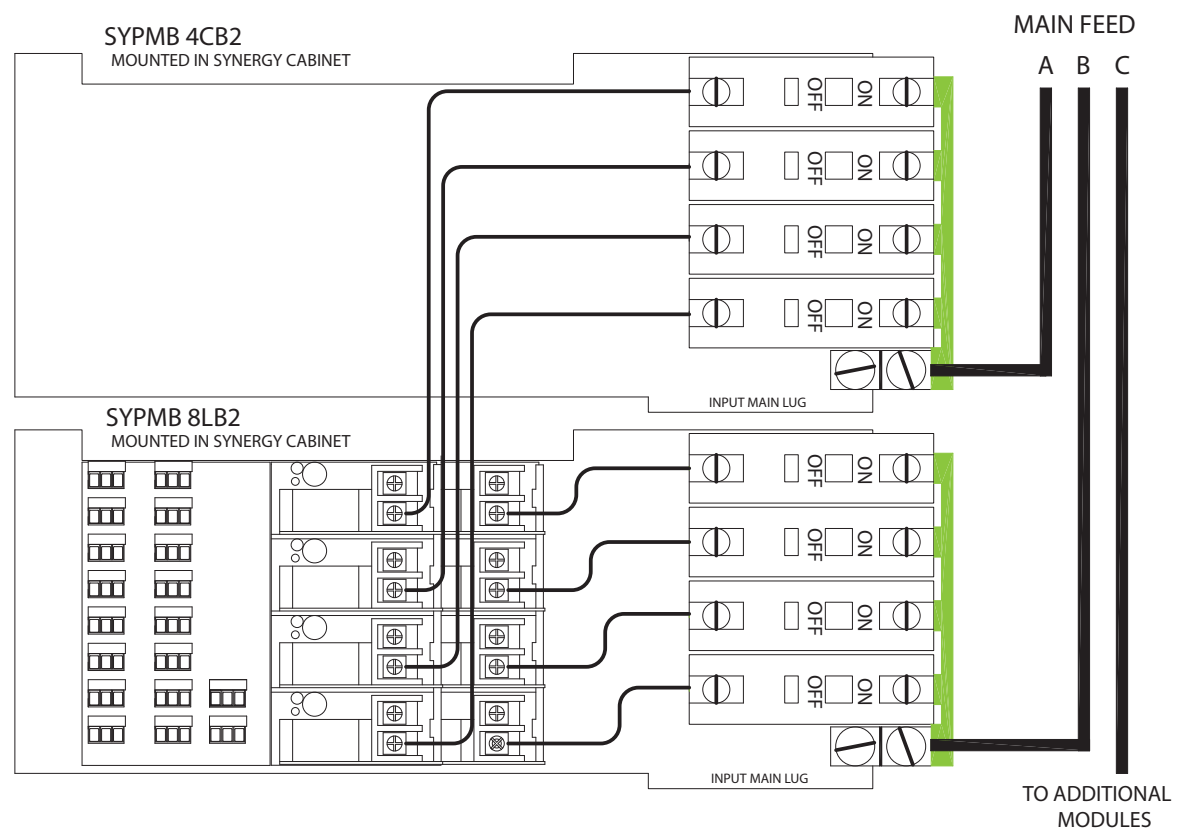


UP TO 4 PANELS
MAY SHARE THE
SAME MAIN FEED

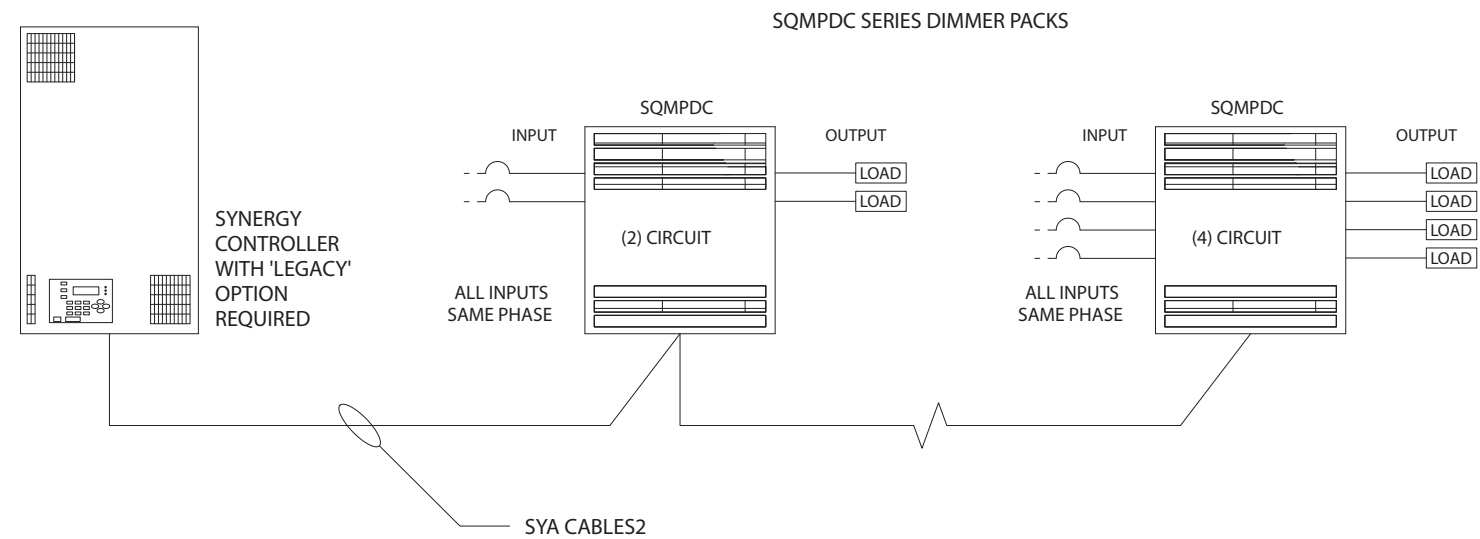
SYA 2Pole, 3Pole, 4Pole - Multi-Pole Contactor Module



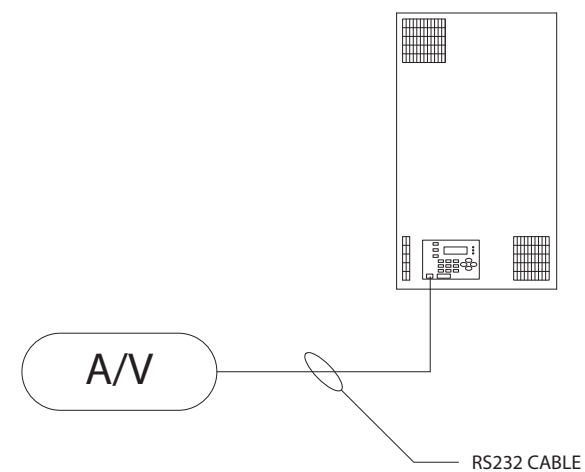
SYPMB CB - Constant Breaker Module



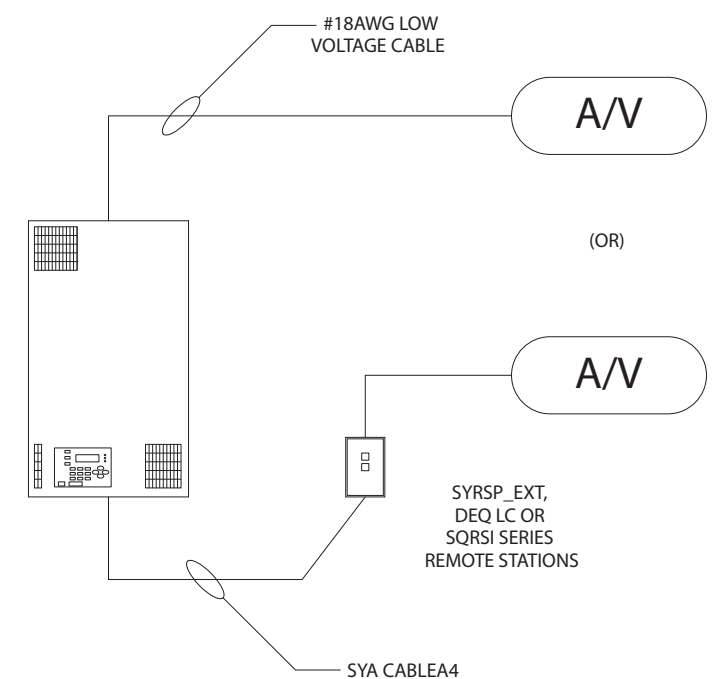
Synergy to MiniPac® Network



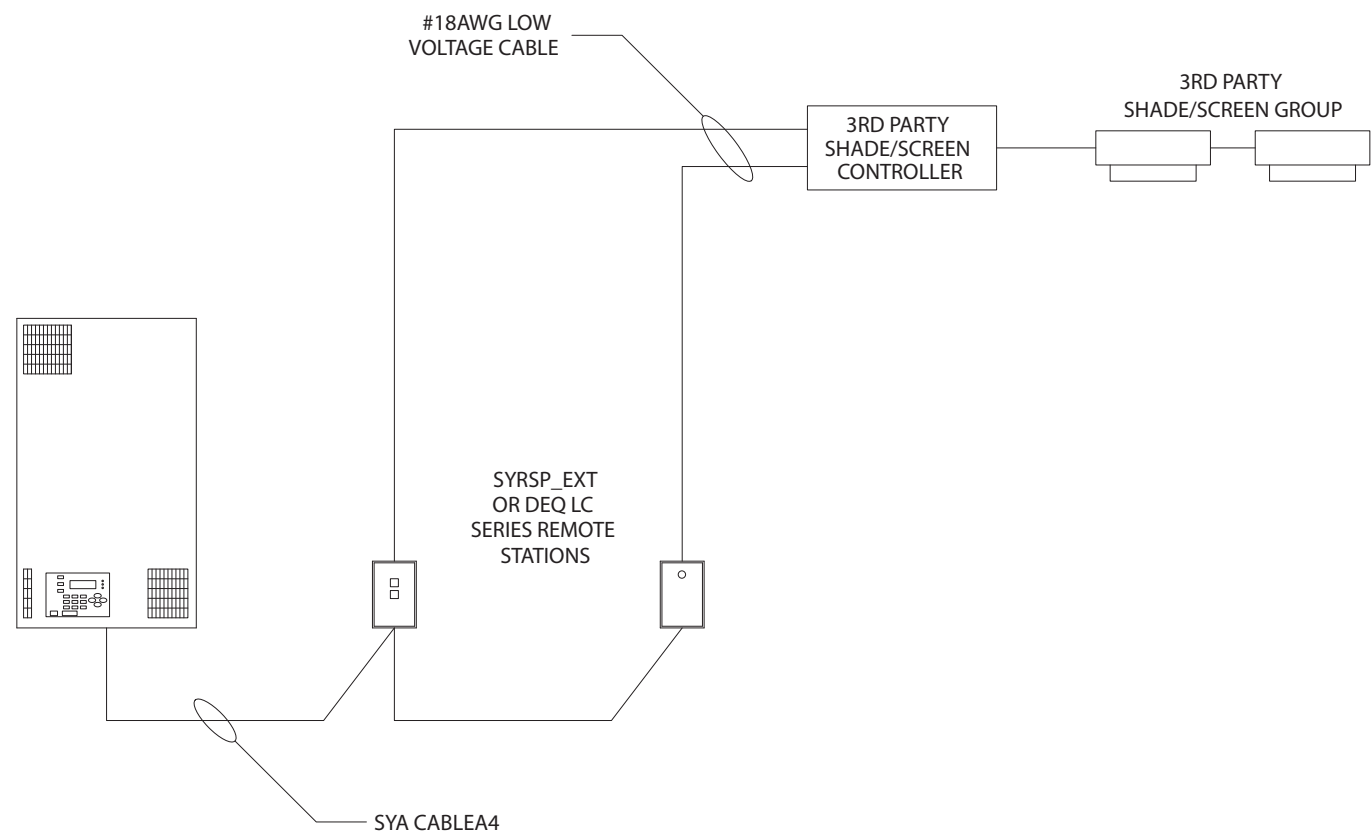
A/V Input Interface to Synergy by RS232



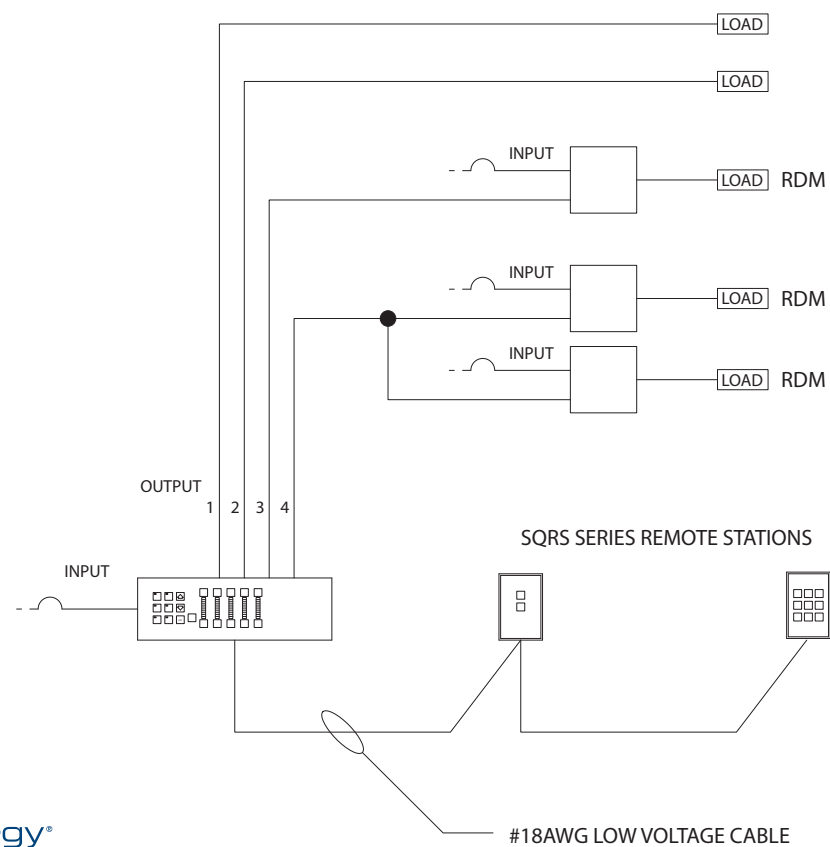
A/V Input Interface to Synergy by Dry Contact Closure



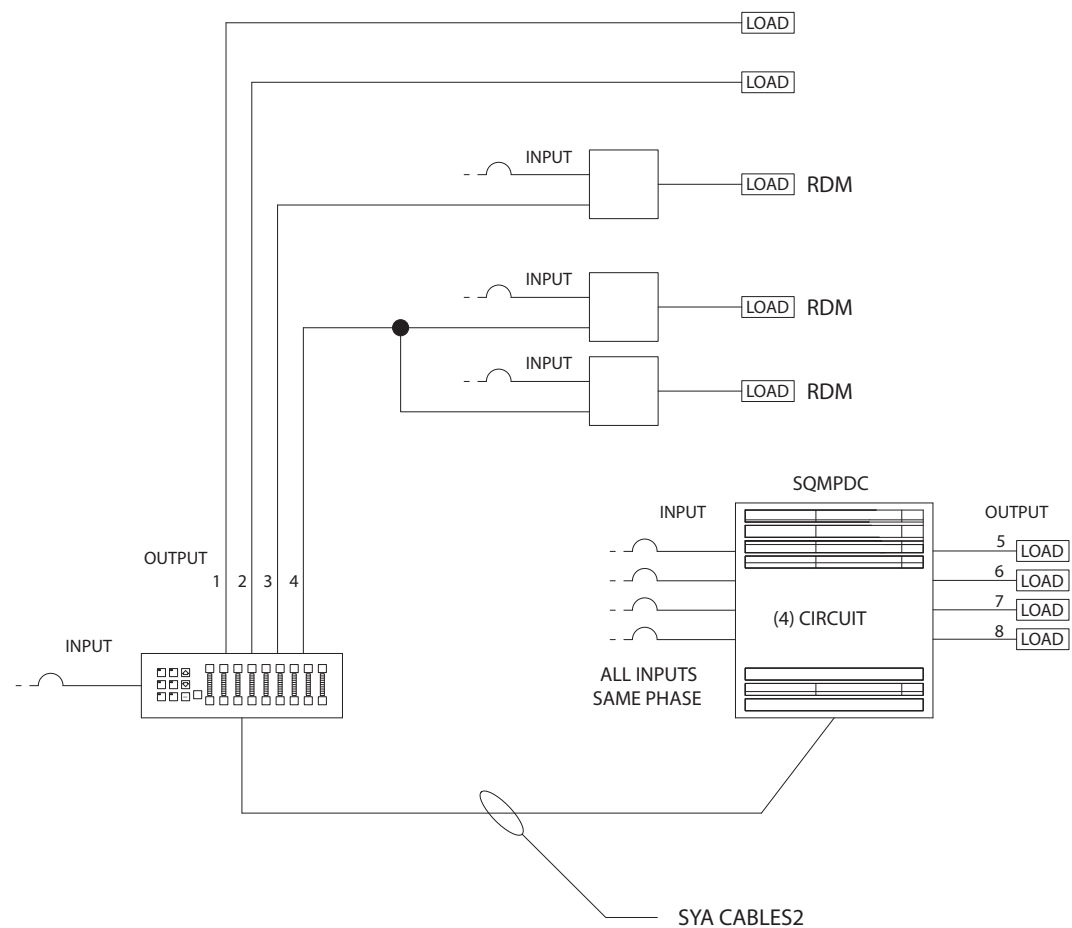
Shade/Screen Control by Dry Contact Closure Output



SQIDC Architectural Preset Control Station with SQRS Remote Stations and Remote Dimming Modules (RDM)



SQIDC Architectural Preset Control Station with MiniPac® Remote Stations and Remote Dimming Modules (RDM)





Our Brands

Lithonia Lighting · Acculamp · American Electric Lighting · Antique Street Lamps
Carandini · Dark To Light · Gotham · Healthcare Lighting · Holophane · Hydrel
Lighting Control & Design · Mark Architectural Lighting · Pathway Connectivity Solutions
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