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

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

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

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

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

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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.

**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.

**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.

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

**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

**Images**
- Enclosures
- Remote Stations
- Control Stations
- Accessories
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.
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.
Specialty

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 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.
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

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-feature 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 SYW 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.

Ordering Information

<table>
<thead>
<tr>
<th>Example: SYELB 16LB1 18DB1 MLX NBAR DMX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series</td>
</tr>
<tr>
<td>SYE6</td>
</tr>
<tr>
<td>SYEMB</td>
</tr>
<tr>
<td>SYELB</td>
</tr>
<tr>
<td>SYE5B</td>
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<tr>
<td>SYEMB</td>
</tr>
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<td>SYELB</td>
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<thead>
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<th>Output quantity/type</th>
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<table>
<thead>
<tr>
<th>Options</th>
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</thead>
<tbody>
<tr>
<td>Make up option</td>
</tr>
<tr>
<td>[Blank] No main lugs, no breaker</td>
</tr>
<tr>
<td>M1</td>
</tr>
<tr>
<td>M2</td>
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<table>
<thead>
<tr>
<th>Controller type</th>
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<tbody>
<tr>
<td>MS</td>
</tr>
<tr>
<td>MLK</td>
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<tr>
<td>SCP</td>
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<table>
<thead>
<tr>
<th>Dimensions/Weight</th>
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<tbody>
<tr>
<td>Small enclosure</td>
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<tr>
<td>Medium enclosure</td>
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<td>Large enclosure</td>
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</table>

<table>
<thead>
<tr>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Maximum one breaker dimming or switching module.</td>
</tr>
</tbody>
</table>

System Enclosures

Example: SYE M 120/277

<table>
<thead>
<tr>
<th>Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYE</td>
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<table>
<thead>
<tr>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
</tr>
<tr>
<td>120/277</td>
</tr>
<tr>
<td>120/1277, 50 or 60Hz operation</td>
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</table>

<table>
<thead>
<tr>
<th>Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYA LRE</td>
</tr>
<tr>
<td>SYM MLE</td>
</tr>
<tr>
<td>SYM MLX</td>
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</table>

<table>
<thead>
<tr>
<th>Voltage</th>
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</thead>
<tbody>
<tr>
<td>347V NBAR</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimensions/Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small enclosure</td>
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<tr>
<td>Medium enclosure</td>
</tr>
<tr>
<td>Large enclosure</td>
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</tbody>
</table>

<table>
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<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Maximum one breaker dimming or switching module.</td>
</tr>
</tbody>
</table>

All enclosures are shipped with a factory-installed power supply with input terminals provided for either 120, 240 or 277 volts supply voltage. Enclosures intended for use with dimmer modules are supplied with an integral thermally-controlled cooling fan and a cover with hinged locking door to cover the power module mounted circuit breakers.

A variety of main lug, neutral bar and main breaker options are available to configure Synergy® as a busied three phase or single phase dimming/switching panel.

Listings
UL Listed to US and Canadian safety standards.

Ordering Information

NOTES:
- Synergy panels with breaker power modules (SYA require a SYEP M16 or SYEP M24) and enclosures at least one power module position in the enclosure panel.
- Main breakers are available for a SYEP configuration from 30A to 100A amps only.
RELAY MODULE WITH EIGHT MECHANICALLY LATCHING, INDEPENDENTLY REPLACEABLE RELAYS

**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**

- Modules are available in two versions, the SYPM 8L and SYPM 8B. 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 dimmable ballasts, eight 3-wire switch inputs to override the outputs, eight pilot light outputs to power switch indicator LEDs and two 0-10VDC inputs for photocells.
- Accepts maintained, momentary or alternative action switches and pilot lights
- Mounts in standard Synergy enclosure
- Available with circuit breakers if used with the Synergy SYPM 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

**Required Accessories**

- SYE enclosure and SYSC MLS or SYSC MLX Controller
- STS-2 and STS-4 for breakers containing 50 or 60A breakers
- Shipping weight is 22lbs. (10kg).

**Example:** SYPM 8L

**SYPMB 6D**

**Line Voltage Dimmer Power Module**

**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.

**Ordering Information**

<table>
<thead>
<tr>
<th>Series</th>
<th>Type</th>
<th>Breaker Configuration</th>
<th>Example: SYPM 6DB1</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYPM 6D</td>
<td>Six dimmers per module</td>
<td>Circuit breaker/voltage</td>
<td></td>
</tr>
<tr>
<td>B1</td>
<td>Six integral 20A, 120V, 15A breakers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B2</td>
<td>Four integral 20A, 277V, 14KA breakers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B3</td>
<td>Six integral 15A, 120V, 10KA breakers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B4</td>
<td>Four integral 15A, 277V, 14KA breakers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B5</td>
<td>Four integral 20A, 120V, 15A breakers</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Example:** SYPM 8L

**SYPMB MB 100 ML**

**Main Breaker/Tap Feed Lug Module**

**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.

**Ordering Information**

<table>
<thead>
<tr>
<th>Series</th>
<th>Type</th>
<th>Example: SYPM MB 100 ML</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYPMB 100 ML</td>
<td>42 circuit neutral bar</td>
<td></td>
</tr>
</tbody>
</table>

**SYPMB MB_NBAR**

**Intelligent Ballast Control Module**

**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, timeblock schedule or graphical workstation.

**Ordering Information**

<table>
<thead>
<tr>
<th>Series</th>
<th>Type</th>
<th>Example: SYPM S5BC</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYPMB MB_NBAR</td>
<td>Main breaker and tap feed lug module</td>
<td>Main breaker, 3-pole, indicate capacity: 30, 40, 50, 60, 70, 80, or 100A ampere.</td>
</tr>
</tbody>
</table>

**Example:** SYPM S5BC

**Series**

- SYPMB

**Type**

- S5BC

**Accessory**

- Accessory software and cables to interface software

**NOTE:**

1. SYPM 5BCB requires the SYPM 5BCB start-up kit.
2. Requires SYE and breakers containing 20A breakers.
3. Shipping weight is 8lbs. (3.6kg).
## Tap Feed Power Modules

### SYPMB ML
- **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 feeder.
- **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.

### 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 feeder.
- **Features:**
  - 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.

### Ordering Information

<table>
<thead>
<tr>
<th>Series</th>
<th>Example: SYPMB ML</th>
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</thead>
<tbody>
<tr>
<td>SYPMB</td>
<td>Number of Breakers/ Type/ Amps-Voltage</td>
</tr>
<tr>
<td>ML</td>
<td>Six 20A, 120V circuit breakers</td>
</tr>
<tr>
<td>MN</td>
<td>Four 20A, 277V circuit breakers</td>
</tr>
<tr>
<td>NBAR</td>
<td>Four 20A, 347V circuit breakers</td>
</tr>
</tbody>
</table>

### 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

### Ordering Information

<table>
<thead>
<tr>
<th>Series</th>
<th>Example: SYPMB 6CB1 NBAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYPMB</td>
<td>Number of Breakers/ Type/ Amps-Voltage</td>
</tr>
<tr>
<td>ML</td>
<td>Six 20A, 120V circuit breakers</td>
</tr>
<tr>
<td>MB</td>
<td>Four 20A, 277V circuit breakers</td>
</tr>
<tr>
<td>MN</td>
<td>Four 20A, 347V circuit breakers</td>
</tr>
<tr>
<td>NBAR</td>
<td>Four 20A, 347V circuit breakers</td>
</tr>
</tbody>
</table>

### Multi-Pole Contactor Module

### SYA 2POLE
- **Intended Use:** Synergy® two-three and four-pole lighting contacts 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.

### SYA 3POLE
- **Intended Use:** Synergy® two-three and four-pole lighting contacts 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.

### SYA 4POLE
- **Intended Use:** Synergy® two-three and four-pole lighting contacts 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.

### Ordering Information

<table>
<thead>
<tr>
<th>Series</th>
<th>Example: SYA 4POLE 120</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYA</td>
<td>Contact/ Coil Voltage</td>
</tr>
<tr>
<td>2POLE</td>
<td>2 poles, 25 Amp contacts/ 120 volt</td>
</tr>
<tr>
<td>3POLE</td>
<td>3 poles, 60 Amp contacts/ 277 volt</td>
</tr>
<tr>
<td>4POLE</td>
<td>4 poles, 90 Amp contacts/ 347 volt</td>
</tr>
</tbody>
</table>

### Accessories

<table>
<thead>
<tr>
<th>SYPM PLATE</th>
<th>Order separately</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required to mount multipole contactors in a Synergy SCI enclosure.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Up to 4 contactors can be mounted on a SYPM PLATE.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**System Controllers**

**SYSC**

**Intended Use**
Mounts in a Synergy SYE enclosure. Provides user interface, display, and programmable logic for a Synergy® Lighting Control System.

**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, SYRBP Digital Wallstation, SYRSK EXT O-10VDC Wallstation Distributed Controller and DEQ LC Distributed Controller.

**Ordering Information**

<table>
<thead>
<tr>
<th>Feature</th>
<th>SYE 12A 100A 225A 400A</th>
<th>SYBPC MLS Controller</th>
<th>SYBPC MLX Controller</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analog Input</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Scheduling</td>
<td>100 schedules</td>
<td>100 schedules</td>
<td>100 schedules</td>
</tr>
<tr>
<td>User interface</td>
<td>simple operation</td>
<td>using soft keys</td>
<td>using soft keys</td>
</tr>
<tr>
<td>System Status LED Indicators</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Example: SYSC MLX**

User interface is designed for simple operation using soft keys. Large 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 scheduling. The controller can read values from accessory photocells and provide an 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.

**Scheduling** – Using integral astronomic clock capability, lighting can be fully automated to conform to a rotating seven-day schedule. Astronomic feature provides dusk/dawn detection, eliminating the need for photocells. Holiday schedule allows entry of up to 32 periods. Blink-warm 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.

**Synergy® Controllable Breaker Panel**

**Ordering Information**

<table>
<thead>
<tr>
<th>Feature</th>
<th>SYBP30</th>
<th>SYBP39</th>
<th>SYBP42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum rating</td>
<td>100 amps</td>
<td>100 amps</td>
<td>420 amps</td>
</tr>
<tr>
<td>Voltage</td>
<td>277V, 10A, 1POLE</td>
<td>277V, 10A, 1POLE</td>
<td>277V, 10A, 1POLE</td>
</tr>
</tbody>
</table>

**Example: SYBP42 P2 225 ML B SS MLX PHONE**

**Controller Selection Table**

<table>
<thead>
<tr>
<th>Branch Circuit Breaker Selection Table (Order as separate items.)</th>
<th>SYBP30</th>
<th>SYBP39</th>
<th>SYBP42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controllable Breakers</td>
<td>Standard Breaker</td>
<td>Standard Breaker</td>
<td>Standard Breaker</td>
</tr>
<tr>
<td>Standard Breakers</td>
<td>Standard Controller</td>
<td>Standard Controller</td>
<td>Standard Controller</td>
</tr>
</tbody>
</table>

** сети**

**MC Controller**

**Options**

<table>
<thead>
<tr>
<th>Feature</th>
<th>SYBP30</th>
<th>SYBP39</th>
<th>SYBP42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode</td>
<td>Stand-alone controller</td>
<td>Networks as controller</td>
<td>Secondary panel, less controller</td>
</tr>
<tr>
<td>Control</td>
<td>Stand-alone</td>
<td>Networks as controller</td>
<td>Secondary panel, less controller</td>
</tr>
<tr>
<td>System Control</td>
<td>System as controller</td>
<td>Networks as controller</td>
<td>Secondary panel, less controller</td>
</tr>
<tr>
<td>Controller</td>
<td>Stand-alone</td>
<td>Networks as controller</td>
<td>Secondary panel, less controller</td>
</tr>
</tbody>
</table>

**Listings**

UL Listed to US and Canadian safety standards.
**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 SYRS and SYRS EXT remote stations are digital devices capable of stand-alone or networked operation. The SYRS 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**

<table>
<thead>
<tr>
<th>Series</th>
<th>Number of gang</th>
<th>Number of buttons</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYRS 1G</td>
<td>1 gang</td>
<td>8 buttons</td>
<td>Brushed stainless steel, black frame and buttons</td>
</tr>
<tr>
<td>SYRS 1G</td>
<td>1 gang</td>
<td>8 buttons</td>
<td>Painted black, black frame and buttons</td>
</tr>
<tr>
<td>SYRS 1G</td>
<td>1 gang</td>
<td>8 buttons</td>
<td>White, white frame and buttons</td>
</tr>
<tr>
<td>SYRS 1G</td>
<td>1 gang</td>
<td>8 buttons</td>
<td>Engraved button caps (Order 1 per button)</td>
</tr>
</tbody>
</table>

**Example:** SYRS 1G 3BT BJ4 EXT

**Features**

- 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 SYRS Digital Remote Wallstations and Distributed Controllers for multi-location control dimming.

**Ordering Information**

<table>
<thead>
<tr>
<th>Series</th>
<th>Number of preset and channels</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQCS 4P</td>
<td>6 presets, 4 channels</td>
</tr>
<tr>
<td>SQCS 6P</td>
<td>6 presets, 8 channels</td>
</tr>
<tr>
<td>SQCS 10P</td>
<td>6 presets, 12 channels</td>
</tr>
<tr>
<td>SQCS 16P</td>
<td>6 presets, 16 channels</td>
</tr>
</tbody>
</table>

**Example:** SQCS 6P 4C BJ4 TR

**Features**

- 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.

**Ordering Information**

**Example:** SQRS 25 BJ4

**Features**

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

**Architectural Remote Station**

**Intended Use**

Provides control functions in conjunction with the Sequel MeX™/Pro or Sequel MeX™/Pro Plus dimming system or the Sequel IDC wallbox dimming system.

**Classification**

Class 2 low voltage device.
**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

---

**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**

<table>
<thead>
<tr>
<th>Series</th>
<th>Number of buttons</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>LVPS</td>
<td>2BT 2 buttons</td>
<td>IV</td>
</tr>
<tr>
<td></td>
<td>4BT 4 buttons</td>
<td>WH</td>
</tr>
</tbody>
</table>

- **Example:** LVPS 2BT WH

---

**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-voltage wire connections.

Use with Synergy® or SwitchPak® lighting control panels.

**Ordering Information**

<table>
<thead>
<tr>
<th>Series</th>
<th>Options</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>LVKS</td>
<td>MOA: 3-position maintained for hand-off-auto operations</td>
<td>IV</td>
</tr>
<tr>
<td></td>
<td>SPDT MOM: 3-position momentary center off</td>
<td>WH</td>
</tr>
<tr>
<td></td>
<td>SPDT 2-position maintained</td>
<td></td>
</tr>
</tbody>
</table>

- **Example:** LVKS SPDT WH

---

**SSPL**

**SweepSwitch®**

**Intended Use**

Provides local line voltage override control of lighting on 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.

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.

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.

**Ordering Information**

<table>
<thead>
<tr>
<th>Series</th>
<th>Load amperage</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSPL</td>
<td>5 0 to 5 amps</td>
<td>277 120 or 277 watts</td>
</tr>
<tr>
<td></td>
<td>20 10 to 20 amps</td>
<td></td>
</tr>
<tr>
<td></td>
<td>200 3-way operation</td>
<td></td>
</tr>
</tbody>
</table>
**SYA LCD SCREEN**

**Intended Use**
Used in conjunction with a Synergy® system equipped with SYSW 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.
- UL Listed to US and Canadian safety standards.

**Ordering Information**
- SYA LCD SCREEN: Full-color touchscreen user interface (May be wall or panel mounted).
- SYA LCD SCREEN (Mounting kit)
  - SYA LCD SCREEN
  - Mounting exclusive kit
  - Mounts SYA LCD SCREEN to wall from finished wall side, not mounting kit 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 Synergy SYSW CONFIG. Schedules and programs can be composed offline 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.
- 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 graphical objects to directly monitor and override all system inputs (switches, photocells, digital status), outputs (relays, dimmers, controllable breakers, DALI devices) and load groups.

**Ordering Information**
- Example: SYA LCD SCREEN
  - SYA LCD SCREEN: Full-color touchscreen user interface.

**Stage Lighting and Controls**
**LSCC**

**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 virtual second scene to duplicate the effective number of control channels.

**Features**
- Two-scene preset, 12 control channels
- Two-scene preset, 24 control channels
- Two-scene preset, 36 control channels
- Power-On LED
- Dual operation modes
- Split dipoles crossfaders
- Grand master fader
- Blackout switch
- DMX-512 output signal
- Chase control module
- 25' control cable included
- Heavy-duty construction

**Ordering Information**
- Example: LSCC 2S12C P2S DMX
  - LSCC 2S12C: Two-scene preset, 12 control channels
  - LSCC 2S24C: Two-scene preset, 24 control channels
  - LSCC 2S36C: Two-scene preset, 36 control channels

**Accessories (Order separately)**
- LSCC P2S DMX: Single gang pass-through receptacle
- LSCC P2M DMX: Single gang pass-through receptacle

**Graphical LCD User Interface**

**Ordering Information Example:** SYA LCD SCREEN
- SYA LCD SCREEN: Full-color touchscreen user interface.

**Graphical Interface Software**

**SYA ROUTER**

**Intended Use**
Synergy® graphical user software

**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 graphical objects to directly monitor and override all system inputs (switches, photocells, digital status), outputs (relays, dimmers, controllable breakers, DALI devices) and load groups.

**Ordering Information Example:** SYA ROUTER
- SYA ROUTER: Synergy® graphical user software

**System Configuration Software**
**SYSA CONFIG**

**Intended Use**
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 graphical objects to directly monitor and override all system inputs (switches, photocells, digital status), outputs (relays, dimmers, controllable breakers, DALI devices) and load groups.

**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 graphical objects to directly monitor and override all system inputs (switches, photocells, digital status), outputs (relays, dimmers, controllable breakers, DALI devices) and load groups.

**Ordering Information Example:** SYSA CONFIG
- SYSA CONFIG: Synergy® configuration software

**Graphical Interface Software**

**SYSTEM GRAPHICS**

**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.

**Ordering Information Example:** SYSTEM GRAPHICS
- SYSTEM GRAPHICS: Synergy® graphical user software

**Accessories (Order separately)**
- SYSTEM GRAPHICS SCREENS: Factory-prepared SYSTEM GRAPHICS screen per user specifications. Indicate quantity of screens required.
- SYA DESKTOP: Personal computer suitable for system configuration or graphics. Contact factory for more options.

**Accessories**
- SYA ROUTER: PC workstation suitable for system configuration or graphics. Contact factory for more options.
- SYA LCD SCREEN: Full-color TFT touchscreen graphical interface may be configured with floorplan-based or button-based screens.
- SYA LCD SCREEN (Mounting kit)
  - SYA LCD SCREEN
  - Mounting exclusive kit
  - Mounts SYA LCD SCREEN to wall from finished wall side, not mounting kit required.

**Graphical Interface Software**

**SYSTEM GRAPHICS**

**Intended Use**
Synergy® graphical user software

**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 graphical objects to directly monitor and override all system inputs (switches, photocells, digital status), outputs (relays, dimmers, controllable breakers, DALI devices) and load groups.

**Ordering Information Example:** SYSTEM GRAPHICS
- SYSTEM GRAPHICS: Synergy® graphical user software

**Accessories (Order separately)**
- SYSTEM GRAPHICS SCREENS: Factory-prepared SYSTEM GRAPHICS screen per user specifications. Indicate quantity of screens required.
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**Graphical Interface Software**

**SYSTEM GRAPHICS**

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**Ordering Information Example:** SYSTEM GRAPHICS
- SYSTEM GRAPHICS: Synergy® graphical user software

**Accessories (Order separately)**
- SYSTEM GRAPHICS SCREENS: Factory-prepared SYSTEM GRAPHICS screen per user specifications. Indicate quantity of screens required.
- SYA DESKTOP: Personal computer suitable for system configuration or graphics. Contact factory for more options.
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- SYA LCD SCREEN: Full-color TFT touchscreen graphical interface may be configured with floorplan-based or button-based screens.
- SYA LCD SCREEN (Mounting kit)
  - SYA LCD SCREEN
  - Mounting exclusive kit
  - Mounts SYA LCD SCREEN to wall from finished wall side, not mounting kit required.
### 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 day/night 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.

**Ordering Information**

<table>
<thead>
<tr>
<th><strong>Example</strong></th>
<th><strong>DEQ LC</strong> Distributed Controller</th>
</tr>
</thead>
</table>

**Ordering Information Example:**

**Series**

- **DEQ LC** Distributed Controller

**NOTES:** Requires SYA MLE or SYA ML3

### 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. Dimmer is fed from individual TSA 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**

<table>
<thead>
<tr>
<th><strong>Example</strong></th>
<th><strong>SQMPDC 4UX2 M2 120</strong></th>
</tr>
</thead>
</table>

**Series**

- **SQMPDC**

**Number of dimmers**

- 2 dimmers
- 4 dimmers

**Voltage**

- 120V
- 240V

**Options**

- SYC CABLE A4 Control cabinet network wire

**NOTES:**
- 2 Capacity listed is per dimmer. Maximum of four dimmers per pack.
- 3 All dimmers are automatically synchronized and configured for input voltage. When used with Synergy® or SwitchPak® lighting control system for use in dimming, switching or daylighting applications.
- 4 Emergency dimmer packs or SQIDC circuits. Connects to Synergy® cabinet or SQIDC via SYA CABLES2 network wire.

### Analog Photosensor

**DEQ APS**

**Intended Use**
Low voltage sensor used to provide ambient light information to for indoor daylight harvesting applications.

**Features**
- This specialty photosensor is factory calibrated to accommodate the relatively low light levels normally found on the ceiling in office applications.
- 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.

**Ordering Information**

<table>
<thead>
<tr>
<th><strong>Example</strong></th>
<th><strong>DEQ APS IN</strong></th>
</tr>
</thead>
</table>

**Series**

- **DEQ APS** Analog photosensor

**Mounting**

- IN Indoor

**Dimensions**

- 1.25” (32)

**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

### Analog Photosensor

**SYA IPCL**

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

**Features**
- 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**

<table>
<thead>
<tr>
<th><strong>Example</strong></th>
<th><strong>SYA IPCL</strong></th>
</tr>
</thead>
</table>

**Series**

- **SYA IPCL** Analog photosensor

**Mounting**

- LSA LS A System Accessory

**Options**

- OL Outdoor (0-105 FC)
- S Skylight sensor (0-1000 FC)

**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

### Analog Photosensor

**LSA APS**

**Intended Use**
A low voltage system component that provides ambient light information to a Synergy® panel, Synergy Remote Station (SYRSP EX or DEQ LC), SwitchPak or SIMPLY5 Sensor Connector (SSC), as an analog input. The photosensor provides control of lighting in response to ambient light conditions.

**Features**
- Units for outdoor or daylight applications mounted 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 indicated 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.

**Ordering Information**

<table>
<thead>
<tr>
<th><strong>Example</strong></th>
<th><strong>LSA APS OL</strong></th>
</tr>
</thead>
</table>

**Series**

- **LSA APS** Analog photosensor

**Mounting**

- OL Outdoor (0-105 FC)
- S Skylight sensor (0-1000 FC)
Emergency Shunt Relay

**Intended Use**

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.

**Features**

- 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**

<table>
<thead>
<tr>
<th>Series</th>
<th>Voltage</th>
<th>Number of Relays per Enclosure</th>
<th>Enclosure Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>GR2001 EMSHUNT</td>
<td>120</td>
<td>1 Emergency Shunt Relays</td>
<td>NEMA 1</td>
</tr>
<tr>
<td></td>
<td>277</td>
<td>2 Emergency Shunt Relays</td>
<td>NEMA 4</td>
</tr>
</tbody>
</table>

Example: GR2001 EMSHUNT 120 1SR

**Arcnet Repeater SYA M1 ARCARC**

**Intended Use**

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 CableS2 or Belden 3105A only) or connecting more than 32 SYSC MLX controllers to a single network.

**Features**

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

**Ordering Information**

<table>
<thead>
<tr>
<th>Series</th>
<th>Example: SYA M1 ARCARC</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSA M1 RS4852</td>
<td></td>
</tr>
</tbody>
</table>

**RS485 Network Isolator and Repeater LSA M1 RS4852**

**Intended Use**

The LSA M1 RS4852 network repeater provides a means of extending the Synergy® A4 digital control station network beyond 2000 feet.

**Features**

- 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
- SPST low voltage dry contact outputs rated for 5 Amps
- UL Listed

**Ordering Information**

<table>
<thead>
<tr>
<th>Series</th>
<th>Example: LSA M1 RS4852</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSA M1 RS4852</td>
<td></td>
</tr>
</tbody>
</table>

**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 loads 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 SQIDC remote stations or monomount 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 bulk 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.

**Ordering Information**

<table>
<thead>
<tr>
<th>Series</th>
<th>Capacity (VA)</th>
<th>Number of presets and channels</th>
<th>Wallplate style</th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQIDC</td>
<td>2000 watts</td>
<td>6 presets, 6 channels</td>
<td>SD/S</td>
<td>120</td>
</tr>
</tbody>
</table>

**Notes:**
- A channel requires 10000FCA** dimmer cabinet for control of loads on channel 6.
- Additional delivery time and cost may be associated.

**Listings:**
UL Listed to US and Canadian safety standards.

---

**Network Cables**

**SYA CABLES2**
**SYA CABLEA4**

**Intended Use**
- Plenum rated network cable suitable for use with industrial EIA RS-485 networks.
- SYA CABLES2 - Fully compatible with Synergy® MILX and SwitchMark® System Remote panel to panel networks.
- SYA CABLEA4 - 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.

**Ordering Information**

<table>
<thead>
<tr>
<th>Series</th>
<th>Cable</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>STX</td>
<td>SYA CABLES2</td>
<td>1000FT</td>
</tr>
<tr>
<td>STX</td>
<td>SYA CABLEA4</td>
<td>1000FT</td>
</tr>
</tbody>
</table>

**Notes:**
- Cannot be used underground.

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

---

**Fiber Optic Repeater Network Hub**

**SYA M1 ARCFST**
**SYA M1 ARCFST2**

**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.

**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**

**Example:**

<table>
<thead>
<tr>
<th>Series</th>
<th>SYA M1 ARCFST</th>
</tr>
</thead>
<tbody>
<tr>
<td>BF4</td>
<td>BF4</td>
</tr>
<tr>
<td>IE3</td>
<td>IE3</td>
</tr>
<tr>
<td>WC2</td>
<td>WC2</td>
</tr>
<tr>
<td>BL4</td>
<td>BL4</td>
</tr>
<tr>
<td>BJ4</td>
<td>BJ4</td>
</tr>
</tbody>
</table>

---

**Ethernet Switch**

**SYA Ethernet Switch 5Port**

**Intended Use**
The SYA Ethernet switch provides five 10/100Mbps plug and play shielded RJ-45 ports for Synergy STC MILX Controller applications. Each port is Auto-MDIX 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 broadcast of degrading network performance.

**Features**
- Compact size, 10BASE-T/10BASE-TX compliant
- Auto-negotiated data rate, duplex and flow control
- Panel and DIN-rail mountable versions
- 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**

**Example:**

<table>
<thead>
<tr>
<th>Series</th>
<th>SYA ETHERNET SWITCH</th>
</tr>
</thead>
<tbody>
<tr>
<td>BF4</td>
<td>BF4</td>
</tr>
<tr>
<td>IE3</td>
<td>IE3</td>
</tr>
<tr>
<td>WC2</td>
<td>WC2</td>
</tr>
<tr>
<td>BL4</td>
<td>BL4</td>
</tr>
</tbody>
</table>

---

**Ethernet Router**

**SYA Router**

**Intended Use**
The SYA ROUTER is a high performance, microprocessor-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

**Listings:**
UL Listed, NEC type CL2P, rated for 75° C/300 Vols.

**Ordering Information**

**Example:**

<table>
<thead>
<tr>
<th>Series</th>
<th>SYA ROUTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>BF4</td>
<td>BF4</td>
</tr>
<tr>
<td>IE3</td>
<td>IE3</td>
</tr>
<tr>
<td>WC2</td>
<td>WC2</td>
</tr>
<tr>
<td>BL4</td>
<td>BL4</td>
</tr>
</tbody>
</table>

---

**Notes:**
- Cannot be used underground.

---
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 loads 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

**Ordering Information Example:**
PP20 347 L T

**LV STANDARD SENSOR**

**Intended Use**
Low voltage sensors with the Standard Range 360º 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.

**Ordering Information**

<table>
<thead>
<tr>
<th>Series</th>
<th>PP20</th>
<th>MP20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example:</td>
<td>PP20 347 LT</td>
<td></td>
</tr>
</tbody>
</table>

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

**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.

**Ordering Information**

<table>
<thead>
<tr>
<th>Series</th>
<th>Example: WV PDT 16 P</th>
</tr>
</thead>
<tbody>
<tr>
<td>WP 16</td>
<td>None R</td>
</tr>
<tr>
<td>WP PDT 16</td>
<td>Photocell P</td>
</tr>
</tbody>
</table>

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

**LV EXTENDED RANGE SENSOR**

**Intended Use**
Sensors with the Extended Range 360º 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).

**Ordering Information**

<table>
<thead>
<tr>
<th>Series</th>
<th>Example: CM 10 P LT</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM 10</td>
<td>None R</td>
</tr>
<tr>
<td>CM PDT 10</td>
<td>Photocell P</td>
</tr>
</tbody>
</table>

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

**HIGH BAY 360º 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.

**Ordering Information**

<table>
<thead>
<tr>
<th>Series</th>
<th>Example: CM 6 P LT</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM 6</td>
<td>None R</td>
</tr>
<tr>
<td>KM 6</td>
<td>Photocell P</td>
</tr>
</tbody>
</table>

**Features**
- Convenient test mode
- Green LED indicator
- User adjustable time delays
- Excellent RF immunity
We currently have over 60,000 projects installed in various high-profile locations across North America.
System Architecture using an Ethernet Network

System Architecture using an Arcnet Network
**Ethernet Network**

- Ethernet Switch 5-Port
- CAT5 Cable

**MS/TP Network**

- #18AWG Low Voltage Cable (Typical)
- Photocell
- Occupancy Sensor
- Low Voltage Switch
- BACNET MS/TP Building Automation System

**ARCNET Network**

- MAXIMUM OF ONE SECONDARY PANEL PER MASTER PANEL. MOUNT SECONDARY PANEL WITHIN 6 INCHES OF MASTER PANEL. SECONDARY PANEL MAY BE MOUNTED ABOVE OR BELOW MASTER PANEL.

**Master/Secondary Network**

- Master Panel
- Secondary Panel
- SYA 50T Cable
ARCNET Network with Repeater for Extending Panel Network an Additional 2000 FT

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

- **SYPM PLATESYA 2POLE**
- **SYPM 8L**

**SYPMB CB - Constant Breaker Module**

- **SYPMB 4CB2** Mounted in Synergy Cabinet
- **SYPMB ILB2** Mounted in Synergy Cabinet

**Synergy to MiniPac® Network**

**A/V Input Interface to Synergy by RS232**

**A/V Input Interface to Synergy by Dry Contact Closure**

**120/208V or 277/480V Power Circuit**

- **NEUTRAL BAR**

**EQUIPMENT MOUNTED IN BREAKER PANEL: SUPPLIED BY CONTRACTOR**

**3RAMP 1/32 V or 277V Cell Supply**

**MAIN FEED**

- **A**
- **B**
- **C**

**TO ADDITIONAL MODULES**

**SYA 2POLE**

**SYM PLATE**

**2 POLE LOAD**

**TO ADDITIONAL CONTACTORS**

**INPUT MAIN LUG**

**OUTPUT MAIN LUG**

**SYA CABLES2**

**SQMPDC SERIES DIMMER PACKS**

- **(2) CIRCUIT**
- **(4) CIRCUIT**

**SYNERGY CONTROLLER WITH LEGACY OPTION REQUIRED**

**A/V**

**#18AWG LOW VOLTAGE CABLE**

**A/V**

**SYRSP_EXT, DEQ LC OR SQRSI SERIES REMOTE STATIONS**

**RS232 CABLE**

**SYA CABLE44**
Shade/Screen Control by Dry Contact Closure Output

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

3RD PARTY SHADE/SCREEN CONTROLLER

3RD PARTY SHADE/SCREEN GROUP

SYA CABLE A4

SYA CABLE A4

#18AWG LOW VOLTAGE CABLE

3RD PARTY SHADE/SCREEN CONTROLLER

3RD PARTY SHADE/SCREEN GROUP

#18AWG LOW VOLTAGE CABLE

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
Peerless · RELOC · Renaissance Lighting · ROAM · Sensor Switch · Sunoptics · Synergy
Tersen · Winona Lighting