



Controls

Lighting Control Drawing Package Type
Submittal

Project Name
St. John Parish Govt Complex

Location
, USA

Date
30-Aug-11

Quote #

PO #

Order #

Nomenclature	Part Description	Type	Location	Qty
Lighting Controls				
GR2448 ENC SM NE1	(GR2448 ENC) 48 Relay Panel Enclosure			1
GR2448 INT DTCMOD DV 1VB SM NE1 GR2448 INT DTCMOD DV SM NE1 1VB Qty:1	(GR2448) - 48 Relay Panel			1
CH1 BWH PWH	(CH1) - Chelsea 1 Button			1
WSD PDT LV WH WSD PDT LV WH Qty:1	(WSD PDT LV) Low Voltage Wall Switch Passive Dual Technology Sensor			1
CM PDT 9	(CM PDT 9) Low Voltage Standard Range Ceiling Mount Passive Dual Technology Sensor			1
SYEMB 6DB3 MLS NBAR MB100 SYEMB 120/277 Qty:1 SYPMB 6DB3 Qty:1 SYPMB MB100 NBAR Qty:1 SYSC MLS Qty:1	(SYEMB) Medium Main Feed Panel - 4 Breakered Module Capacity			1
SQCS 6P 8C WC2 SD	(SQCS) Architectural Preset Control Station			1
SYNERGY ENGRAVING SERVICES	SYNERGY ENGRAVING SERVICES			6
SQCS 5GB	(SQCS 5GB) 5 Gang Backbox for 4/8 Channel SQCS			1

Bill of Material / Project Notes



Bill of Materials

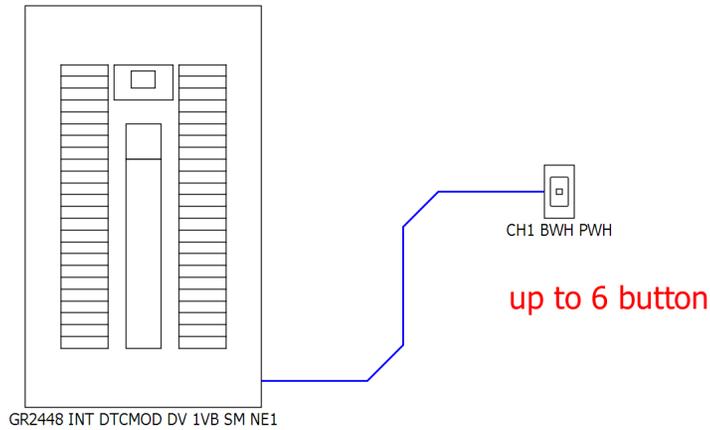
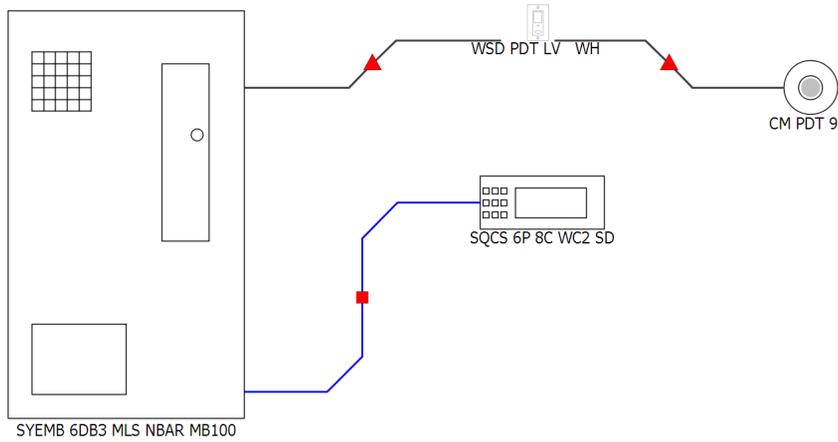
Quote #

PO #

Order #

Job Name:

St. John Parish Govt Complex



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One Line Diagram

Quote #

Date

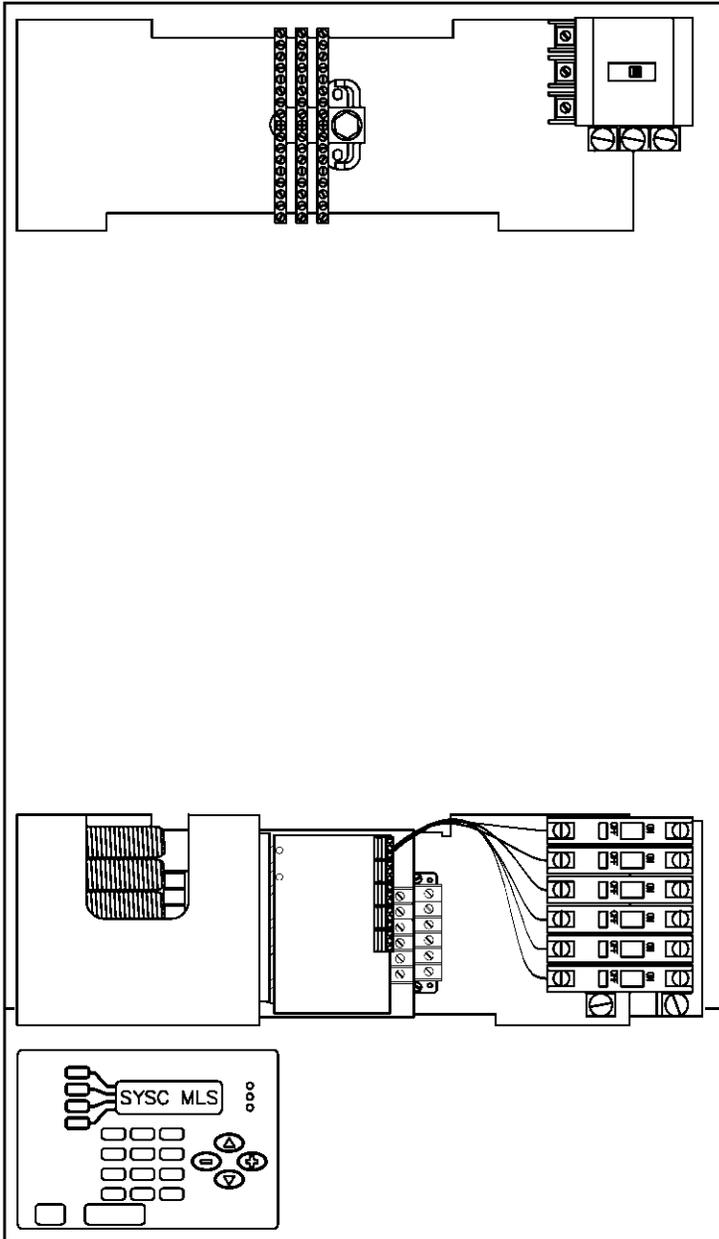
PO #

30-Aug-11

Order #

Project Name

St. John Parish Govt Complex



Cabinet Catalog Number:
SYEMB 6DB3 MLS NBAR MB100

- Components:
- (1) SYEMB 120/277
 - (1) SYPMB 6DB3
 - (1) SYPMB MB100 NBAR
 - (1) SYSC MLS



Name	Quote #
Room	PO #
Tag	Order #
Project Name St. John Parish Govt Complex	
Catalog Number SYEMB 6DB3 MLS NBAR MB100	

Catalog Number	
SYEMB 6DB3 MLS NBAR MB100	
Notes	Type

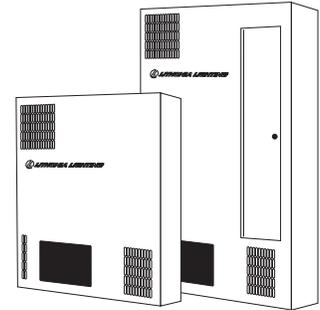
FEATURES

Synergy® is a unique lighting control system that integrates all aspects of lighting control into a single system platform. Synergy combines architectural dimming, low-voltage switching, lighting automation and lighting energy management functions into a single scalable package capable of meeting the requirements of virtually any lighting control application.

- Integrated and distributed switching and dimming
- Time scheduling with day/date/astromonic functions
- Programmable low voltage inputs
- Integral keypad and display
- Stand-alone panel operation
- Optional building-wide networked operation
- BACnet® native for interoperability with other building systems
- Physical layer connections via Arcnet 156KBS, Ethernet/IP, or MSTP
- Available Windows™ 98, 2000, NT, XP and Vista configuration, control and monitoring software
- UL, C-UL listed; CEC certified

Lighting Control System

SY



ORDERING INFORMATION

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

Example: **SYELB 24LB1 12DB1 MLS NBAR DMX**

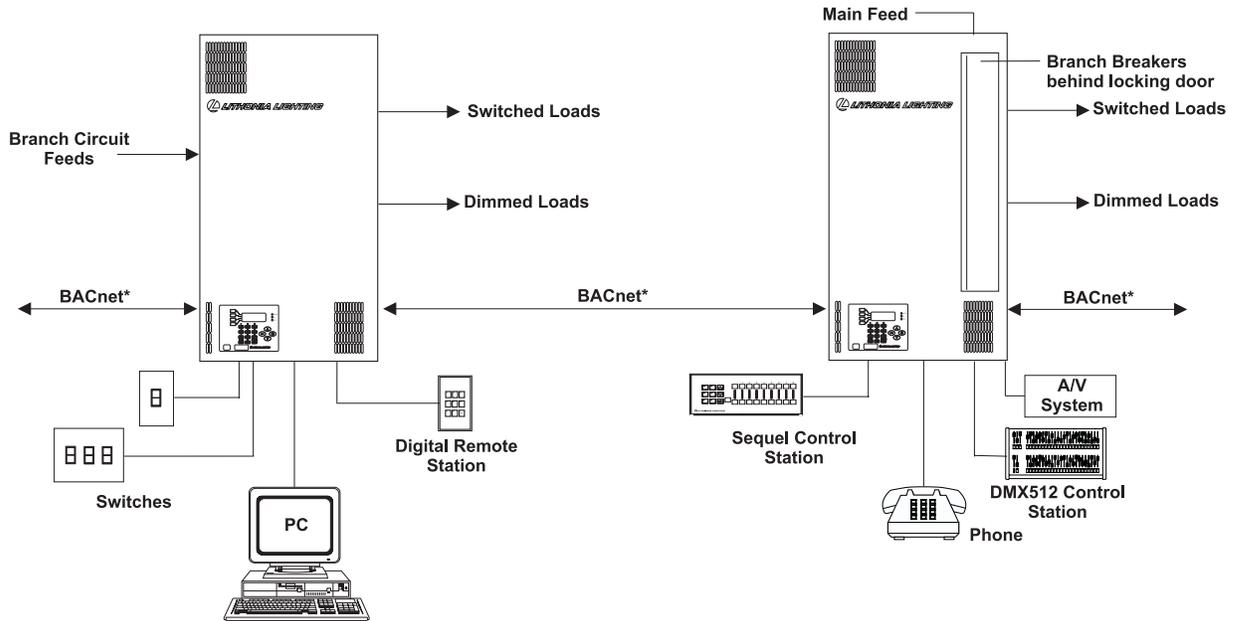
SYEMB		6DB3		MLS		NBAR	
Series	Output quantity/type				Main feed option		Options
SYES Small enclosure, 2 modules max.	_DB1 Qty. 120V 2KW dimmers with six 20A circuit breakers, six dimmers per module	_LB6 Qty single-pole 30A relays @ 120, 230 and 277 volts, and 20A @ 347 volts. Four 347V, 20A circuits breakers. Eight low voltage dry contact inputs and eight 0-10VDC dimming outputs.			(blank) No main lugs, no main breaker	(blank) Panel ships as components consisting of enclosure, power modules and controller	
SYEM Medium enclosure, 4 modules max.	_DB2 Qty. 277V 3.5KW dimmers with four 20A circuit breakers, six dimmers per module	_LB7 Qty single-pole 30A relays @ 120, 230 and 277 volts, and 20A @ 347 volts. Four 347V, 15A circuits breakers. Eight low voltage dry contact inputs and eight 0-10VDC dimming outputs.			ML Main lugs for 120V, 240V or 277V operation; requires 2 module positions; requires power modules with circuit breakers	DMX Dimming interface required for connection to DMX512 control	
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.	DSO Add to relay module to remove low voltage dry contact inputs and 0-10VDC dimming outputs.			MB Main breaker, 3 pole, specify # of amps, 100A maximum	ISA Three 16-bit ISA expansion slots	
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.	_S5BC Intelligent Ballast Control module compatible with SIMPLY5 and DALI dimming ballasts. With power supply and controller for 3 ballast loops			NBAR 42 circuit neutral bar	MODEM Modem for remote dial-up access	
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.	_CB1 Qty. 120V constant breakers, six breakers per module				PHONE Modem for remote dial-up access and voice-prompted override (requires ISA option)	
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.	_CB2 Qty. 277V constant breakers, four breakers per module				LEGACY Allows control of legacy MiniPac, Sequel, and Max-Star dimmer cabinets	
	_LB4 Qty single-pole 30A relays @ 120, 230 and 277 volts, and 20A @ 347 volts. Four 277V, 15A circuits breakers. Eight low voltage dry contact inputs and eight 0-10VDC dimming outputs.						
					Controller type		
					MLS Stand-alone controller		
					MLX Network controller		
					SCP Secondary panel, less controller		

Accessories

Order as a separate item.

- SYA SRE** Recess kit for small enclosures
- SYA MRE** Recess kit for medium enclosures
- SYA LRE** Recess kit for large enclosures

SYSTEM ARCHITECTURE

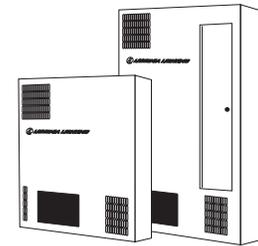


* RS-485 Arcnet 156KBS, Ethernet/IP, MSTP. Available with MLX only. Additional equipment may be needed.

SYSTEM CONTROLLER OPTIONS

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

SYSTEM COMPONENTS



Synergy Enclosures (SYE)
(Reference spec sheet SYE)

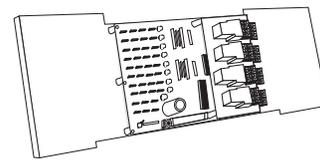
Dimensions:

Shown in inches (millimeters)

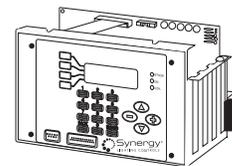
Small (SYES, SYESB): 21(533) H x 20(508) W x 6(152) D

Medium (SYEM, SYEMB): 34.5(876) H x 20(508) W x 6(152) D

Large (SYEL, SYELB): 48(1,219) H x 20(508) W x 6(152) D



Synergy Power Modules (SYPM and SYPMB Series)
(Reference spec sheets SYPM 8L, SYPMB 6D, SYPMB CB, and SYPM S5BC)



Synergy System Controller (SYSC)
(Reference spec sheets SYSC MLS and SYSC MLX)



Catalog Number		SYEMB 120/277
Notes	Type	

FEATURES

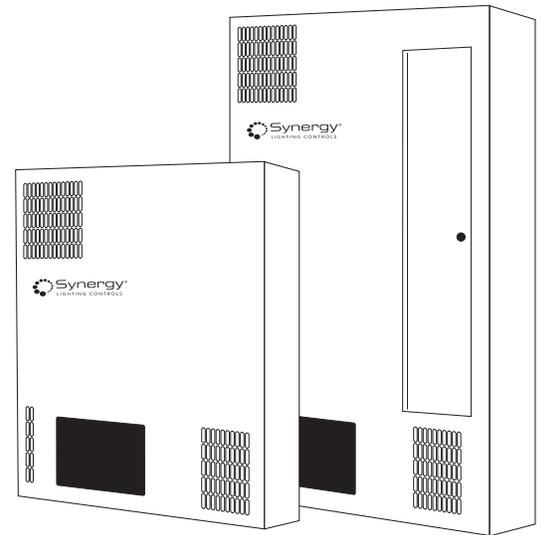
The Synergy lighting control system enclosure is designed to accommodate a variety of power module and controller choices to provide switching and dimming control of lighting in response to a variety of input sources. The enclosure is supplied prewired to accept SYPM power modules and the SYSC system controller. The power supply is factory-installed and is suitable for either 120V, 230V or 277V supply.

- Up to six power modules per cabinet
- Optional recess mounting kit available
- Locking door for circuit breakers
- Rough-in enclosure from stock
- UL and C-UL listed; CEC certified

Lighting Control System

System Enclosure

SYE



ORDERING INFORMATION

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

Example: **SYEM 120/277**

SYE		MB	120/277	
Series	Capacity		Power Supply Voltage	
SYE	<p>S 2 power module spaces (no circuit breaker door)</p> <p>M 4 power module spaces (no circuit breaker door)</p> <p>L 6 power module spaces (no circuit breaker door)</p> <p>SB 2 power module spaces (provision for circuit breakers)*</p> <p>MB 4 power module spaces (provision for circuit breakers)</p> <p>LB 6 power module spaces (provision for circuit breakers)</p>		120/277 120/230/277V, 50 or 60Hz operation	

* Maximum one dimmer module

Accessories

Order as a separate catalog number

- SYA SRE** Recess kit for small enclosures
- SYA MRE** Recess kit for medium enclosures
- SYA LRE** Recess kit for large enclosures
- SYA BP** Plug for circuit breaker opening (each)

NOTE: Power modules ordered separately, or use sheet SYEN-100 for single line nomenclature.

SYE System Enclosure

SPECIFICATIONS

MECHANICAL

- Enclosure: NEMA 1, wall-mounted, optional accessory kit for recess mounting.
- Enclosure cover: screw-on, opening provided in cover for operation of keypad and viewing of LCD display; hinged locking door over optional circuit breakers.
- Breaker option includes thermal sensor and fan for use with dimmer modules.

CAPACITIES

- Small enclosure: 2 SYPM power modules maximum.
- Medium enclosure: 4 SYPM power modules maximum.
- Large enclosure: 6 SYPM power modules maximum.

ENVIRONMENTAL

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

ELECTRICAL

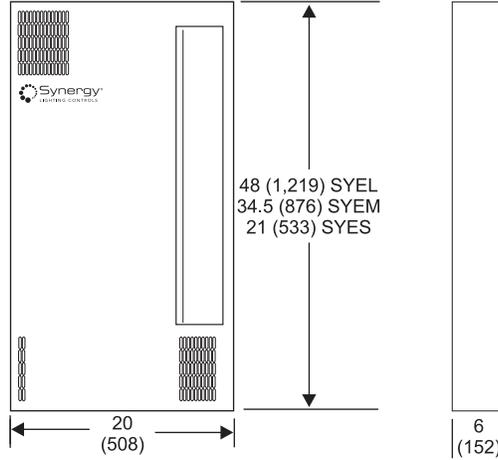
- Power supply input: 120/230/277VAC, 50/60 Hz.
- Control transformer: 225VA at maximum configuration.

DIMENSIONS

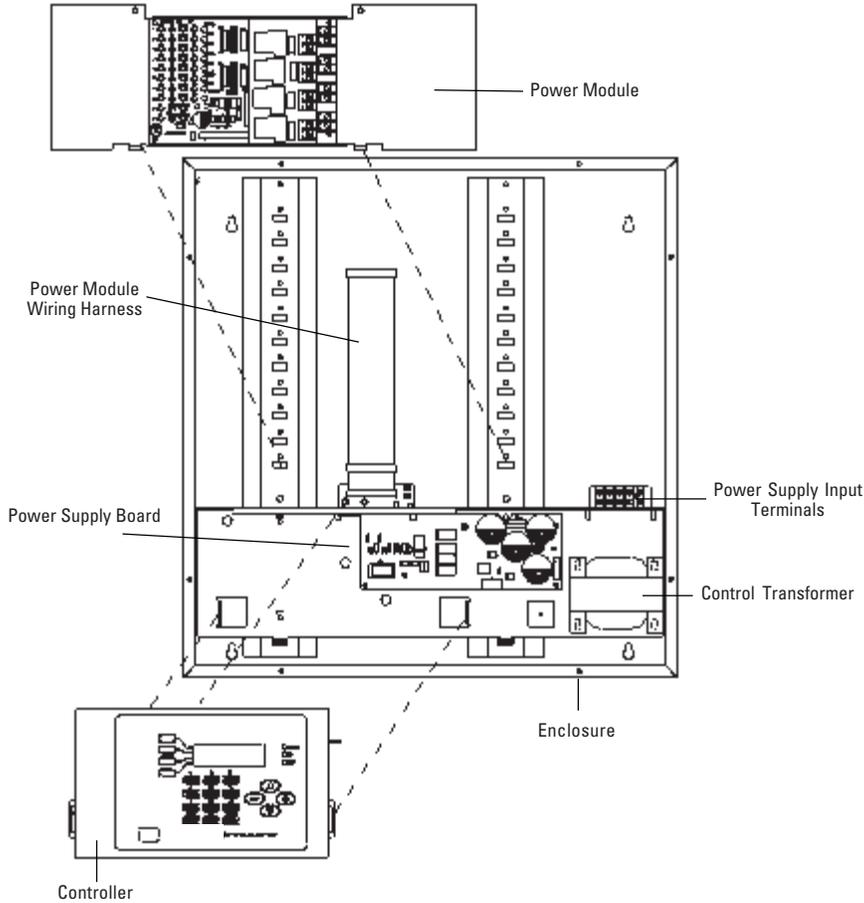
All dimensions are inches (millimeters). Add 1.5" (40) to height and width for recessed version.

Shipping weights:

- Small enclosure – 30 lbs. (14 kg)
- Medium enclosure – 40 lbs. (18 kg)
- Large enclosure – 50 lbs. (23 kg)



FUNCTIONAL



An Acuity Brands Company

Catalog Number SYPMB NBAR MB100	
Notes	Type

FEATURES

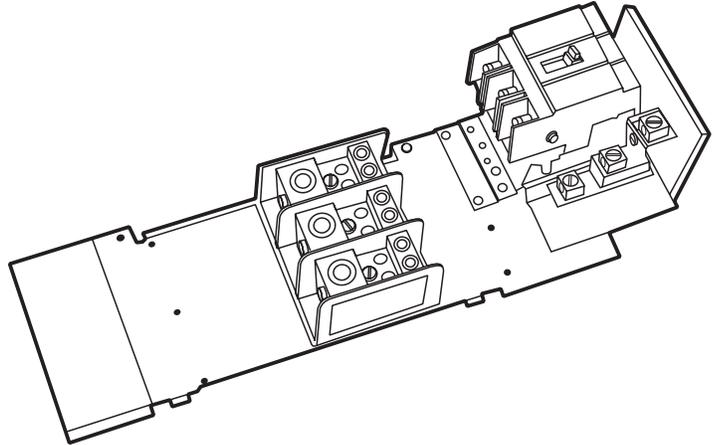
The main feed power module is used with Synergy enclosures to facilitate connection of the enclosures to either a three-phase, four-wire or single-phase, three-wire main power source.

- Optional main breaker on ML or NBAR option
- Up to 380A , 500 MCM feed for SYPMB option
- ML option provides power feed for up to four SYE enclosures
- Neutral bar assembly
- Main breaker option has maximum 2/0 AWG size
- UL and C-UL listed

Lighting Control Systems

SYPMB

Main Breaker / Tap Feed Lug Module



ORDERING INFORMATION

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

Example: **SYPMB MB 100 ML**

SYPMB	MB100	NBAR
Series	Main breaker	Lug configuration
SYPMB	(blank) No main breaker MB _ 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.

SYPMB Main Lug Module

SPECIFICATIONS

MECHANICAL

- Chassis: all components mounted to steel black plane, keys into enclosure via tab and slot, secures with provided screws.

ENVIRONMENTAL

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

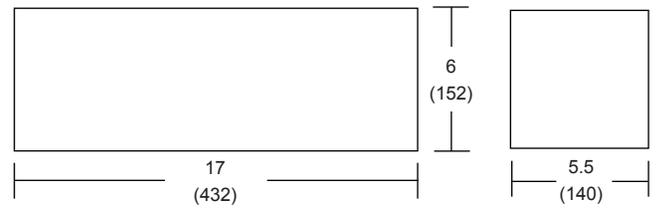
ELECTRICAL

- Main lug rating: 380A, 500 MCM maximum.
- Tap lugs: (4) 2/0 wire per phase.
- Optional main breaker rating: 120 volts at 65,000 AIC or 277 volts at 14,000 AIC. (Not available for 347V)
- Use with conductors rated 90°C or higher.
- Neutral bar: 42 #14-#10 connectors.

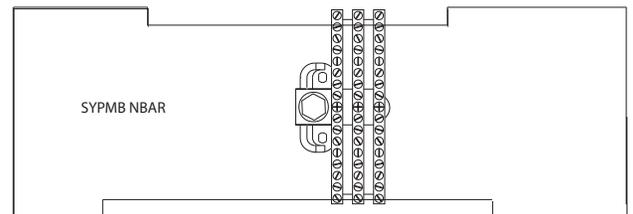
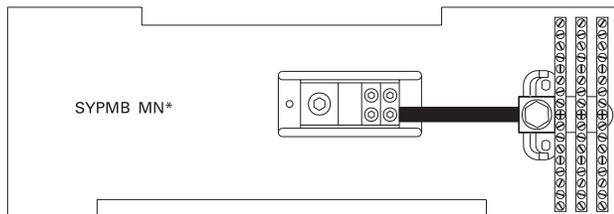
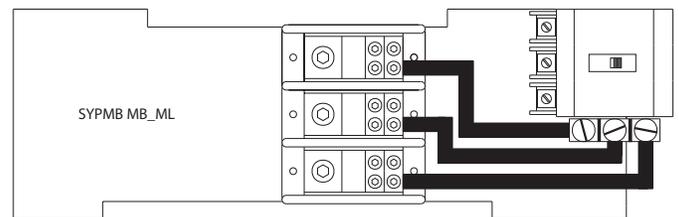
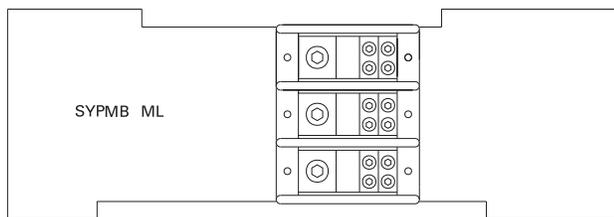
DIMENSIONS

All dimensions are inches (millimeters).

Shipping weight = 15 lbs. (6.8 kg) maximum

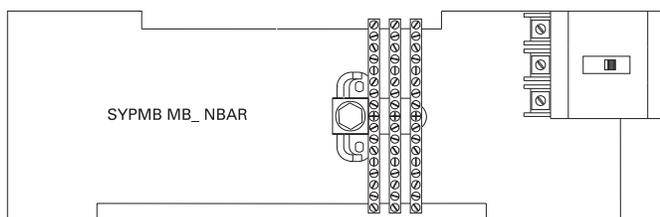


FUNCTIONAL



Note:

* SYPMB MN required for use with SYPMB ML or SYPMB MB ML modules, order as accessory.



Catalog Number	SYPMB 6D B3	
Notes	Type	

FEATURES

The Synergy dimmer module is used with the Synergy enclosure to provide dimming and switching capability for a wide variety of loads. Modules contain toroidal filters, thyristor switching elements, integral air-gap relay for each dimmer, circuit breakers, analog and low-voltage switch inputs and on-board digital processor control circuit. Power modules are interchangeable within the enclosure and are field-installed.

- Six universal dimmers per module

Compatible load types:

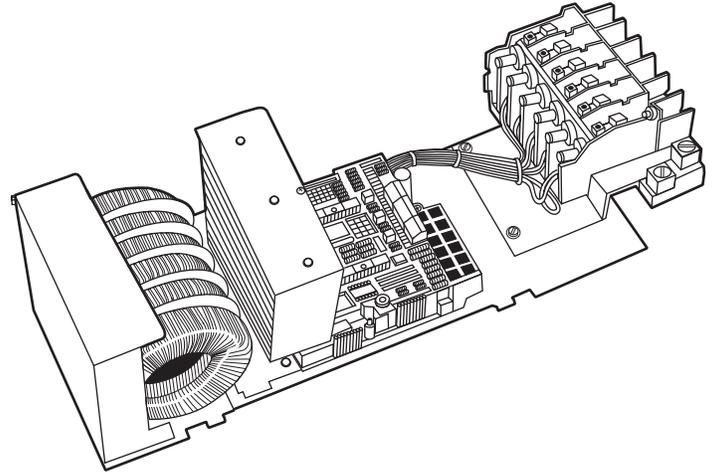
- Incandescent
- Magnetic low voltage
- Electronic low voltage¹
- Advanced Mark10[®] fluorescent
- Lutron Hi-Lume[®] fluorescent
- Lutron ECO10[®] fluorescent
- Neon
- Cold Cathode

- Dimmed and switched output per dimmer
- Precise digital performance
- Adjustable High/Low trims
- Square-law dimming curve
- Heavy-duty toroidal chokes
- Thermal magnetic circuit breakers
- 120V or 277V
- Air-gap relays
- Over-temperature cut-out
- Remote override input accepts contact closure to force *FULL-ON* operation for essential lighting applications
- Selectable soft-start for all loads
- Analog filter and advanced digital processing techniques enable consistent, reliable dimming performance in a wide variety of power environments
- UL Listed to US and Canadian safety standards

Lighting Control System

Linc Voltage Dimming Power Module

SYPMB 6D



ORDERING INFORMATION

Example: SYPMB 6DB1

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

SYPMB	6D	B3
Series	Dimmers	Circuit breaker voltage
SYPMB	6D Six dimmers per module	B1 Six 20A CB, 120V 10 KAIC B2 Four 20A CB, 277V 14 KAIC B3 Six 15A CB, 120V10 KAIC B4 Four 15A CB, 277V14 KAIC B5 Four 20A CB, 120V 65 K AIC

NOTES:

- 1 Normal power factor magnetic transformers. Electronic low voltage transformers must be dimmable and compatible with forward phase out dimmers with series inductive filtering. Low voltage transformers should be protected by a line-side fuse when used with dimmers.
- 2 Installer must coordinate lamp/ballast configuration.

SYPMB 6D Dimming Power Module

SPECIFICATIONS

MECHANICAL

- Chassis: all components mounted to steel back plane, keys into enclosure via tab and slot, secures with provided screws.
- Electronic control assembly and power devices are individually field-replaceable without removing module.

ENVIRONMENTAL

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

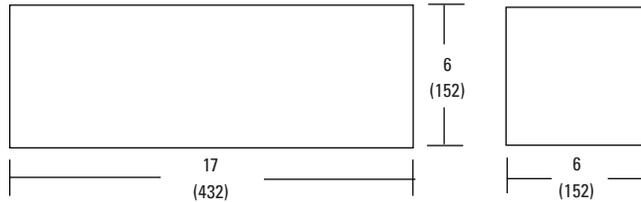
ELECTRICAL

- Module rating: 10 KVA (83.5A) at 120V, 17.5 KVA (64A) at 277V.
- Dimmers: Six dimmers per module, 2 KVA each at 120V, 3.5 KVA each at 277V.
- Thermal magnetic input circuit breakers: Six 120V 10,000 AIC breakers, four 277V 14,000 AIC breakers, or four 120V 65,000 AIC breakers per module.
- Load relays: SPST, N.O. maintained air-gap in series with dimmer, enclosed silver cadmium-oxide contacts, 16A 277VAC ballast.
- Over-temperature sensor: thermal cut-out integral to anodized extruded aluminum heat sink assembly.
- Toroidal Filtering: 350 µsec current rise time measured from 10-90% of the load current waveform at a 90° conduction angle and dimmer at 50% of rated capacity.
- Efficiency: dimmer output voltage is greater than 96% of input voltage at the maximum intensity setting; maximum heat loss is 16 BTU/hour per ampere of phase-controlled current.
- Low voltage inputs: two switch inputs per module, accept momentary or maintained contacts; three analog inputs per module, accept 0-10V or 0-24V three wire signals. All inputs have removable terminal blocks that accept up to #16 AWG wires. 24VDC accessory power, 2.5A per cabinet, 500mA total per SYPMB 6D.
- Override: one PC board mounted *ON/AUTO/OFF* switch per module, overrides all six dimmers/relays. Remote override terminals provided for remote activation of *ON/AUTO/OFF* switching.
- Load wire connection: board-mounted compression screw terminal blocks, #10 AWG or two #12 AWG maximum. Two terminals per dimmer - one dimmed and one non-dimmed.
- Input and feed-through lug capacity: 2/0 maximum.
- Lamp compatibility: incandescent, low-voltage¹, neon¹, cold-cathode¹, fluorescent (Advance Mark 10[®], Lutron HiLume[®], Tu-Wire[®] and ECO10[®]).

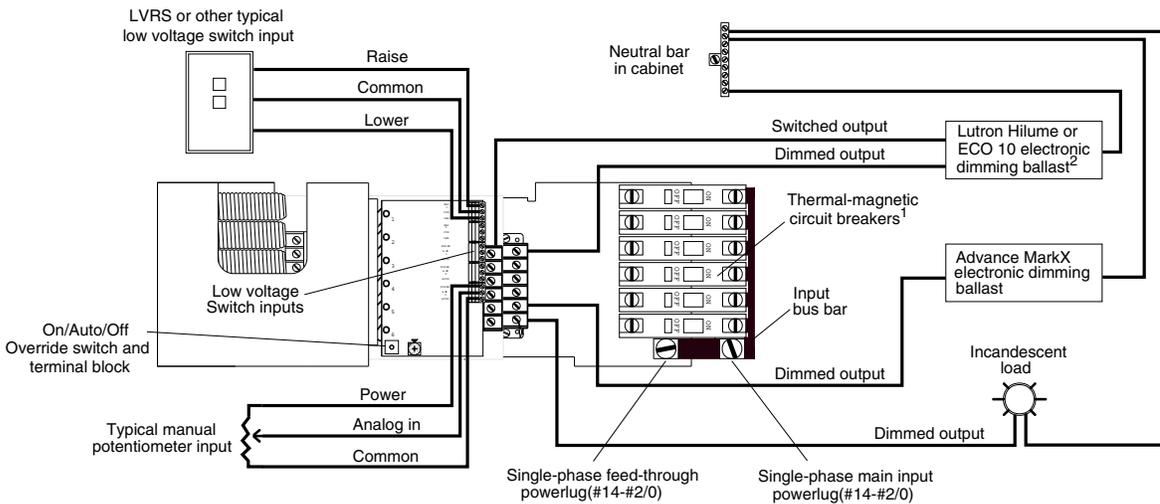
DIMENSIONS

All dimensions are inches (millimeters).

Shipping weight = 22 lbs. (10 kg)



FUNCTIONAL



NOTES:

- 1 On 4 breaker modules breaker #3 feeds dimmers 3 & 4 and breaker #4 feeds dimmers 5 & 6.
- 2 Minimum two (2) Lutron ballasts per dimmer required for proper operation.



Catalog Number	SYSC MLS	
Notes		
	Type	

FEATURES

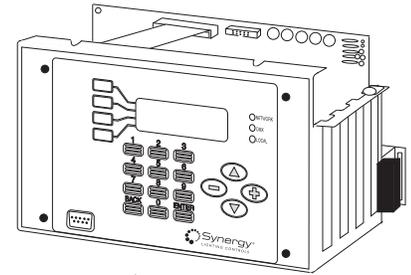
The Synergy[®] MLS system controller adds programming and automation capabilities to a Synergy system. Capabilities include individual circuit control of lighting functions for a wide variety of applications. System outputs respond to time-of-day schedules via the internal time clock. In addition, inputs can be accepted from external devices such as switches, photocells, occupancy sensors, digital remotes, telephones and other control systems to directly control lighting or override scheduled events.

- Supports all Synergy power modules
- Seven-day scheduling with astronomic clock
- Holiday schedule dates
- Load prioritization setup
- Exclusive Script Logic Application Language
- Programmable switch inputs
- Support for SEQUEL[®] dimming control stations
- Support for digital Synergy[®] remote stations
- Timed switch overrides
- Analog source monitoring with multiple set points
- Integral keypad with backlit display
- All programming stored in non-volatile industrial compact flash memory card
- Automatic system event logging
- Integral lamp burn hours and start counters
- Integral RS232 ports
- Optional PC software
- Optional touch-tone telephone interface for voice-prompted overrides.
- Optional support for Legacy MiniPac, Sequel, and MaxStar dimmer cabinets.
- English, Spanish or French operation
- UL and C-UL listed; CEC Certified

Lighting Control System

Enhanced System Controller

SYSC MLS



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

ORDERING INFORMATION

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

Example: **SYSC MLS**

SYSC		MLS		Options	
Series	Controller type				
	MLS Enhanced system controller with programmer	ISA	Three 16-bit ISA expansion slots		
		PHONE	Telephone interface for voice-prompted override and remote modem access (requires ISA option)		
		DMX	Dimming interface, required for connection to DMX 512 control signal		
		LEGACY	Allows control of one complete network (255 dimmers) of Legacy MiniPac, Sequel, and MaxStar dimmer cabinets. Replaces master controller on existing systems.		

Accessories

Order as separate items.

- 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 control station network cable (Specify length: 250', 500' or 1000')

SYSC MLS Enhanced System Controller

SPECIFICATIONS

MECHANICAL

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

ENVIRONMENTAL

- Operation temperature: 32-104°F (0-40°C). Storage temperature: 0-160°F (-18-71°C). Humidity: 10-90% non-condensing.

ELECTRICAL

- Power input: 24VDC maximum, supplied by enclosure power supply.
- Data port: front-mounted DB9 RS232 serial communications connector accessible without removal of cover.
- Internal RS232 port for connection to A/V systems.
- Internal RS485 port for connection to SEQUEL control stations and digital remote stations.

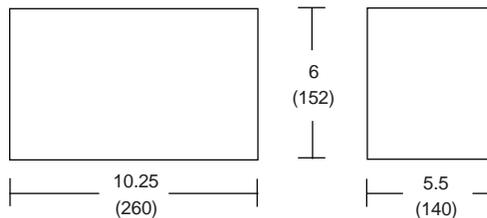
FUNCTIONAL

- Program entry: numeric keypad (0-9, back and enter), "soft" function keys (F1-F4), navigation key cluster (up, down, + and -) for menu navigation and logical entry selections.
- LCD display: four-line, 80-character with back light.
- LED indicators: local status indication.
- Outputs: 128 maximum per controller in typical configurations; map inputs and schedules to any combination of connected relays, dimmers, or controllable circuit breakers.
- Groups: map output relays and dimmers into logical groups (zones) for association to inputs and schedules.
- Switch inputs: 128 maximum per controller, soft-linked through the program to control any combination of outputs; one minute to 100 hour time-out function per switch.
- Analog input: maximum of 48, each capable of multiple set-point operation or tracking operation.
- *Priority on* switch: switch input set to *priority on* cannot be overridden *off* by any other source until the *priority on* condition is removed.
- *Priority off* switch: switch input set to *priority off* cannot be overridden *on* by any other source until the *priority off* condition is removed.
- Four levels of priority provide for layering of manual and automatic functions.
- Schedules: Maximum of 100 independent schedules of time events; number of events per schedule limited only by system resources. Schedules may be assigned to days of the week days of the year, or recurring holiday dates through 12/31/2200.
- *Warn off*: automatic flash of lights at scheduled *off* to warn occupants of impending *off*, user selectable from one to 99 minutes.
- Logging: automatic logging of system events including *on* events, *off* events, relay run time, relay starts, alarms, power up, power down, override *on* and override *off*; 10,000 event maximum storage with automatic overwrite of oldest data; view log data on LCD display or printout.
- Telephone Override: override selected loads via touch-tone phone using programmable four-digit codes and voice prompts using optional PHONE interface.
- DMX Control: control connected loads with DMX control signal using optional DMX input card. May be configured via hardware settings or through controller software to provide prioritized and conditional control of loads along with other input devices and schedules.
- Legacy Dimmer Control: control up to 255 legacy MiniPac, Sequel, and MaxStar dimmers with optional LEGACY card. Synergy controller replaces function of M2, M3, or M9 master controller in existing systems. Legacy dimmers may be controlled by any input or schedule in the Synergy system.
- PC software: program the controller, download data, upload data and monitor status using optional Windows™ 95, 98, 2000, NT or XP software via front-mounted DB-9, RS232 port or optional modem connection.

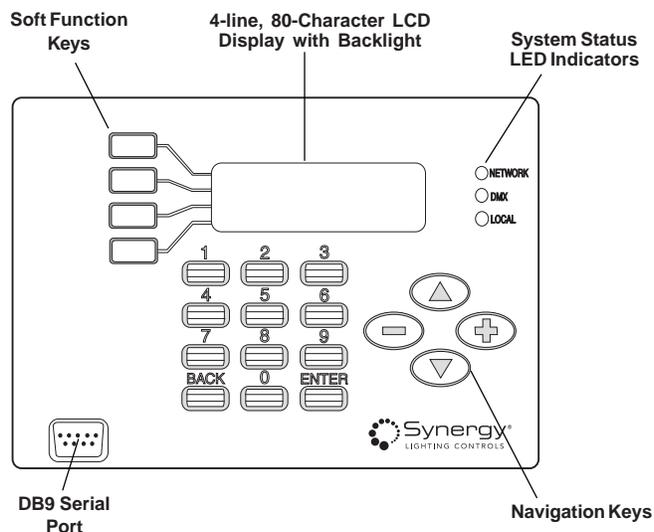
DIMENSIONS

All dimensions are inches (millimeters).

Controller weight = 5.5 lbs. (2.6 kg)



FUNCTIONAL



- Sixty digital stations maximum per MLS controllers
- Room Assignment: digital station control of up to a 4X8 room matrix that may be dynamically joined and separated to accommodate partitioned spaces. Join/separate action for each set of rooms may be triggered by switch input, digital station, time schedule, or partition sensor.



An Acuity Brands Company



Catalog Number		SQCS 6P 8C WC2 SD	
Notes		Type	

FEATURES

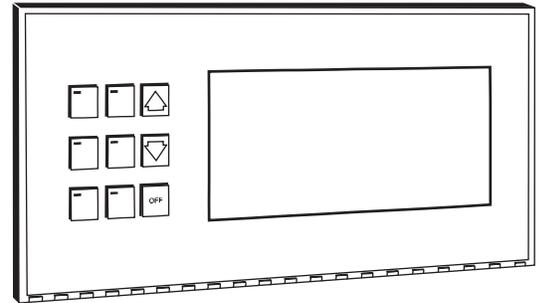
Sequel control stations provide manual dimming and preset lighting control for architectural dimming applications. These stations are offered in a variety of styles and architectural finishes suitable for virtually any application. Control stations may be connected in parallel for multi-location control or used with matching remote stations.

- Thin architectural styling
- Metal and painted finish faceplates
- Simple operation
- LED intensity indication
- Multiple control stations per system capability
- All-digital performance
- Adjustable fade time per preset
- Preset save/disable function
- Power failure memory
- Integral A/V interface terminals
- Matching remote stations
- Supplied with channel labels

Lighting Control System

SQCS

Control Station



ORDERING INFORMATION

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

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

SQCS	6P 8C	WC2	SD
Series	Number of presets and channels	Finish	Faceplate style
SQCS	6P 4C 6 presets, 4 channels 6P 8C 6 presets, 8 channels 6P 12C 6 presets, 12 channels 6P 16C 6 presets, 16 channels	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 BF4 Polished brass, black frame and buttons	SD Solid TR Translucent

Accessories

Order as separate catalog number.

SQCS 5GB	5-gang backbox for 4C and 8C stations
SQCS 8GB	8-gang backbox for 12C and 16C stations
SQCS RE8	Recessed NEMA 1 enclosure for 4C and 8C stations
SQCS RE16	Recessed NEMA 1 enclosure for 12C and 16C stations
SQCS PE8	Portable console for 4C and 8C stations
SQCS PE16	Portable console for 12C and 16C stations
BKLE 10P	Engraved button caps, 10 pack
SYA_CABLEA4	Plenum rated network cable, specify 250, 500 or 1000-foot length

SPECIFICATIONS

CONSTRUCTION

- Low-profile frame with hinged faceplate. Mounting requirements: Lithonia #SQCS 5GB or RACO 699 5-gang backbox for four-channel and eight-channel stations; Lithonia #SQCS 8GB 8-gang backbox for 12-channel and 16-channel stations. Consult factory for retrofit applications.

FUNCTIONAL

- CHANNEL RAISE/LOWER buttons adjust the intensity level of individual channels. LED bar graph displays intensity level. Alternate non-dim operation, selectable per channel.
- MASTER RAISE/LOWER buttons adjust the intensity of all lights dimmed from the station.
- OFF turns off all lighting.
- PRESET buttons save and activate presets.
- SELECT button for saving presets. Concealed disable switch protects saved presets.
- FADE TIME is adjustable for each preset scene. Available fade times are 0, 5, 10, 15, 30 and 45 seconds and 1, 5, 10, 30 and 60 minutes.

CAPACITIES

- Presets: six presets with master raise/lower and off. Two additional presets are switch selectable, replacing the master raise/lower function.
- Channels: 4 (4C), 8 (8C), 12 (12C) or 16 (16C).
- Terminals on rear of station allow access to 16 presets, off, master and (2) channels of raise/lower from SQRS remote stations or momentary dry contact closures.

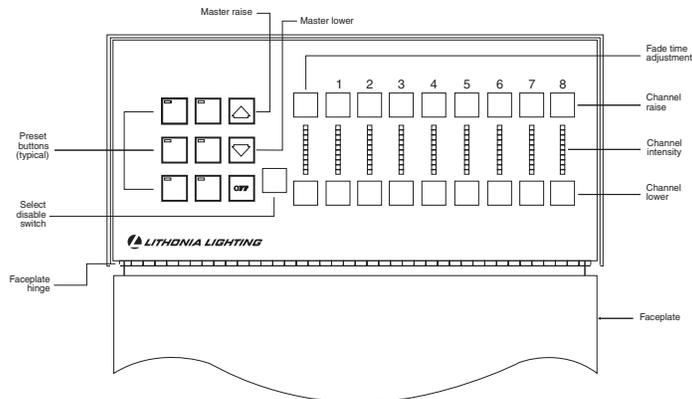
ENGRAVED BUTTON CAPS - BKLE (ACCESSORY)

- Characters are upper case block normal type style. Maximum two lines per switch cap, seven characters per line.
- Characters are back filled with a contrasting color as follows: (cap color/back fill color) white/medium gray, ivory/beige, and black/medium gray.

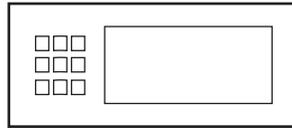
ELECTRICAL

- Operating voltage: 10 – 30 VDC, Class 2.
- Network Wiring: One pair, twisted and shielded, plus (2) #16 AWG conductors. Lithonia SYA_CABLEA4, plenum rated or Belden #3105A plus two #16 AWG conductors. Network connections are made in a "daisy chain" - no "T" taps or branches.

FUNCTIONAL DESCRIPTION



STYLE CONFIGURATIONS



TR
Translucent Faceplate
Six-Preset

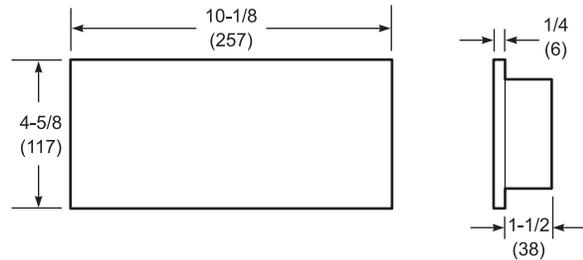


SD
Solid Faceplate
Six-Preset

DIMENSIONS

All dimensions are in inches (millimeters).

4C and 8C Control Stations



SQCS 5GB Backbox: 9-1/8 W x 3-5/8 H x 3-1/2 D (232 x 92 x 89)

12C and 16C Control Stations



SQCS 8GB Backbox: 14-1/2 W x 3-5/8 H x 3-1/2 D (368 x 92 x 89)

GR 2400™

Control Panel



GR 2400™ Relay Panel

Description: The GR 2400 system is a 100% digital solution to lighting control. Panels and switches daisy-chain together, using Cat. 5 patch cable with RJ45 connectors in any sequence.

- Features:**
- 32-channel, 365-day/astronomical time clock. Large display (21 x 8 characters) acts as the programming interface for the entire system. Non-volatile memory holds all programming indefinitely. Ten-year battery back-up for time-of-day
 - Modem includes free lifetime factory programming
 - May control mixed voltages (i.e., 120V, 277V)
 - May control normal or emergency power
 - Ideal for all applications
 - Manual override of individual relays, zones or entire panel
 - Link up to 127 addresses of digital devices via Cat. 5 patch cable with RJ45 connectors

Specifications:

Enclosure dimensions:	20" w x 25.5" h x 6" d (32 relays) 20" w x 37.5" h x 6" d (48 relays)	Addresses used:	GR 2432 (4), GR 2448 (6)
Enclosure type:	Surface mount, hinged locking door, NEMA 1	Listings:	UL and cUL 916 listed, ETL listed to UL 924 (for emergency circuit use)
Optional enclosures:	NEMA 4, NEMA 4X, NEMA 12, flush mount	Programming:	Via DTC, via PC with Unity 2™ Lighting Control Software
Relay:	Normally Closed (NCL) 30A @ 277VAC Ballast 20A @ 120VAC Tungsten 20A @ 347VAC Ballast SCCR 18kA @ 277VAC Rated 250,000 Cycles	Max. humidity:	10–90% non-condensing
Optional relays:	Normally Open, (NOL) Spec same as NCL, Two Pole — NO or NC (480VAC); Double Throw 20A 277VAC	Ambient temperature:	32–105° F (0–41° C)
		Power supply voltage:	120/277VAC or 120/347VAC
		Bus protocol:	RS 485 (GR 2400 bus)
		Bus connector:	RJ45 connectors

Overview

Power Supply:

120/277V or 120/347V

DTC:

32-channel, 365-day astro clock
Access and program the entire system

Modem:

Remote programming and control, includes free lifetime dial-up programming

Bus connectors

RJ45 connectors

Lighting Relays:

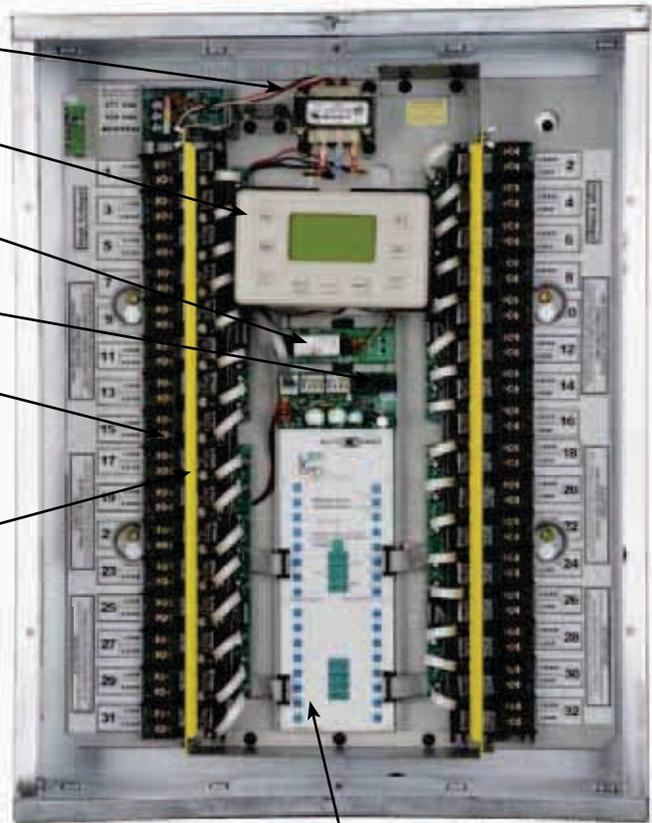
Normally Closed (NCL), 30A @ 277V Ballast, 20A @ 120V Tungsten, 20A @ 347V Ballast, SCCR 18K A @ 277V, Rated 250,000 Cycles

Optional Relays:

Normally Open, (NOL) Spec same as NCL, Two Pole — NO or NC (480V); Double Throw 20A 277V

High/Low Voltage Barrier:

(16 gauge steel)



Master Relay Panel



Chelsea DigitalSwitch



Photosensor PCELL 2WO



Remote Relay Panel w/PCC1 card

Chelsea DigitalSwitch™



Relay Control Card (manual control of zones or individual relays)

Up to 127 digital addresses • Up to 4,000 ft.

Cat. 5 patch cable with RJ45 connectors

ORDERING LOGIC

Enclosure				
GR2448 ENC	SM NE1	Examples:		
Relay Panel Enclosure	Enclosure Mounting, NEMA Rating, Knockouts	GR2448 ENC SM NE1		
GR2448 ENC = 48 Relay Enclosure	SM NE1 = Surface Mount, NEMA 1 with knockouts	GR2448 INT 12NCL 12DPNC DTCMOD DV		
GR2432 ENC = 32 Relay Enclosure	FM NE1 = Flush Mount, NEMA 1 with knockouts	48 relay, surface mount NEMA 1 enclosure with knockouts, with 12 normally closed relays, 12 double pole normally closed relays, with a digital time clock and modem (master panel), and a 120/277V dual voltage transformer (also, no voltage barriers).		
	SM NE1 NKO = Surface Mount, NEMA 1 no knockouts			
	FM NE1 NKO = Flush Mount, NEMA 1 no knockouts			
	SM NE4 = Surface Mount, NEMA 4			
	SM NE12 = Surface Mount, NEMA 12			
	SM NE4X = Surface Mount, NEMA 4X			
Interior				
GR2448 INT		DTCMOD	DV	1VB
Relay Panel Interior	Relays	Clock Option	Transformer	Voltage Barrier¹
GR2448 INT = 48 Relay Interior	[qty]NCL = Normally Closed Latching	DTCMOD = Digital time clock with modem	DV = Dual voltage 120/277V	[blank] = No barrier
GR2432 INT = 32 Relay Interior	[qty]NOL = Normally Open Latching	DTC = Digital time clock without modem	CNDV = 120/347V	1VB = 1 barrier
	[qty]DPNC = Double Pole Normally Closed	REMOTE = Remote panel, no clock		2VB = 2 barriers
	[qty]DPNO = Double Pole Normally Open			3VB = 3 barriers
	[qty]RRNO = Reed Relay Normally Open (pair)			4VB = 4 barriers
	[qty]SPDT = Single Pole Double Throw			1 = Check with NEC or CEC, State or Province, and local regulations as well as your electrical inspector about allowances for voltage barriers within panels.
	[qty]SPDTC = Single Pole Double Throw Contactor			

GR 2400™

Chelsea Switch



Cover plate provided by contractor

Chelsea DigitalSwitch™

Description: The **Chelsea DigitalSwitch** is a 100% digital switch which connects directly to the **GR 2400** bus via Cat. 5 patch cable with RJ45 connectors. **Chelsea DigitalSwitches** can be ordered with 1, 2, 3, 4 or 6 buttons per gang and can be mounted in any standard 2.25" deep switch box with a decorator style switch plate. All **Chelsea DigitalSwitches** are 100% backwards compatible with all LC&D systems.

- Features:**
- May be programmed to control any relay, **SmartBreaker™** or dimmer in any panel
 - Custom button engraving at no cost (2 lines 8 character/line)
 - Available in a choice of plate and button colors
 - All push buttons are annunciated with a pilot light
 - Factory preprogrammed. May be reprogrammed in the field using the DTC (Digital Time Clock)
 - Link up to 127 digital addresses via Cat. 5 patch cable with RJ45 connectors
 - Can be enabled/disabled by optional **KeyEnable™** switch

- Advanced Programming Features:**
- A programmable green "Locator Light" at the top of each unit is always on, can be programmed to blink to show Horn Driver Mode or help locate a switch
 - Programmable Status LED logic
 - Adjustable debounce time to avoid accidental trigger
 - Audible beep alert for warning or switch locating
 - Alternate button programming to allow more flexibility of use, for example the same button can perform a different task at different times of the day
 - Capable of being digitally enabled/disabled over the bus on a per button or per switch basis

Specifications:

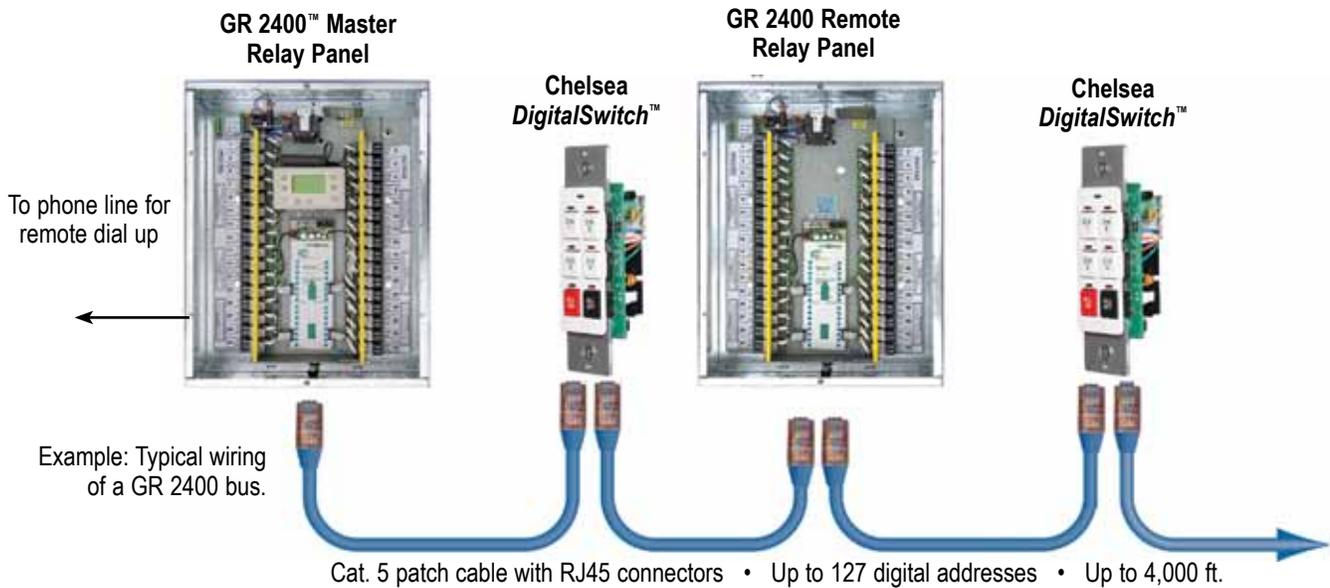
Dimensions: 1.3" w x 4" h x 1.3" d
Switch plate: Decorator style
Mounting: 2.25" deep-switch box
Switch addresses available: 1-119
Address per switch: 1
Function: ON, OFF, Mixed, Group Control, Toggle, Scene Control

Programming: Via DTC
Humidity: 10-90% non-condensing
Ambient temperature: 32-105° F (0-41° C)
Power supply: Powered from GR 2400 bus
Bus connector: Two RJ45 connectors
Bus termination: Manual end-of-line termination with jumper



Ordering Information

Chelsea DigitalSwitches™ are available in 1, 2, 3, 4 or 6 buttons. Center plates are available in white, ivory and brushed stainless steel. Indicator light is red and locator light is green.



ORDERING LOGIC

Chelsea Digital Switch™			
CH1	BWH		PWH
Number of Buttons	Single/Multicolor	Multicolor Button Colors	Plate Colors
CH1 = 1 button Chelsea CH2 = 2 button Chelsea CH3 = 3 button Chelsea CH4 = 4 button Chelsea CH6 = 6 button Chelsea	BWH = All buttons white BIV = All buttons ivory BGY = All buttons gray BBK = All buttons black BRD = All buttons red BGR = All buttons green BBU = All buttons blue BYL = All buttons yellow BOR = All buttons orange MC = Multicolored buttons (please select quantities from the multicolor button section)	Button Quantity 1B = 1 button 2B = 2 buttons 3B = 3 buttons 4B = 4 buttons 5B = 5 buttons Color WH = White IV = Ivory GY = Gray BK = Black RD = Red GR = Green BU = Blue YL = Yellow OR = Orange	Multicolor Examples: CH6 MC 2BWH 4BBK PST 6 button Chelsea with 2 white and 4 black buttons and a stainless steel faceplate CH4 MC 2BBU 1BGR 1BYL PWH 4 button Chelsea with 2 blue, 1 green, and 1 yellow button and a white faceplate Button Quantity represents the number of buttons on a switch that will be in the selected color—number may not exceed total number of buttons on switch - total of all button color quantities must equal total number of buttons on switch (refer to examples).
Examples: CH6 BWH PWH = 6 button Chelsea with all white buttons and a white faceplate CH3 MC 1BRD 2BBK PST = 3 button Chelsea with 1 red button, 2 black buttons, and a stainless steel faceplate			

TYPICAL APPLICATIONS

- Private Offices where occupant turns back to sensor
- Restroom with Stalls
- Storage rooms with shelving

FEATURES

- Patented Dual Technology with PIR/Microphonics™ Detection
- Small Motion Detection to 20 Feet
- Time Delay: 30 sec. to 20 minutes, selectable in 2.5 min. increments
- Green LED Activity Indicator
- Push-Button Programmable

AVAILABLE OPTIONS

- Vandal-Resistant Lens (-V)
- Isolated Low Voltage Relay (-R)
- Low Temp/Hi Humidity (-LT)

SPECIFICATIONS

- Size: 4.2" H x 1.8" W x 1.5" D (10.67cm x 4.57cm x 3.81cm)
- Sensor Weight: 5 Ounces
- Colors: Ivory, White, Gray, Almond
- Mounting Height: 30 to 48 inches
- Relative Humidity: 20 to 90% non-condensing
- Operating Temp: 14° to 85° F (-10° to 29° C)
- Storage Temp: -14° to 160° F (-26° to 71° C)
- Operating Voltage: 12-24 VAC/VDC
- UL and CUL Listed
- 5 Year Warranty
- Made in U.S.A.

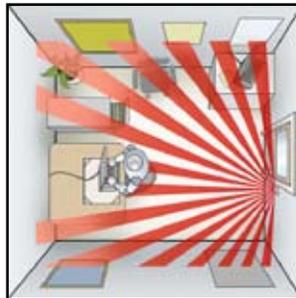
LOW TEMP/HI HUMIDITY(-LT)

- Conformally coated Circuit Board is corrosion resistant from moisture
- Operates down to -4° F (-20° C)

WSD-PDT-LV Series Programmable Edition!

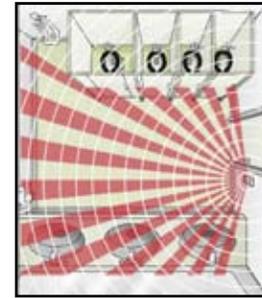


Dual Technology in a low voltage Wall Switch Sensor! The *WSD-PDT-LV Series* is by far the most powerful Decorator occupancy sensor ever invented. This sensor combines Passive Infrared (PIR) detection with patented Microphonics™; enabling it to literally “See & Hear” occupants in areas with or without obstructions. A user programmable time delay ensures that once the room is vacated the sensor will time out and turn off the lights. *WSD-PDT-LV* sensors also have additional On Modes and Switch Modes that are all fully programmable using the front push-button. Additionally, the *WSD-PDT-LV* offers a Vandal Resistant version for high abuse or public areas.



Small Office

- Sensors maintain effectiveness in obstructed locations
- Detects keyboard, phone, paper shuffling



Bathrooms

- Senses partitioned spaces
- Voice sound re-activation prevents lights out condition

SENSOR OPERATIONS

Sensors with Passive Dual Technology (PDT) first “See” motion using Passive Infrared (PIR) and then engage Microphonics™ to “Hear” sounds that indicate continued occupancy. This patented technology uses Automatic Gain Control (AGC) to dynamically self adapt a sensor to its environment by filtering out constant background noise and detecting only noises typical of human activity. When occupancy is detected, a DC output goes high and can drive up to 200 mA of connected load. The sensor is powered with 12-24 VAC/VDC and typically operates with a PP-20 or MP-20 Power Pack; enabling complete 20 Amp circuits to be controlled. An internal timer, factory set at 10 minutes, keeps the lights “On” during brief periods of no activity. This timer is selectable at 2.5 minute increments from 30 seconds to 20 minutes, and is reset every time occupancy is re-detected. If needed, a 10 second grace period also allows the lights to be voice reactivated after shutting off.

LOW VOLTAGE RELAY OPTION (WSD-PDT-LV-R)

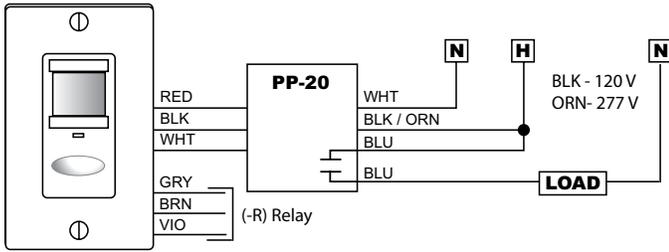
To enable a sensor to interface with a building management system, the -R option provides dry contact closure via a SPDT, 1 Amp, 40 Volt relay. The relay is energized while the sensor registers “Unoccupied”. The relay is then de-energized when the sensor registers “Occupied”.

MODEL NUMBERING SYSTEM: WSD-PDT-LV-[LENS]-[LV RELAY]-[COLOR*]-[TEMP/HUMIDITY]

SERIES #	LENS	LOW VOLTAGE RELAY	COLOR	TEMP/HUMIDITY
WSD-PDT-LV	Blank = Standard -V = Vandal Resistant	Blank = No Relay -R = w/ SPDT Relay, 1 Amp	-I = Ivory -W = White -G = Gray -A = Almond	Blank = 14° to 85° F -LT = -4° to 85° F

WIRING INSTRUCTIONS

Wire lead connections are Class II, 18 to 22 AWG.



STANDARD WSD-LV

RED – 12 to 24 VAC/VDC
 BLACK – Common
 WHITE – Output (High DC for Occupancy)

LOW VOLTAGE RELAY OPTION WIRING

GRAY / BROWN – Connected during Occupied state
 VIOLET / BROWN – Connected during Unoccupied state

Note: Relay is energized during Unoccupied state and must have power at all times to function.

OPERATIONAL MODES

On Modes (*Default)

- Automatic On*** - The sensor automatically turns the lights on when the sensor detects occupancy.
- Manual On** - The occupant must push the sensor’s button to turn the lights on.
- Reduced Turn-On** - The sensor is set to initially only detect large motions, effectively ignoring any reflected PIR signals while still sensing occupants when they enter the room. Once on, the sensor returns to maximum sensitivity.

Switch Modes

The default operation of the push-button switch will turn the lights off no matter what the occupancy state. The lights will stay off until the switch is pressed again, restoring the sensor to Automatic On.

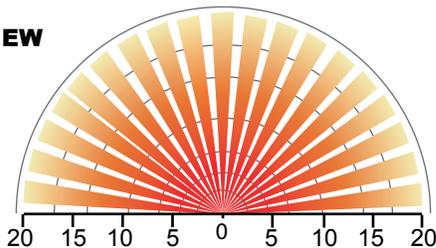
Other switch modes include:

- Switch Disable** - Prevents user from manually turning off the lights via the push-button.
- Predictive Off** - Pressing the switch overrides the lights off and disables the occupancy detection. After an exit time delay (default 10 seconds) the occupancy detection reactivates and monitors for an additional grace period time (default 10 seconds). If no occupancy is detected during this period, the sensor will revert to Automatic On operation. If occupancy is detected, the sensor will remain in permanent off mode requiring the switch to be pressed again in order to restore the sensor to Automatic On.

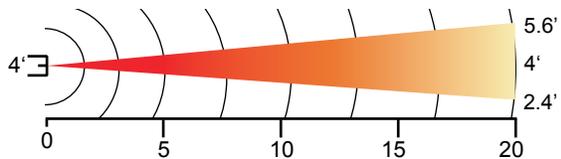
AREA OF COVERAGE:

The PIR collector beams view out horizontally in a wall-to-wall pattern. The beams will see out to 50 feet, however, their effectiveness with *Standard Lens* is 20 feet for small hand or body motions and 10 feet for the *Vandal Resistant* lens. The Microphonics™ will detect normal human activity up to 20 feet, but will detect greater distances in spaces with hard floors or very quiet rooms with little or no background noise.

TOP VIEW



SIDE VIEW



STANDARD vs. VANDAL RESISTANT LENS

The Standard lens should be used in typical offices or rooms where occupants work for extended periods of time. The Vandal Resistant lens should be used in high abuse or public areas, where occupants simply come and go and make larger types of motions. Copy rooms, small public restrooms, storage or janitor’s closets are ideal applications. A sensor with a Vandal Resistant lens will have its PIR detection range reduced by 50%., however the Microphonics™ range is not affected.

WARRANTY: Sensor Switch, Inc. warrants these products to be free of defects in manufacture and workmanship for a period of sixty months. Sensor Switch, Inc., upon prompt notice of such defect will, at its option, provide a Returned Material Authorization number and a replacement product.

LIMITATIONS AND EXCLUSIONS: This Warranty is in full lieu of all other representation and expressed and implied warranties (including the implied warranties of merchantability and fitness for use) and under no circumstances shall Sensor Switch, Inc. be liable for any incidental or consequential property damages or losses.



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 (203) 265-2842 info@sensorswitch.com
 www.sensorswitch.com

revised 09/19/2006
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STANDARD RANGE 360° SENSOR CEILING MOUNT • LOW VOLTAGE • DUAL TECHNOLOGY (PDT)

SPECIFICATIONS

FEATURES

- 100% Digital PIR Detection, Excellent RF Immunity
- 360° Coverage Pattern
- Patented Dual Technology with PIR / Microphonics Detection
- Push-Button Programmable Adjustable Time Delays
- Convenient Test Mode
- No Field Calibration or Sensitivity Adjustments Required
- 100 hr Lamp Burn-in Timer
- Green LED Indicator

LAMPMAXIMIZER® TECHNOLOGY

- Protects Lamp Life while Maximizing Energy Savings
- Minimum On Timer (15 min default)
- Occ. Time Delay (10 min default)
- LampMaximizer+ Mode - Optimizes Lamp Life & Energy Savings (disabled by default)
- Switch Counter (in 1000's)
- Total Lamp On Time (in khrs)

PHYSICAL SPECS

- SIZE 4.55" Dia. (11.56 cm)
1.55" Deep (3.94 cm)
- WEIGHT 6 oz
- MOUNTING
Ceiling Tile Surface
3.5" Octagon Box
Single Gang Handy Box
- COLOR White

ELECTRICAL SPECS

- OPERATING VOLTAGE
12-24 VAC/VDC
- CURRENT DRAW
Standard, 4 mA
w/ R option, 16 mA
- DIMMING LOAD Sinks < 20mA;
~40 Ballasts @ .5mA each
- RECOMMENDED POWER PACK
PP20

ENVIRONMENTAL SPECS

- OPERATING TEMP
14° to 160° F (-10° to 71° C)
- STORAGE TEMP
-14° to 160° F (-26° to 71° C)
- RELATIVE HUMIDITY
20 to 90% non-condensing
- SILICONE FREE
- ROHS COMPLIANT

OVERVIEW

Open area office lighting control is made cost-effective with the use of the CM PDT 9 Series Standard Range 360° occupancy sensor. This sensor provides line-of-sight PIR detection of small motion in a circular pattern, and combines overlapping Microphonics™ coverage for detection of occupants working in their cubical space. By installing multiple CM PDT 9s on 30 ft (9.14 m) centers, large control zones are created (typically one per circuit of lighting). The lighting is then controlled in blocks similar to manual switching. Restrooms with stalls, large storage areas with shelving, and libraries with study carrels are also easily and cost-effectively controlled by the CM PDT 9.

SENSOR OPERATION

Sensors with Passive Dual Technology (PDT) first see motion using 100% digital Passive Infrared (PIR) detection and then engage Microphonics™ to hear sounds that indicate continued occupancy. This patented technology uses Automatic Gain Control (AGC) to dynamically self adapt a sensor to its environment by filtering out constant background noise and registering only noises typical of human activity. When occupancy is detected, a DC output goes high and can drive up to 200 mA of connected load. If needed, a 10 second grace period also allows the lights to be voice reactivated after shutting off. The sensor is powered with 12-24 VAC/VDC and typically operates with a PP20 or MP20 power pack, enabling complete 20 Amp circuits to be controlled.

LAMPMAXIMIZER®

This sensor also contains patent pending LampMaximizer technology that allows users to aggressively target energy savings while still protecting lamp life. A minimum on timer, factory set at 15 minutes, helps preserve lamp life by eliminating all lamp cycles shorter than lamp warranties specify. A standard occupancy time delay is also present that ensures lights turn off (assuming minimum on timer has elapsed) if no occupancy is detected. This timer is factory set at 10 minutes to promote energy savings, but is adjustable between 30 seconds and 20 minutes. These adjustments can be done manually, through the units push-button, or automatically every two weeks through an advanced mode, called LampMaximizer+, that determines the optimum time delay in order to maximize both lamp life and energy savings. Additionally, this sensor maintains statistics on total lamp on time and number of cycles.

OPTIONS

LOW VOLTAGE RELAY (R)

- Enables sensors to interface with other systems (e.g., BMS, lighting panels)
- Provides dry contact closure via a SPDT, 1 Amp, 40 Volt relay
- Only one relay needed per zone
- Changes state when all connected sensors register unoccupied
- Relay requires sensor power to function

OCCUPANCY CONTROLLED DIMMING (D)

- Provides dimming output to control 0-10 VDC dimmable ballasts
- Provides a second occupancy time-out period that enables the lights to go to a dim setting before turning off
- Adjustable max/min dim setting
- Only one sensor per zone needs to have dimming output

PHOTOCELL (P)

- Auto set-point calibration
- Two selectable modes of operation
- On/Off mode: Photocell has full control during periods of occupancy
- Inhibit mode: Photocell can prevent lights from turning on if adequate daylight is available, but cannot turn lights off

PHOTOCELL W/ DIMMING (ADC)

- Photocell within sensor maintains total room light level by controlling levels of 0-10 VDC dimmable ballasts
- Photocell also has full on/off control during periods of occupancy
- Provides a second occupancy time-out period that enables the lights to go to a dim setting before turning off

Note: LampMaximizer+ features not available with ADC option

LOW TEMP/HIGH HUMIDITY (LT)

- Sensor is corrosion resistant to moisture
- Operates down to -4° F (-20° C)



TITLE 24
MADE in U.S.A.
5 YEAR WARRANTY

ORDERING INFO CM PDT 9 [RELAY] [DIMMING/PHOTOCELL] [TEMP/HUMIDITY]

RELAY

- Blank = None
- R = Low Voltage Relay

DIMMING / PHOTOCELL CHOOSE ONE ONLY

- Blank = None
- D = Occupancy Controlled Dimming
- P = Photocell
- ADC = Photocell w/ Dimming

TEMP/HUMIDITY

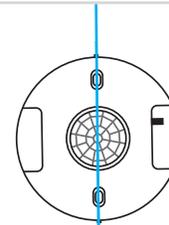
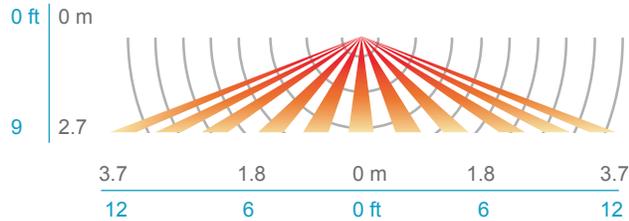
- Blank = Standard
- LT = Low Temp

COVERAGE PATTERN

9 STANDARD RANGE 360° LENS WITH MICROPHONICS™

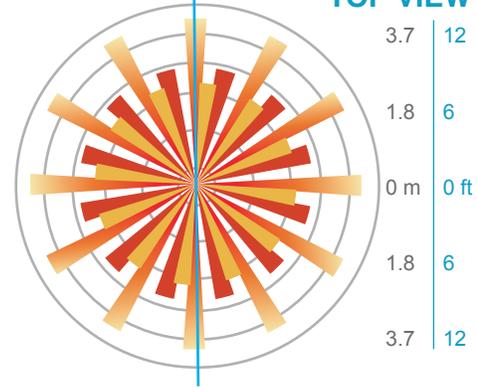
- Best choice for small motion (e.g. hand movements) detection
- Viewing angle of 56° in a 360° conical shaped pattern
- Provides 12 ft (3.66 m) radial coverage when mounted to standard 9 ft (2.74 m) ceiling
- 8 to 15 ft (2.44 to 4.57 m) mounting heights provide 10 to 20 ft (3.05 to 6.10 m) radial coverage
- Microphonics™ provides overlapping detection of human activity over the complete PIR coverage area. Advanced filtering is also utilized to prevent non-occupant noises from keeping the lights on.

SIDE VIEW



Note: Screw axis is aligned with a long detection segment

TOP VIEW



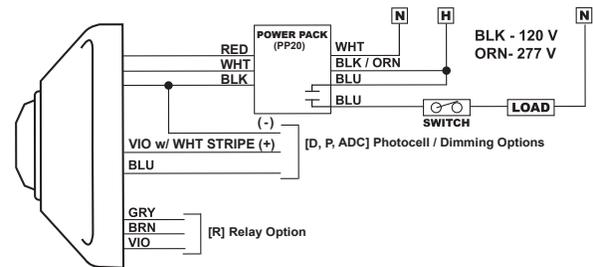
WIRING (DO NOT WIRE HOT)

STANDARD WIRING

- RED** - Power Input (12-24 VAC/VDC)
- BLACK** - Common
- WHITE** - Occupancy State (high VDC for occupied)

PHOTOCELL/DIMMING OPTIONS (D, P, ADC)

- BLUE** - Direct output to power pack for providing photocell control and/or secondary dim time out. Output is high VDC with occupancy & low light. Output also held high during secondary dim time out. For multi-level control, use two power packs and connect White wire to primary load and Blue to daylight load.
- VIOLET w/ WHITE STRIPE** - Connect to 0-10 VDC control wire (typically Violet) from 0-10 VDC dimmable ballast
- GRAY from Ballast** - Connect to sensor Black wire

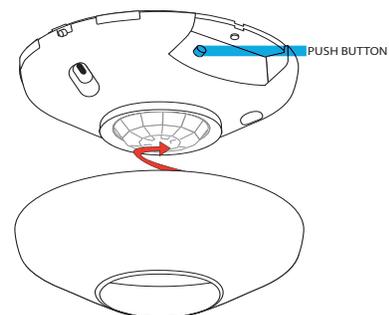


RELAY OPTION (R)

- GRAY / BROWN** - Connected during occupied state
- VIOLET / BROWN** - Connected during unoccupied state
- Note:** Relay is energized during unoccupied state

INSTALLATION

- Mount sensor directly to a ceiling tile or a metallic grid (two self-tapping screws provided)
- Sensor's mounting holes also align with 3.5" octagon or single gang handy box (screws not provided)
- Sensor will detect motions crossing segments more effectively than motions parallel to beams
- For optimal detection, position sensor such that segments are crossed upon entrance and unable to view outside the space
- For maximum Microphonics™ sensitivity avoid locating sensor near HVAC air diffusers.



PROGRAMMING

Refer to instruction card IC7.001 for default settings and directions on programming the sensor via the push-button.

sensorswitch

An AcuityBrands Company

WARRANTY: Sensor Switch, Inc. warrants these products to be free of defects in manufacture and workmanship for a period of 60 months. Sensor Switch, Inc., upon prompt notice of such defect, will, at its option, provide a Returned Material Authorization number and repair or replace returned product.

LIMITATIONS AND EXCLUSIONS: This Warranty is in full lieu of all other representation and expressed and implied warranties (including the implied warranties of merchantability and fitness for use) and under no circumstances shall Sensor Switch, Inc. be liable for any incidental or consequential property damages or losses.

TS-CM-005A