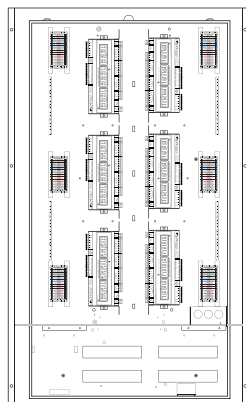


LCAP44A • LCAP44/A/LO/CB • Les Numéros de Catalogue • Los Números de Catálogo:

Country of Origin: Made in China • Pays d'origine: Fabriqué en Chine • País de origen: Hecho en China


OVERVIEW

The WattStopper® LCAP Series Commercial Enclosures ship with pre-configured modular solutions. Load dimming and switching use Vantage™ controllers and switching products. The pre-configured designs save time in Vantage's Design Center™ software and during the installation process.

The UL listed LCAP44A panels are adaptable to spaces that have mixed 0-10V, and PWM loads and HV relay loads via Vantage's LVOS 0-10-PWM station. LCAP44A connects to any controller over the local network for easy connection and scalability.

SOLUTION 1 - PARENT-LEVEL ENCLOSURE MODELS

Main Enclosure	Description
LCAP44	44" Architectural Enclosure
LCAP44A Panel Configurations See KIT Panel part numbers ordering key, last page)	Panel Load Section: • 1 to 2 LVOS-0-10-PWM stations
	Panel Controller Section: • 1 to 2 LVOS-0-10-PWM stations
	Panel Lower Section: • 1 to 2 LVOS-0-10-PWM stations
	Panel Low-Voltage Section
Optional Parts	Description
LCAP-OPT-SWITCH	8-Port (4 standard and 4 PoE) Ethernet switch/power supply
VA-RRU-1-120V	Emergency Shunt Relay - 120V
VA-RRU-1-277V	Emergency Shunt Relay - 277V
Additional Parts Order Separately	Description
VA-EPC-DFS-120V	Emergency Lighting Surface Mount Switch 120V
VA-EPC-DFS-277V	Emergency Lighting Surface Mount Switch 277V

LCAP44A SPECIFICATIONS

LCAP44A	Specifications
Cabinet Dimensions, HWD	44.5" x 24" x 4.575" 113cm x 61cm x 11.6cm
Door Dimensions, HWD	44.5" x 24" x 0.75" 113cm x 61cm x 2cm
Panel Insert, HWD	42" x 21" x 4.175" 106.7cm x 53.3cm x 10.6cm
Weight - Enclosure	41 lbs / 18.6 kg
Weight - Door	20.7 lbs / 9.39 kg
Weight - Panel Insert	23 lbs / 10.43 kg
Number of LVOS-0-10-PWM* Stations	Up to 6
Analog, 0-10DC/LV — Max. Outputs	Up to 24
PWM, LV — Max. Outputs	Up to 24
Line Feeds (breakers) required	1 and Up
Enclosure Finish	Galvanized steel
Door Finish	Black - Powder coated
Cover	Vented, hinged
Wire	Copper wire, MIN. of 176° F / 80° C insulation
Ventilation	Maintained 36" front clearance
Ambient Operating Temperature	32 - 104° F / 0 - 40° C
Ambient Operating Humidity	5 - 95% non-condensing
UL, CUL, and CE Listed	Yes

*See this install sheet for important information: [Low Voltage Output Station Lighting_LVOS-0-10-PWM-1](#)

LCAP ENCLOSURE DESIGNS

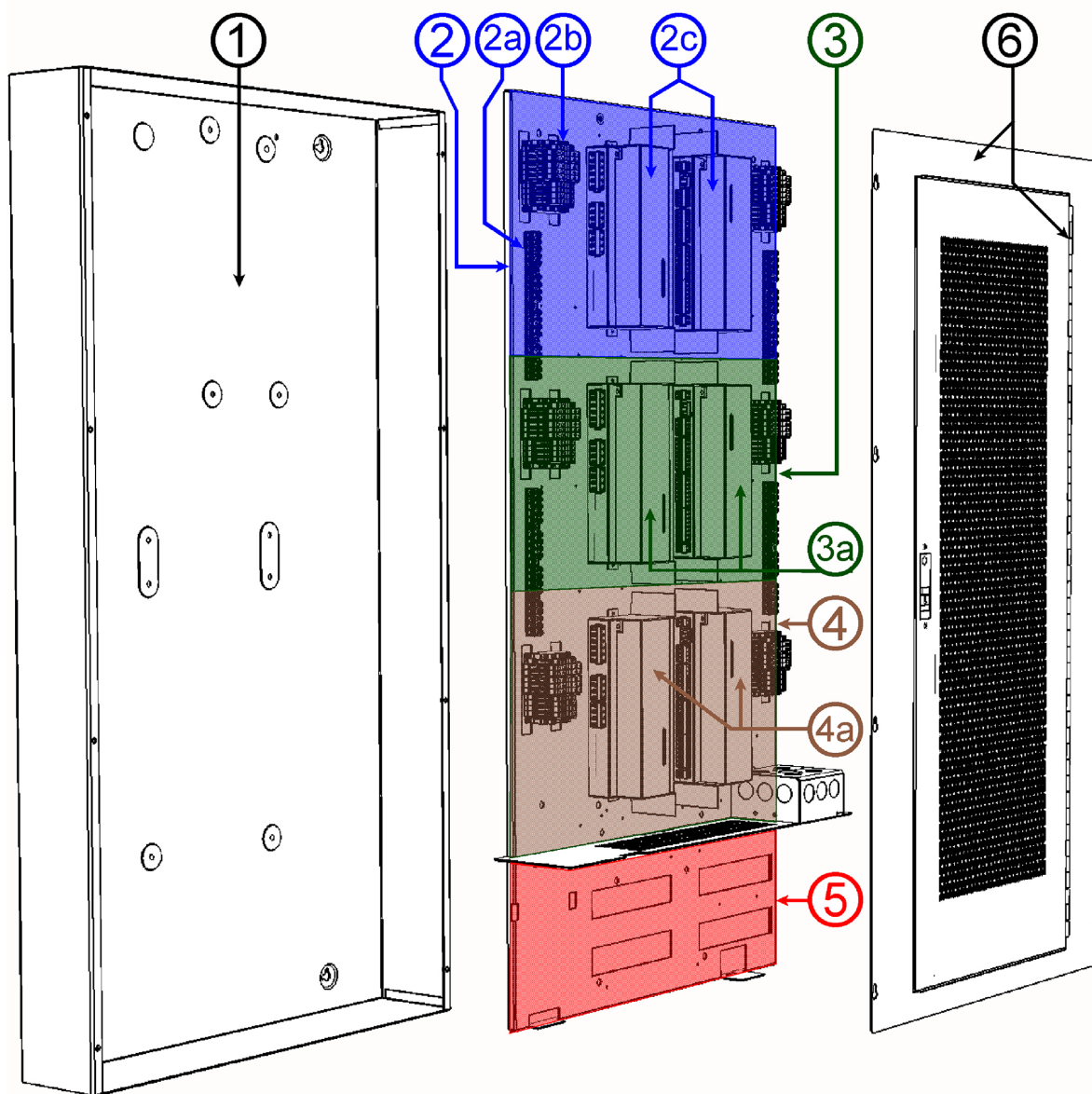
LCAP SERIES ENCLOSURE FACTS

- Enclosures must be populated from left to right and top down
 - Blank positions cannot be left between lighting modules in Design Center setup
- Enclosures are pre-configured and wired (to the extent possible) using specific combinations of the following components. Installed switching components are dependent on the enclosure design
 - Components using high-voltage wiring
 - Mixed high-voltage wiring
 - Components using low-voltage control signal wiring
 - Components using low-voltage communication wiring
 - Components using high-voltage and low-voltage connections made inside the enclosure
- The enclosure uses built-in barriers to separate high and low-voltage wiring
 - Some designs include the barrier while other designs require the barrier be added by the designer
 - High-voltage barriers may be installed between 120V/240V/277V load modules
- LCAP44A Enclosures only contain LVOS-0-10-PWM stations

ENCLOSURE FEATURES / PARTS

1. Enclosure can (includes door), order *LCAP44* for can only
2. Panel Insert (**upper section**)
 - a. Ground terminals, (notice terminals for all sections)
 - b. Wiring terminal blocks for upper section LVOS stations, (notice wiring blocks for all sections if populated with LVOS stations)
 - i. Internal side pre-wired (see *Wiring Block* pg. 2)
 - ii. External side wired in field (see *Wiring Block* pg. 2)
 - c. Up to (2) LVOS-0-10-PWM stations (**upper section**)
3. Panel Insert (**middle section**)
 - a. Up to two additional LVOS-0-10-PWM stations
4. Panel Insert (**lower section**)
 - a. Up to two additional LVOS-0-10-PWM stations
5. Panel Insert (**low-voltage section**)
6. Enclosure cover with hinged/vented door allowing easy access when servicing and proper ventilation for convection cooling process

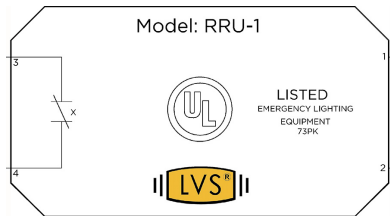
LCAP44A PANEL BASIC CONSTRUCTION PARTS



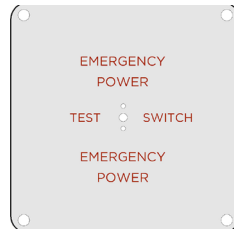
LCAP44A PANEL OPTIONAL CONSTRUCTION PARTS

- The VA-RUU-1 Switch comes pre-installed in the kit
- The VA-EPC-DFS-1 Switch is installed on site

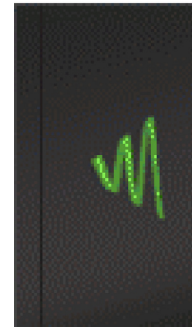
NOTE: Please see install sheets for emergency switch applications



EMR SWITCH
VA-RRU-1-120V (277V)



EMR SWITCH
VA-EPC-DFS-120V (277V)
Order Separate



LCAP-OPT-SWITCH
8-Port (4 Standard and 4 PoE)

INSTALLATION / ENCLOSURE MOUNTING INSTRUCTIONS

Installation of LCAP products should be performed or supervised by a WattStopper/Vantage factory representative and a Certified WattStopper/Vantage Installer. Installation and maintenance of high-voltage devices should only be performed by qualified and licensed personnel having appropriate training and experience.

GENERAL WIRING

Drill proper size holes in can for running wires in and out of the enclosure. Separate high and low-voltage wire run channels. All wire runs in and out of the enclosure should be secured using 2-screw connectors or equivalent as shown at the right. Proper conduit or equivalent wire channels should be used according to local codes and regulations.



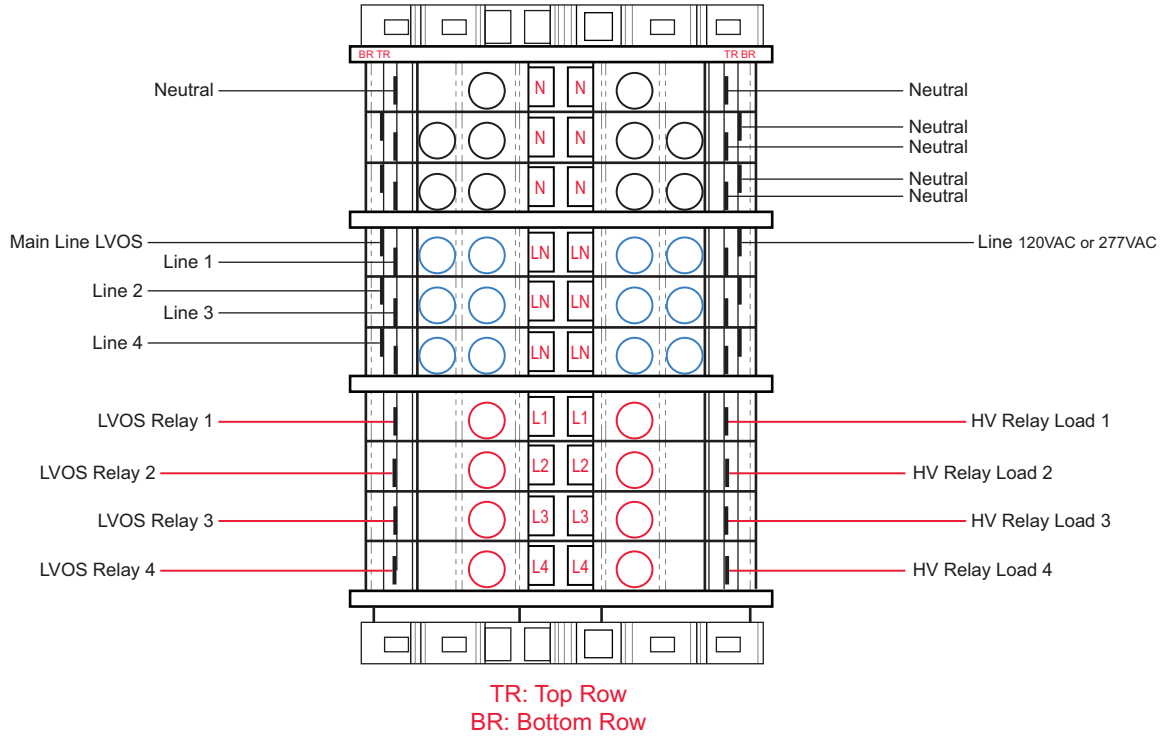
IMPORTANT SAFEGUARDS

CAUTION: TURN BREAKERS OFF AND CHECK THAT NO POWER IS ON AT THE AC TERMINAL BOARDS WHEN WORKING IN THE ENCLOSURE OR WORKING ON LIGHTING FIXTURES CONNECTED TO THE MODULE'S LOADS, ETC. DO NOT ALLOW TRIMMED WIRE CUTTINGS TO FALL INTO ENCLOSURE COMPONENTS AS THEY MAY CAUSE DAMAGE WHEN POWER IS RESTORED. DAMAGE FROM THIS TYPE OF SHORT WILL VOID THE WARRANTY.

- Do not use outdoors
- Do not mount near gas or electric heaters
- Do not mount enclosures in attics, garages, or crawlspaces, unless room is properly conditioned to conform to ambient room temperature and humidity requirements
- Mount enclosure a minimum of 18" from ceiling or floor
- National Electrical Code requires a minimum frontal clearance of 36" for the enclosure
- Use screws provided for mounting
- If any emergency circuits are fed or controlled from this panel, it must be located electrically where fed from a UPS, generator, or other guaranteed source of power during emergency and power outage situations
- **LISTED AS EMERGENCY LIGHTING EQUIPMENT** – using an appropriate label
- **CAUTION:** To avoid electrical overload, total external connected load should not exceed output rating
- **SAVE THESE INSTRUCTIONS**

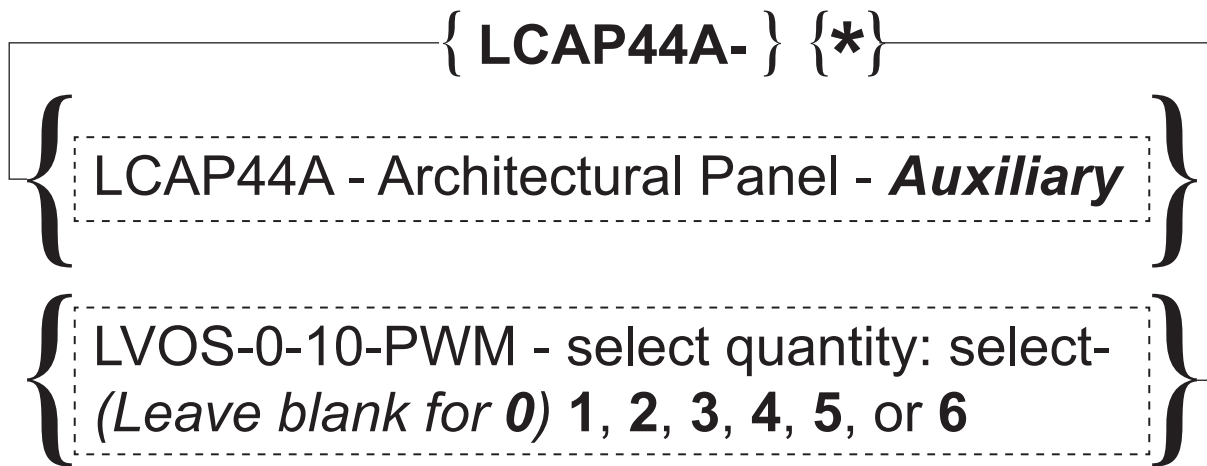
EMERGENCY CIRCUITS

WIRE BLOCK TERMINAL CLOSE UP



PART NUMBER ORDERING KEY

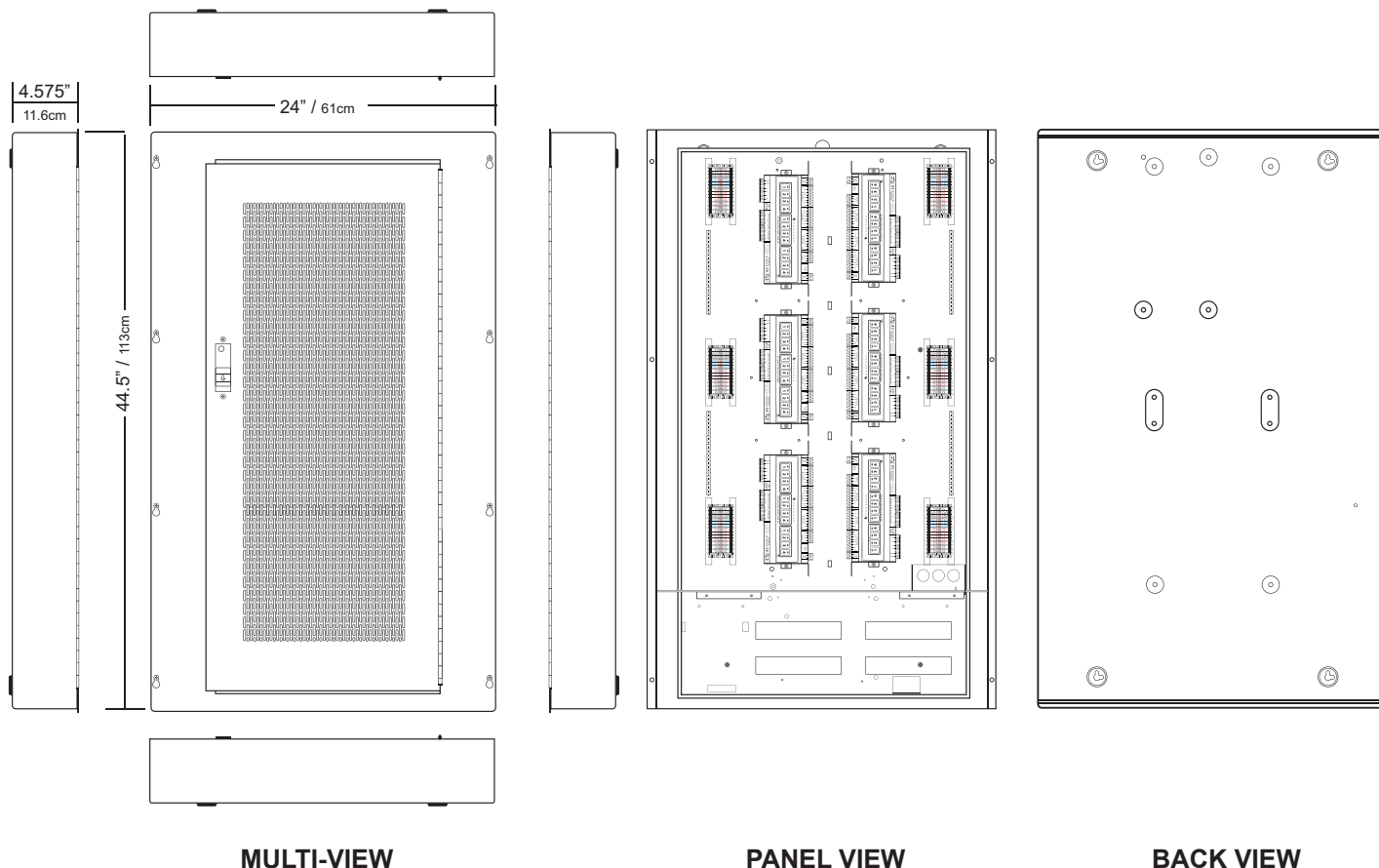
Design Center will generate part numbers automatically as the enclosures are built. This key is for help creating manual orders if needed. See next page for kit part numbers.



KIT PART NUMBERS AND CONTENTS

Part Number	Incl/Opt	Equipment
LCAP44A-KIT	Included	(1) LCAP44A Panel
	Optional	(1) COM-POE-SWITCH Ethernet Switch
LCAP44A-1-KIT	Included	1) LCAP44A Panel and (1) LVOS-0-10-PWM-P-1 with (1) Pre-wired Block
	Optional	(1) COM-POE-SWITCH Ethernet Switch and (1) VA-RRU-1-120V -or- VA-RRU-1-277V
LCAP44A-2-KIT	Included	(1) LCAP44A Panel and (2) LVOS-0-10-PWM-P-1 with (2) Pre-wired Blocks
	Optional	(1) COM-POE-SWITCH Ethernet Switch and (1 or 2) VA-RRU-1-120V -or- VA-RRU-1-277V
LCAP44A-3-KIT	Included	(1) LCAP44A Panel and (3) LVOS-0-10-PWM-P-1 with (3) Pre-wired Blocks
	Optional	(1) COM-POE-SWITCH Ethernet Switch and (1 to 3) VA-RRU-1-120V -or- VA-RRU-1-277V
LCAP44A-4-KIT	Included	(1) LCAP44A Panel and (4) LVOS-0-10-PWM-P-1 with (4) Pre-wired Blocks
	Optional	(1) COM-POE-SWITCH Ethernet Switch and (1 to 4) VA-RRU-1-120V -or- VA-RRU-1-277V
LCAP44A-5-KIT	Included	(1) LCAP44A Panel and (5) LVOS-0-10-PWM-P-1 with (5) Pre-wired Blocks
	Optional	(1) COM-POE-SWITCH Ethernet Switch and (1 to 5) VA-RRU-1-120V -or- VA-RRU-1-277V
LCAP44A-6-KIT	Included	(1) LCAP44A Panel and (6) LVOS-0-10-PWM-P-1 with (6) Pre-wired Blocks
	Optional	(1) COM-POE-SWITCH Ethernet Switch, (1 to 6) VA-RRU-1-120V -or- VA-RRU-1-277V

LCAP44A ENCLOSURE MULTI-VIEW



LCAP44/A/LO/CB PANELS WITH MAIN LUG PANEL OPTION

MAIN LUG CIRCUIT BREAKER OPTION

The LCAPA and LCAPM series enclosures can be configured as a load feed through panel (LCAP PANEL only) or as main lug panels with the addition of load circuit breakers below the load control feed through compartment. Main lug options can also contain a main breaker. The Main Lug option is available for the LCAP-A and LCAP-M/S series panels – see the LCAP32/44/M/S/LO/CB install sheet. The circuit breaker options are based on the panel configuration, number and type of loads, and circuit breaker rating requirements. Once the main lug panel and circuit breaker options are selected the panel is built and prewired* in the factory and delivered to the project ready to be installed.

NOTE: *Panels with GFI breakers:* GFI breakers are not installed or pre-wired and are shipped separately.

APPLICATIONS

The LCAP44A is designed for medium to large spaces requiring control of up to 24 low-voltage PWM lighting circuits, 24 low-voltage 010V DC lighting circuits, and 24 120-277VAC relay lighting circuits. The built-in integration and networking capabilities of the LCAP44A easily meet requirements in spaces needing multiple types of lighting, and other automation integration systems using this panel. Adding an Equinox 41 or 73 touchscreen to the project allows the facility manager or end user to create, change, and manage scenes, schedules, and user profiles.

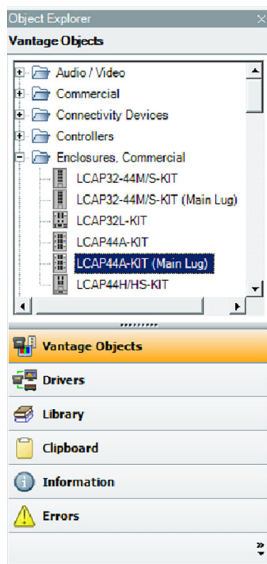
FEATURES

- Modular LCAP load section; pre-configured solution from the factory. Just connect line voltage and load wires
- Pre-configured Main Lug Panel solution options
- System is expandable using other LCAP series primary or secondary panels and LCAP Main Lug / Circuit Breaker options
- Can be configured with emergency circuits for emergency lighting
- Connects to InFusion Controller system via Ethernet or Station Bus
- Up to 24 dry contact inputs; 12 of the contacts may be used for, system powered, light sensors or occupancy sensors
- Dimmers have programmable start/stop and dimming curve adjustment features to customize dimming linearity
- Simple programming from a single software solution - Design Center
- Adding one BACnet enabled controller to a system allows the entire system to be controlled through BACnet
- Main Lug Panel options range from 18 to 36 circuits, 208-480V, and 10kAIC to 65kAIC and may be configured with a main breaker option

SET UP IN DESIGN CENTER

UNDERSTANDING LCAP AND MAIN LUG PANELS

- LCAP panels with the Main Lug option is a larger enclosure that holds the traditional LCAP components in the upper section of the enclosure and includes a breaker section in the lower section of the enclosure.
- LCAP panels with the Main Lug option are built in Design Center the same way as standard LCAP panels. The only difference is the Main Lug option has been selected. Follow the steps below to create an LCAP panel with the Main Lug option selected



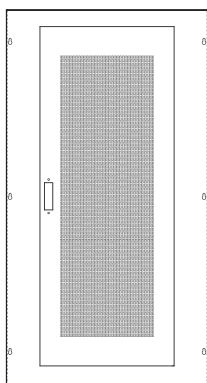
1. In Design Center | Object Explorer select
 - Vantage Objects
 - Enclosures, Commercial
 - LCAP model
 - LCAP44A-KIT (Main Lug)
2. Right-click in the enclosure and select Populate to automatically add LVOS-PWM stations in the enclosure or select LVOS-PWM stations and drag into the enclosure as wanted. (It is not possible to drag an LVOS-PWM station below a blank station position in an LCAP enclosure – fill enclosure from left to right / top to bottom. **NOTE:** Notice that breakers are automatically added to the Main Lug section of the enclosure as LVOS-PWM stations are added.
3. It is possible to add additional breakers in the Main Lug section by right-clicking below existing breakers and selecting Add Breaker until the maximum number of breakers allowed is reached.
4. Select the Main Lug section of the enclosure and change the type to MCB to add a Main Breaker option or leave as MLO for standard load breakers only.

LCAP32/44M/S/LO/CB SERIES SPECIFICATIONS

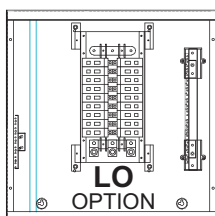
Specifications	LCAP44/A/LO	LCAP44/A/CB
Cabinet/Panel Cover Dimensions, HWD	68.0" x 24.0" x 4.75" 172.72cm x 60.96cm x 12.06cm	77.0" x 24.0" x 4.75" 195.58cm x 60.96cm x 12.06cm
Breakers	Up to 18	Up to 36
Door Dimensions, HWD	32" x 24" x 0.75" 81cm x 61cm x 2cm	44.5" x 24" x 0.75" 113cm x 61cm x 2cm
Main Lug Panel Door Dimensions HWD	16" x 12.5" x 0.75" 40.64cm x 31.75cm x 1.9cm	23" x 19" x 0.75" 58.42cm x 48.26cm x 1.9cm
Weight - Enclosure with Cover	165 - 175 lbs / 74.84 – 79.38 kg	170 - 180 lbs / 77.11 – 81.65 kg
LCAP Panel Door Dimensions, HWD	40.5" x 16.0" x 0.75" / 102.87cm x 40.64cm x 1.9cm	
Panel Insert, HWD	42" x 21" x 4.175" / 106.7cm x 53.3cm x 10.6cm	
Weight - Panel Insert	M-23 lbs. / 10.43 kg	
Number of LVOS-0-10-PWM* Stations	Up to 6	
Analog, 0-10DC/LV — Max. Outputs	Up to 24	
PWM, LV — Max. Outputs	Up to 24	
HV Relay 120-277 VAC — Max. Outputs	Up to 24	
Enclosure Finish	Galvanized steel	
Door Finish	Black - Powder coated	
Cover	Vented, hinged	
Wire	Copper wire, MIN. of 176° F/ 80° C insulation	
Ventilation	Maintained 36" front clearance	
Ambient Operating Temperature	32 - 104° F / 0 - 40° C	
Ambient Operating Humidity	5 - 95% non-condensing	
UL, CUL, and CE Listed	Yes	

LCAPM SERIES/LCAPA SERIES ENCLOSURE CONFIGURED WITH MAIN LUG ENCLOSURES

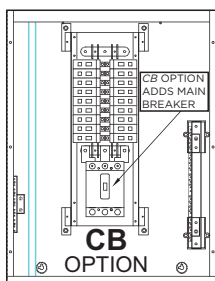
1 STANDARD
LCAP44/A PANEL



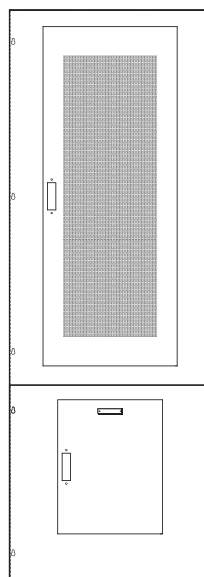
2 ADD THE MAIN
LUG **LO** OPTION



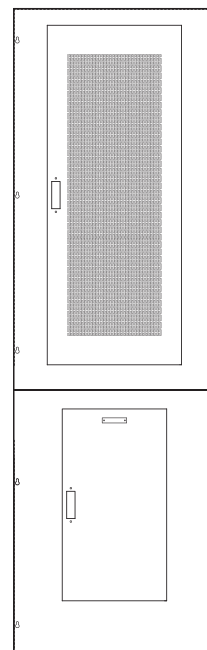
OR ADD THE MAIN
LUG **CB** OPTION



3 TO CREATE AN
LCAP44//A/LO

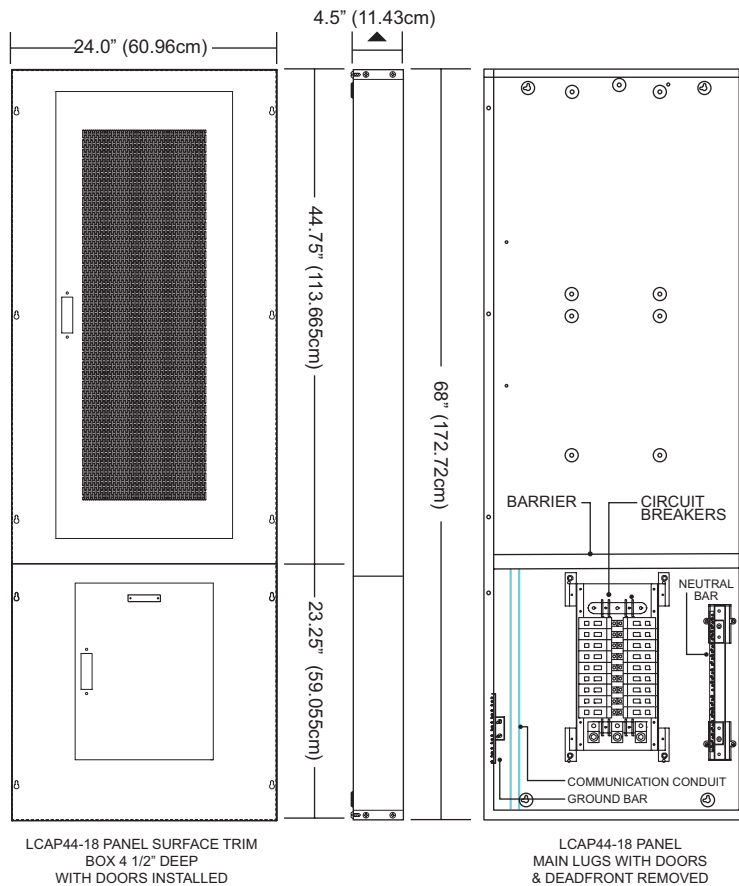


4 OR CREATE AN
LCAP44/A/CB



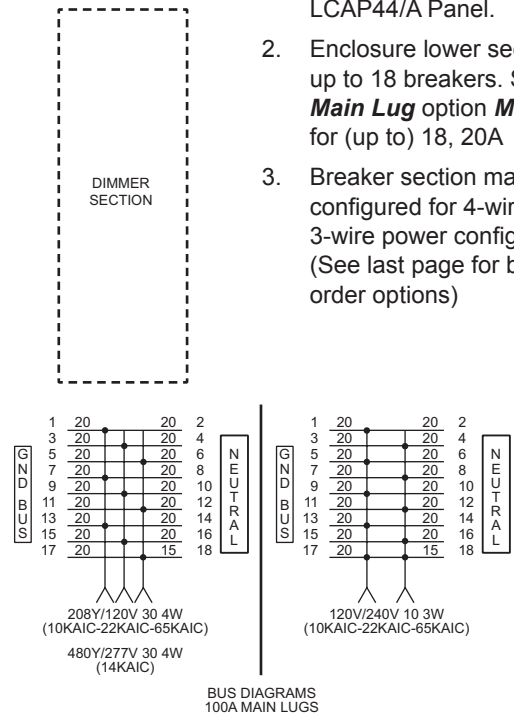
EXAMPLE SHOWN:
LCAP44/A configured with
LCAP44/A/LO or CB

LCAP44A/LO WITH MAIN LUG (UP TO 18 BREAKERS) ENCLOSURE MULTI-VIEW

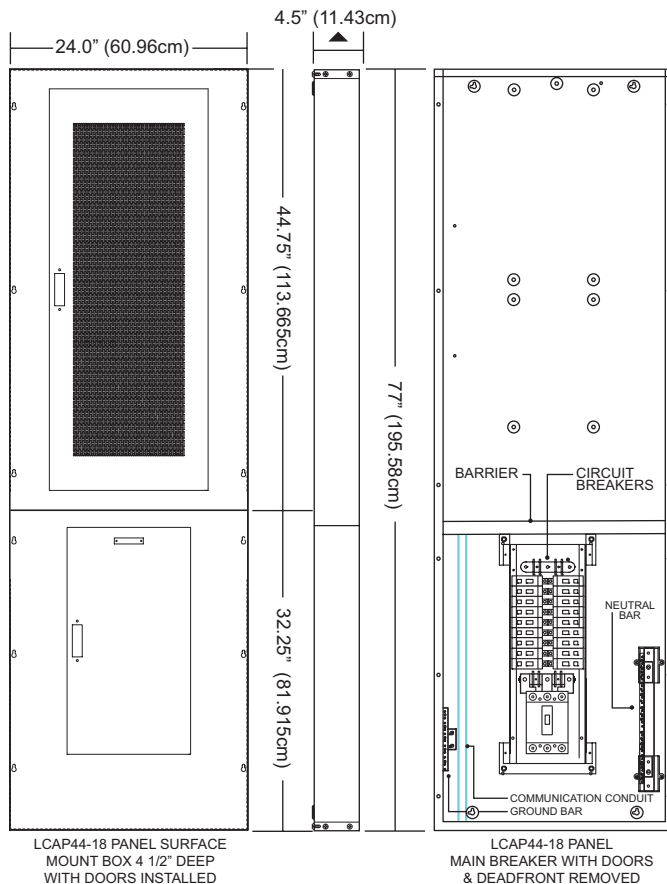


LCAP44A/LO

1. Enclosure upper section for LCAP44/A Panel.
2. Enclosure lower section for up to 18 breakers. Select the **Main Lug** option **MLO** option for (up to) 18, 20A breakers.
3. Breaker section may be configured for 4-wire or 3-wire power configurations. (See last page for breaker/order options)

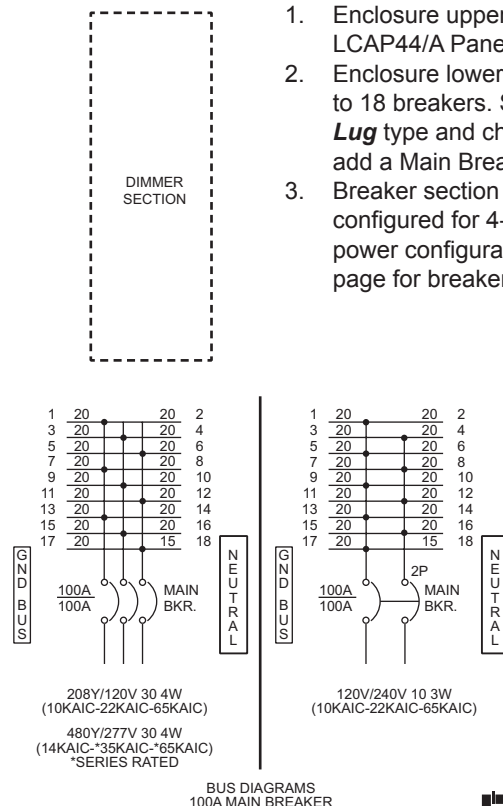


LCAP44A/CB WITH MAIN LUG ND MAIN BREAKER ENCLOSURE MULTI-VIEW

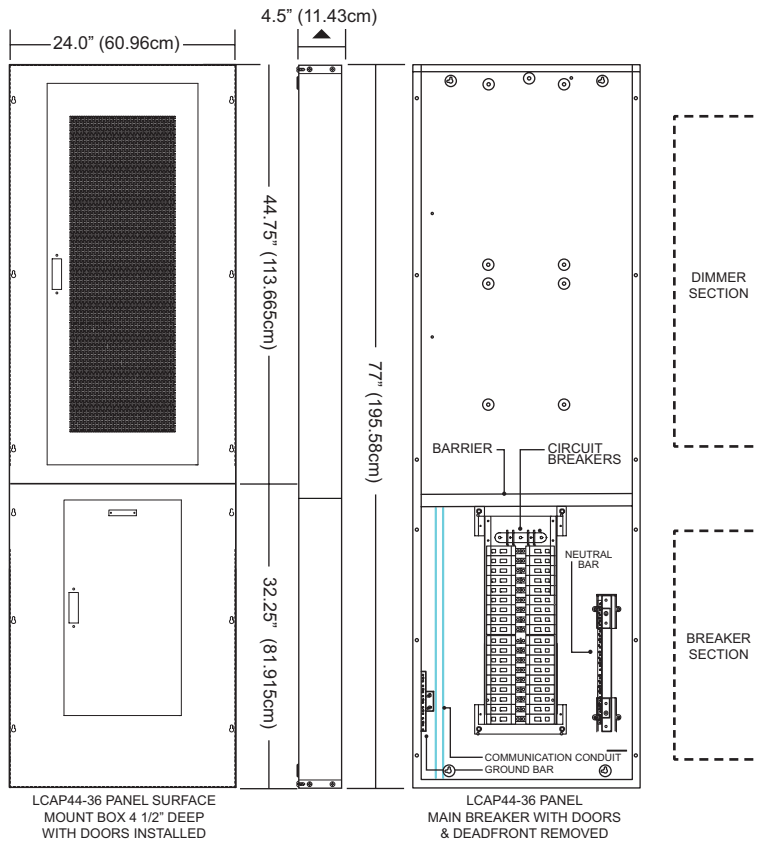


LCAP44A/CB

1. Enclosure upper section for LCAP44/A Panel
2. Enclosure lower section for up to 18 breakers. Select the **Main Lug** type and change to **MCB** to add a Main Breaker option
3. Breaker section may be configured for 4-wire or 3-wire power configurations (See last page for breaker/order options)

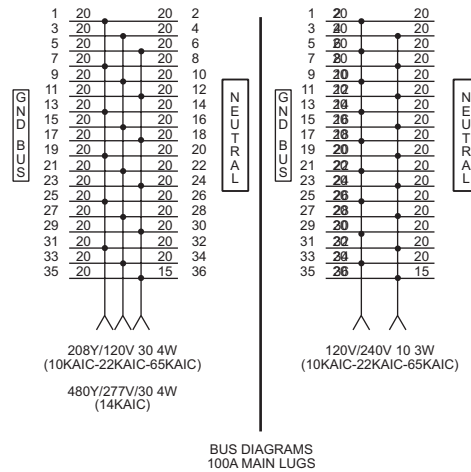


LCAP44A/LO WITH MAIN LUG (UP TO 36 BREAKERS) ENCLOSURE MULTI-VIEW

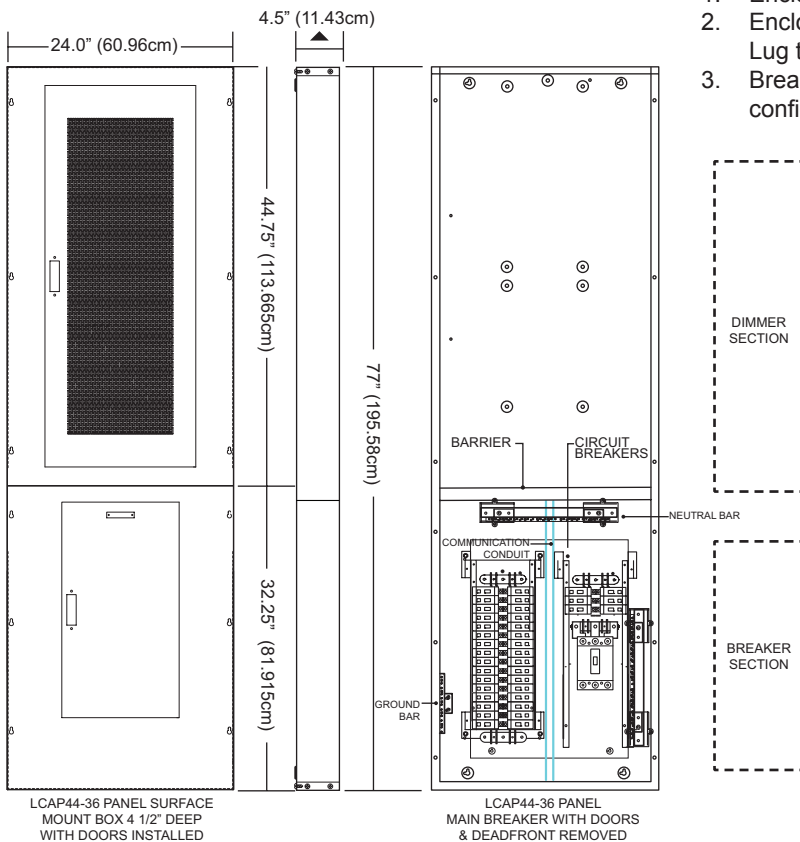


LCAP44A/LO (36 Breakers)

1. Enclosure upper section for LCAP44/A Panel.
2. Enclosure lower section for up to 36 breakers. Select the **Main Lug** option and choose the **MLO** option for (up to) 36, 20A breakers.
3. Breaker section may be configured for 4-wire or 3-wire power configurations (See last page for breaker/order options)

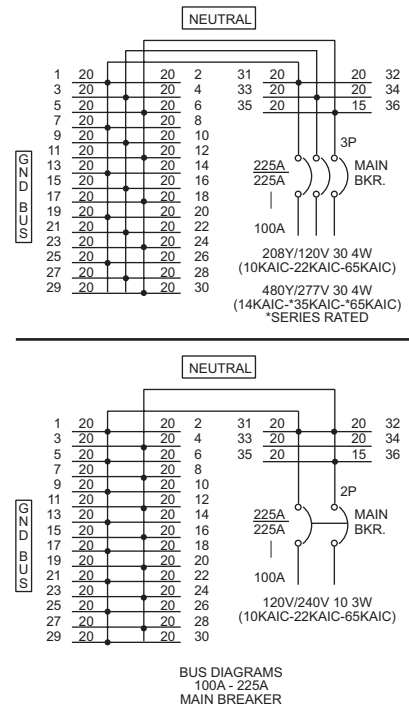


LCAP44A/CB WITH MAIN LUG (UP TO 36 BREAKERS) & MAIN BREAKER ENCLOSURE MULTI-VIEW



LCAP44A/LO (36 Breakers)

1. Enclosure upper section for LCAP44/A Panel.
2. Enclosure lower section for up to 36 breakers. Select the Main Lug type and change to MCB to add a Main Breaker option.
3. Breaker section may be configured for 4-wire or 3-wire power configurations (See last page for breaker/order options)



LCAP WITH OPTIONAL MAIN LUG PART NUMBER ORDERING KEY

Design Center will generate LCAP44/S/LO/CB part numbers automatically as the enclosures are built. This key is for help in understanding and creating orders in the LCAP Quote Tool online ordering tool.

BREAKER TYPES FOR LCAPM/S/LO/CB ENCLOSURE CONFIGURATIONS

CONFIGURATION FOR LCAP32			ADDER - Branch Breakers Each, 1-Pole, 20A				
SIZE	HEIGHT	BASE PANEL CONFIGURATION	10kAIC	14kAIC	11kAIC	35kAIC	65kAIC
18 Circuits 100A Bussing	56"	240V - MLO (Single Phase)	BAB		QHB		GHB
		208V - MLO	BAB		QHB		GHB
		480V - MLO		GHB			
	65"	240V - MCB (Single Phase) (Up to 100A, 65kAIC)					BAB*
		208V - MCB (up to 100A, 65kAIC)					BAB*
		480V - MCB (up to 100A, 35kAIC)				GHB*	
		480V - MCB (up to 100A, 65kAIC)					GHB*

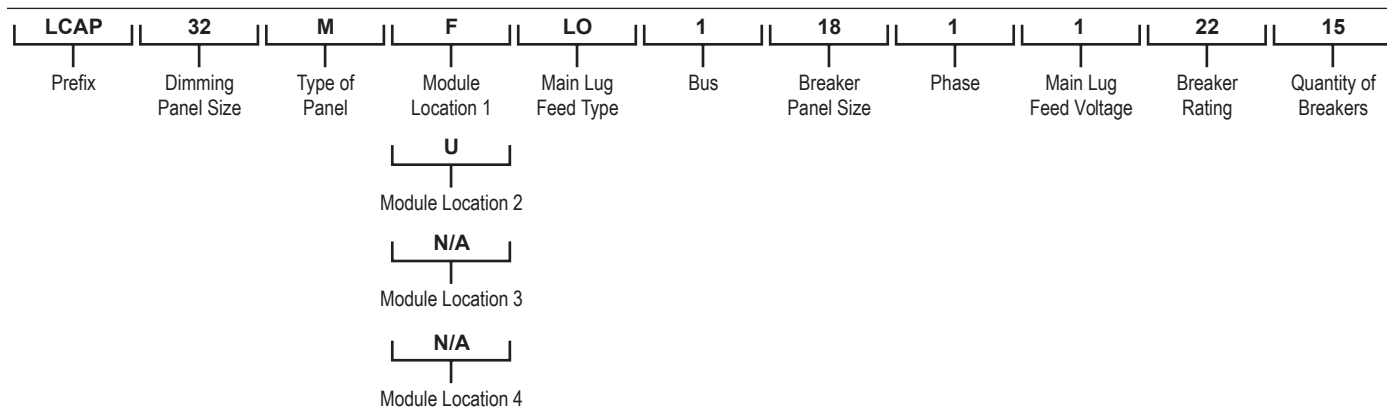
CONFIGURATION FOR LCAP44			ADDER - Branch Breakers Each, 1-Pole, 20A				
SIZE	HEIGHT	BASE PANEL CONFIGURATION	10kAIC	14kAIC	11kAIC	35kAIC	65kAIC
18 Circuits 100A Bussing	68"	240V - MLO (Single Phase)	BAB		QHB		GHB
		208V - MLO	BAB		QHB		GHB
		480V - MLO		GHB			
	77"	240V - MCB (Single Phase) (Up to 100A, 65kAIC)					BAB*
		208V - MCB (up to 100A, 65kAIC)					BAB*
		480V - MCB (up to 100A, 35kAIC)				GHB*	
		480V - MCB (up to 100A, 65kAIC)					GHB*

BREAKER TYPES FOR LCAPM/S/LO/CB ENCLOSURE CONFIGURATIONS

CONFIGURATION FOR LCAP44 - 36 BREAKER			ADDER - Branch Breakers Each, 1-Pole, 20A				
SIZE	HEIGHT	SIZE	10kAIC	14kAIC	11kAIC	35kAIC	65kAIC
36 Circuits 225A Bussing	77"	240V - MLO (Single Phase)	BAB		QHB		GHB
		208V - MLO	BAB		QHB		GHB
		480V - MLO		GHB			
		240V - MCB (Single Phase) (Up to 225A, 65kAIC)					BAB*
		208V - MCB (up to 225A, 65kAIC)					BAB*
		480V - MCB (up to 100A, 35kAIC)				GHB*	
		480V - MCB (110A - 225A, 35kAIC)				GHB*	
		480V - MCB (up to 100A, 65kAIC)					GHB*
		480V - MCB (100A - 225A, 65kAIC)					GHB*

BREAKER RATING LEGEND (Single Phase)			
	MLO = Main Lug Option	Type BAB	10kAIC
	MCB = Main Lug with Main Circuit Breaker	Type QBH	22kAIC
		BAB	65kAIC

LCAP M/S PANEL WITH MAIN LUG - ORDERING KEY



Field Description	Available Options
Prefix	LCAP - Lighting Control and Automation
Dimming Panel Size	32 - 32 inches 44 - 44 inches
Type of Panel	M - Panel with Main Controller and modules for dimming switching S - Secondary panel with no controller and modules for dimming and switching
Part Numbers for Modules or Stations	32M/S Panels - Module locations 1 and 2 - select: C - For MDR8CW301 , 8 Line feed 8 load latching relay - Uses 8 breakers FA - For FANMOD , 2 Line feed 8 fan load module - Uses 2 breakers F - For SDM12-EM , 4 Line feed 12 load standard dimming module (Forward phase) - Uses 2 breakers U - For UDM08-EM , 4 Line feed 8 load universal dimming module (Forward or reverse phase) - Uses 2 breakers X - Blank module position (allowed only after populated module positions)
Main Lug Feed Type	LO - Main Lug only CB - Main Lug with Main Breaker (will be sized according to circuit requirements)
Breaker Panel Bus	1 - 100A Bus 2 - 225A Bus
Breaker Panel Size	18 - Quantity of circuits available = 18, with and without Main Breaker 36 - Quantity of circuits available = 36, with and without Main Breaker NOTE: 36 not available for 32 inch panels
Phase	1 - Single phase 3 - Three phase
Main Lug Feed Voltage	1 - Rating 120/240 Single phase 2 - 120/208 Three phase 4 - Rating 277/480 Three phase
Breaker SCCR Rating kAIC (all branch circuits rated at 20A)	10 - 14 - Only breaker option available for LO type panels at 480V feed voltage 22 - 35 - Only available for CB type panels at 480V feed voltage 65 -
Quantity of Breakers Required	Add up all the breakers used by modules. Add any additional breakers needed. Cannot exceed the breaker panel size selected - 18 or 36

WARRANTY INFORMATION

Wattstopper warrants its products to be free of defects in materials and workmanship for a period of five (5) years. There are no obligations or liabilities on the part of Wattstopper for consequential damages arising out of, or in connection with, the use or performance of this product or other indirect damages with respect to loss of property, revenue or profit, or cost of removal, installation or reinstallation.

INFORMATIONS RELATIVES À LA GARANTIE

Wattstopper garantit que ses produits sont exempts de défauts de matériaux et de fabrication pour une période de cinq (5) ans. Wattstopper ne peut être tenu responsable de tout dommage consécutif causé par ou lié à l'utilisation ou à la performance de ce produit ou tout autre dommage indirect lié à la perte de propriété, de revenus, ou de profits, ou aux coûts d'enlèvement, d'installation ou de réinstallation.

INFORMACIÓN DE LA GARANTÍA

Wattstopper garantiza que sus productos están libres de defectos en materiales y mano de obra por un período de cinco (5) años. No existen obligaciones ni responsabilidades por parte de Wattstopper por daños consecuentes que se deriven o estén relacionados con el uso o el rendimiento de este producto u otros daños indirectos con respecto a la pérdida de propiedad, renta o ganancias, o al costo de extracción, instalación o reinstalación.