ARCHITECTURAL DIMMING PANEL - MAIN/ SECONDARY WITH MAIN LUG PANEL

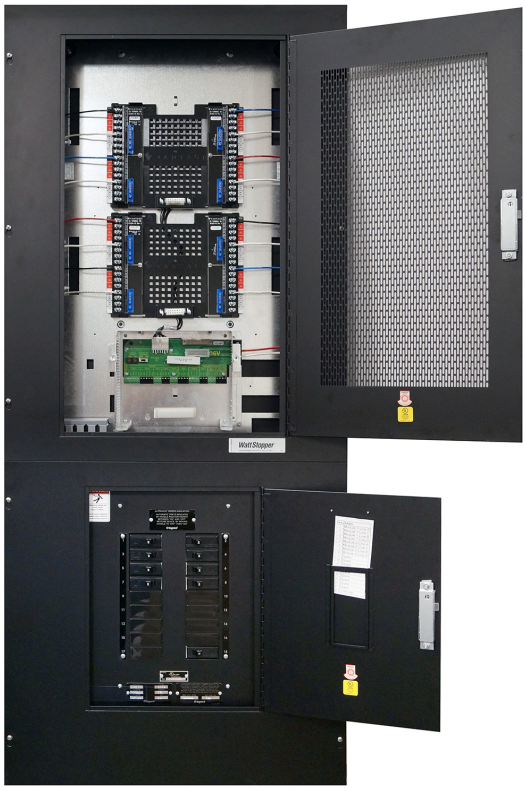
LCAP32MLO/SLO, MLO/MCB
LCAP44MLO/SLO, MLO/MCB

High capacity forward phase dimming capabilities LCAP44x up to 48 loads per panel – up to 30,720 watts @ 120V; 70,912 watts @ 277V

LCAP32x up to 24 loads per panel - up to 15,360 watts @ 120V; 35,456 watts @ 277V

Many combinations of dimming and switching available - forward phase, reverse phase, relays

Main Lug Circuit Breaker option. Prewired from factory based on dimming panel configuration



Panel includes terminals for simple field wiring

Space allocated for adding emergency lighting shunt relays

Adding a BACnet® enabled controller allows the panel to be part of a BACnet system

Powerful controller (LCAP32MLO or LCAP44MLO) offers integration using RS232, RS485, and Ethernet

ASHRAE BACnet®

Description

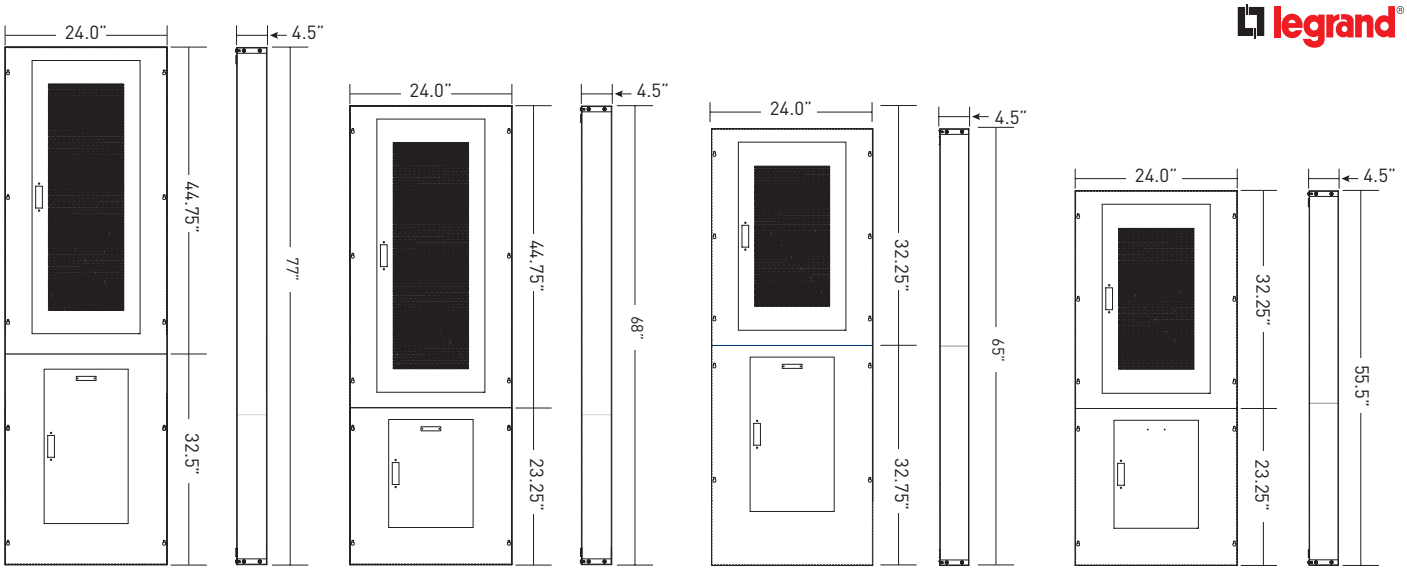
The LCAP series of lighting control panels provides modular pre-configured architectural dimming and integration options for a wide range of commercial market applications. The UL listed LCAPxxMLO/SLO series offers the highest amperage dimming and switching options of any in the LCAP line. Whether it's forward phase dimming, reverse phase dimming, or 20 amp switching the LCAPxxMLO/SLO series offers a robust option. In addition, the dimming curve for each dimming channel can be independently customized for starting and stopping points as well as linearity. This patent pending technology is exclusive to Legrand and allows for smooth dimming and consistent lighting when using mixed lighting types and brands. The included processor and networking capability provide an ideal platform for integration with Equinox touchscreen interfaces, plug load, emergency lighting, shades, and climate control.

Operation

Using Legrand's powerful Design Center software tool, the controller in the LCAP32MLO or 44MLO can be easily configured with unlimited scenes and schedules. Also, using the Design Center software driver library and built-in controller RS2332, RS485, and Ethernet ports, the LCAP32MLO or 44MLO can be programmed to integrate third party devices. Our Equinox touchscreens and extensive line of keypads provide intuitive interfaces for controlling both lighting and integrated systems including shading, comfort, and A/V. Adding occupancy, daylight, contact sensors, as well as plug-load management, can deliver an energy code compliant solution.

Using a BACnet enabled controller provides the ability for the BMS system to have control and get feedback of lighting loads, tasks and occupancy status to be controlled by the BMS platform.

PROJECT		LOCATION/ TYPE	



LCAP44MLO/SLO, MLO/MCB FRONT VIEW | LCAP44MLO/SLO, MLO/MCB SIDE VIEW | LCAP44MLO/SLO, MLO FRONT VIEW | LCAP44MLO/SLO, MLO SIDE VIEW | LCAP44MLO/SLO, MLO/MCB FRONT VIEW | LCAP44MLO/SLO, MLO/MCB SIDE VIEW | LCAP44MLO/SLO, MLO FRONT VIEW | LCAP44MLO/SLO, MLO SIDE VIEW

Highlights

Our controllers, combined with Design Center programming software, not only offer a comprehensive architectural dimming solution, but also provide precise automation of lighting and other related systems. The ability to utilize conditional programming using if-then-or statements can provide control beyond the scope of ordinary lighting control systems. In addition, the ability of Architectural Dimming controllers to integrate with the Digital Lighting Management (DLM) system provides advanced control capabilities for the entire facility.

Main Lug Circuit Breaker Option

The LCAP series can be configured as a feed through panel or as a main lug panel with the addition of circuit breakers below the feed through compartment. The Main Lug option is available for the MLO/SLO and ALO series panels. The circuit breaker options are based on the panel size, number and type of load, and circuit breaker rating requirements. See main lug options. Once the panel load and circuit breaker option are selected the panel is built and wired in the factory and delivered to the project ready to be installed.

Applications

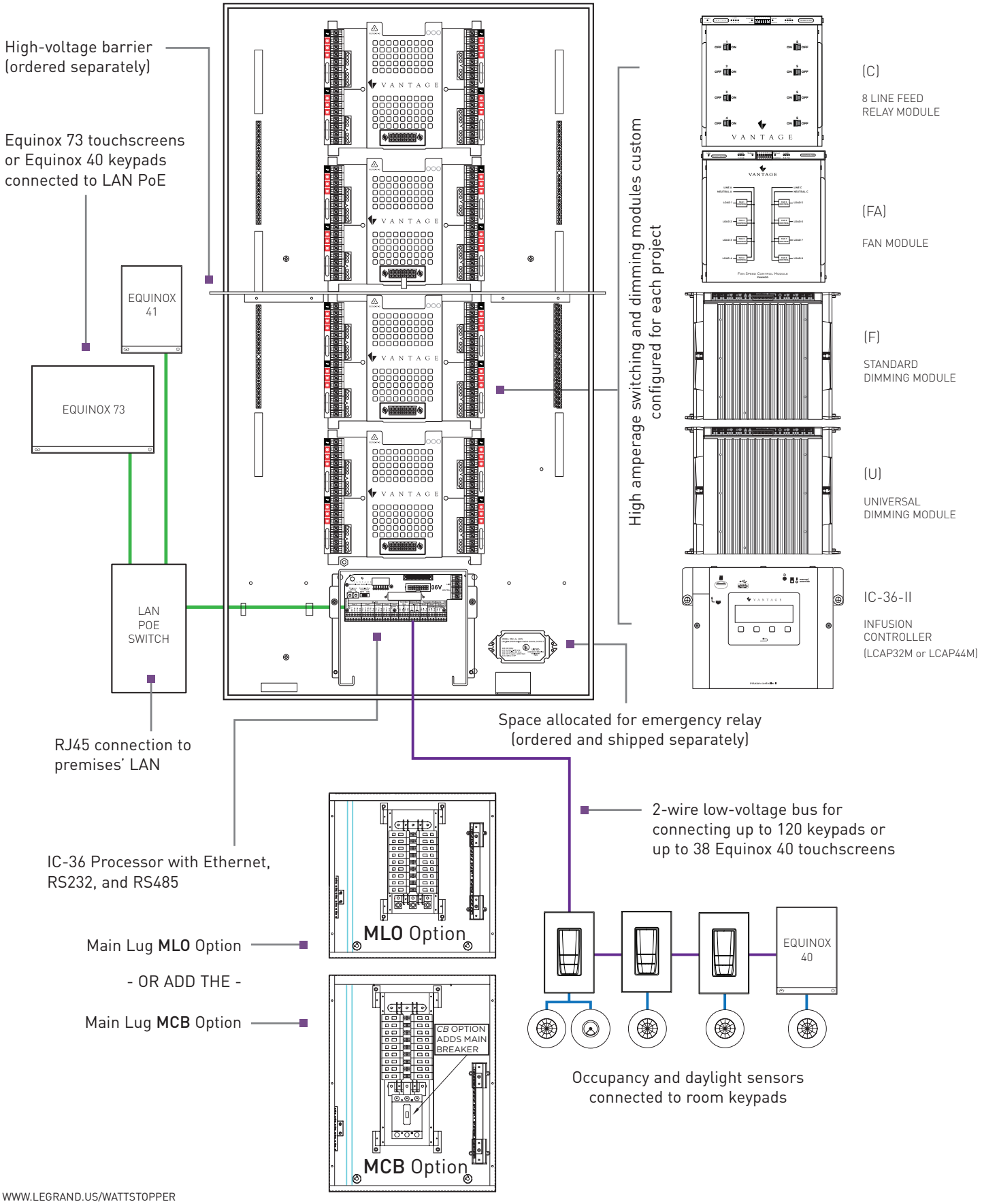
The LCAP32MLO/SLO and 44MLO/SLO are designed for medium to large spaces requiring control of up to 48 separate line voltage lighting circuits per panel. The built-in integration and networking capabilities in the LCAP32MLO and LCAP44MLO mean that spaces with shades and comfort control needs can easily be met 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

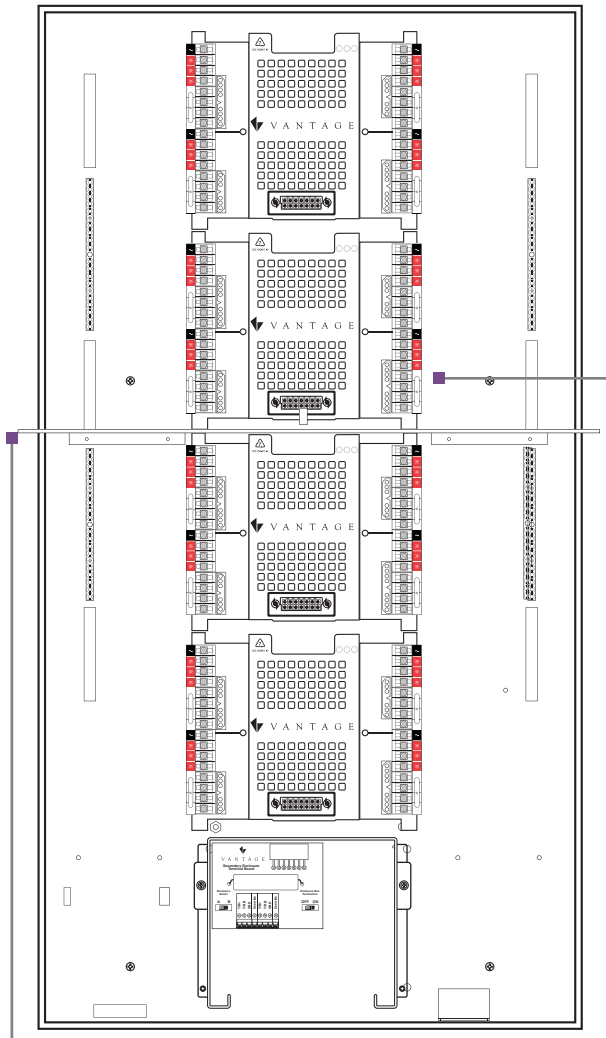
- Modular, pre-configured solution from the factory. Just connect line voltage and load wires
- Modular, pre-configured Main Lug Panel solution options
- System is expandable using other LCAP series primary or secondary panels
- When connected to the premises' LAN the panel can be remotely programmed
- Low-voltage 2 wire station bus for connecting keypads can extend up to 4,000 ft.*
- Connects to DLM systems for a whole building control solution
- Ability to integrate plug load
- DMX or DALI lighting supported with additional hardware (see DMX-DALI-GW)
- Daylight and occupancy sensors are connected to keypads or contact input stations. No power packs needed
- Dimmers have programmable start/stop and dimming curve adjustment features to customize dimming linearity
- Forward phase and universal dimmers, SDM12 and UDM08 each have 65kA ratings
- Simple programming from a single software solution – Design Center
- LCAP32MLO and LCAP44MLO include controller, add up to six LCAP32SLO and LCAP44SLO panels for expansion of dimming and load control capabilities; network additional controllers for further scalability
- BACnet option available through a BACnet enabled controller
- Main Lug Panel options range from 18 to 36 circuits, 120/240V, 120/208V, 277/480V, and 10kAIC to 65kAIC with main breaker options
- Panel is UL/cUL listed 508 and 924 on the dimming panel and UL67 on the circuit breaker panel

* See controller specifications for limitations

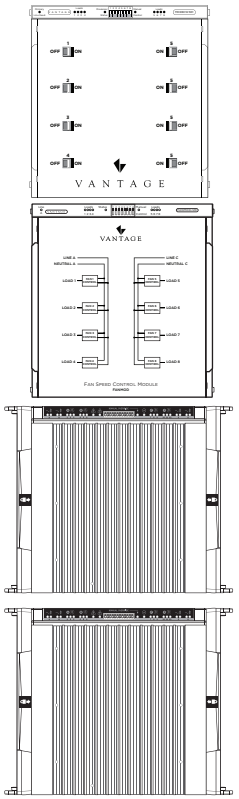
System Diagram - Main



System Diagram - Secondary



High amperage switching and dimming modules custom configured for each project



(C)

8 LINE FEED
RELAY MODULE

(FA)

FAN MODULE

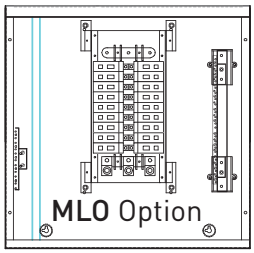
(F)

STANDARD
DIMMING MODULE

(U)

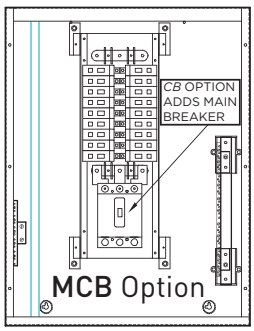
UNIVERSAL
DIMMING MODULE

High-voltage
barrier
(ordered separately)



Main Lug **MLO** Option

- OR ADD THE -



Main Lug **MCB** Option

Specifications	Dimensions (LxWxD)	Weights
Delivered as a complete unit with enclosure		
LCAP32MLO/SLO, MLO		
Enclosure	56.0" x 24.0" x 4.575" 142cm x 61cm x 12cm	(With doors) 110 - 130 lbs. depending on number of breakers
Panel insert	29.5" x 21.0" x 4.175" 75cm x 53.3cm x 10.6cm	M - 23 lbs. (10.43 kg) S - 20 lbs. (9.07 kg)
Door	32.0" x 24.0" x .75" 81cm x 61cm x 2cm	
LCAP32MLO/SLO, MCB		
Enclosure	65.0" x 24.0" x 4.575" 165cm x 61cm x 12cm	(With doors) 115-135 lbs depending on number of breakers
Panel insert	29.5" x 21.0" x 4.175" 75cm x 53.3cm x 10.6cm	M - 23 lbs. (10.43 kg) S - 20 lbs. (9.07 kg)
Door	32.0" x 24.0" x .75" 81cm x 61cm x 2cm	
LCAP44MLO/SLO, MLO		
Enclosure	68.0" x 24.0" x 4.575" 173cm x 61cm x 12cm	(With doors) 165-175 lbs depending on number of breakers
Panel insert	42.0" x 21.0" x 4.175" 106.7cm x 53.3cm x 10.6cm	M - 18.7 lbs. (8.48 kg) S- 15.4 lbs. (7.12 kg)
Door	44.25" x 24.0" x .75" 112.4cm x 61cm x 2cm	
LCAP44MLO/SLO, MCB (18 Breaker)		
Enclosure	77.0" x 24.0" x 4.575" 196cm x 61cm x 12cm	(With doors) 165-175 lbs depending on number of breakers
Panel insert	42.0" x 21.0" x 4.175" 106.7cm x 53.3cm x 10.6cm	M - 18.7 lbs. (8.48 kg) S- 15.4 lbs. (7.12 kg)
Door	44.25" x 24.0" x .75" 112.4cm x 61cm x 2cm	
LCAP44MLO/SLO, MLO (36 Breaker)		
Enclosure	77.0" x 24.0" x 4.575" 196cm x 61cm x 12cm	(With doors) 175-185 lbs depending on number of breakers
Panel insert	42.0" x 21.0" x 4.175" 106.7cm x 53.3cm x 10.6cm	M - 18.7 lbs. (8.48 kg) S- 15.4 lbs. (7.12 kg)
Door	44.25" x 24.0" x .75" 112.4cm x 61cm x 2cm	
LCAP44MLO/SLO, MCB (36 Breaker)		
Enclosure	77.0" x 24.0" x 4.575" 196cm x 61cm x 12cm	(With doors) 180-190 lbs depending on number of breakers
Panel insert	42.0" x 21.0" x 4.175" 106.7cm x 53.3cm x 10.6cm	M - 18.7 lbs. (8.48 kg) S- 15.4 lbs. (7.12 kg)
Door	44.25" x 24.0" x .75" 112.4cm x 61cm x 2cm	

Specifications

Mounting	Surface
Ambient operating humidity	5-95% non-condensing
Ambient operating temperature	32-104°F (0-40°C)
Cooling	Convection
Controller battery backup	Disk battery CR2032, 3V
Power requirements Input voltage	120V 60Hz for controller, 120/277V for dimming modules
Interior capacity **LCAP32ML0**	- Up to 24 forward phase or 16 reverse phase loads at 120/277V 20A each channel See SDM12-EM and UDM08-EM cutsheets for more information - Up to 16 universal phase loads at 120/277V 6A each channel See UDM08-EM cutsheet for more information - Up to 24 relay latching loads at 120V or 277V 20A each channel See MDR8CW301 cutsheet for more information - Up to 16 fan loads at 120V 2A each channel See FANMOD cutsheet for more information
LCAP44ML0	- Up to 48 forward phase or 32 reverse phase loads at 120/277V 20A each channel See SDM12-EM and UDM08-EM cutsheets for more information - Up to 32 universal phase loads at 120/277V 6A each channel See UDM08-EM cutsheet for more information - Up to 32 relay latching loads at 120V or 277V 20A each channel See MDR8CW301 cutsheet for more information - Up to 24 fan loads at 120V 2A each channel See FANMOD cutsheet for more information
Processor (in LCAP32ML0 or LCAP44ML0)	IC-36-II See IC-36-II cutsheet for more information
Certifications	UL/cUL 508 and 924 on dimming panel, UL/cUL 67 on circuit breaker panel
Warranty	5 years
System compatibility	InFusion

Main Lug Panel Options Matrix

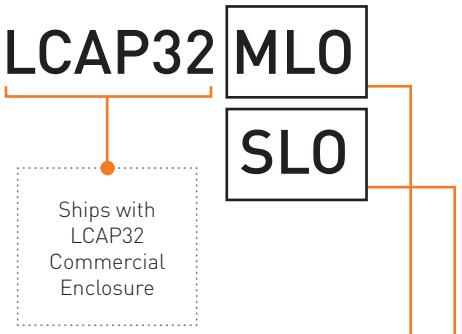
CONFIGURATION FOR LCAP32			ADDER - Branch Breakers Each, 1-Pole, 20A				
SIZE	HEIGHT	BASE PANEL CONFIGURATION	10kAIC	14kAIC	22kAIC	35kAIC	65kAIC
18 Circuits 100A Bussing	56"	240V- MLO (Single Phase)	BAB		QHB		GHB
		208V - MLO	BAB		QHB		GHB
		480V - MLO		GHB			
	65"	240V - MCB (Single Phase) (up to 100A, 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	22kAIC	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*
36 Circuits 225A Bussing	77"	240V- MLO (Single Phase)	BAB		QBH		GHB
		208V - MLO	BAB		QBH		GHB
		480V - MLO		GHB			
	68"	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 series rating when a main breaker option is selected**

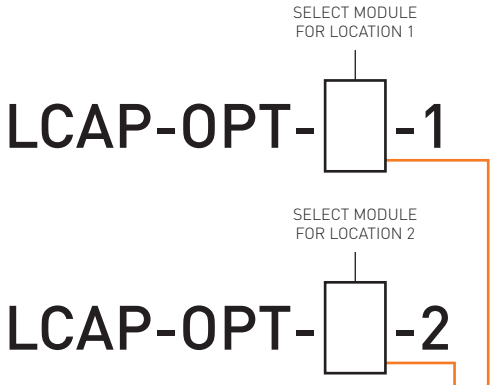
	BREAKER RATING LEGEND (Single Phase)	
MLO = Main Lug Option	Type BAB	10kAIC
MCB = Main Lug with Main	Type QBH	22kAIC
Circuit Breaker	Type GHB	65kAIC

Ordering Key for LCAP32MLO/SLO



LCAP32**MLO** - Architectural Dimming Panel - ***Main***
2 module capacity main panel with controller terminal board and Main Lug option

LCAP32**SLO** - Architectural Dimming Panel - ***Secondary***
2 module capacity secondary panel with secondary terminal board and Main Lug option



Module locations 1 and 2 - select:

C - for MDR8CW301, 8 line feed latching relay
for Main Lug use 8 breakers

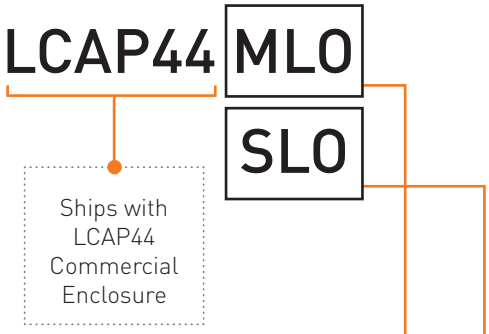
FA - for FANMOD, 2 line feed 8 fan load module
for Main Lug use 2 breakers

F - for SDM12-EM, standard dimming module
(forward phase)
for Main Lug use 4 breakers

U - for UDM08-EM universal dimming module
(forward or reverse phase)
for Main Lug use 2 breakers

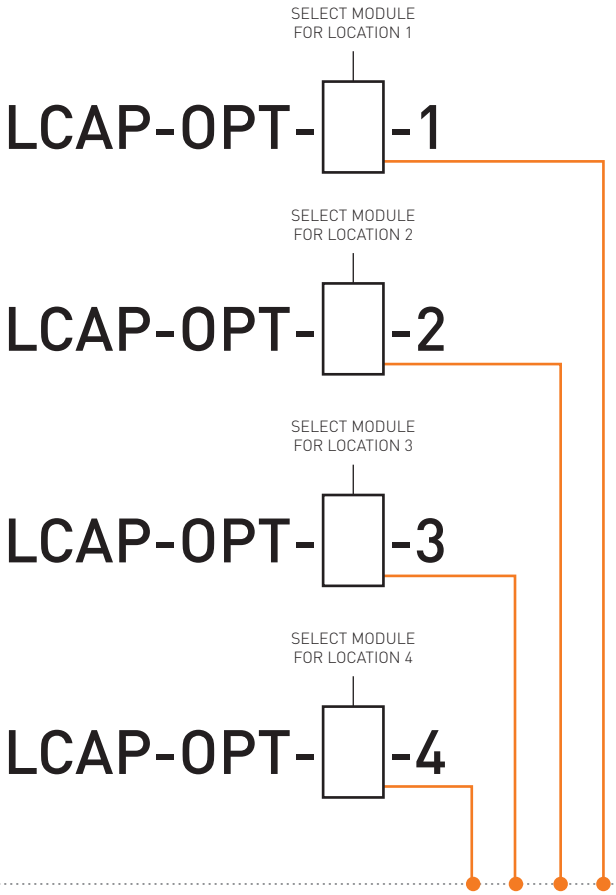
X - Blank module position
(Allowed only after populated module positions)

Ordering Key for LCAP44MLO/SLO



LCAP32**MLO** - Architectural Dimming Panel - ***Main***
4 module capacity main panel with controller terminal board and Main Lug option

LCAP44**SLO** - Architectural Dimming Panel - ***Secondary***
4 module capacity secondary panel with secondary terminal board and Main Lug option



Module locations 1, 2, 3, and 4 - select:

C - for MDR8CW301, 8 line feed latching relay
for Main Lug use 8 breakers

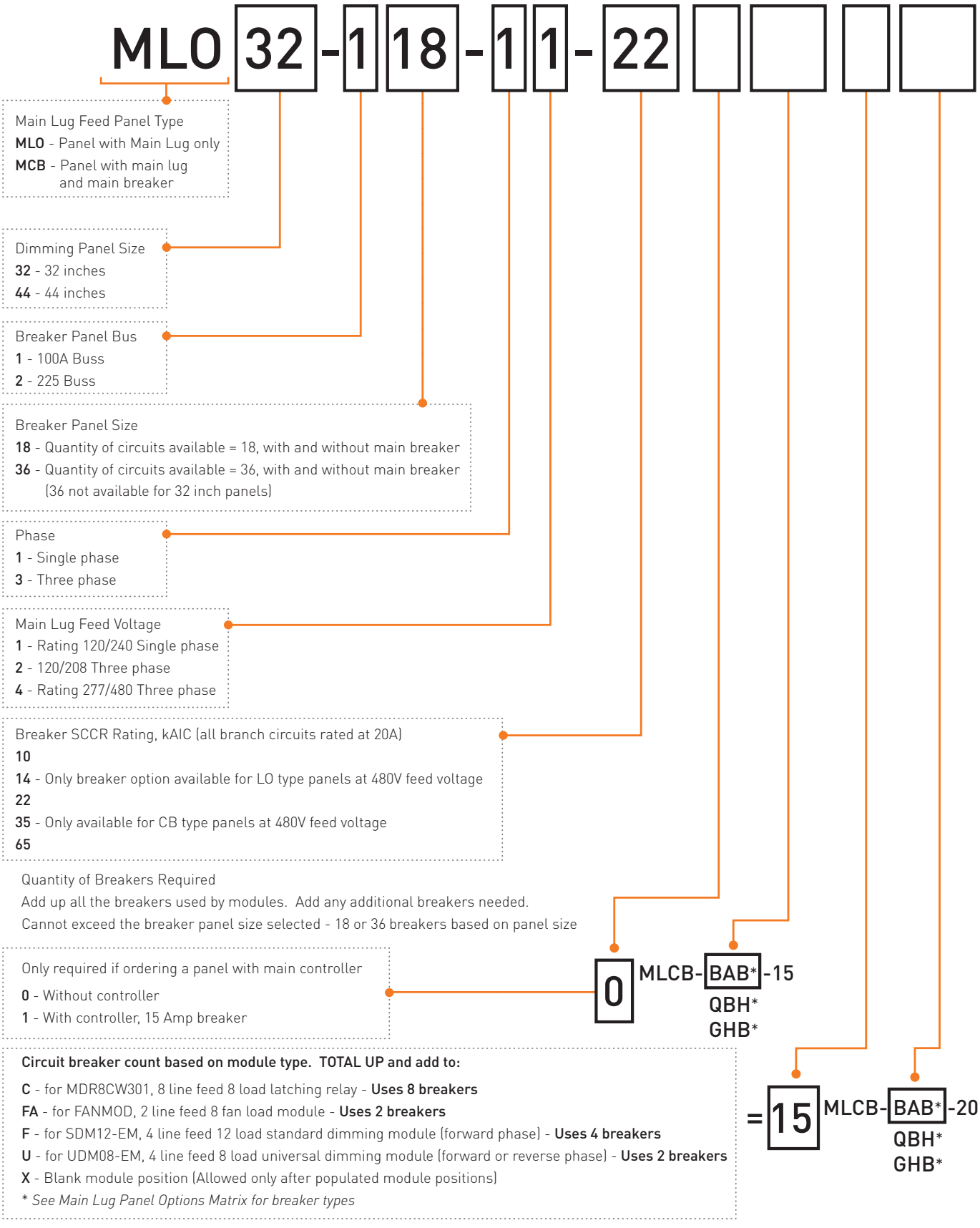
FA - for FANMOD, 2 line feed 8 fan load module
for Main Lug use 2 breakers

F - for SDM12-EM, standard dimming module
(forward phase)
for Main Lug use 4 breakers

U - for UDM08-EM universal dimming module
(forward or reverse phase)
for Main Lug use 2 breakers

X - Blank module position
(Allowed only after populated module positions)

Ordering Key for MLO/MCB



Ordering Information

Catalog #		Description	Voltage	Zones
☐	LCAP32MLO with MLO32xxxxx panel	Architectural Dimming Panel - Main Controller with Main Lug	120/240,120/208, 277/480 VAC	Up to 24 Zones - See ordering key for breaker information
☐	LCAP32MLO with MCB32xxxxx panel	Architectural Dimming Panel - Main Controller with Main Breaker	120/240,120/208, 277/480 VAC	Up to 24 Zones - See ordering key for breaker information
☐	LCAP32SLO with MLO32xxxxx panel	Architectural Dimming Panel - Secondary Panel with Main Lug	120/240,120/208, 277/480 VAC	Up to 24 Zones - See ordering key for breaker information
☐	LCAP32SLO with MCB32xxxxx panel	Architectural Dimming Panel - Secondary	120/240,120/208, 277/480 VAC	Up to 24 Zones - See ordering key for breaker information
☐	LCAP44MLO with MLO44xxxxx panel	Architectural Dimming Panel - Main Controller with Main Lug	120/240,120/208, 277/480 VAC	Up to 48 Zones - See ordering key for breaker information
☐	LCAP44MLO with MCB44xxxxx panel	Architectural Dimming Panel - Main Controller with Main Breaker	120/240,120/208, 277/480 VAC	Up to 48 Zones - See ordering key for breaker information
☐	LCAP44SLO with MLO44xxxxx panel	Architectural Dimming Panel - Secondary Panel with Main Lug	120/240,120/208, 277/480 VAC	Up to 48 Zones - See ordering key for breaker information
☐	LCAP44SLO with MCB44xxxxx panel	Architectural Dimming Panel - Secondary Panel with Main Breaker	120/240,120/208, 277/480 VAC	Up to 48 Zones - See ordering key for breaker information
☐	MLCB-BAB-20-GFI	GFI Breaker option for Main Lug Panels with Main Breaker	20A - 10kAIC	Shipped as a separate breaker - not installed in panel
☐	MLCB-QBH-20-GFI	GFI Breaker option for Main Lug Panels with Main Breaker	20A - 22kAIC	Shipped as a separate breaker - not installed in panel
☐	MLCB-GHB-20-GFI	GFI Breaker option for Main Lug Panels with Main Breaker	20A - 65kAIC	Shipped as a separate breaker - not installed in panel
☐	BACNET-IP-IC	BACnet enabled controller		See InFusion Controller BACnet Protocol Implementation Compliance Statement for more information
☐	VA-RRU-1-120V	Emergency Shunt Relay	120V	
☐	VA-RRU-1-277V	Emergency Shunt Relay	277V	
☐	VA-EPC-DFS-120V	Emergency Lighting Surface Mount Switch	120V	
☐	VA-EPC-DFS-277V	Emergency Lighting Surface Mount Switch	277V	
☐	COM-HV-BARRIER	High-Voltage Barrier		