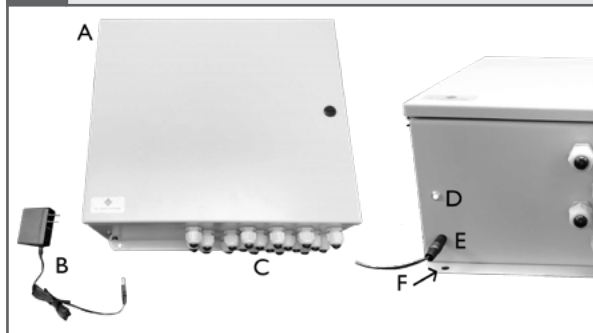
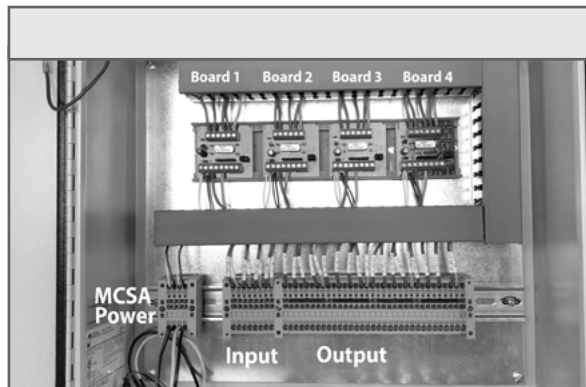


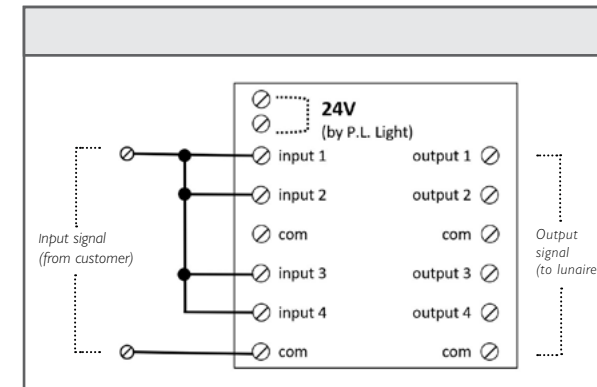
1 Main Components



- A MCSA box
- B 24V DC Power Supply w/plug
- C Strain Reliefs (dimming cables)
- D Indicator Light
- E Power Input
- F Mounting Tab



- The default configuration for the MCSA is with four 4-channel signal boards.



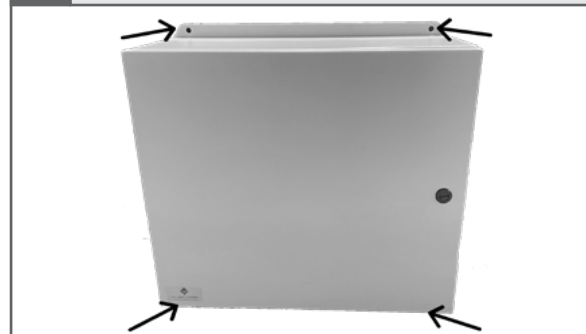
- Each signal board can accommodate up to four (4) inputs and four (4) outputs.

2 Prepare for Installation



- Remove MCSA from packaging.
- Ensure plug and transformer are disconnected.
- Turn off and lock out the branch circuit before commencing installation or maintenance work.

3A Mount MCSA Box



- Holding the MCSA box in desired location, mark position of the holes on the mounting surface, using the mounting tabs (top and bottom of MCSA box).
- Set MCSA box aside and drill holes in marked locations. Insert anchors into holes if required.

Note: MCSA should be mounted in dry location, away from direct exposure to water.

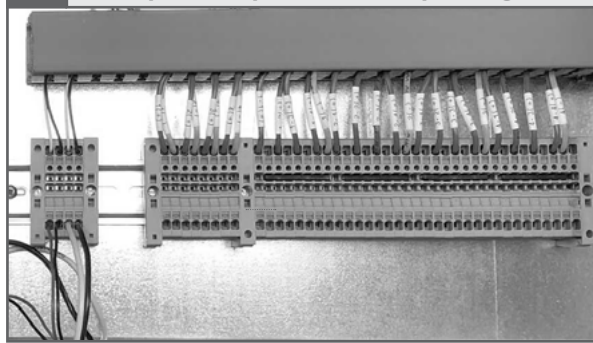
3B



- Align mounting tabs (top and bottom) with drilled holes.
- Insert one screw into each hole and tighten with a screwdriver until MCSA box is securely attached to the mounting surface.

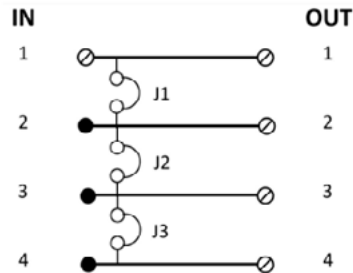
Note: Customer to supply mounting hardware.

4 Complete Input and Output Signals



- Terminate customer supplied 1-10V dimming cable to each input terminal blocks.
- Wire and terminate each board output to the luminaires.
- Refer to terminal wire connections image on next page.

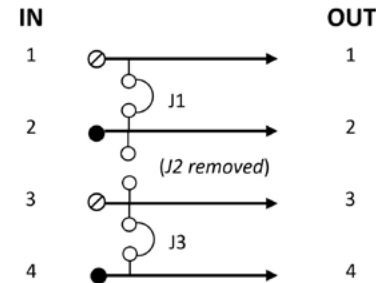
Default Board Settings



- The default setting for each board is for single-channel control, with all three (3) pre-installed jumpers in place—allowing for one (1) input signal to control all four (4) output signals.

Note: purple = positive (+); grey = negative (-)

Modifying Board Settings



- To modify the number of channels used, simply remove the relevant jumpers on the board. For example, if two control-amplifying channels are required, then simply remove J2 from the board (see Modified Setting example above).

Note: 10 kΩ resistor is required for unused outputs from the signal board.

NOTES:

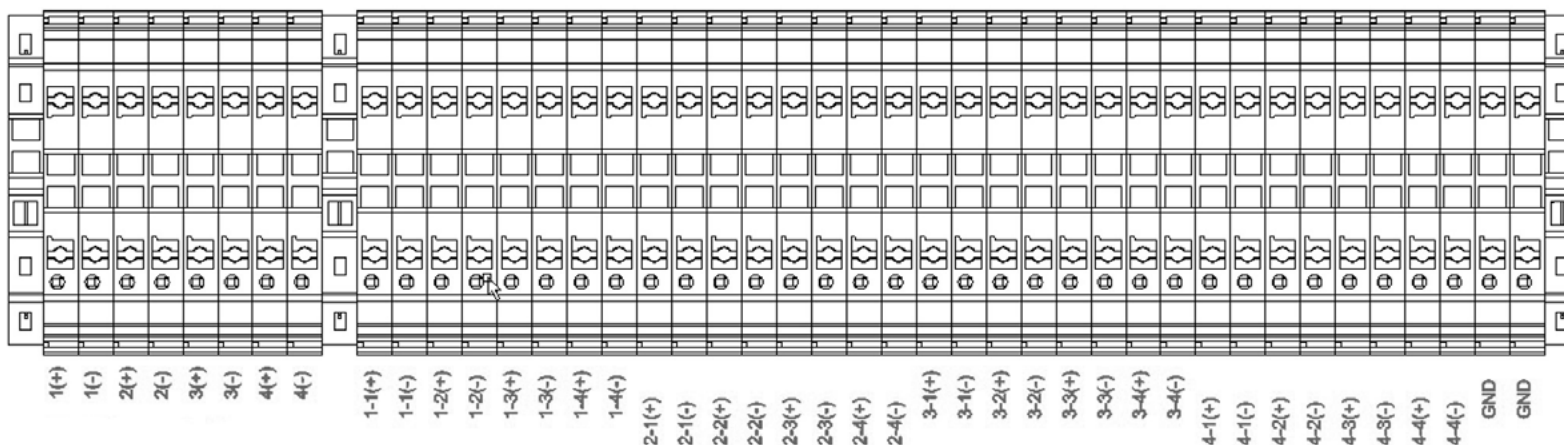
Refer to light plan for quantity of luminaires per channel.

Refer to light plan for configuration of control/grouping of luminaires.

1-10V sink or source (input and output protocols must be the same for each channel) based on jumper selection.

Consult with a local certified electrical contractor for a suitable dimming cable. Specifications to consider include safety certifications; UV rated; voltage rating, temperature rating of $\geq 90^{\circ}\text{C}$; and should be 18 gauge twisted pair with foil.

Terminal Wire Connections



INPUTS - Board I-4

OUTPUTS

I-1, Board I, Channel 1
I-2 Board I, Channel 2
Etc.

NOTES:

Exceeding 10V or 20 mA on any channel may result in permanent board damage.

Input Configuration: 1-10V sink or source (input and output protocols must be the same for each channel) based on jumper selection.

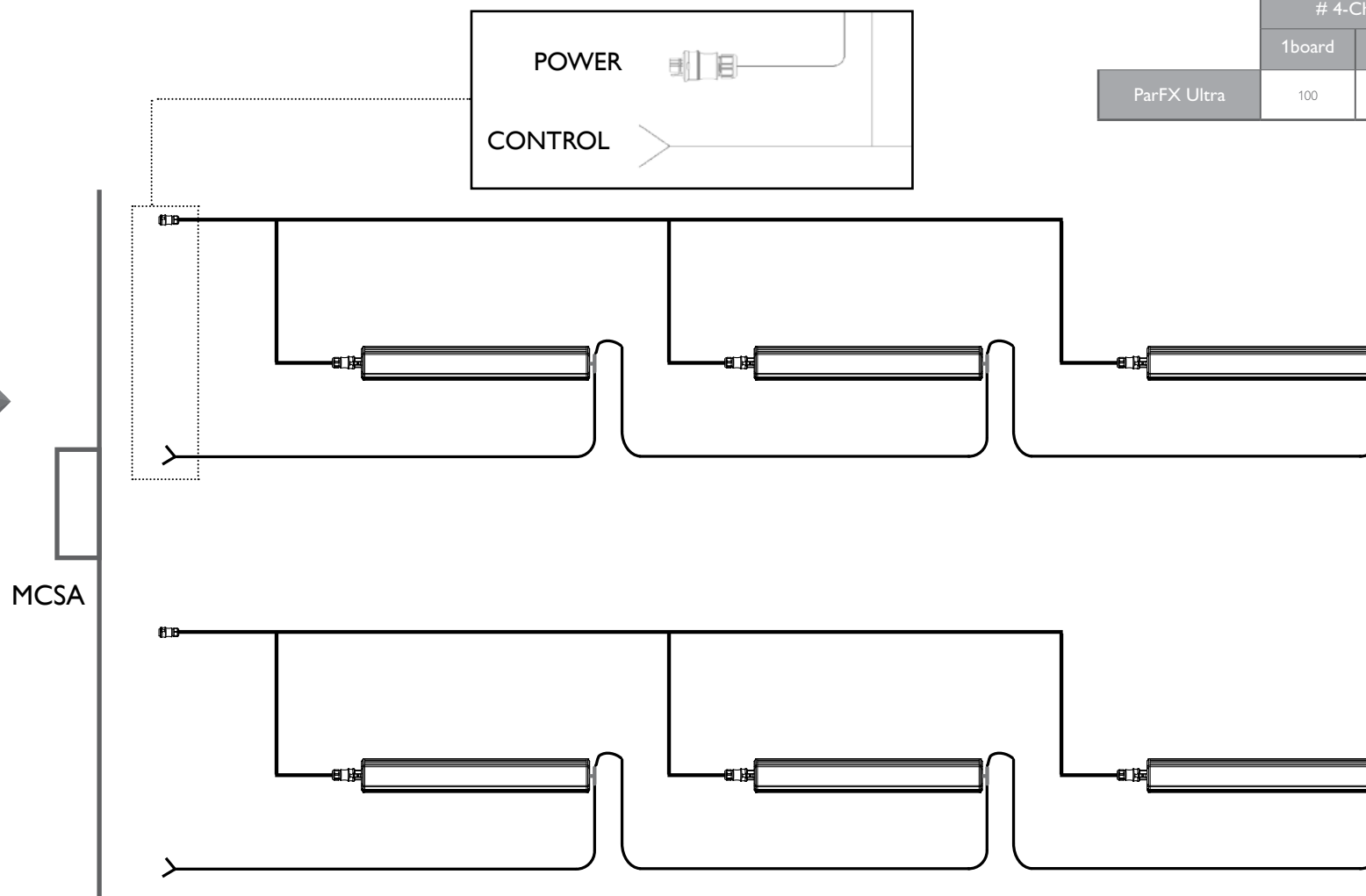
Output Configuration: 1, 2, 3 or 4 channels that duplicate the input channel, based on jumper selection.

Consult with a local certified electrical contractor to determine the maximum 0-10V wire length per run.

Refer to luminaire installation instructions for direct wiring on daisy-chain options.

ParFX Ultra

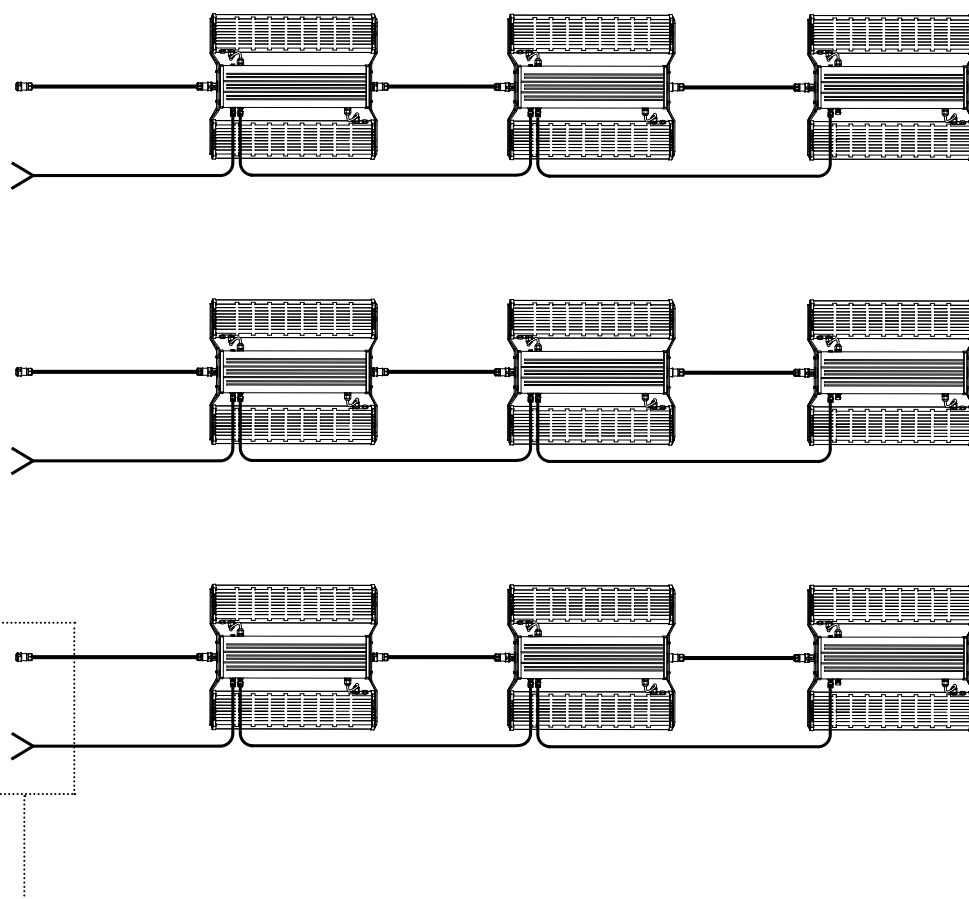
Max # Luminaires / MCSA				
# 4-Channel Signal Boards in MCSA				
	1board	2 boards	3 boards	4 boards Default Configuration
ParFX Ultra	100	200	300	400



NOTE: Refer to light plan for quantity of luminaires per channel. Refer to light plan for configuration of control/grouping of luminaires in racking system / grow room / greenhouse.



TriPlane Linear SQ



	Max # Luminaires / MCSA			
	# 4-Channel Signal Boards in MCSA			
	1board	2 boards	3 boards	4 boards Default Configuration
TriPlane Linear SQ	100	200	300	400

NOTES:

Refer to light plan for quantity of luminaires per channel.

Refer to light plan for configuration of control/grouping of luminaires in racking system / grow room / greenhouse.

POWER

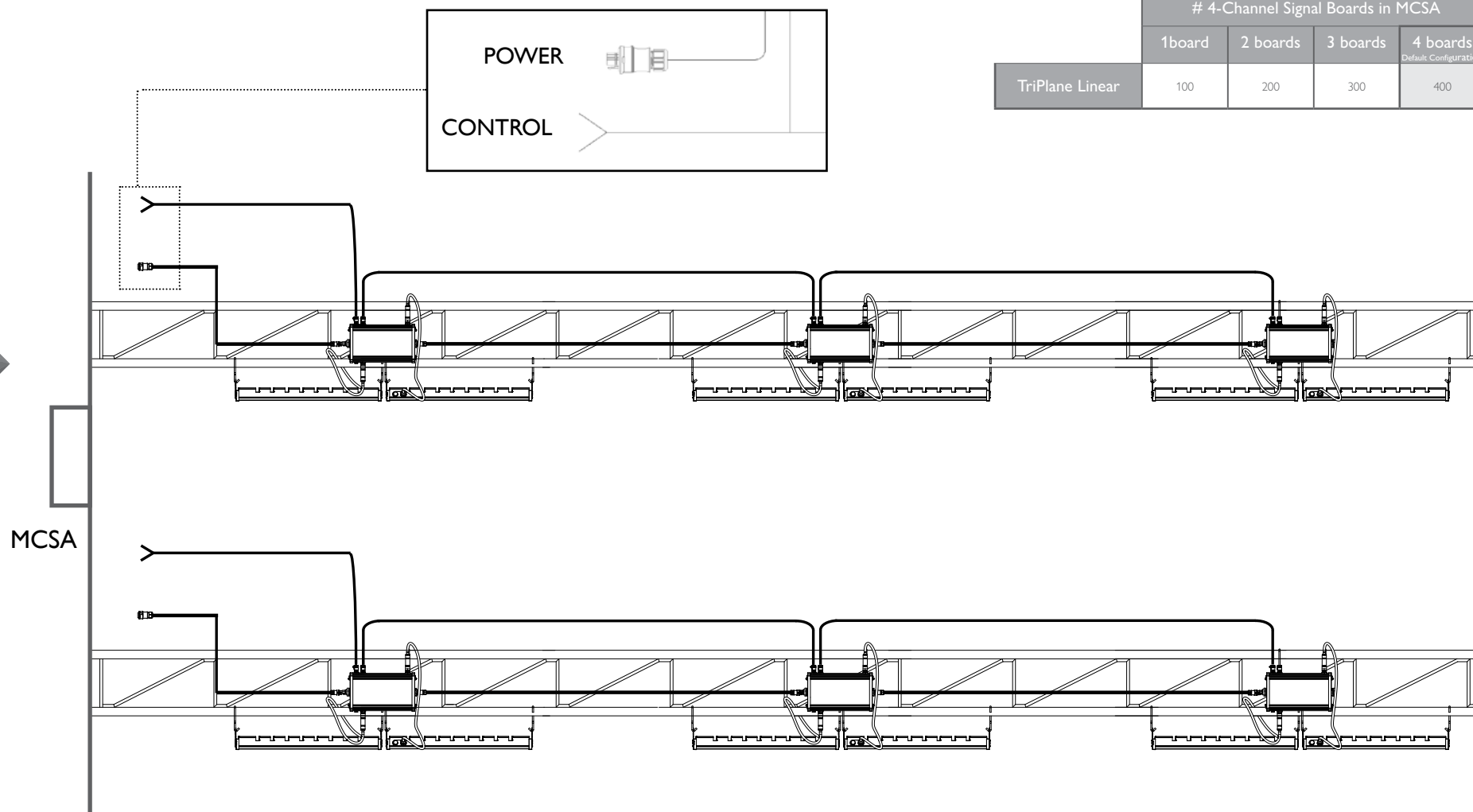


CONTROL



TriPlane Linear

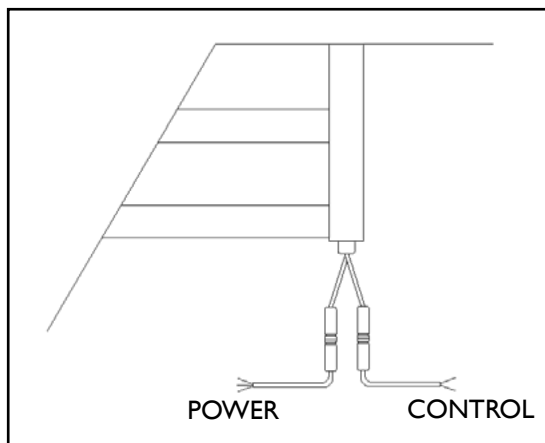
TriPlane Linear	Max # Luminaires / MCSA			
	# 4-Channel Signal Boards in MCSA			
	1board	2 boards	3 boards	4 boards Default Configuration
	100	200	300	400



NOTE: Refer to light plan for quantity of luminaires per channel. Refer to light plan for configuration of control/grouping of luminaires in racking system / grow room / greenhouse.

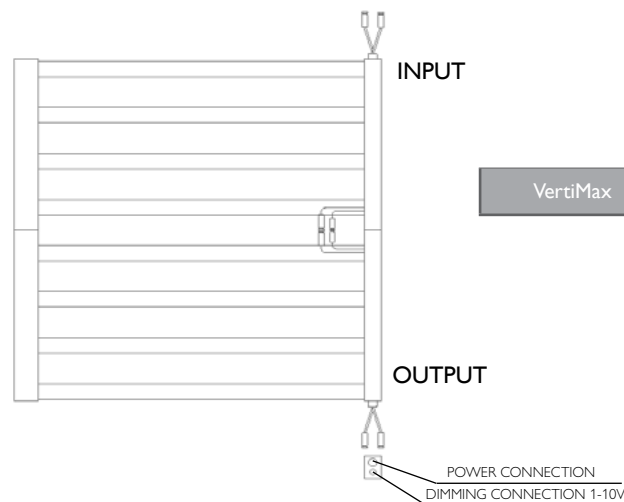


VERTIMAX



Connect to customer power supply

Connect to MCSA



Max # Luminaires / MCSA				
# 4-Channel Signal Boards in MCSA				
	1 board	2 boards	3 boards	4 boards Default Configuration
VertiMax	44	88	132	176

NOTES:

Refer to light plan for quantity of luminaires per channel.

Refer to light plan for configuration of control/grouping of luminaires in racking system.

MCSA

