

# WAC LIGHTING

## STRUT

### Remote CPU

Fixture Type: \_\_\_\_\_

Catalog Number: \_\_\_\_\_

Project: \_\_\_\_\_

Location: \_\_\_\_\_

#### ORDER NUMBER

Model	Power	Control Protocol	Finish
<b>S2CPU-R</b>	<b>096</b> 96W Hardwired	<b>S</b> (1) 0-10V or (1) ELV or (1) TRIAC	<b>BK</b> Black
	<b>150</b> 150W Hardwired	<b>X</b> DMX or (1) 0-10V or (1) ELV or (1) TRIAC	
	<b>320</b> 320W Hardwired	<b>Z</b> (4) 0-10V or (1) ELV or (1) TRIAC	
	<b>600</b> 600W Hardwired		

Example: **S2CPU-R096-S-BK**

#### PRODUCT DESCRIPTION

The only lighting, power, and control system complete with lighting elements designed for discriminating performance. Configure STRUT for your retail, restaurant, commercial office, or residential lighting plan without custom lead times - get exactly what you want, when you want it.

#### FEATURES

- Accepts input ranges of 120-277V AC, and converts to a stable 48V DC output.
- TRIAC/ELV Dimmer Input: 120VAC
- No minimum load requirement for system operation. However, to meet EMC requirements, it is recommended for 150W, 320W, 600W CPU's that the total system power should be between 50%-95% of the CPU's capacity.
- Maximum feed and channel length (12 AWG power and 16 AWG data wires): 96W, 150W, 320W: 200FT; 600W: 100FT
- Compatible with WAC App via 2.4 GHz WiFi or wired RJ45 Ethernet.
- 5 year warranty

#### SPECIFICATIONS

<b>Construction:</b>	Steel housing with injected molded polycarbonate cover
<b>Input:</b>	120-277 VAC, 50/60Hz
<b>Dimming:</b>	TRIAC, ELV, 0-10V, DMX: 100-0.1%
<b>Mounting:</b>	Secures on wall or on ceiling for remote powering of STRUT, can be mounted on ceiling or wall vertically or horizontally
<b>Finish:</b>	Injection Molded Polycarbonate Black
<b>Operating Temp:</b>	-4°F to 122°F (-20°C to 50°C)
<b>Standards:</b>	UL, cUL, Non IC

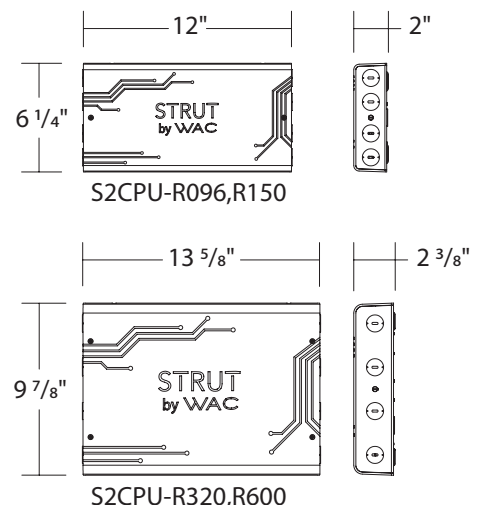


#### FINISHES



Black

#### LINE DRAWING



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## STRUT - REMOTE CPU

### Connected Power Unit (CPU) Range

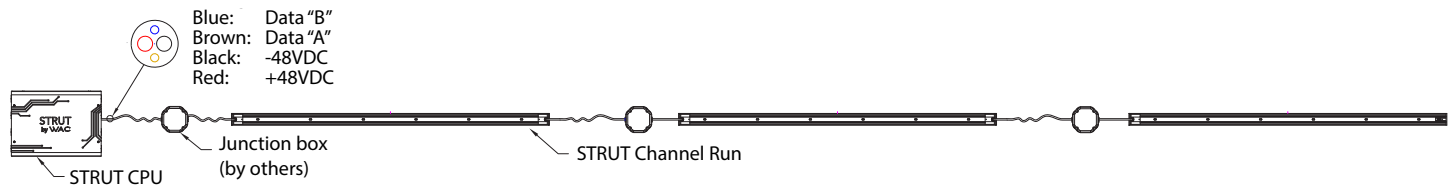


CONNECTED POWER UNIT RANGE				
POWER SUPPLY	96W	150W	320W	600W
TOTAL FEED AND CHANNEL LENGTH	200 ft	200 ft	200 ft	100 ft

**Note:** Above calculations based on 12 AWG power wires and 16 AWG data wires.

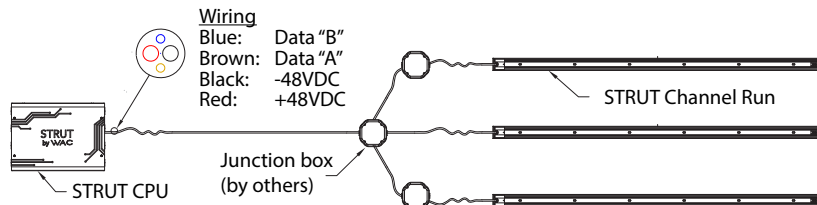
### STRUT CPU to Channel Capability: Series Connection

For maximum power and data integrity, 1 CPU per 1 STRUT channel run is recommended. However it is possible to connect 1 CPU to up to 3 STRUT channels; provided the specifications of the system length and wire gauge as well as reliable electrical and mechanical connections are implemented.



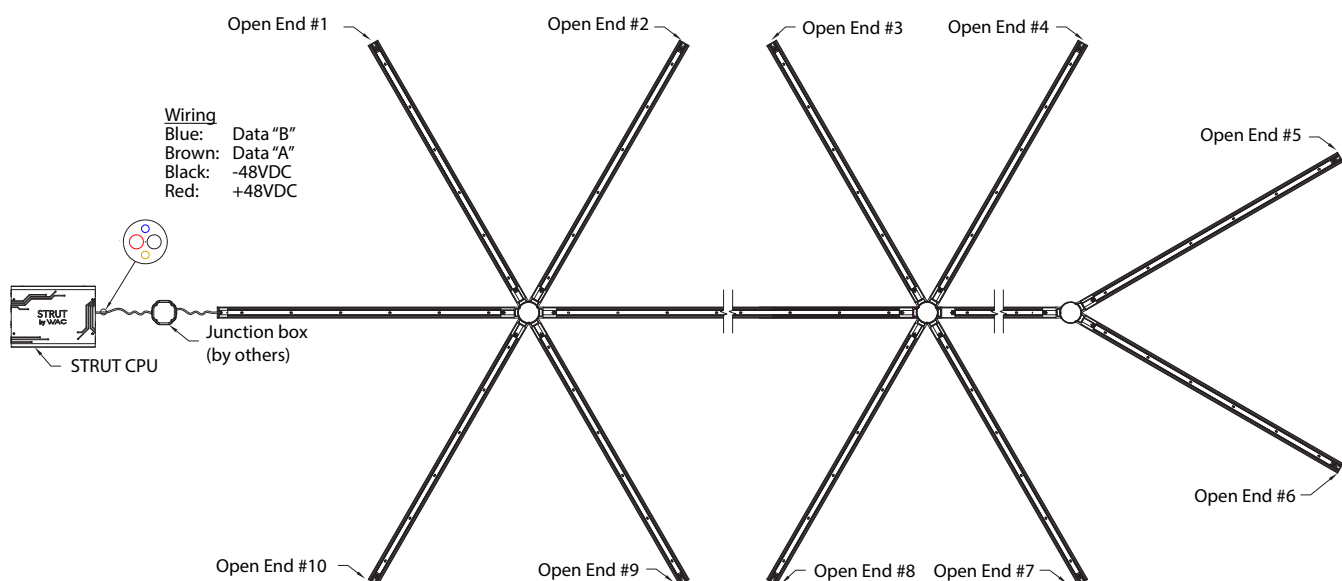
### STRUT CPU to Channel Capability: Branch Connection

For maximum power and data integrity, 1 CPU per 1 STRUT channel run is recommended. However it is possible to connect 1 CPU to up to 3 STRUT channels; provided the specifications of the system length and wire gauge as well as reliable electrical and mechanical connections are implemented.



### STRUT CPU to Channel Capability: "Open Ends"

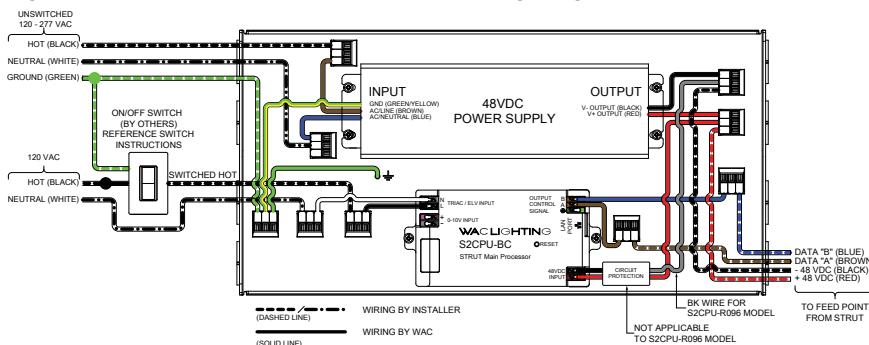
In order to maintain data and control integrity, keep the number of system "open ends" (data reflection points) to less than 10 per CPU. Reference below for an example of system with multiple open ends.



## STRUT - REMOTE CPU

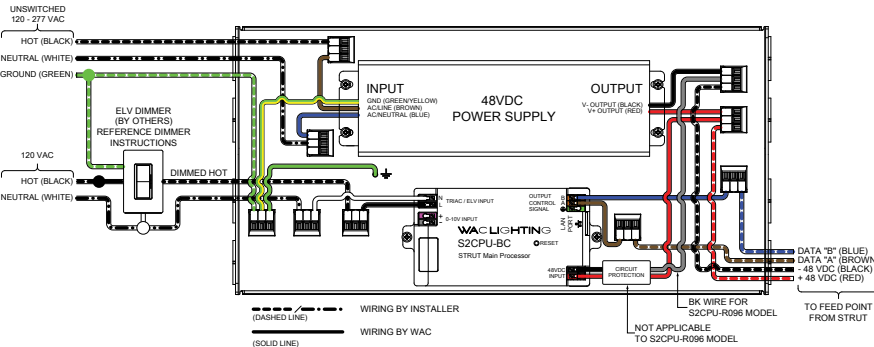
## Wiring Diagrams

**Figure 1 Remote CPU with On/Off Switch Wiring Diagram**



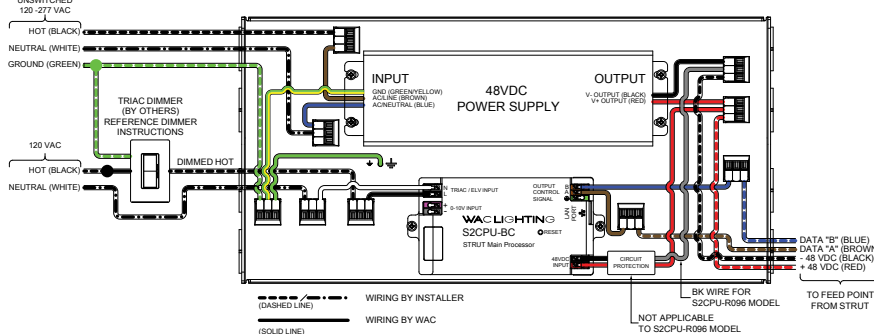
To utilize on/off switch, connect SWITCHED HOT and NEUTRAL in accordance to switch specifications to the wire connectors leading to the “L” and “N” inputs of the S2CPU-BC processor. Ensure appropriate ground connection is made to the on/off switch.

**Figure 2 Remote CPU with ELV Dimmer Wiring Diagram**



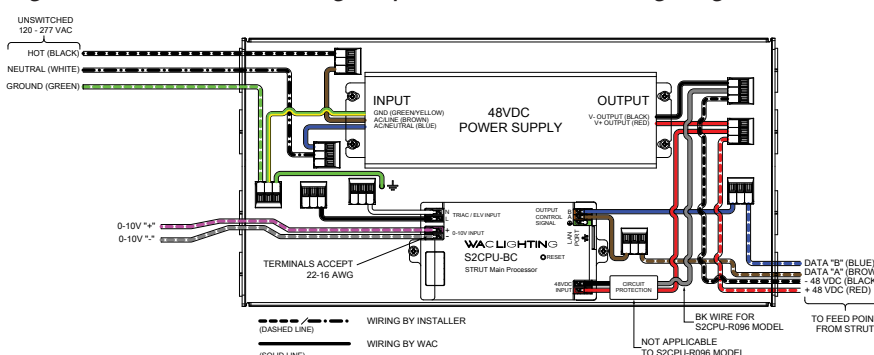
To utilize an ELV dimmer, connect DIMMED HOT and NEUTRAL in accordance to dimmer specifications to the wire connectors leading to the "L" and "N" inputs of the S2CPU-BC processor. Ensure appropriate ground connection is made to the ELV dimmer.

*Figure 3 Remote CPU with TRIAC Dimmer Wiring Diagram*



To utilize a TRIAC dimmer, connect DIMMED HOT and building NEUTRAL in accordance to dimmer specifications to the wire connectors leading to the "L" and "N" inputs of the S2CPU-BC processor. Ensure appropriate ground connection is made to the TRIAC dimmer.

*Figure 4 Remote CPU with Single Input 0-10V Dimmer Wiring Diagram*



To utilize a single channel 0-10V dimmer, connect 0-10V "+" and 0-10V "-" wires in accordance to dimmer specifications directly to the "+" and "-" input terminals of the S2CPU-BC processor.

**Note:** Use either 0-10V or ELV/TRIAC control input. Do NOT use multiple control input types concurrently.

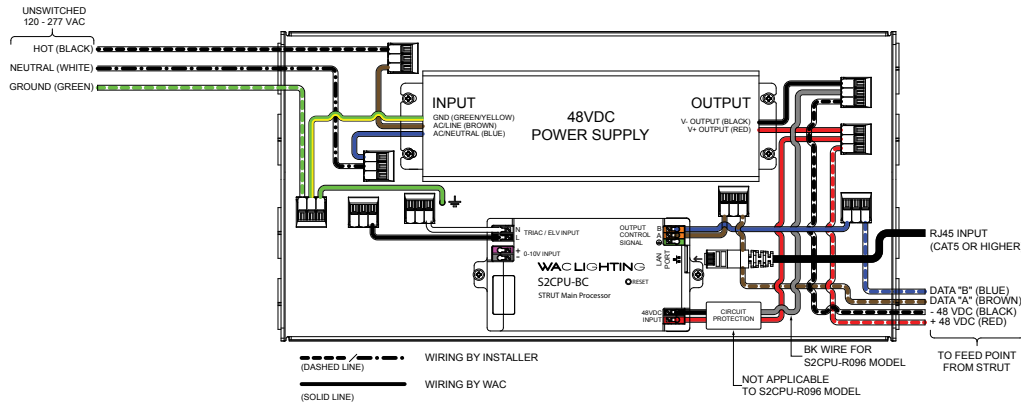
With this wiring setup, the line voltage power is constantly supplied to the STRUT CPU and the toggle on/off mechanism of the controls (by others) is to bring the 0–10 V signal to 0 V when in the off position.

# WAC LIGHTING

## STRUT - REMOTE CPU

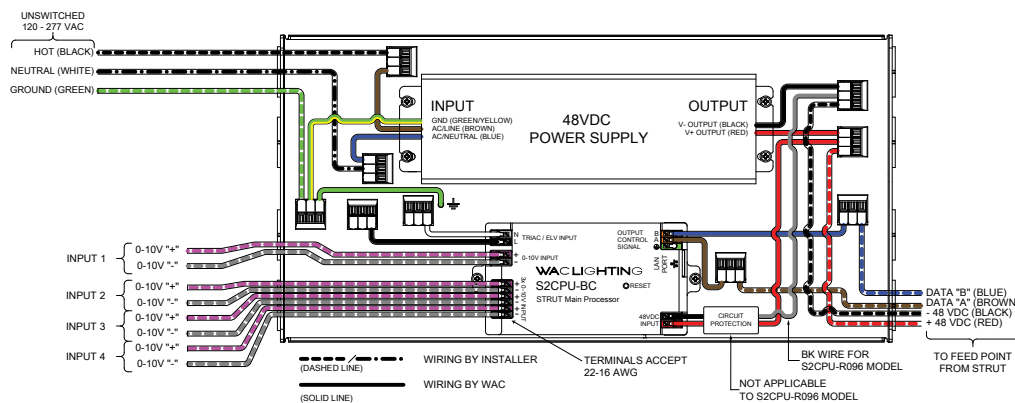
### Wiring Diagrams (continued)

Figure 5 Remote CPU with RJ45 Ethernet Wiring Diagram



To utilize a RJ45 wired ethernet input, connect the RJ45 cable to the LAN PORT of the S2CPU-BC processor. WAC recommends a minimum cable type of CAT5.

Figure 6 Remote CPU with 4x 0-10V Input Wiring Diagram ("Z" Model CPU only)

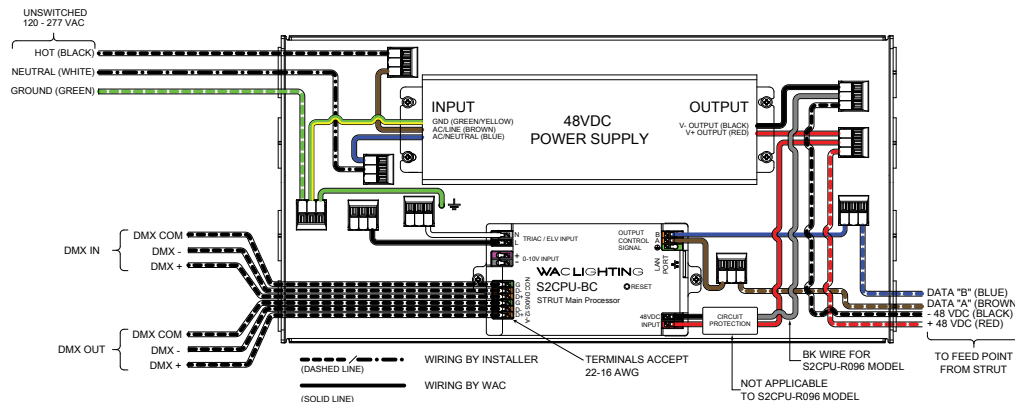


To utilize up to 4x 0-10V dimmers, connect 0-10V "+" and 0-10V "-" wires in accordance to dimmer specifications directly to the appropriate "+" and "-" input terminals of the S2CPU-BC processor.

With this wiring setup, the line voltage power is constantly supplied to the STRUT CPU and the toggle on /off mechanism of the controls (by others) is to bring the 0-10 V signal to 0 V when in the off position.

**Note:** Use either 0-10V or ELV/TRIAC control input. Do NOT use multiple control input types concurrently.

Figure 7 Remote CPU with NCC DMX 512-A Input Wiring Diagram ("X" Model CPU only)



This CPU type features alternative connector (NCC) terminals for DMX-512A input. There are two sets of terminals to accommodate DMX daisy chain wiring between the STRUT CPUs and other DMX devices. To utilize DMX 512-A, connect the appropriate DMX control wires directly to either set of "D+", "D-", and "G" input terminals of the S2CPU-BC processor.

**Note:** Use either DMX-512A, 0-10V, or ELV/TRIAC control input. Do NOT use multiple control input types concurrently.