

## INSTALLATION INSTRUCTIONS

### KONSTRUKT - SURFACE MOUNT CPU w/ 4x 0-10V

S2CPU-S096-Z, S2CPU-S150-Z, S2CPU-S320-Z, S2CPU-S600-Z

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#### CAUTION: TO PREVENT ELECTRICAL SHOCK, ENSURE ELECTRICITY HAS BEEN TURNED OFF AT THE CIRCUIT BREAKER BEFORE BEGINNING.

- Read all instructions before installing.
- System is intended for installation by a licensed electrician in accordance with the National Electrical Code (NEC) and local regulations.
- When handling the power supply, Hold the supply by the base only.
- Retain installation instructions for future maintenance reference.
- KONSTRUKT fixtures and channels feature separate data and power conductor systems. During installation and use, do not short the data or power conductors together by any means or damage may occur.

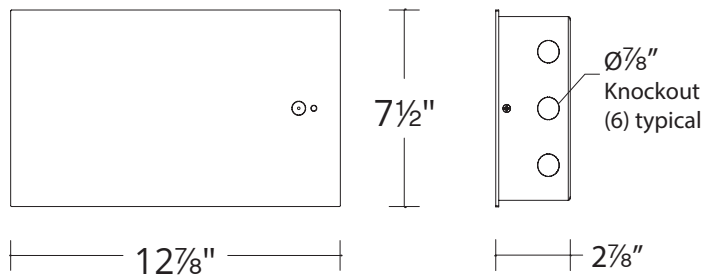
**WARNING:** All parts must be used as indicated in these instructions. This product is designed for use only with the supplied parts and/or accessories designated for use by WAC Lighting. Substitution of parts or accessories not designated for use with this product by WAC Lighting could result in personal injury or property damage, and will void the warranty. Contact an authorized dealer or the manufacturer if any parts are damaged or missing.

#### MISE EN GARDE: POUR ÉVITER TOUT CHOC ÉLECTRIQUE, ASSUREZ-VOUS QUE LE DISJONCTEUR SOIT MIS HORS TENSION AVANT DE COMMENCER.

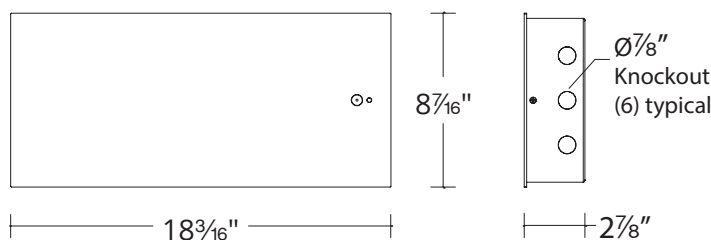
- Lisez toutes les instructions avant l'installation.
- Le système doit être installé par un électricien licencié conformément au code national de l'électricité (NEC), et également aux règlements locaux.
- Lors de la manipulation du luminaire, n'appuyez pas sur les LED. Tenez-le uniquement par la base.

**ATTENTION:** Toutes les pièces doivent être utilisées comme indiqué dans ces instructions. Ce produit est conçu pour être utilisé seulement avec les pièces et/ou accessoires fournis pour être utilisés avec les produits WAC Lighting. Remplacer des pièces ou accessoires non conçus pour ce produit WAC Lighting pourrait causer des dommages corporels ou matériels et pourrait également causer l'annulation de la garantie. Veuillez contacter un revendeur autorisé ou le fabricant si des pièces manquent ou sont endommagées.

#### OVERALL FIXTURE DIMENSIONS



S2CPU-S096, S150



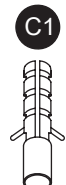
S2CPU-S320, S600

#### FIXTURE OVERVIEW

KONSTRUKT Surface Mount CPU are intended for use on WAC Lighting's KONSTRUKT Channel systems.

CPU	KONSTRUKT SYSTEM
S2CPU-S096-Z, S2CPU-S150-Z, S2CPU-S320-Z, S2CPU-S600-Z	48VDC KONSTRUKT System

SPECIFICATIONS	
Input:	120 - 277 VAC, 50/60Hz
Installation:	Ceiling Surface Mount
Dimming:	ELV/TRIAC, 4x 0-10V, Compatible with WAC App (WiFi 802.11 b/g/n, 2.4GHz)



	Junction Box Screw	Screw	Plastic Anchor
S096,S150	Qty: 2pcs+1 Extra	Qty: 4pcs+1 Extra	Qty: 4pcs+1 Extra
S320,S600	Qty: 2pcs+1 Extra	Qty: 8pcs+1 Extra	Qty: 8pcs+1 Extra
	#5 - 32x5/8	Φ4X22	
	Nickel Plating		

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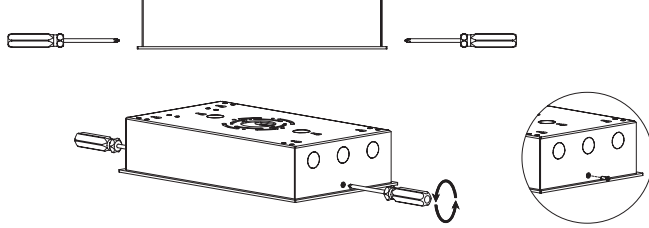
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S2CPU-S096-Z, S2CPU-S150-Z, S2CPU-S320-Z, S2CPU-S600-Z

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**FIG. 1**

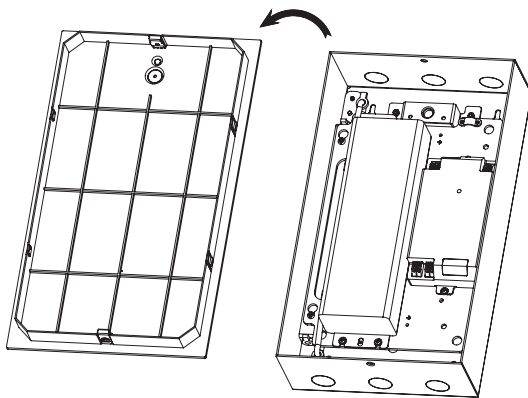


#### 1.INSTALLATION OF CPU BOX AND COMPONENTS

##### *Ceiling Mount*

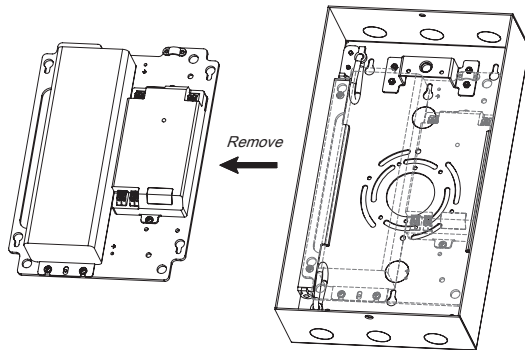
1.1. Unscrew CPU cover screws (See **FIG. 1**).

**FIG. 2**



1.2 Open and remove the cover (See **FIG. 2**).

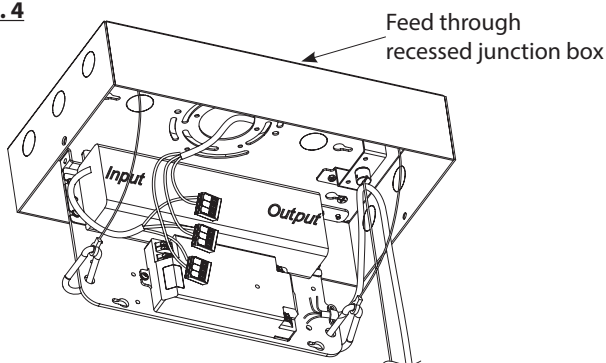
**FIG. 3**



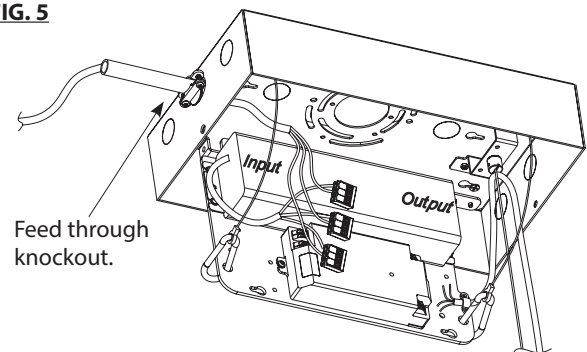
1.3 Remove the electrical board from the CPU base for box installation (See **FIG. 3**).

1.4 Surface mount CPU can be fed either with direct mounting over recessed junction box (by others) or conduit feeds through knockouts. Select appropriate installation to meet project requirements. (See **FIG. 4 & 5**).

**FIG. 4**



**FIG. 5**



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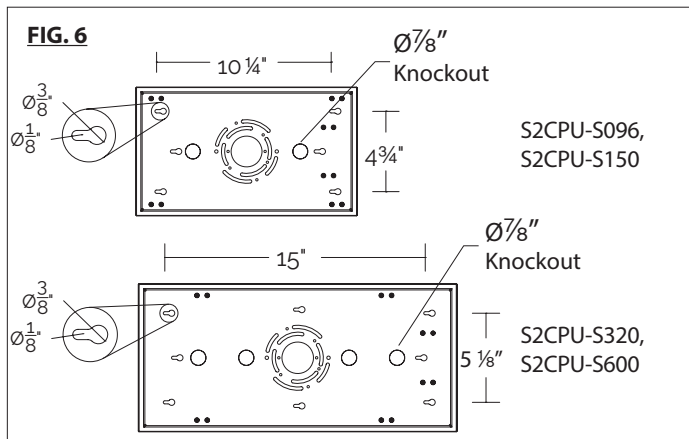
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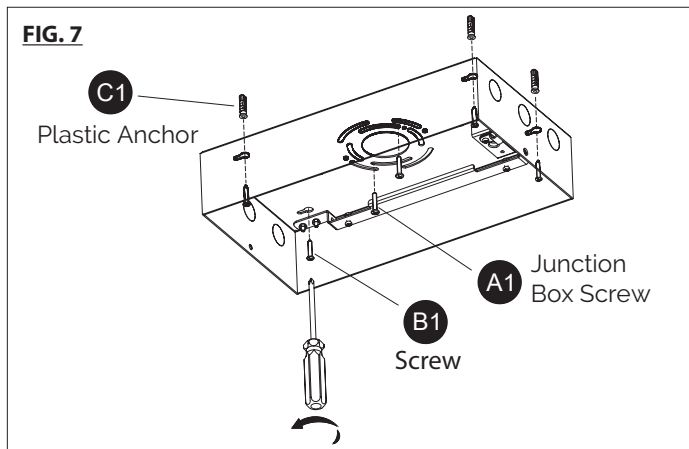
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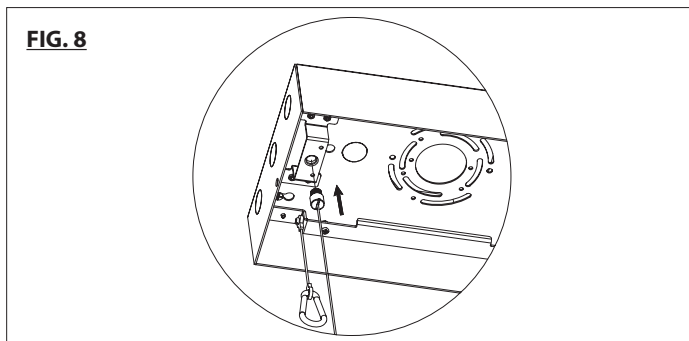
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- 1.5 Select ceiling mounting position. Follow CPU key hole locations. (See **FIG. 6**). Install appropriate mounting hardware. Installer to select appropriate hardware and confirm appropriate installation means to meet project requirements. With appropriate mounting hardware installed, install CPU keyholes onto hardware. Tighten hardware in small diameter section of key hole and confirm CPU is secure. (See **FIG. 7**)



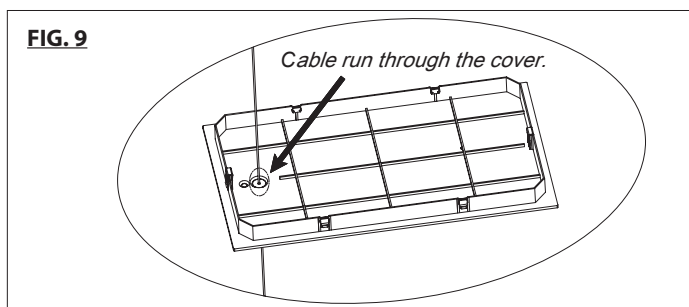
2. KONSTRUKT Surface CPU can be used as a suspension support point for suspended KONSTRUKT channel. For suspensions using cable, see Section 2.1. For suspensions using rigid stem, see Section 2.2.



#### 2.1 Cable Suspension Installation

- 2.1.1 Insert top side of cable suspension feed (sold separately) into CPU cable support threads. Ensure connection is secure. (See **FIG. 8**)

- 2.1.2 With cover oriented correctly, insert free end of air craft cable through appropriate hole in cover. (See **FIG. 9**). Support CPU cover temporarily until installation is complete.



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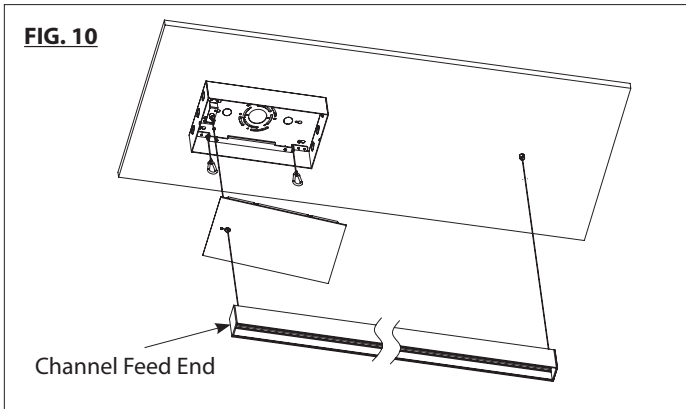
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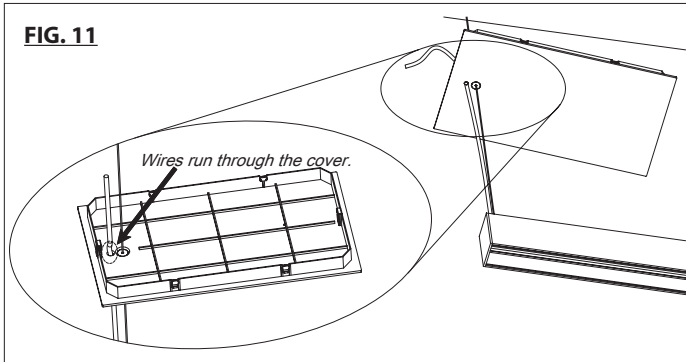
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**FIG. 10**



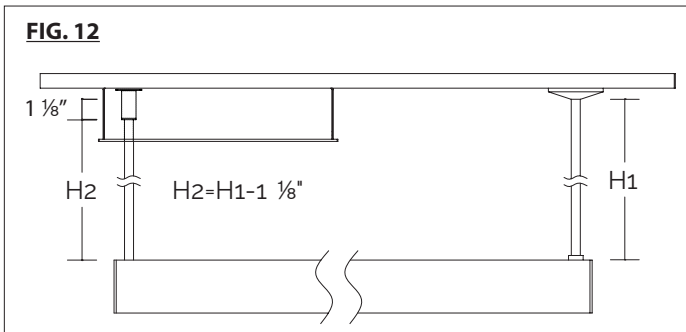
2.1.3 Mechanically complete installation of KONSTRUKT channel to ceiling surface. Orientate KONSTRUKT Channel such that feed is directly below the CPU (See **FIG. 10**).

**FIG. 11**



2.1.4 Remove feed knockout on CPU Cover. Bring KONSTRUKT feed wire through cover. (See **FIG. 11**). Skip to section 3.

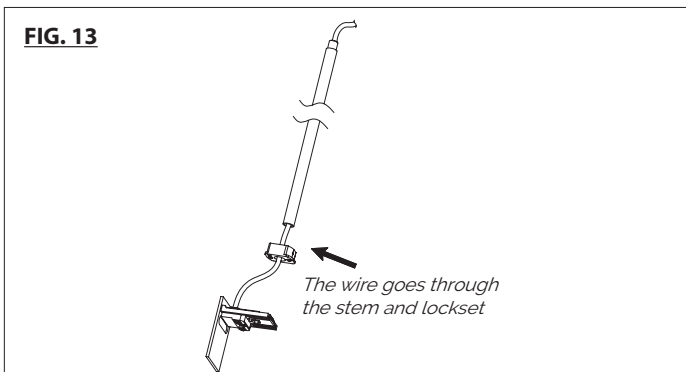
**FIG. 12**



## 2.2 Stem Suspension Installation

2.2.1 Field measure rigid stem suspension feed (sold separately) such that KONSTRUKT Channel will be level after installation. With correct length determined, cut bottom side feed rod (See **FIG. 12**).

**FIG. 13**



2.2.2 Feed KONSTRUKT feed end wire through stem feed and stem mount (See **FIG. 13**).

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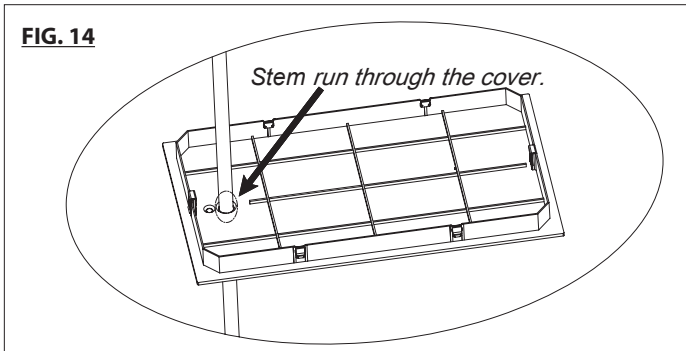
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S2CPU-S096-Z, S2CPU-S150-Z, S2CPU-S320-Z, S2CPU-S600-Z

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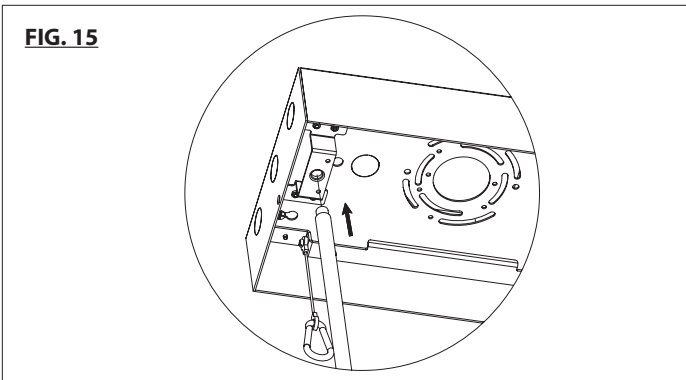
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**FIG. 14**



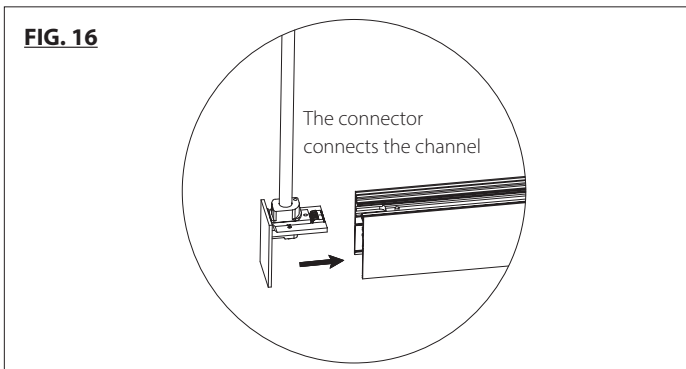
2.2.3 Knockout stem feed hole in CPU cover. With cover oriented correctly, insert feed stem through appropriate hole in cover. (See **FIG. 14**). Support CPU cover temporarily until installation is complete.

**FIG. 15**



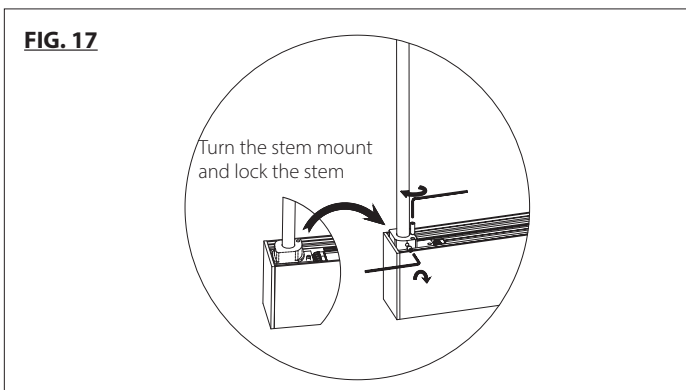
2.2.4 Pass feed wire through CPU bracket. Then Insert top side of feed stem into CPU support threads. Ensure connection is secure (See **FIG. 15**).

**FIG. 16**



2.2.5 Secure feed end and stem into channel. (See **FIG. 16 & 17**) Mechanically complete installation of KONSTRUKT channel to ceiling surface.

**FIG. 17**



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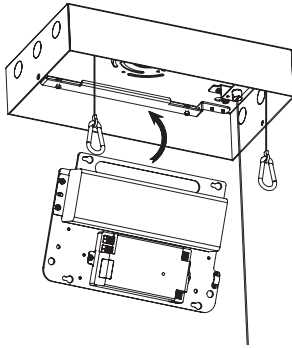
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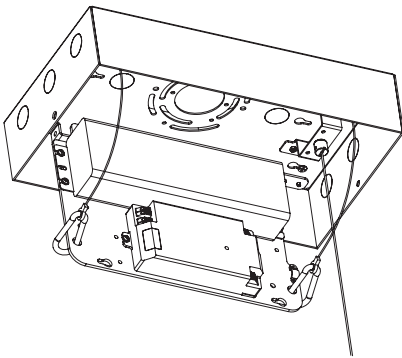
S2CPU-S096-Z, S2CPU-S150-Z, S2CPU-S320-Z, S2CPU-S600-Z

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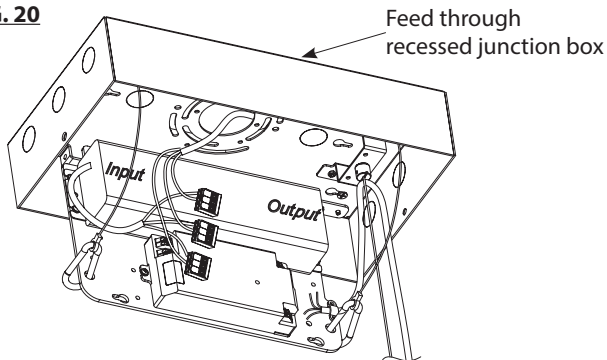
**FIG. 18**



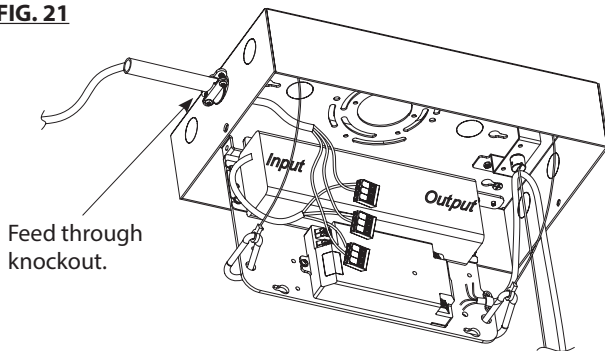
**FIG. 19**



**FIG. 20**



**FIG. 21**



### 3. Surface Mount CPU Wiring

3.1 Support electrical board by hooking it to slot. Attach both retaining cable clips. (See **FIG. 18** & **FIG. 19**).

3.2.1 For recessed junction box feed input, bring input wires through rear feed location (See **FIG. 20**).

3.2.2 For conduit feed input, bring input wires through CPU knockouts. (See **FIG. 21**).

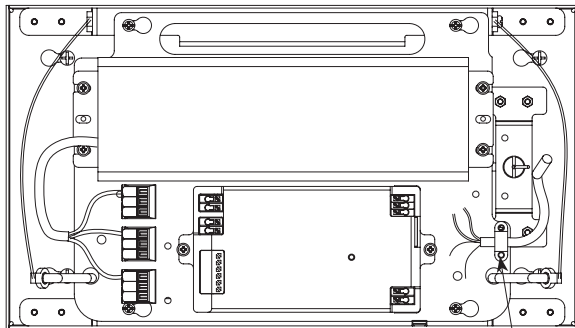
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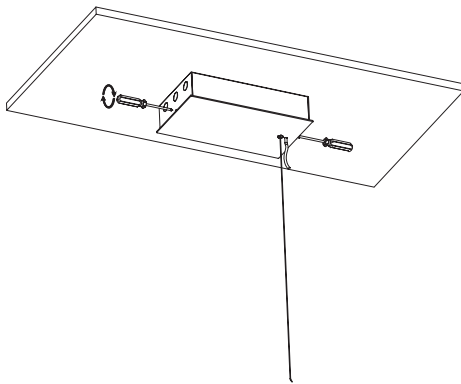
**FIG. 22**



Secure feed wire  
to KONSTRUKT with mount

3.3 Bring input wires to accessible location and then install electrical board secure to CPU base. (See **FIG. 22**). Reference appropriate wire diagram to wire CPU. (See **FIG. 24-27**)

**FIG. 23**



3.4 Reinstall CPU cover. (See **FIG. 23**).

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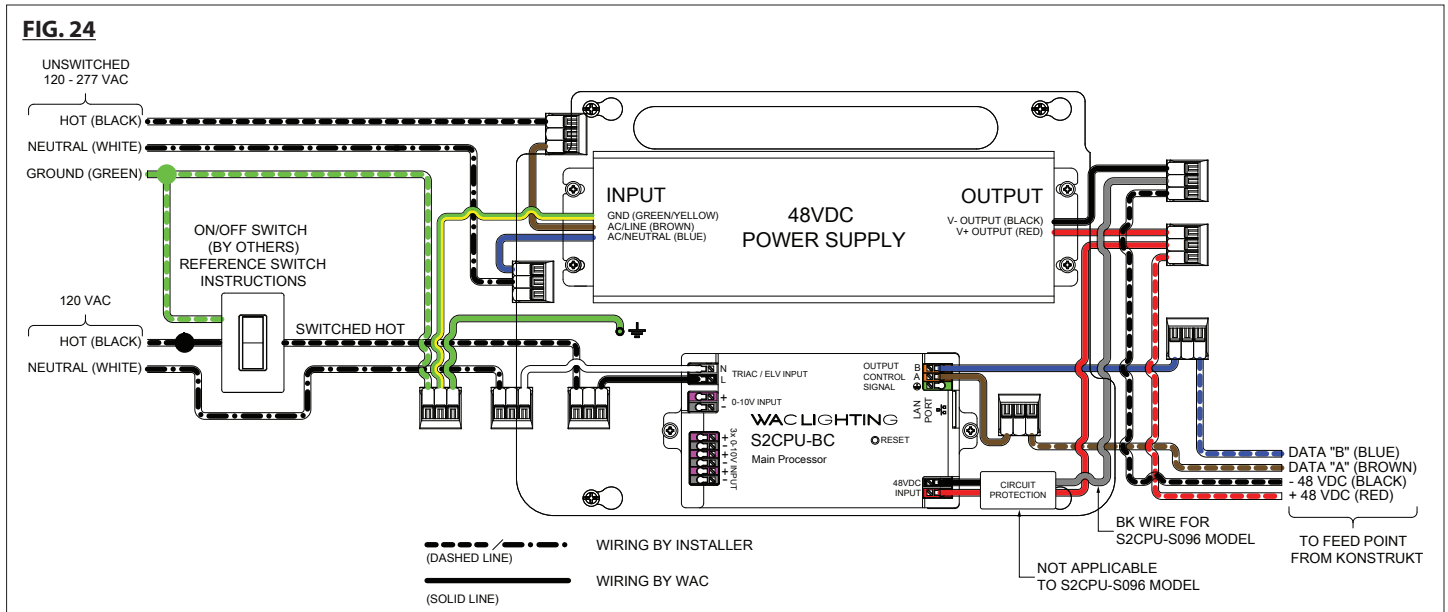
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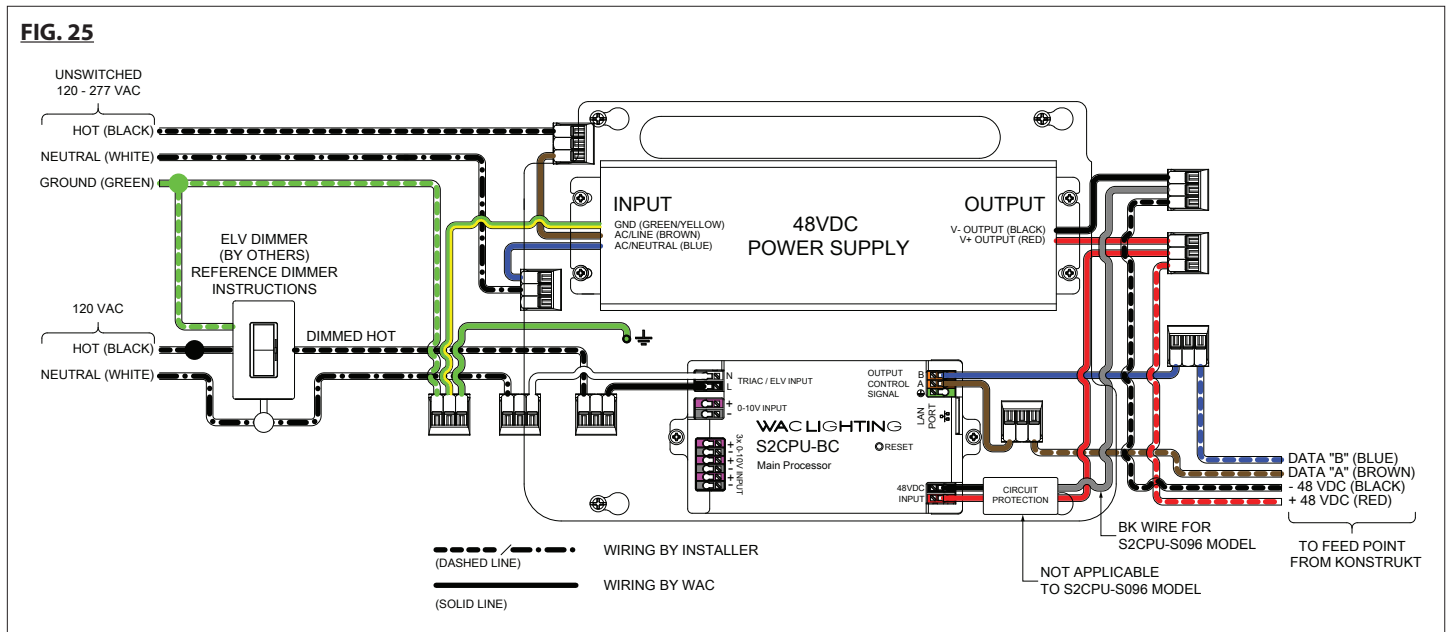
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Figure 24 Surface Mount CPU with On/Off Switch Wiring Diagram



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 25 Surface Mount CPU Wiring with ELV Dimmer



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.

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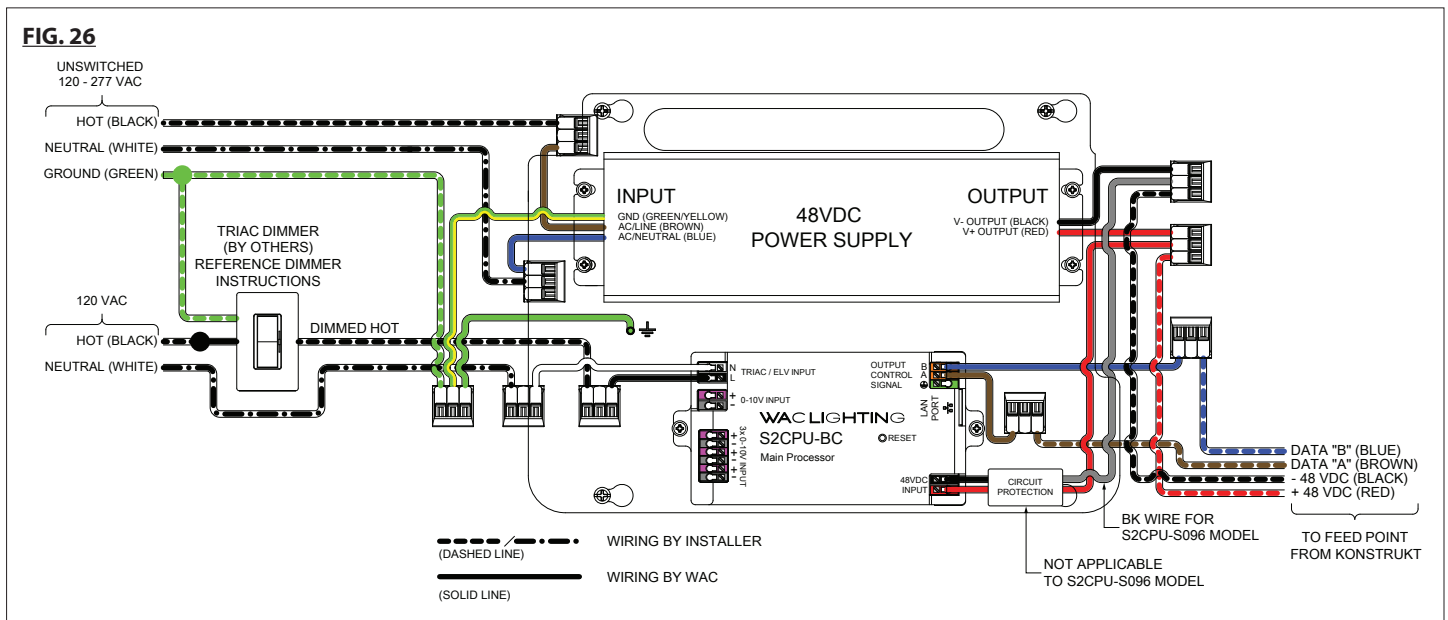
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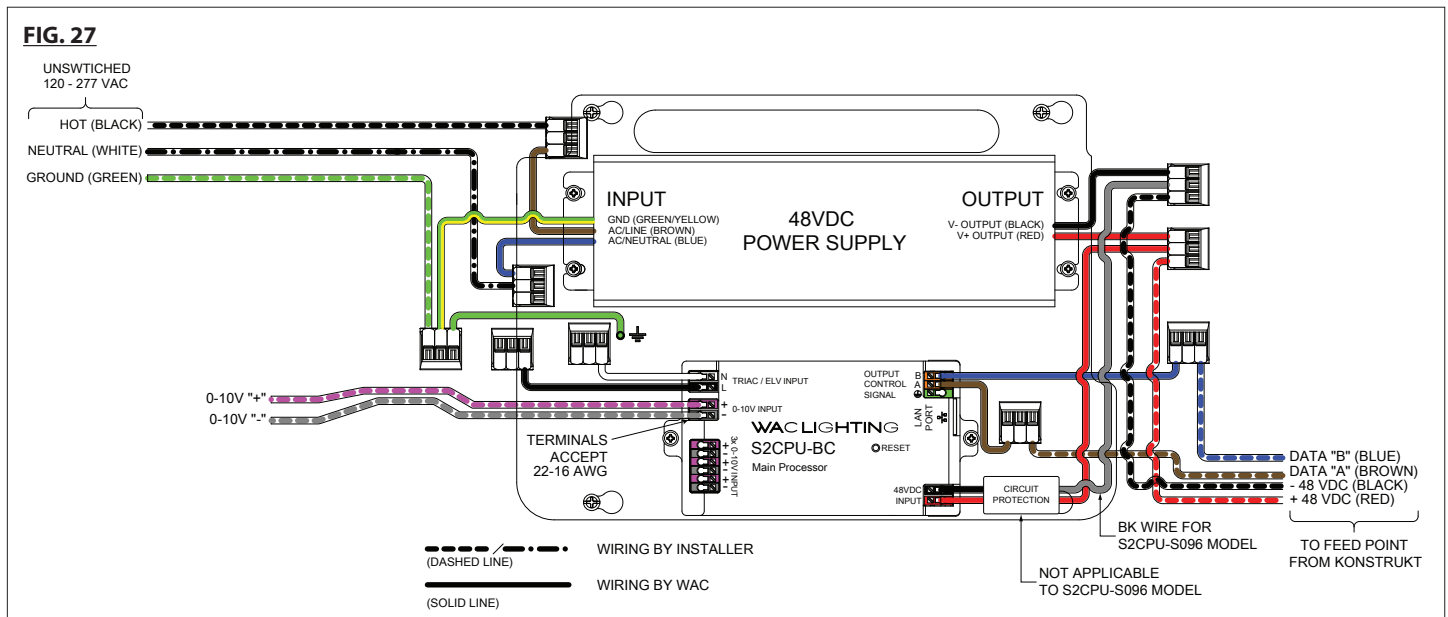
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Figure 26 Surface Mount CPU Wiring with TRIAC Dimmer



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 27 Surface Mount 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 KONSTRUKT CPU and the toggle on /off mechanism of the controls (by others) is to bring the 0-10V signal to 0V when in the off position.

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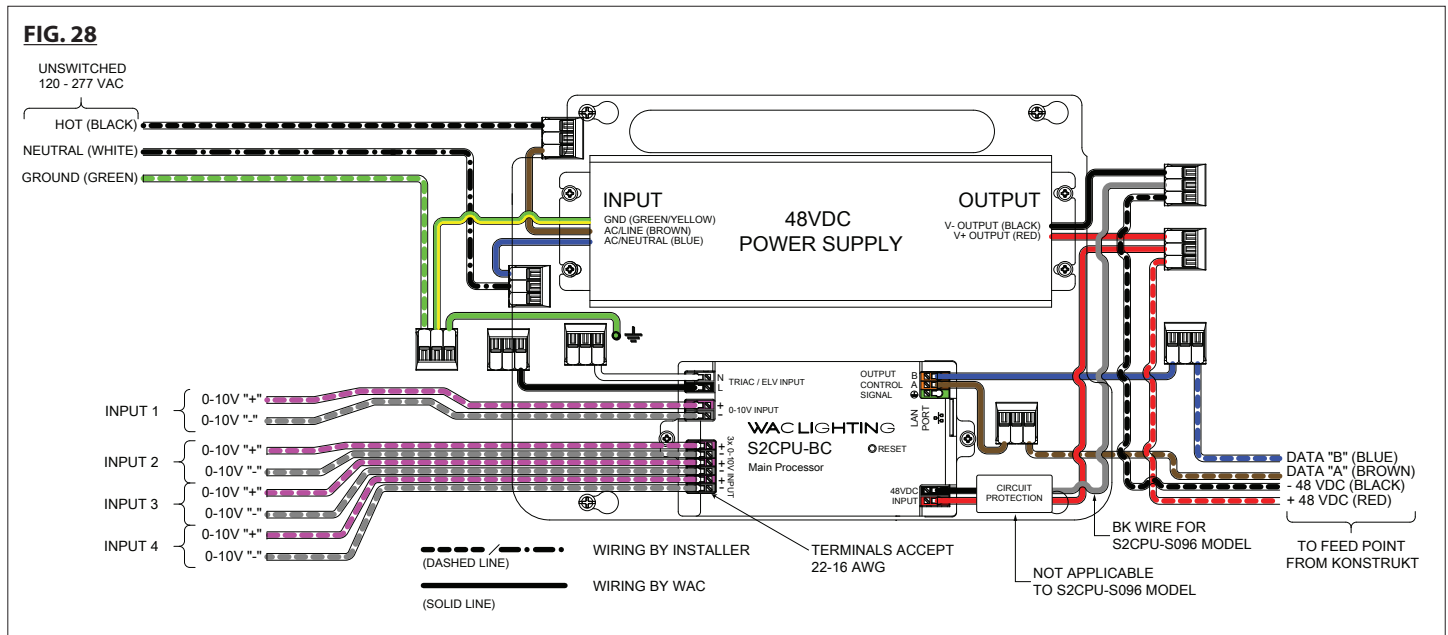
## INSTALLATION INSTRUCTIONS

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Figure 28 Surface Mount CPU with 4x 0-10V Input Wiring Diagram

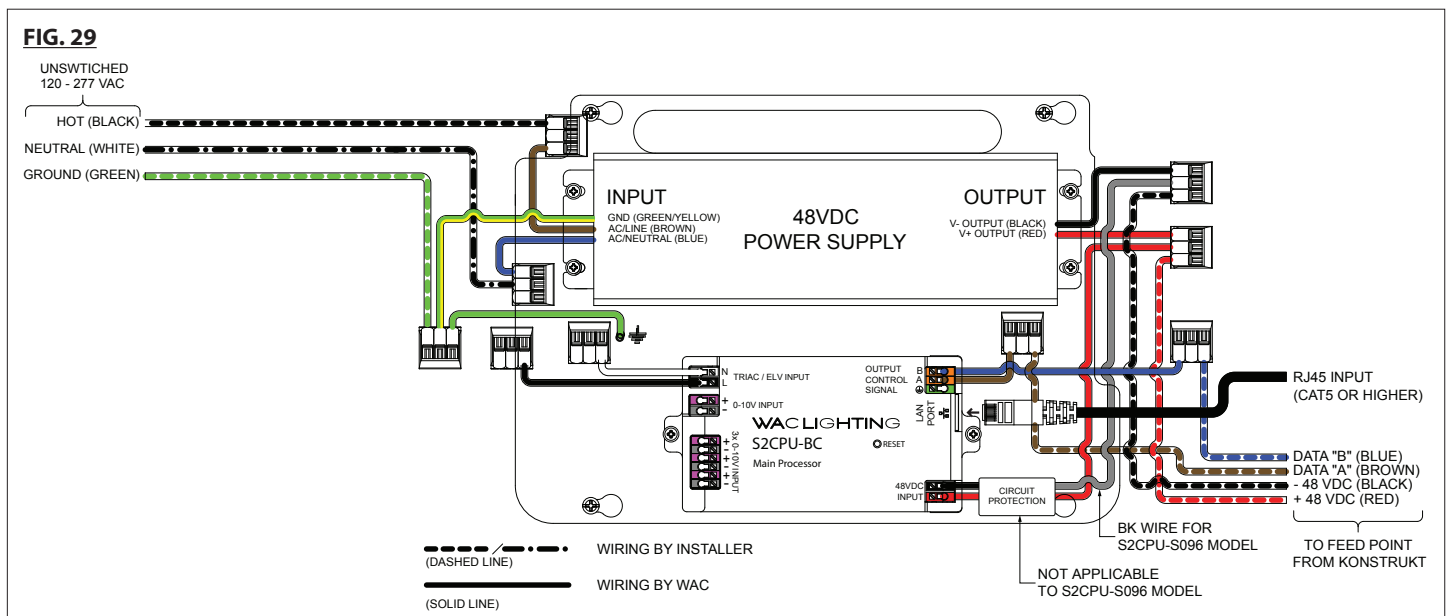


To utilize up to 4x 0-10V dimmer, connect each dimmer to the appropriate 0-10V "+" and 0-10V "-" wires in accordance to dimmer specifications directly to the "+" and "-" input terminals of the S2CPU-BC processor.

**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 KONSTRUKT 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.

Figure 29 Surface Mount 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.

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S2CPU-S096-Z, S2CPU-S150-Z, S2CPU-S320-Z, S2CPU-S600-Z



**CONFIGURE KONSTRUKT WITH WAC APP**

In addition to compatibility with building controls, you can configure and control your KONSTRUKT installation through the WAC App. To use the WAC App, download it for free from the App Store (iOS) or Google Play (Android).



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### TROUBLESHOOTING

#### **KONSTRUKT Installation Does Not Power ON**

1. Check main and branch circuit fuses or circuit breakers.  
CAUTION: Make sure the main power is turned OFF, while inspecting connections to breaker.
2. Check line wire connections to KONSTRUKT CPU and switch wire connections in the switch housings, where applicable.
3. Check low voltage control wire connections to KONSTRUKT CPU and ensure proper functionality of control devices, where applicable. Once connections are confirmed

#### **Performing Power Cycle on KONSTRUKT CPU**

Power cycling is the act of temporarily removing the power source to the KONSTRUKT CPU. Use the circuit breaker connected to the KONSTRUKT CPU is connected, by toggling it OFF for 10 seconds and back ON.

#### **Performing KONSTRUKT CPU Factory Reset**

Factory Reset is a restoration of the KONSTRUKT CPU and any connected fixtures to original factory setting. This can be achieved by the following steps:

1. Open the KONSTRUKT CPU case by loosening the cover screws.
2. Press and hold the RESET button located on the inside S2CPU-BC processor for 3 seconds, while the KONSTRUKT CPU remains powered.
3. Release the RESET button, and allow at least 30 seconds for the S2CPU-BC processor to reboot. A successful reset and reboot may be indicated by KONSTRUKT functionality of wired controls and broadcasting of the KONSTRUKT CPU Wi-Fi/SSID for connection.
4. Reinstall the KONSTRUKT CPU case cover.

NOTE: A factory reset will also disconnect the KONSTRUKT CPU from any previously connected Wi-Fi network and will require re-configuration via the WAC App.

#### **KONSTRUKT CPU Wi-Fi/SSID (WAC\_KST\_XXXXXX) Does Not Appear During Pairing**

If the KONSTRUKT CPU had been previously paired, the Wi-Fi radio will be OFF.

1. To turn on Wi-Fi, see above section "Performing KONSTRUKT CPU Factory Reset"
2. After Factory Reset has been performed, the KONSTRUKT CPU Wi-Fi/SSID broadcast will appear for connection.

#### **Building Wi-Fi/SSID Does Not Appear in WAC App for Pairing**

The KONSTRUKT CPU supports Wi-Fi connection with 2.4GHz 802.11 b/g/n networks.

1. Confirm your network is compatible by checking your router/wireless access point settings or contact your router/wireless access point manufacturer.
2. Ensure your network's SSID is not hidden.
3. The KONSTRUKT CPU does not support 5GHz connectivity or 5GHz Wi-Fi networks.

#### **KONSTRUKT CPU Not Connecting After Building Wi-Fi/SSID Update**

If a change is made to the building Wi-Fi network configuration and the KONSTRUKT CPU is unable to connect to the network, it will re-enable its access point mode. To reconfigure Wi-Fi, use the WAC App.

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