FranklinWH Smart Circuits Module Installation Guide

aGate X, SKU: AGT-R1V2-US; AGT-R1V3-US
Smart Circuits Module, SKU: ACCY-SCV2-US

Oct. 10, 2025

Please visit *FranklinWH Support* for the latest FranklinWH documents.

Please read this document carefully to ensure the best reliability of the product and your warranty eligibility. For further information about the warranty, please refer to the ***FranklinWH Limited Warranty***.

This document is intended for use by professional installation and maintenance service providers only and no statements, information or recommendations in this document constitute any express or implied warranty.

Please read this document carefully before installing or using the FranklinWH equipment. Failure to follow any instructions or warnings in this document may result in damage to the equipment, personal electric shock, severe injury, or even death.

Product Information

This document applies only to the following products: aGate X and the FranklinWH Smart Circuits Module.

FranklinWH Energy Storage Inc. (FranklinWH) reserves the right to make any improvements to the product, and the contents in this document shall be subject to updates without further notification.

All images and pictures provided in this Manual are only for demonstration purposes and may differ in detail from the product, based on the product version.

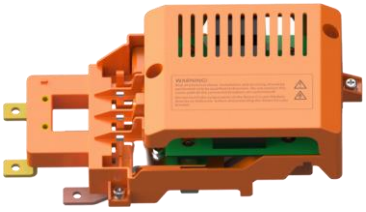
Feedback

If you have any questions or comments, please send us an email at: *service@franklinwh.com*

Disposal of Scrapped Products

Scrapped products (including their internal chemicals and electrical materials) should not be disposed of with household waste. Please refer to your local laws and regulations regarding disposal.

Overview



The Smart Circuits Module is an optional aGate component. It provides the ability to connect up to three circuits in order to remotely manage unique devices, from anywhere and at any time.

The three Smart Circuits are as follows:

- Smart Circuit 1 & Smart Circuit 2 are 1-pole circuit breakers which may be merged into a single 2-pole circuit.
- Smart Circuit 3 requires a 2-Pole circuit breaker.

Through the FranklinWH App, homeowners can schedule times for the circuits to automatically turn on and off. For instance, the EV charger may be set to only run from 1:00 am to 5:00 am, during a low demand, low-cost period.

Additionally, homeowners can manually turn on and turn off individual Smart Circuits as needed. An example is that of turning on the air conditioner shortly before returning home.

Preparation

The Smart Circuits Module does not come with breakers. Before heading to the installation site, evaluate the installation needs and bring all necessary components.

Smart Circuits Module Installation

Before installation, make sure all breakers in the aGate and all switches connected to the aGate are disconnected. Use a multimeter to check the voltages at both input and output terminals of aGate are zero (0).

DANGER: Despite control through the FranklinWH App, the remote OFF status does not mean the circuit has been physically disconnected. It is important to test the circuit status before performing installation.

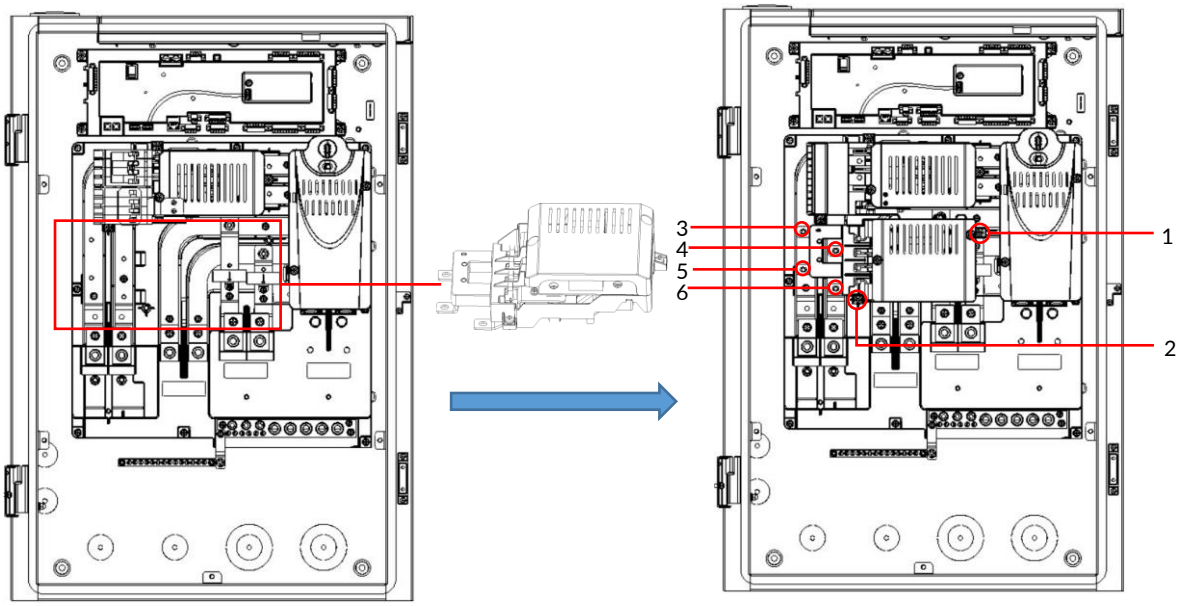
Do not touch the output ports of the Smart Circuits Module directly or indirectly through conductive material before disconnecting the circuit breakers.

Torque Requirements

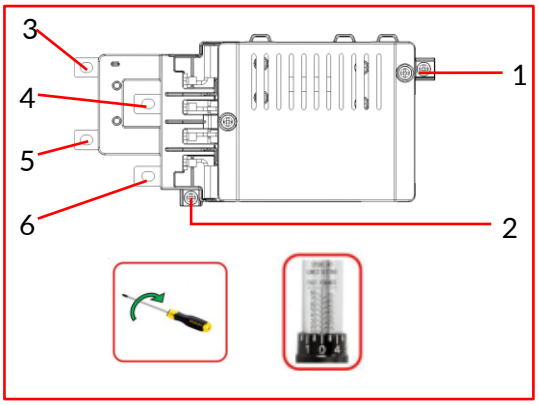
Screw type	Cross head screwdriver	Tightening torque
M4	PH2	1.03 lb·ft (1.4 N·m)
M5	PH2	2.21 lb·ft (3.0 N·m)
M6	PH3	4.42 lb·ft (6.0 N·m)

Installation Procedure

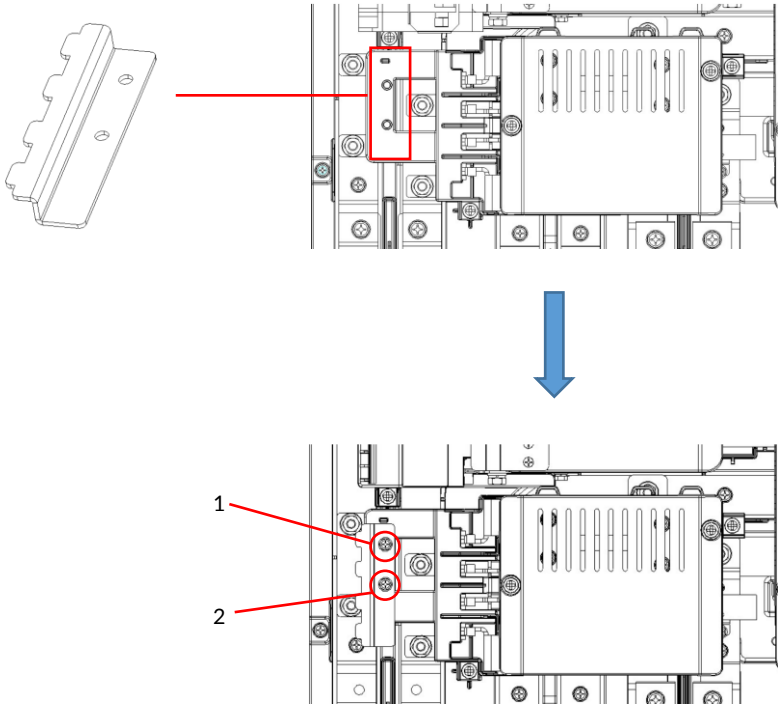
a) Place the Smart Circuits Module in the position as shown in the figure below and check that all installation holes 1 to 6 have been properly aligned.



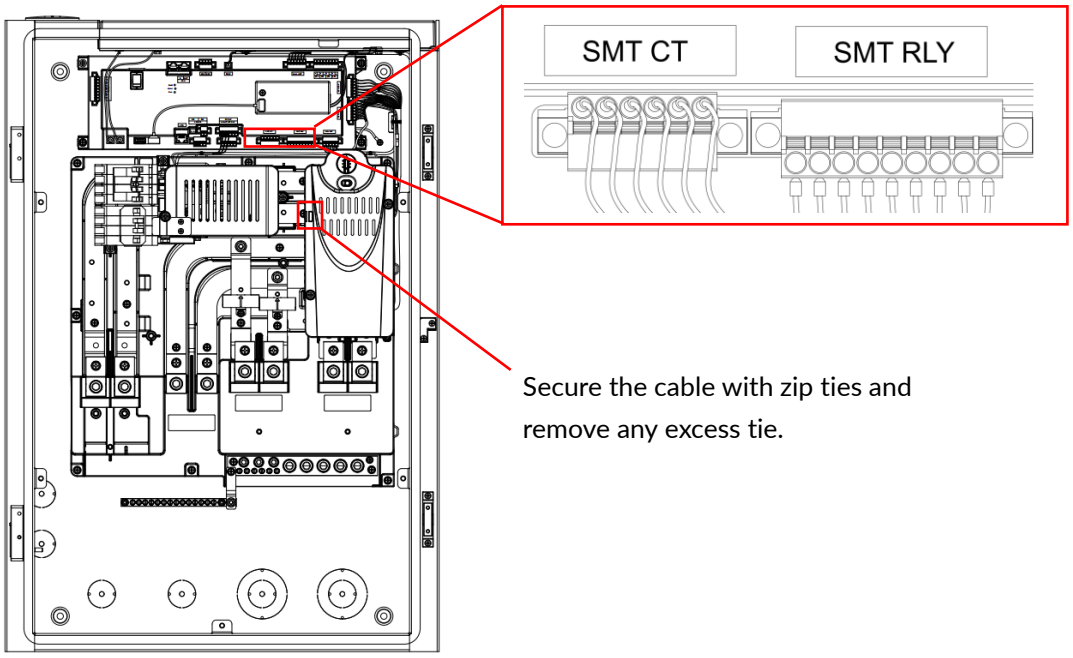
b) Use a Phillips screwdriver to tighten the two captive M5 captive screws at positions 1 and 2 to the recommended torque. Then, using a 10 mm socket, tighten the four M6 flange nuts at positions 3 to 6 to torque 4.42 lb·ft (6.0 N·m).



c) Install the metal base of the Smart Circuits Module at the indicated location in the diagram. Use a Phillips screwdriver to tighten the two M4x10 screws at positions 1 and 2 to the recommended torque.

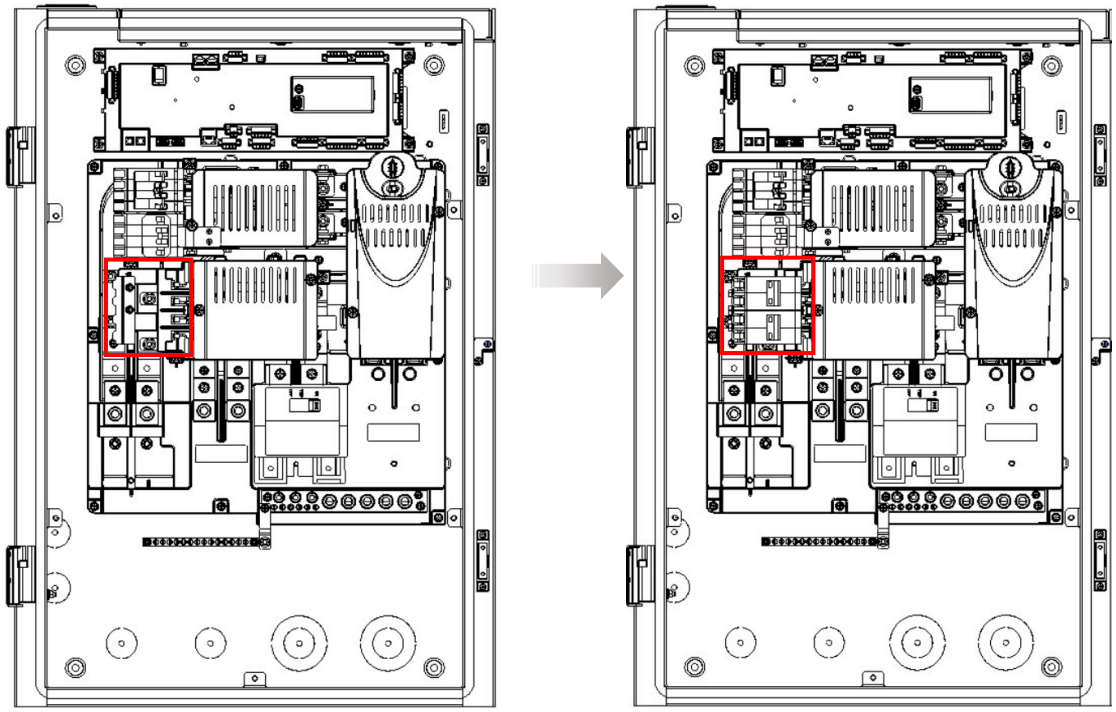


d) Connect the cables as shown in the diagram below. Plug the SMT-RLY cable into the SMT RLY connector and the SMT-CT cable into the SMT CT connector on the EMS module.



Install Smart Circuit Breakers

Loads connected to Smart Circuits always require a breaker. The Smart Circuit breakers are not included and must be ordered separately. Refer to **Appendix 1** for compatible breaker information.

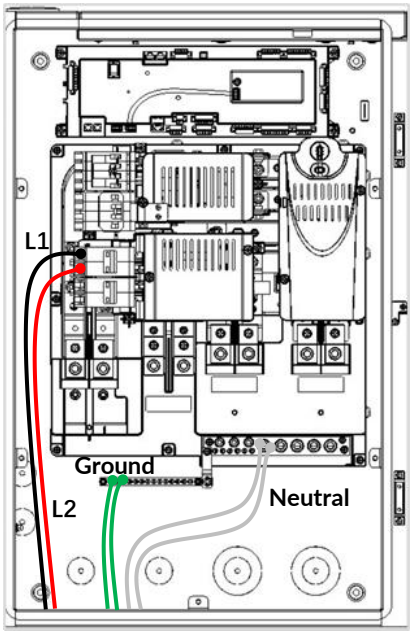


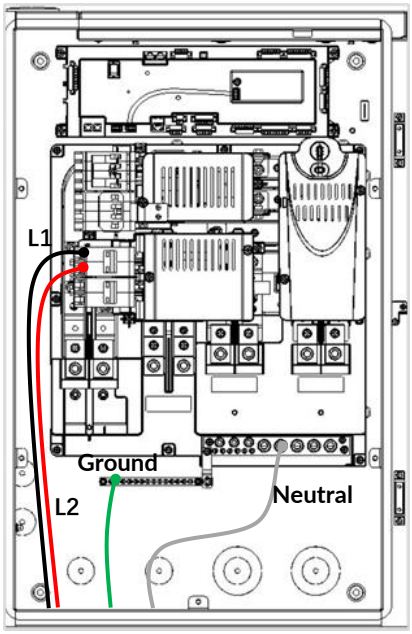
Connect loads to Smart Circuits

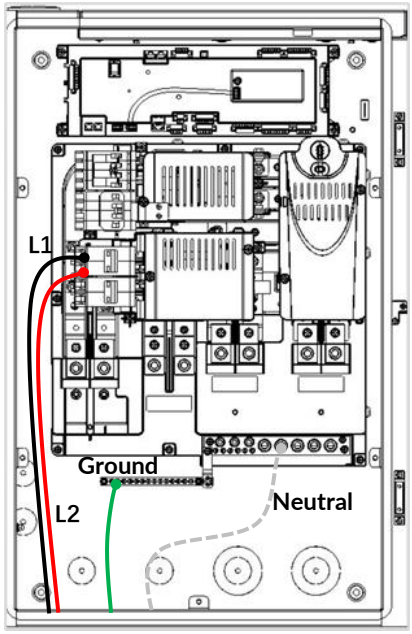
NOTE: Refer to the breaker specifications for breaker output cable screws tightening torque valued. The ground cable does not pass through the circuit breaker.

Follow the instructions below to connect loads to Smart Circuits. Refer to Appendix 2 for wiring requirements.

<table>
<tr><th colspan="2">Load Connections to Smart Circuit 1 / Smart Circuit 2</th><th>Load Connections to Smart Circuit 3</th></tr>
<tr>
<td>If Smart Circuit 1 and Smart Circuit 2 connect two 1-pole breakers, connect the load conductors to the Smart Circuit module output terminals on the aGate (L1, L2, Neutral & Ground), as shown below.

  </td>
<td>If Smart Circuit 1 and Smart Circuit 2 connect one 2-pole breaker, connect the load wires to the Smart Circuit module output terminals on the aGate (L1, L2 & Ground). Smart Circuits can be installed with neutral as normal.

  </td>
<td>Smart Circuit 3 is mainly used for 240 V loads. Connect the load conductors to the Smart Circuit module output terminals on the aGate (L1, L2 & Ground), as shown below. Smart Circuits can be installed with neutral as normal, when the 240V device has a neutral terminal.

  </td>
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Configure Smart Circuits using the FranklinWH App

For more information, refer to ***FranklinWH Commissioning Guide***.

Appendix 1 Recommended Smart Circuits Breakers

Breaker for Smart Circuit 1 and 2 (1-Pole)			
S/N	**Model**	**Current**	**Description**
1	CH120	20 A	Eaton#Circuit Breaker; 1-Pole, 10 kAIC, 20 A/240 V
2	CH130	30 A	Eaton#Circuit Breaker; 1-Pole, 10 kAIC, 30 A/240 V
3	CH135	35 A	Eaton#Circuit Breaker; 1-Pole, 10 kAIC, 35 A/240 V
4	CH140	40 A	Eaton#Circuit Breaker; 1-Pole, 10 kAIC, 40 A/240 V
5	CH145	45 A	Eaton#Circuit Breaker; 1-Pole, 10 kAIC, 45 A/240 V
6	CH150	50 A	Eaton#Circuit Breaker; 1-Pole, 10 kAIC, 50 A/240 V
7	CHF130	30 A	Eaton#Circuit Breaker; 1-Pole, 10 kAIC, 30 A/240 V
8	CHF135	35 A	Eaton#Circuit Breaker; 1-Pole, 10 kAIC, 35 A/240 V
9	CHF140	40 A	Eaton#Circuit Breaker; 1-Pole, 10 kAIC, 40 A/240 V
10	CHF145	45 A	Eaton#Circuit Breaker; 1-Pole, 10 kAIC, 45 A/240 V
11	CHF150	50 A	Eaton # Circuit Breaker; 1-Pole, 10 kAIC, 50 A/240 V
Breaker for Smart Circuit 1 + Circuit 2 (2-Pole)			
S/N	**Model**	**Current**	**Description**
1	CH230	30 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 30 A/240 V
2	CH235	35 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 35 A/240 V
3	CH240	40 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 40 A/240 V
4	CH245	45 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 45 A/240 V
5	CH250	50 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 50 A/240 V
6	CHF230	30 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 30 A/240 V
7	CHF235	35 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 35 A/240 V
8	CHF240	40 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 40 A/240 V
9	CHF245	45 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 45 A/240 V
10	CHF250	50 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 50 A/240 V
Breaker for Smart Circuit 3			
S/N	**Model**	**Current**	**Description**
1	CH230	30 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 30 A/240 V
2	CH235	35 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 35 A/240 V
3	CH240	40 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 40 A/240 V
4	CH245	45 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 45 A/240 V
5	CH250	50 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 50 A/240 V
6	CH260	60 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 60 A/240 V
7	CH270	70 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 70 A/240 V
8	CH280	80 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 80 A/240 V
9	CHF230	30 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 30 A/240 V
10	CHF235	35 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 35 A/240 V
11	CHF240	40 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 40 A/240 V
12	CHF245	45 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 45 A/240 V
13	CHF250	50 A	Eaton#Circuit Breaker; 2-Pole, 10 kAIC, 50 A/240 V

Appendix 2 Wiring

Terminal Name	Wire Gauge	Tool	Strip Length	Torque
Single-lug terminal	4 AWG–250 MCM CU/AL	8 mm hex wrench 5/8-18 UNF hex screw	1 in.	3/0 AWG–250 MCM 275LB-IN 4 AWG–2/0 AWG 110LB-IN
Neutral bar terminal lug	4 AWG–250 MCM CU/AL	8 mm hex wrench 5/8-18 UNF hex screw	1 in.	3/0 AWG–250 MCM 275 LB-IN 4 AWG–2/0 AWG 110 LB-IN
	14 AWG–2/0 AWG CU/AL	5 mm hex wrench 7/16-20 UNF Hex head screw	1 in.	3 AWG–2/0 AWG 110 LB-IN 14 AWG–4 AWG 35 LB-IN
	14 AWG–4 AWG CU/AL	Straight screwdriver 1/4-28 UNF	0.6 in.	14 AWG–4 AWG 26 LB-IN
Ground bar terminal lug	14 AWG–2/0 AWG CU/AL	5 mm hex wrench 7/16-20 UNF hex screw	0.8 in.	3 AWG–2/0 AWG 110 LB-IN 14 AWG–4 AWG 35 LB-IN
	14 AWG–4 AWG CU/AL	Straight screwdriver 1/4-28 UNF	0.4 in./0.8 in.	14 AWG–4 AWG 26 LB-IN