

CONTROLLER INTEGRATIONS

CHRYSTAL CPC401

Primary Controller Configuration

- The CHRYSTAL controller can be installed as a standalone device or as an accessory controller to an existing or primary system to boost it's performance or reduce operating costs.
- In the case of CHRYSTAL being installed as an accessory controller, it sends a dry contact signal to the primary controller just as a snow detection command. This command can be in parallel to local sensors or can replace them entirely.
- In the event of such installations, it is prudent and sometimes essential to reconfigure the primary controller settings.
- If the user decided to subscribe to the preheating monitoring plan on myCHRYSTAL, it is recommended to reduce or eliminate the afterrun period on the primary controller.
- It's important to note that the state of the device shown on the myCHRYSTAL app is the state of the CPC401 Controller and not the state of the primary controller. Ex: If the local sensor detects snow, but CHRYSTAL did not send a command the app will show the system in standby state and not in heating state.

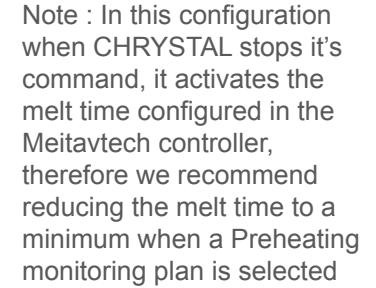
The diagram shows the ETO2 Controller with its terminal block and internal components. The terminal block has the following connections:

- Top Row:** 11 (N), 12 (L), 13 (1), 14 (2), 15 (3), 16 (4), 17 (5), 18 (6), 19 (7), 20 (8).
- Bottom Row:** 21 (N), 22 (L), 23 (1), 24 (2), 25 (3), 26 (4), 27 (5), 28 (6), 29 (7), 30 (8).

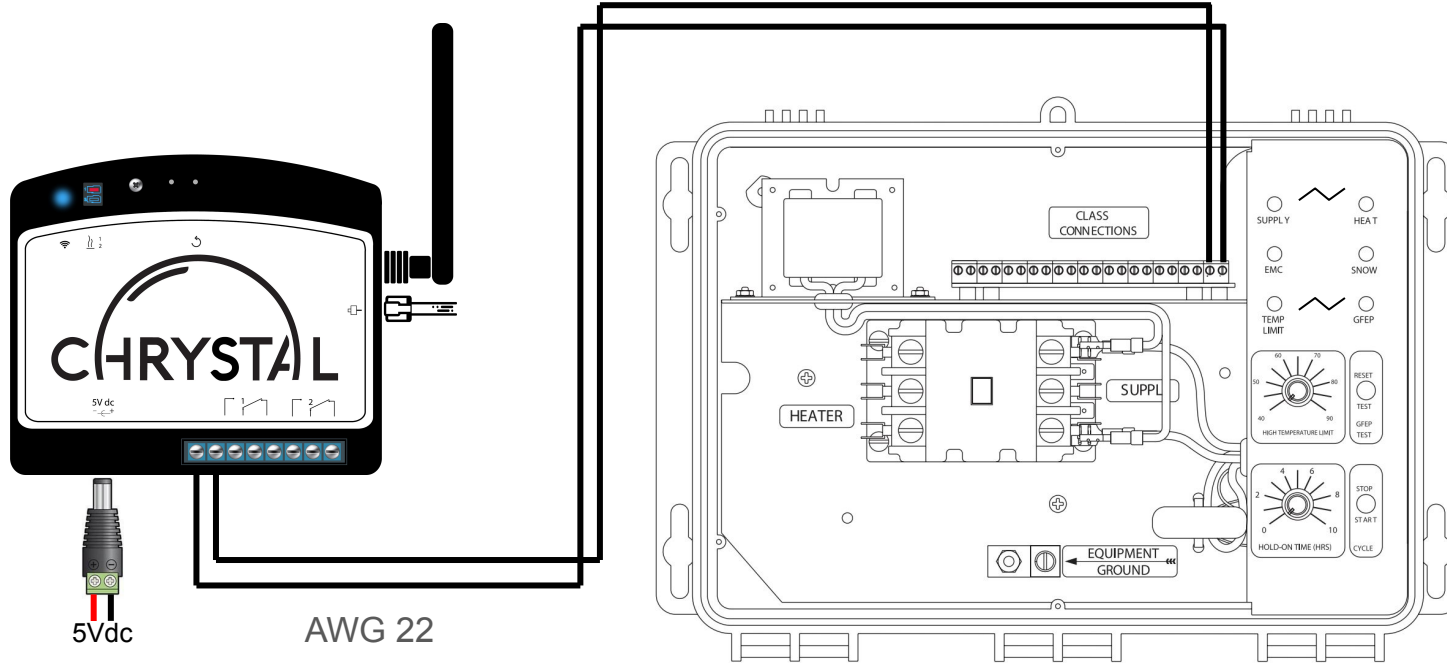
Internal components and labels include:

- ON** (switch symbol)
- ALARM** (switch symbol)
- ETO2 CONTROLLER** (text)
- www.oj.dk** (text)
- FUSE T 800mA** (fuse symbol)
- ALARM OUTPUT MAX 5A** (output symbol)
- POWER OUTPUT 1 MAX 16A** (output symbol)
- POWER OUTPUT 2 MAX 16A** (output symbol)
- POWER OUTPUT 3 MAX 16A** (output symbol)
- ZONE 1** (label)
- ZONE 2** (label)

The diagram shows the front of the CHRYSTAL device. It has a black casing with a white screen in the center. The screen displays the word "CHRYSTAL" in large black letters, with a curved line above it. Above the screen, there are three small circular indicators (blue, red, and grey) and a Wi-Fi symbol. Below the screen, there are four small square buttons. At the bottom of the device, there is a port labeled "5Vdc" with a red and black power cable connected to it. On the right side, there is a port labeled "ANTENNA" with a black antenna connected to it.



CPC401 Integration with - ETI APS-3C/4C

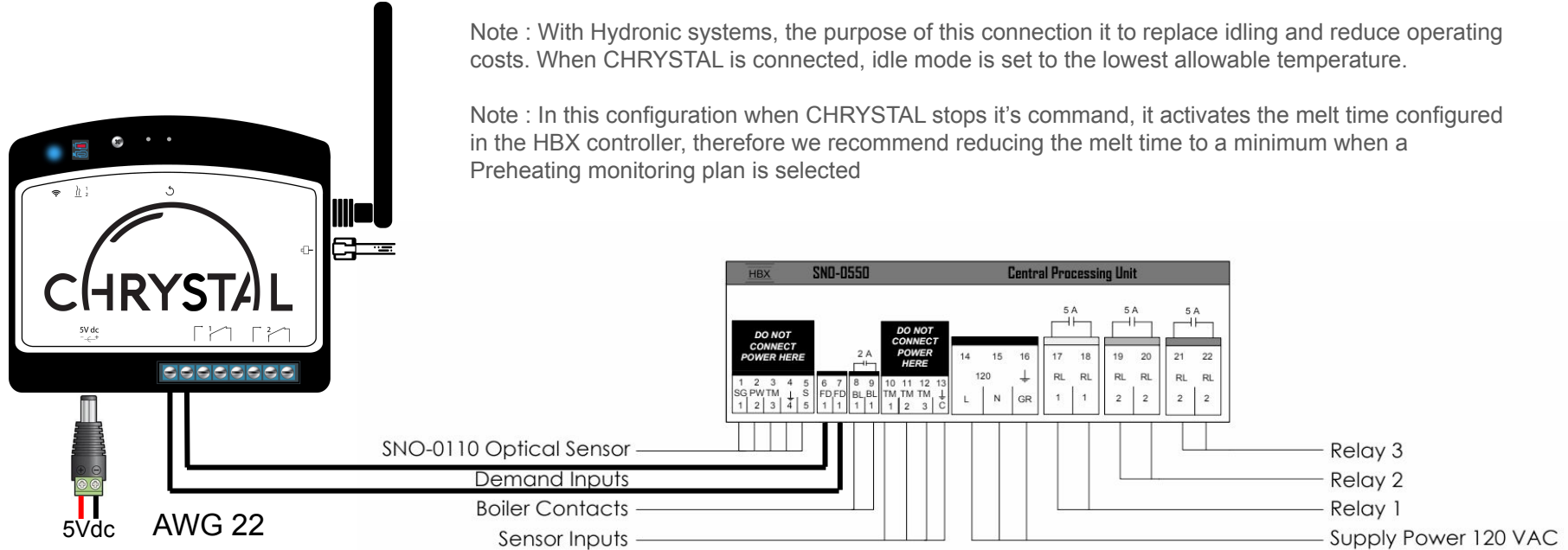


Note : In this configuration when CHRYSTAL stops it's command, it activates the melt time configured in the APS controller, therefore we recommend reducing the melt time to a minimum when a Preheating monitoring plan is selected

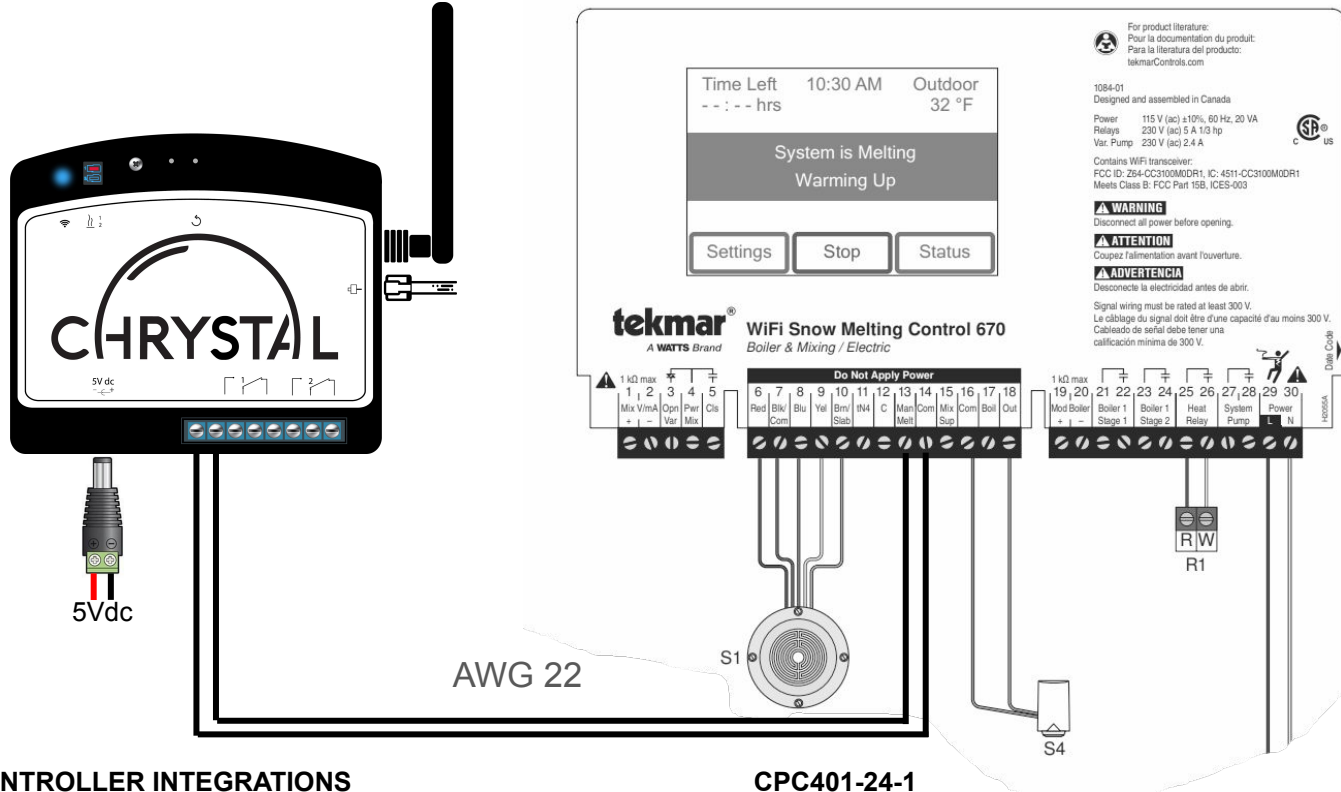
CPC401 Integration with - HBX SNO-550

Note : With Hydronic systems, the purpose of this connection is to replace idling and reduce operating costs. When CHRYSTAL is connected, idle mode is set to the lowest allowable temperature.

Note : In this configuration when CHRYSTAL stops its command, it activates the melt time configured in the HBX controller, therefore we recommend reducing the melt time to a minimum when a Preheating monitoring plan is selected



CPC401 Integration with - Tekmar 670

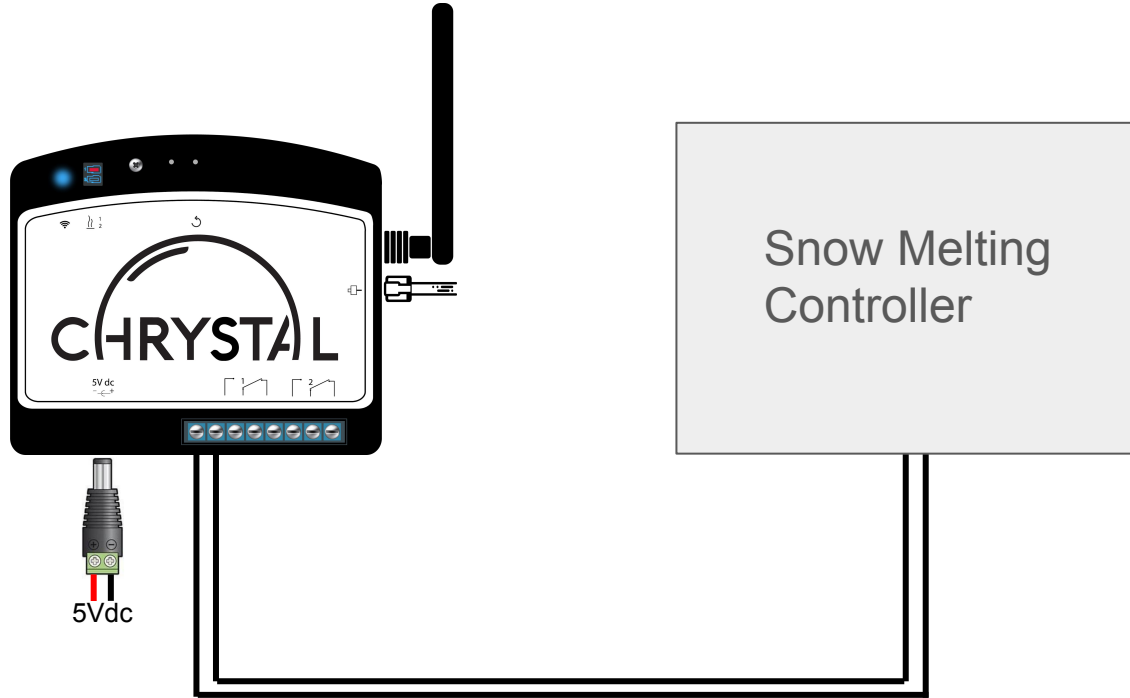


Note : With Hydronic systems, the purpose of this connection it to replace idling and reduce operating costs. When CHRYSTAL is connected, idle mode is set to the lowest allowable temperature.

Note : As opposed to the Storm feature inside the Tekmar controller which preheats for a predefined period, CHRYSTAL's algorithm adapts the preheating time based on the outdoor temperature and the upcoming snow event.

Note : In this configuration when CHRYSTAL sends a command, it activates the manual melt time configured in the tekmar controller.

CPC401 Integration with - **Other**



If the primary controller receives commands by means of a dry contact then Chrysal will be compatible.

If you are working with a different snow melting controller then mentioned in the list above and unsure if it is compatible with the CPC401 controller, please send your request to support@mychrysal.com