Ducted Systems Technical Services: Service Tips Letter

Letter: ST-022-22

Date: December 14, 2022

To: S1 HVAC Branch and Distributor Principal, Sales Manager, Service Manager, Parts Manager, Warranty Manager, Delegated Administrator, Ducted Systems Technical Services, DS Parts/S1, ES Americas, ADTI Channel, Account Representatives, Marketing, Sales, Warranty teams.

Subject: **Simplicity Controller Solder Trace Failures**

Product/s: **Light Commercial Simplicity Controllers (Lite and 1A Controllers Only)**

Summary: This letter is to provide an agency-approved temporary solution to products affected by a solder trace failure. Therefore, this letter should be read and followed in its entirety as a temporary solution only.

Johnson Controls has been working with controller suppliers to continue to be able to provide replacement boards. As the Lite and 1A controllers are both affected by component shortages in the industry, Johnson Controls has worked with the certification agency Canadian Standards Association (CSA) on Nov. 22, 2022, to provide a temporary solution for a specific failure.

If a controller solder trace has failed from the W1 or W2 thermostat input to their H1 or H2 output, certified HVAC Technicians are authorized to bypass the controller and utilize a field-supplied single-pole single-throw relay. This type of failure must be verified using an ohm meter between W1 to H1, or W2 to H2 terminals with wires and harnesses disconnected (the meter should read an open circuit). Once verified the circuit is open, the resolution below is authorized **only for temporary use in the heating mode**.

To install the relay, certified HVAC Technicians will need to field supply wire for the thermostat's W1 wire termination, H1 wire, and tap into the 24v output terminal of the equipment's factory-installed stepdown transformer. (All voltages should be confirmed with a voltage meter before wiring to ensure only low voltage is being used). In addition, standard industry safe electrical work practices must be followed, and the system should be de-energized with appropriate Lockout-Tagout precautions at the power source.

To wire the relay, certified HVAC technicians should field wire splice into the 24v of the transformer and splice into the H1 or H2 output wire, and attach them to the contacts of the relay. Then an additional field-installed wire should be spliced into the board's W1 or W2 and the transformer's grounded common wire of the secondary side. These wires will be attached onto the coil of the relay to allow operation of the heating mode. (The same process can be used for W2 to H2 solder trace failures) **Note: During this process, the thermostat should be sending the W1 or W2 signal to the thermostat terminal on the simplicity controller and the relay at the same time to ensure fan operation.**

During this process, no safeties, manufacturing components, or devices should be removed or bypassed outside of the W1/H1 and W2/H2 solder trace. It is recommended to clearly inform your customer in writing that this is a **temporary solution**, aligned with CSA until a controller is received for replacement and if not replaced may be subject to review in the event of a failure. Requests for modified or custom wiring diagrams will not be provided by Johnson Controls. This wiring solution is not authorized for any other unlisted failure or site concern outside of a solder trace failure of the heating circuit listed above.

Any sites with this temporary solution completed for solder trace failures should be reported to Technical Services in an email with the subject showing the ST letter number and serial number of the unit (ex: **ST-022-22 N2A1XXXX** or **ST-022-22 / Multiple Units**). For sites with multiple units having this performed, all serial numbers should be provided in the same email. Once the replacement controller has been received, a certified HVAC technician should replace the board with the failed solder traces as soon as possible. Once the board is replaced the field wiring and relay should be removed and the system returned to factory standards as reflected in the system's wiring diagram.

If assistance is needed or if you need confirmation that a board qualifies for the temporary relief outlined, please contact Johnson Controls Commercial Technical Services at 877-874-7378 and follow the phone-cue prompts for your product or have your distributor contact us at cg-upgtechsupport@jci.com. All brands will be supported by Technical Services Phone Support regarding this letter. The correct application of this narrowed temporary solution by a certified HVAC technician will not affect or extend the outstanding product's limited warranty.

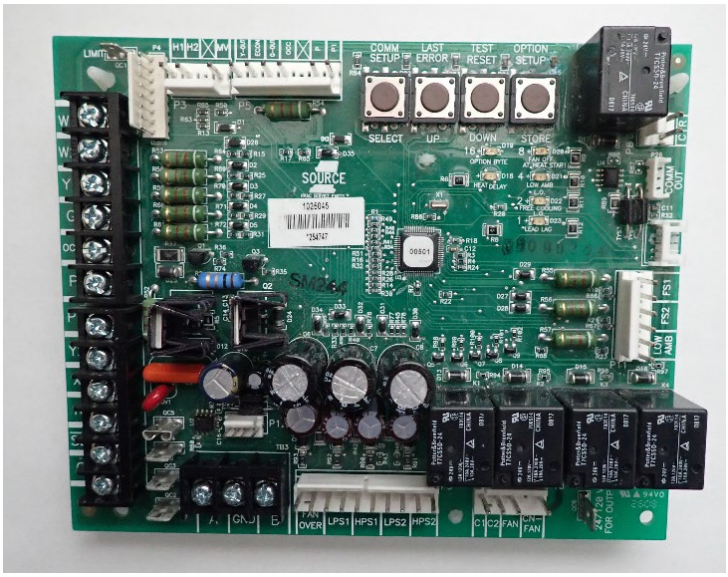
Material: S1-02421678700 Description: RELAY, CNTRL,24V,50/60 HZ, SPST

Field Wiring Specifications: 18 AWG stranded wire, minimum thermal rating of 105°C, rated VW-1.

Regards,

Ian Boger
Product Technical Support ENG II
Commercial Technical Services
5005 York Drive Norman OK 73069

Simplicity 1A Board



Simplicity Lite Board