



TECHNICAL BULLETIN

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Subject:
HA47 PLC Grounding

All,
We have seen the possibility of the PLC in the HA47 being burned by an electrical short. Adding a ground wire from 24VDC negative (-) to the earth ground will prevent the PLC from being damaged.

Issue:
The issue is if 24VDC positive (+) is shorted to ground anywhere in the system, it finds it way back to 24VDC negative (-) through the PLC terminals. This short can be anywhere in the system meaning it could be in the interconnect cable, in the customer unit, in the teller unit, or anywhere there is 24VDC positive (+) that could be shorted to earth ground. The short may not be strong enough to open the fuse or stop normal function of the unit. The short creates an unnecessary load on the 24VDC negative (-) terminal and can eventually burn the circuit board inside the PLC.

Solution:
The solution is to add a jumper wire from the 24VDC negative (-) terminal located on the PLC lower side terminal strip. Connect this wire to the earth ground lug mounted on the PLC mounting panel.

Additional:
We are going to also recommend a low ampere fuse be added to the 24VDC positive (+) so if there is any short no matter how slight, the fuse will open. If this fuse is added and opens when unit is powered, you will know that there is a short between 24VDC positive (+) and earth ground that must be found and repaired to prevent potential damage to the unit.

Hamilton has available a no charge kit that will include the fuse and the ground wire needed to retrofit existing units.

E0900 = HA47 24VDC fuse kit