Load Controls
UPC Troubleshooting Guide

To get started with the installation of the UPC, please refer to the Installation – Model UPC page in the UPC Data sheet.

We recommend setting the UPC Full Scale first, matching the resistance between test points TP1 and TP2 with your motor size:
5K Ohm = 5HP up to 150H Ohm = 150HP

After making the correct power connections you should see a glowing green Power LED.

If after making all the recommended wiring connections the UPC does not yield expected results, refer to this troubleshooting procedure.

UPC reads 4mA all the time
Did you set the Full Scale to match your motor?
Was the J1 jumper placed back on the pins after scaling? The indentation in the jumper must be UP.
Are the conductors passing through the control in the correct direction? UPC conductors enter 'Supply Side'.
Do the current conductors in the L1, L2 and L3 windows match the Voltage connections for L1 (Term 7), L2 (Term 8) and L3 (Term 9). The UPC is a multiplier, each phase Voltage must multiply with the associated phase's Current. If there is a mix up, the output will be zero or incorrect.

UPC reads 35mA all the time
Is there a 24VDC power supply connected to the 4-20mA loop? The UPC has a sourcing output that is internally powered by a 12V power supply. If a 24V supply is connected to the output loop the 24V supply will destroy the UPC output circuitry. Disconnect the 24V supply immediately and contact Load Controls about returning the UPC for repair or replacement.

The 4-20mA output goes right to Full Scale when the motor turns on
Was the UPC scaled to the correct motor size?

Is there significant inefficiency in the motor? The UPC measures Power into the motor, while the nameplate motor HP is rated at output, or 'shaft' power. If you suspect significant inefficiency (>10%) the UPC can be scaled up by the motor efficiency or higher to give some head room. If you do scale up the Full Scale by motor efficiency, ensure that this is accounted for in any connected PLC or DCS so that 20mA output = motor size.

Was the 10V Output from the UPC (T3) mistakenly connected to a 4-20mA input?