

TROUBLE-SHOOTING GUIDE TO RAINMAN MP IRRIGATION CONTROLLER

Outputs

1. No Output on a single station?
Disconnect the field wire and using either a spare Solenoid or Multimeter, check output. Please remember to use **Test Output** function on the Controller as this will not start the Pump or Master Valve. If Solenoid used for testing activates or the Multimeter reads 24volts AC, the problem is on the field side, not the Controller.
2. No Output on multiple stations?
Disconnect one (1) of the field wires and test as above. If you find that the fault is on eight (8) stations, this will most likely be the protection fuse for that bank. This is situated on the boards and will require replacing.

NOTE: Always test the field solenoids resistance with Multimeter set on Ohms. Replace ALL coils under 15 Ohms BEFORE powering up Controller again. If the Controller tests out ok, fault may be on field common.

Digital Inputs

1. Function Concern?
If concerned about the function of any Digital Input, isolate the Pump Start circuit by turning off pump circuit breaker or key switch or remove Pump Start Output from Controller. If it is a Fault Input type, check, in the Alarm Setpoints Menu that the Alarm has been activated.
Remove the Input wire from the terminal and then activate a Manual start on any station. With a short piece of wire connect into the Digital Input Common and the Digital Input Terminal to be tested. After the set amount of time (that the Alarm has been set for) the Controller should go into "fault mode" and an Alarm should be registered on the Controller display. If so, then the Digital Input is ok.
2. Pulse Type Flow Meter problem?
Connect a short piece of wire from the Digital Input Common to the Digital Input terminal to be tested. Tap the short piece of wire on the Input terminal repeatedly (to simulate a "pulse"). The flow reading should increase on the Controllers' system display menu.

NOTE: Digital Inputs problems/faults on the Controller are very uncommon.

Analogue Inputs

1. Power/Voltage present?
To test voltage, use a Multimeter set on DC volts. Test between the "V" and the "C" on the Analogue Input block. (Refer to the Manual or Connections Specifications sheet provided to the 'End-User' if unsure of which connections to test).
24volts DC should be present. If no voltage is present, remove ALL Inputs and test again, as a damaged/faulty instrument may be dragging the voltage down.
2. Reading is not accurate?
Put the Multimeter in series with the Analogue Input to be tested. Set on Milliamps (mA), take the reading. 4mA is considered to be 0 and 20mA is full scale, and therefore there is a range of 16mA. It is now necessary to calculate the accuracy of the Input (mathematically).

NOTE: Analogue Input faults may require testing by a Qualified Technician. If uncertain, then please contact Pentair Environmental Systems.