Motor Error/Safe Mode

Check

Has the valve been reset (i.e. powered off, then on)?

Reset the valve by powering down & then powering back on

Are the valve internals free of debris and clean?

Remove valve internals and thoroughly clean

Are the O-Rings/Seals in good condition & not preventing the spool travel?

Remove valve internals & check O-rings/Seals to ensure they are smooth; if not, replace

Can the motor operate/turn (w/ power off & motor cable disconnected, turn brass disk by hand)?

Replace motor

Can the drive mechanism operate/turn (w/ power off & motor cable disconnected, turn brass disk by hand)?

If can’t turn or very difficult to turn; replace drive mechanism

Are all cables/wires & connectors ok?

Ensure all wires are not pinched & plugs are connected

Are supply pressures nominally equal (within 5psi)?

Equalize pressures

Is the valve PCB operational and ok?

Replace PCB

Is the valve PSU operational and ok?

Replace PSU

Issue addressed or Contact Factory @ 269-279-3602

Key:
- PSU = Power Supply
- PCB = Printed Circuit Board

PSU = Power Supply
PCB Error

**Check**

Has the valve been reset (i.e. powered off, then on)?

- **No**
  - Reset the valve by powering down & then powering back on
  - Is the software/firmware version 11 or greater?
    - **No**
      - If has BrainScan, replace PCB
    - **Yes**
      - Ensure all wires are not pinched & plugs are connected
  - Are all cables/wires & connectors ok?
    - **No**
      - Replace PCB
    - **Yes**
      - Is the valve PCB operational and ok?
        - **No**
          - Replace PCB
        - **Yes**
          - Is the valve PSU operational and ok?
            - **No**
              - Replace PSU
            - **Yes**
              - Issue addressed or Contact Factory @ 269-279-3602

**Thermistor Error**

**Check**

Has the valve been reset (i.e. powered off, then on)?

- **No**
  - Reset the valve by powering down & then powering back on
  - Are all cables/wires & connectors ok?
    - **No**
      - Ensure all wires are not pinched & plugs are connected
    - **Yes**
      - Are the thermistors operational and ok?
        - **No**
          - Replace Thermistors
        - **Yes**
          - Is the valve PCB operational and ok?
            - **No**
              - Replace PCB
            - **Yes**
              - Issue addressed or Contact Factory @ 269-279-3602

**Key:**

PSU = Power Supply
PCB = Printed Circuit Board

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**Battery Error**

- **Check**
  - Has the valve been reset (i.e. powered off, then on)?
    - **No** → Reset the valve by powering down & then powering back on
    - **Yes** → Have the batteries been replaced within last year?
      - **No** → Replace Batteries
      - **Yes** → Are all cables/wires & connectors ok?
        - **No** → Ensure all wires are not pinched & plugs are connected
        - **Yes** → Is the valve PCB operational and ok?
          - **No** → Replace PCB
          - **Yes** → Is the valve PSU operational and ok?
            - **No** → Replace PSU
            - **Yes** → Issue addressed or Contact Factory @ 269-279-3602

**Display Issues**

- **Check**
  - Has the valve been reset (i.e. powered off, then on)?
    - **No** → Reset the valve by powering down & then powering back on
    - **Yes** → Is the lighting/brightness sufficient?
      - **No** → Adjust brightness via POT adjustment screw on PCB
      - **Yes** → Is the display numerals/characters ok?
        - **No** → Replace display & keep original to allow for a spare in event heat affects again
        - **Yes** → Issue addressed or Contact Factory @ 269-279-3602

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**Key:**
- PSU = Power Supply
- PCB = Printed Circuit Board
Temperature Control Issues Cont’d

Are there strainers in the system & if so are they clean?

Yes
- Install strainers on ALL supply lines & remove basket (not just blow down) to clean

No
- No

Is the valve installed/piped according to installation instructions?

Yes
- No
- Re-pipe to ensure installed per instructions

No
- Yes

Are the checkvalves installed holding correctly?

Yes
- No
- Replace checkvalves

No
- Yes

Is the valve installed in a single temperature loop/system (i.e. no high temp kitchen loops)?

Yes
- No
- Ensure there are no cross-connections w/ any higher/lower temp loops

No
- Yes

Issue addressed or Contact Factory @ 269-279-3602