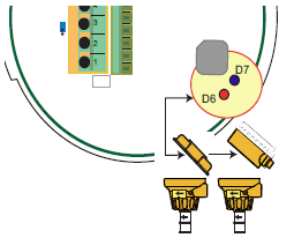
Signet
3-2551 Magmeter Troubleshooting Guide

Symptom	Possible Cause	Possible Solution
• Frequency, Digital or Current output is erratic.	• Magmeter installed too close to upstream obstruction. • Electrodes coated with solids. • Electrodes exposed to air bubbles. • Electrical noise interference. • New sensor, metal surface not properly conditioned.	• Move the Magmeter upstream at least 10 pipe diameters from obstruction. • Clean the electrodes with soft cloth. Do not use abrasives. • Eliminate air bubbles in the pipe. • Remove the Magmeter and reinstall with the flow direction arrow on the sensor body pointed DOWNSTREAM. • Modify grounding as required to protect the Magmeter from interference. • Soak sensor overnight in fluid.
• Output is not 0 when flow is stopped.	• Electrode not adequately conditioned. • Electrical noise interference. • Vibration or other movement in pipe causes magmeter to detect flow. • Defective Magmeter	• Soak sensor overnight in fluid. • Modify grounding to protect the Magmeter from interference. • Set low flow cutoff higher. • Return to factory for service.
• 4-20 mA output is incorrect.	• Loop device not scaled same as Magmeter. • Range Jumper not placed correctly. • Defective Magmeter	• Use 3-0250 Setup tool to respan the Magmeter to match Loop device. • Respan Loop device to match Magmeter. • Set Range Jumper correctly. • Return to factory for service.
• Frequency output is inoperative • Digital (S³L) output is inoperative. • Loop output is inoperative.	• 2551 is wrong model. • Blue jumper not in correct position. • Wiring is not correct. • Frequency input to other manufacturer's flow instrument does not have pull-up resistor.	• Frequency model is 3-2551-11. • Place blue jumper correctly. (Sec. 5 pg. 4) • Check wiring, make corrections. • Install 10kΩ resistor. (Sec 8.1, pg. 6)
• Output is 22.1 mA.	• Conductivity is less than 20 µS/cm. • Electronic component failure.	• Unsuitable application for Magmeter. Return to factory for service.

11.3 Troubleshooting with the RED and BLUE lights

No Lights:	The power is off or the sensor is not connected
Solid Blue:	The power is on but there is no flow in the pipe.
Blinking Blue:	Normal operation, blink rate is proportional to the flow rate.
Alternating Red-Blue:	Empty pipe indication (electrodes are not wet.)
Blinking Red:	System errors (Electrical noise interference)
Solid Red:	Instrument error (defective electronics component)



If the 2551 detects an Empty Pipe:
- Frequency output will be locked to 0 Hz if electrodes are not wet.
- Digital (S³L) output will be locked to 0 if electrodes are not wet.
- 4-20 mA will be locked to 4 mA if electrodes are not wet.
- Blue and Red LED indicators on the magmeter circuit will blink alternately if electrodes are not wet.

If the 2551 detects REVERSE FLOW:
- Frequency out cannot distinguish reverse flow from forward flow. The output will be the absolute value.
- Digital (S³L) output: Reverse flow results in 0 flow rate displayed on 8900
- 4-20 mA output can be spanned into negative flow range using the 3-0250 USB Setup Tool and software. (See section 9) (example: 4-20 mA = -100 to +100 GPM)