

PDS-360 Troubleshooting Guide

Symptom	Cause	Check or Try
<p>#1 No display</p> <p>No Display backlighting</p>	<p>No Power</p> <p>Defective Display</p>	<p>Check power circuit breaker and wiring</p> <p>ON/OFF switch on main circuit board</p> <p>Ribbon cable not secure</p> <p>0.5 amp fuse on main circuit board</p>
<p>#2 Keypad Does Not Respond</p>	<p>Ribbon Cable</p> <p>Lightning or Power surge</p>	<p>Check ribbon cable</p> <p>Turn unit OFF, wait 10 sec. turn back ON</p> <p>RESET and Reprogram meter</p>
<p>#3 4-20 mA. Output Not Functioning</p> <p>4-20 mA. Output Indicates Max All The Time (see #9 below)</p> <p>Output Not Same As Display</p>	<p>Defective Wiring</p> <p>Defective Output and/or Lightning Damage</p> <p>Not Scaled Correctly</p>	<p>Check wiring and polarity Disconnect output wires and check 4-20 with current meter. If OK, receiver or wiring is problem.</p> <p>Replace Q1 and/or Q2 (2N3904 transistor) and U1(LM324 IC) on main circuit board.</p> <p>Go to programming, 'SCALE 20mA OUTPUT' and 'TEST ANALOG OUTPUT'</p>
<p>#4 Display Does Not Change or Update</p>	<p>Processor Crash</p> <p>Lightning or Power Surge</p>	<p>Turn unit OFF, wait 10 sec. turn back ON</p> <p>RESET/Reprogram meter</p>
<p>#5 Pass Code Lockout</p>	<p>Wrong Code</p> <p>Code Corrupted</p>	<p>Call Factory for alternate code</p> <p>Provide product SN# on Printed Circuit Board. Call (610) 942-3190</p>
<p>#6 Display Says 'ECHO LOST, Check Wiring</p>	<p>Sensor NOT LEVEL</p> <p>Accoustic Signal Path Obstructed</p> <p>Defective wiring or wrong cable type</p> <p>Defective Sensor</p>	<p>Check sensor mounting for plumb</p> <p>Check for signal path obstructions</p> <p>Check wire splices for break or short - Do not solder or use wire connectors at splice - use wire nut and electrical tape</p> <p>Test sensor back at the meter to by-pass cable run ... replace sensor and/or PC-548 transmit/receive circuit card if needed.</p>

PDS-360 Troubleshooting Guide

Symptom	Cause	Check or Try
<p>#7 Display Says 'Temperature Error Check wires ...'</p>	Defective wiring	<p>Check wire splices for break or short - Do not solder or use wire connectors at splice - use wire nut and electrical tape. Make sure all three (3) wires (Red, Black, Bare) are connected.</p> <p>Turn Probe OFF in Programing and Enter Manual (default) Temperature until corrected.</p>
	Defective Temp Probe	<p>Use DC volt meter to check RETURN signal from probe (+ to TC [black wire] and - to BARE wire [gnd] at terminal barrier). DC volt range is 1 to 4.4 volts. 0 or 5 volts indicates bad probe.</p>
<p>#8 Readings Fluctuate</p>	Severe Turbulence, eddy currents, Intermittent Foam, Floating Debris	<p>Reduce source of turbulence, foam and/or debris. May need stilling well to correct.</p> <p>Check that sensor is plumb.</p> <p>Increase programmed DAMP FACTOR Best setting is DAMP FACTOR of 3 to 5.</p>
	Electrical Noise	<p>Do not run sensor wires with other wires or parallel with electrical wires ... Do not locate system in same area as VFD (variable speed drive).</p>
<p>#9 Readings Are Fixed</p> <p>Reads MAX All The Time</p> <p>Spikes to MAX readings randomly</p>	Sensor Not Plumb or Obstruction in Accoustic Path	<p>Check sensor for plumb and obstructions</p> <p>Remove ANY METAL (including pipe nipples) from sensor mounting. Use only PVC mounting components. Loosen Sensor slightly. Check for water collecting in conduit behind sensor head.</p>
	Sensor is Mounted To Metal Support or Sensor screwed too tight to mounting bracket	<p>Increase THRESHOLD (CW) on XMIT/REC circuit board, PC-548 Reduce PRE-GAIN (CCW) adjustment on circuit board or increase BLANK (CW) slightly.</p>
	Ring Time Problem	
<p>#10 Depth / Flow Readings Not Correct</p>	Program Data Incorrect	<p>Check ALL program data and CAL FACTOR</p>
	Incorrect Temperature Reading	<p>Check Temperature Reading on display . if reading is greater than $\pm 10^{\circ}\text{F}$, check probe - see symptom #7 above.</p>
<p>#11 Flow Readings Are ZERO when there is flow</p>	LOW FLOW SHUT OFF Set Too High	<p>Check LOW FLOW SHUT OFF and other settings in program. Flow Readings will go to ZERO if Flow Rate is below LOW FLOW setting. Note: LOW FLOW does not affect DEPTH indication.</p>