



Electronic Products

MAINTENANCE

SubDrive2W, 75, 100, 150, 300, MonoDrive, & MonoDrive XT SubDrive/MonoDrive Troubleshooting

NUMBER OF FLASHES OR DIGITAL DISPLAY	FAULT	POSSIBLE CAUSE	CORRECTIVE ACTION
1	MOTOR UNDERLOAD	Overpumped well Broken shaft or coupling Blocked screen, worn pump Air/gas locked pump SubDrive not set properly for pump end	Frequency near maximum with less than 65% of expected load, 42% if DIP Switch # 3 is "ON" System is drawing down to pump inlet (out of water) High static, light loading pump - reset DIP switch #3 to "ON" for less Underload Sensitivity if not out of water Check pump rotation (SubDrive only) reconnect if necessary for proper rotation Air/gas locked pump - if possible, set deeper in well to reduce Verify DIP switches are set properly
2	UNDERVOLTAGE	Low line voltage Misconnected input leads	Line voltage low, less than approximately 150 VAC (normal operating range = 190 to 260 VAC) Check incoming power connections and correct or tighten if necessary Correct incoming voltage - check circuit breaker or fuses, contact power company
3	LOCKED PUMP	Motor and/or pump misalignment Dragging motor and/or pump Abrasives in pump	Amperage above SFL at 10 Hz Remove and repair or replace as required
4 (MonoDrive & MonoDriveXT only)	INCORRECTLY WIRED	- MonoDrive only - Wrong resistance values on main and start	Wrong resistance on DC test at start Check wiring, check motor size and DIP switch setting, adjust or repair as needed
5	OPEN CIRCUIT	Loose connection Defective motor or drop cable Wrong motor	Open reading on DC test at start. Check drop cable and motor resistance, tighten output connections, repair or replace as necessary, use "dry" motor to check drive functions, if drive will not run and exhibits underload fault replace drive
6	SHORT CIRCUIT	When fault is indicated immediately after power-up, short circuit due to loose connection, defective cable, splice or motor	Amperage exceeded 50 amps on DC test at start or max amps during running Incorrect output wiring, phase to phase short, phase to ground short in wiring or motor If fault is present after resetting and removing motor leads, replace drive
	OVER CURRENT	When fault is indicated while motor is running, over current due to loose debris trapped in pump	Check pump
7	OVERHEATED DRIVE	High ambient temperature Direct sunlight Obstruction of airflow	Drive heat sink has exceeded max rated temperature, needs to drop below 85 °C to restart Fan blocked or inoperable, ambient above 125 °F, direct sunlight, air flow blocked Replace fan or relocate drive as necessary
8 (SubDrive300 only)	OVER PRESSURE	Improper pre-charge Valve closing too fast Pressure setting too close to relief valve rating	Reset the pre-charge pressure to 70% of sensor setting. Reduce pressure setting well below relief valve rating. Use next size larger pressure tank. Verify valve operation is within manufacturer's specifications. Reduce system pressure setting to a value less than pressure relief rating.
RAPID	INTERNAL FAULT	A fault was found internal to drive	Unit may require replacement. Contact your supplier.
9 (SubDrive 2W Only)	OVER RANGE (Values outside normal operating range)	Wrong hp/voltage Internal fault	Verify motor hp and voltage Unit may require replacement. Contact your supplier.

WARNING: Serious or fatal electrical shock may result from failure to connect the motor, SubDrive/MonoDrive Controller, metal plumbing and all other metal near the motor or cable to the power supply ground terminal using wire no smaller than motor cable wires. To reduce the risk of electrical shock, disconnect power before working on