Error Recognition & Removal

Please follow the steps below to solve a problem:

- 1st Check which component LED is Red or Flashing Red/Green on EK-S1.
- 2nd Refer to pages 10 & 11 for further information on LED states
- 3rd Find Component Troubleshooting procedure below for solution

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DANGER!
When conducting tests on the DEGER system, ensure that all parts have been disconnected from the power supply by an electrical circuit breaker, provided by the client. When conducting tests where there is live voltage, take appropriate actions to prevent injury to persons and property damage.

Please perform a clearance check for free movement

Problem	Causes	Solutions
AC Power on Clamps L-N Not Present?	• Power supply not connected	• Provide AC power
	• No AC power	• Check with multimeter if there is 100-240 VAC supplied to EK-S1
	• Connections are loose	• Check cables for loose connection • Check with multimeter if power supply on EK-S1 is present **Note:** If power supply is present and still EK-S1 power error i.e. LED D64 flashing fast Red then replace EK-S1
Motor	• LED D66 Fast Flashing (Power Error) • LED DA1/DB2 off (Motor is off) • LED D35/D41 on (Motor error/defective) • Cable connector of motor not connected • Not connected to EK-S1 • LED D43 on (System is overheated)	**Note:** Follow the general process mentione below for all causes. • Remove motor from gearbox • Connect motor cables to battery and provide 24VDC and check with multimeter if 24VDC is supplied. • Measure current with no load. Current range should be 0.5-0.8A • Check motor cabling for loose connection. • Provide AC power • Cover one side of MLD manually • Check inclination sensor cabling for loose connection • Replace motor cable connector and check • Replace motor & check **Note:** • If Master & Slave are running in opposite direction, then stop the power supply immediately to avoid damage to gearbox & check the motor cable connections. • If LED D43 is on, it means system is overheated and motor is switched off. It will retry to run after 15 minutes. After 15 mins LED D43 flashes

MLD Sensor	• LED DC1 not on (MLD sensor) • LED D65 is flashing (Power Error)	• Cover one side of MLD to see if the tracker changes direction • Disconnect it and check if 24V is present at Brown & White cable. • Replace MLD sensor if no 24V present at Brown & White cable
Inclination Sensor	• LED D29 or D31 flashing Green (Sensor Error) • LED D35 or D41 On (Motor Error) • Orientation not exact i.e. not installed correct • Re-programmed with a software & change reference point	• Supply independent 24V & check output of current from 4-20 mA • Check wiring of Inclination sensor for loose connection • Replace the cable of inclination sensor • Install it as described in the Assembly and Operation Manual DEGER system S100 page 35 **Note:** If reprogrammed then replace it with new one without re-programming it.
Wind Sensor	• LED DG1 is off • LED DG1 fast flashing Red (Sensor Error) • LED DG1 Red (Wind Alarm)	• Connect Wind sensor to EK-S1 in solar park • Check wiring instruction in Assembly Instructions page 9 • If Wind Alarm at very low wind speeds. Then check wire 5 & 4 for damage or loose connection • If cable is extended then remove extension and install it with the default cable length i.e. 20m **Note:** If Wind Alarm is activated except on the tracker it is connected to then assign wind sensor to all trackers in CTC and write command to all trackers.
Snow Sensor	• LED DD1 fast flashing Red (Sensor Error) • Sensitivity is increased or decreased via potentiometer using screwdriver	• Check cabling of Snow Sensor. • Supply independent 24V to check if sensor switches LED on. **Note:** If sensitivity is changed then check range with hand. Increase or decrease it to set up to 6 cm. If still not then replace it with another snow sensor without changing sensitivity
Joystick Manual Control	• LED DE1 fast flashing Red (Joystick error) • LED DE1 still off with Joystick connected	• Check wiring of pins of Joystick to connector. See Assembly Instructions page 9. • Reconnect it. Is connected when the clip clicks
CTC Manual Control	• LED DF1 is off • The USB adapter connection is loose. • CAN Bus not connected properly	• Provide any manual command from CTC software. • Check CAN bus USB connection • Check CAN In and CAN Out of all EK-S1s **Note:** Important is to connect 120 ohm resistor at termination and connect CAN Bus Pin C to USB adapter Pin 9 for 5 V for proper Manual Control. Check Assembly Instructions page 17