Electronics Troubleshooting Guide

Electronics Type	Error Code / LED Indication	Fault	Possible Cause and Recommended Action
Classic	Blue LED illuminated	Temperature or battery voltage	Control unit temperature is too high, or battery voltage is too low or too high.
	Red LED — 2 slow flashes	Low voltage	Battery voltage below 10V.
	Red LED — 5 flashes	High voltage	Battery voltage above 15V.
	Red LED — continuous flashing	Excessive current	Electrical current is too high (above 120A).
	Red LED — continuously illuminated	Over-temperature	Temperature exceeds 80°C.
Basic	Red LED — 2 flashes	Overcurrent (motor or battery)	Usually caused by overworking the system. Avoid excessive load or steep slopes, and check that the vehicle brakes are not engaged.
	Red LED — 3 flashes	Undervoltage	Usually caused by a low or flat battery. Check battery voltage.
	Red LED — 4 flashes	Overvoltage	Usually caused by an incompatible battery or a charging system still connected.
	Red LED — 5 flashes	Over-temperature	Usually caused by prolonged use under heavy load. Allow 5 minutes for the electronics to cool down and break long journeys into shorter trips.
	Red LED — 6 flashes	Critical low-voltage lockout	Usually caused by a loose or dry wiring connection, or an end-of-life battery. Ensure the system is powered off, check wiring and terminals, and verify battery condition using proper equipment.
	Red LED — 8 flashes	M2 motor driver failure	Output voltage is not detected. Possible causes include a motor short circuit or controller failure.
	Red LED — 8 flashes	M3 motor driver failure	Output voltage is not detected. Possible causes include a motor short circuit or controller failure.
	Red LED — 8 flashes	M2 and M3 motor driver failure	Output voltage is not detected. Possible causes include a motor short circuit or controller failure.
Smart	Ex1 — 2 red LED flashes	Overcurrent (motor)	Usually caused by excessive load or a steep slope. Slow down or remove some of the load.
	Ex2 — 2 red LED flashes	Overcurrent (battery)	Usually caused by excessive load or a steep slope. Slow down or remove some of the load.
	Ex3 — 3 red LED flashes	Undervoltage	Usually caused by a flat battery. Charge the battery or check its voltage.
	Ex4 — 4 red LED flashes	Overvoltage	Usually caused by an incompatible battery or a charger left connected. Check the battery type or unplug the charger.
	Ex5 — 5 red LED flashes	Over-temperature	Usually caused by prolonged use under heavy load. Allow 5 minutes for the electronics and motors to cool and break long journeys into shorter sections.
	Ex6 — 6 red LED flashes	Critical low-voltage lockout	Usually caused by a loose or dry wiring connection, or occasionally an end-of-life battery. Check wiring and connections and verify battery condition using proper equipment.
	E1x — 8 red LED flashes	M2 motor driver failure	Output voltage is not detected. Possible causes include a motor short circuit or controller failure.
	E2x — 8 red LED flashes	M3 motor driver failure	Output voltage is not detected. Possible causes include a motor short circuit or controller failure.
	E3x — 8 red LED flashes	M2 and M3 motor driver failure	Output voltage is not detected. Possible causes include a motor short circuit or controller failure.