

List of failures descriptions for AXINET charger management system reports.

Code	Failure description	Reason	Steps to remedy
E1x	Incorrect initial conditions, battery failures, high battery, temperatures		
E11	Voltage of battery lower than..98% of Unom/V/ cell., deep discharged battery.	<ul style="list-style-type: none"> • Battery is deeply discharged during operation • Wrong setting • Wrong callibration of charger 	<ul style="list-style-type: none"> • Check electrolyte level • Discharge max. to 80% of capacity • Check setting of charger • Recalibrate the charger
E12	Battery has been disconnected during charging without regular stop of charging by STOP button.	<ul style="list-style-type: none"> • Inadmissible interrupt of charging by disconnecting of connector during operation (charging) 	<ul style="list-style-type: none"> • To terminate the charging cycle use allways STOP button!
E13	Battery temperature >TbatMAX: - if battery is connected to charger and its temperature is higher than set value, charging don't start - If temperature of battery overrun set value during charging, charging current falls to set value of and charging continues. If than temperature increase to (TbatMAX-2)°C, charging current decrease to Imax.	<ul style="list-style-type: none"> • To high temperature of battery ambient • Cycles of charging and discharging proceed with no break – increase of temperature • Too high charging current 	<ul style="list-style-type: none"> • Lower envioment temperature • Make longer pauses between charging and discharging cycles • Check setting of charger
E14	Temperature of control unit >65°C: - if battery is connected to charger and inner temperature is higher than set value, charging don't start - If inner temperature of charger overrun set value during charging, charging current falls to value set in folder „Charging – Temperature measurement“ and charging continues. If than temperature decrease to (T-5)°C, charging current increase to Imax.	<ul style="list-style-type: none"> • To high temperature of charger ambient • Charger exceedingly coated by dust 	<ul style="list-style-type: none"> • Lower envioment temperature. • Clean up the charger • If the charger is in IP54 case – clean up or change the filter inserts
E15	Voltage of battery > Umax (set in charging curve).	<ul style="list-style-type: none"> • Failure of power unit • Failure of control unit 	<ul style="list-style-type: none"> • Repair/exchange of power unit • Repair/exchange of control unit
E2x	Incorrect charging duration		
E21	The constant current charging phase I1 is taking too long; charging terminates and fails.	<ul style="list-style-type: none"> • A faulty battery or incorrect charger settings • Excessive battery capacity or insufficient charger current 	<ul style="list-style-type: none"> • Check the battery – electrolyte density, temperature, voltage of single cells • Check setting of charger
E22	Constant voltage phase U1 too long, charging goes further to next phase.	<ul style="list-style-type: none"> • Defective battery • Wrong setting of charger 	<ul style="list-style-type: none"> • Check the battery – electrolyte density, temperature, voltage of single cells • Check setting of charger
E23	The constant current charging phase I2 is taking too long; charging terminates and fails.	<ul style="list-style-type: none"> • Defective battery • Wrong setting of charger 	<ul style="list-style-type: none"> • Check the battery – electrolyte density, temperature, voltage of single cells • Check setting of charger
E24	During charging phase I1+ U1 more than 90% of nominal capacity is supplied.	<ul style="list-style-type: none"> • A completely flat battery • Incorrect charger settings 	<ul style="list-style-type: none"> • Check the battery – electrolyte density, temperature, voltage of single cells • Checking de-charging circumstances • Checking charger setting
E3x	Deviations charging current		
E31	Charging current I1 <80% of set value.	<ul style="list-style-type: none"> • One phase of three phase mains is missing • Defective power unit • Wrong calibration of charger 	<ul style="list-style-type: none"> • Check the mains • Check power units of charger • Recalibrate the charger
E32	Charging current I1 >110% of set value.	<ul style="list-style-type: none"> • Defective power unit • Wrong calibration of charger 	<ul style="list-style-type: none"> • Check power units of charger • Recalibrate the charger
E5x	Failures of aeration system		
E51	Low pressure in the aeration system failure of airpump or aeration piping. If the pressure is not restored and the correct pressure value is not reached within 1 minute, the charging current value decreases to the 80% Ichar value in the “charging” and the pump is not switched any more.	<ul style="list-style-type: none"> • Failure of airpump • Pressure loss in piping system 	<ul style="list-style-type: none"> • Check the airpump • Check piping system of aeration
E52	High pressure in the aeration system, fault in the pump or in hose system. If the pressure is not restored and the correct pressure value is not reached within 1 minute, the charging current value decreases to the 80% Ichar value in the “charging” and the pump is not switched any more.	<ul style="list-style-type: none"> • Clogged piping of aeration system. 	<ul style="list-style-type: none"> • Check piping system of aeration

E53	More than 5 faults of aeration system (pressure too low or too high) during the common charging cycle; the charging current value decreases to the 80% I _{char} value in the "charging" and the pump is not switched any more.	<ul style="list-style-type: none"> • Failure of airpump • Pressure loss in piping system • Clogged piping of aeration system. 	<ul style="list-style-type: none"> • Check the airpump • Check piping system of aeration
E54	Leakage in the air system, the pressure goes down too fast.	<ul style="list-style-type: none"> • Pressure loss in piping system 	<ul style="list-style-type: none"> • Check piping system of aeration
E55	Charger blocked due to aeration system failures.	<ul style="list-style-type: none"> • Blockage of charger due to overrun of setted nr. of failures E51, E52, E54. • Failure of airpump • Pressure loss in piping system • Clogged piping of aeration system. 	<ul style="list-style-type: none"> • Check the airpump • Check piping system of aeration • Charger must be unblocked by service engineer
E9x	Failures of communication		
E91	Failure of communication with IM at battery connecting.	<ul style="list-style-type: none"> • IM is not used • IM is defective • IM is not programmed • Defective wiring or connector 	<ul style="list-style-type: none"> • Connect, change or programme IM • Check connection between IM and charger
E94	Failure at temperature check – temperature sensor or IM.	<ul style="list-style-type: none"> • Defective temp. Sensor • Defective IM • Defective wiring or connector 	<ul style="list-style-type: none"> • Change temperature sensor • Change IM • Check connection between temp. Sensor or IM and charger

F1x	Failures of the starting condition and failures of battery		
F10	Power units with different voltage levels has been connected together.	<ul style="list-style-type: none"> • Power units with different voltage levels • Wrong callibration 	<ul style="list-style-type: none"> • Use right units • Calibrate the power units
F11	Battery with high impedance. Voltage during initial test increase more than 19% of U _{nom} /cell.	<ul style="list-style-type: none"> • Deeply sulphated battery 	<ul style="list-style-type: none"> • Check battery and its use • Check electrolyte density and voltage of single cells
F12	The initial battery voltage is higher than 135% of U _{nom} /cell, i.e. not suitable battery.	<ul style="list-style-type: none"> • Battery with higher nominal voltage than is set in charger 	<ul style="list-style-type: none"> • Check battery voltage
F13	Battery voltage > 115% U _{nom} , battery charging is initiated only after a rate fall below 115% U _{nom} .	<ul style="list-style-type: none"> • The battery is fully charged 	<ul style="list-style-type: none"> • Disconnect battery • If mains connection is maintained, eventual voltage reduction will trigger automatic recharging
F14	The battery voltage during the charging overruled setted value (U _{max}) – charging is stopped.	<ul style="list-style-type: none"> • Defective battery • Defective wiring charging cable • Defective connector • Failure of charger 	<ul style="list-style-type: none"> • Check the battery – electrolyte density, temperature, voltage of single cells • Check charging cable • Check functions of charger
F15	Voltage monitors of single modules connected in parallel vary more than 3% of U _{nom} .	<ul style="list-style-type: none"> • Voltage monitor failed 	<ul style="list-style-type: none"> • Exchange of power unit
F16	Battery temperature during charging > (T _{bat} MAX+5)°C, charging is stopped.	<ul style="list-style-type: none"> • To high temperature of battery ambient • Cycles of charging and discharging proceed with no break – increase of temperature • Too high charging current 	<ul style="list-style-type: none"> • Lower environment temperature • Make longer pauses between charging and discharging cycles • Check setting of charger
F17	Output voltage during charging is lower than U _{min} (set in charging curve) – longer than 1min.	<ul style="list-style-type: none"> • Voltage monitor failed 	<ul style="list-style-type: none"> • Exchange of power unit
F18	Low level of electrolyte	<ul style="list-style-type: none"> • Insufficient maitanance • Error automatical refilling • Wrong setting of switching valves 	<ul style="list-style-type: none"> • Refill water to battery • Check function of aut. refilling • Check charger setting
F2x	Incorrect charging duration		
F21	Constant current phase I1 runs too long, charging is stopped.	<ul style="list-style-type: none"> • Defective battery • Wrong setting of charger 	<ul style="list-style-type: none"> • Check the battery – electrolyte density, temperature, voltage of single cells • Check charger setting
F22	Constant current phase U1 runs too long, charging is stopped.	<ul style="list-style-type: none"> • Defective battery • Wrong setting of charger 	<ul style="list-style-type: none"> • Check the battery – electrolyte density, temperature, voltage of single cells • Check charger setting
F23	Maximal duration of phase I2 overruled.	<ul style="list-style-type: none"> • Battery is deeply discharged during operation • Wrong setting • Wrong callibration of charger 	<ul style="list-style-type: none"> • Check electrolyte level • Discharge max. to 80% of capacity • Check setting of charger • Recalibrate the charger
F3x	Deviations of charging current		
F31	The charging current < 50% of the desired value, charging is stopped.	<ul style="list-style-type: none"> • One phase of three phase mains is missing • Defective power unit • Wrong calibration of charger 	<ul style="list-style-type: none"> • Check the mains • Check power units of charger • Recalibrate the charger
F32	The charging current > 120% of the desired value, charging is stopped.	<ul style="list-style-type: none"> • Defective power unit • Wrong calibration of charger 	<ul style="list-style-type: none"> • Check power units of charger • Recalibrate the charger

F33	The charging current >120% of the Inom – value, charging is stopped.	<ul style="list-style-type: none"> Defective power unit Wrong calibration of charger 	<ul style="list-style-type: none"> Check power units of charger Recalibrate the charger
F35	During charging has been charged more than 125% of nominal capacity.	<ul style="list-style-type: none"> Defective battery Wrong setting of charger 	<ul style="list-style-type: none"> Check the battery – electrolyte density, temperature, voltage of single cells Check setting of charger
F4x	Communication of control unit		
F40	Communication with power unit failed.	<ul style="list-style-type: none"> Wrong contact on wiring Defective control unit Defective power unit 	<ul style="list-style-type: none"> Check wiring Repair/exchange control unit Repair/exchange power unit
X0x	AXINET system operation		
X01	Incorrectly taken battery from wrong place	<ul style="list-style-type: none"> Operator's mistake 	<ul style="list-style-type: none"> Give right instructions to operator
X02	Incorrectly given battery to wrong place	<ul style="list-style-type: none"> Operator's mistake 	<ul style="list-style-type: none"> Give right instructions to operator



-  Vídeňská 125, Brno 619 00, CZ
-  acdc@axima.cz
-  +420 546 418 859
-  www.axima-power.com