

Please enclose a copy of this fulfilled troubleshooting with the shipment of the charger

Charger type	code	customer	Technician	date
Troubleshooting				
Condition	Cause	what can I do	What shall I verify	notes
The battery charger does not turn on	Failure in the input circuit	verify mains fuse	switch, power supply, net filter, diod bridge, MOS/IGBT, pulse transformer	
The chargers turns on but does not supply any current and keeps yellow led on with still fans	Microcontroller failure	verify microcontroller base	Watch-Dog, Clock, Reset	
The charger turn on but does not supply any current, red led "line alarm" on, yellow led on and still fans	Phase lack	Verify mains connection, external and internal fuses	circuit for phase lacking	
the charger overheats	Air flow blocked or wrong adjustment of charging parameter	verify charging parameter (current and voltage), fans nets should be free and fans without external objects	Fans functioning, fan voltage, PTC connected, if wrong adjustment use trimmer to readjust V and I	
broken NTC	Overcurrent	verify that no other damages ocured	circuit for NTC relais for bypass NTC	
broken MOV	over voltage	mains voltage in tolerance	if you have a generator verify (cosj @ 0,7)	
Audiable message + RED flash	Battery presence	Verify connection and nominal voltage (if lower than 1,5 v/el bc will not start)	verify output fuse and battery connection (reversed polarity?)	
Audiable message + YELLOW flash	thermal sensor disconnected during recharge or out of range	verify sensor connection	verify voltage on the sensor and measure temperature on the battery	
audiable message + GREEN flash	phase 1 or 2 longer than allowed	verify battery capacity	verify charge specifications of the battery and algorithm of the charger	
Audiable message + RED-YELLOW flash	loss of control of output current	verify what happens to the current before the alarm	verify current or shunt	
audiable message + RED-GREEN flash	loss of control of output voltage	verify what happens to the voltage before the alarm	verify voltage, or resistor for battery voltage interrupted	

Audiable message + RED-YELLOW-GREEN flash	overheating of semiconductors	verify fan operation	fan motion, fan circuit, PTC sensor connection	
Control points:				
ITEM		RANGE		
DESCRIZIONE	POSIZIONE	NG1	NG3	NG5/7/9
Tensione di alimentazione logica	pin 1/2 - e pin 7/8 + ZR76C	12÷14V	12÷14V	14,5÷15,5V
Tensione di alimentazione AC	pin AC del ponte di diodi	207÷253V	207÷253V	340÷460V
Tensione di alimentazione DC	pin + e - del ponte di diodi	293÷358V	293÷358V	480÷650V
Tensione sonda termica	pin 2 (-) e pin 4 (+) di CN1 ZR76C	$V=(Temp+273)/100$	$V=(Temp+273)/100$	$V=(Temp+273)/100$
Tensione PTC di allarme	pin 20 (-) e pin 16 e 19 ZR76C	$\geq 2,1V$	$\geq 2,1V$	$\geq 2,1V$
Has the charger been replaced?	do you have called ZIVAN	have you sent it back to zivan	this operation has been authorized by	company stamp
yes	yes	yes		
no	no	no	signature	