BATTERY CHARGER, 453540-S, LEAD ACID

SPECIFICATIONS	12 V	24 V	48 V
Available versions:	453540-SB	453540-SC	453540-SE
Input voltage/Line frequency:	198-264VAC/50Hz		
Max output power:	294W		
Step 0. <30min: Yellow	2.4A when battery voltage <10.5V	1.4A when battery voltage <21.0V	0.7A when battery voltage <42.0V
Step 0. >30min: Red (error-mode):	0A		
Step 1. Constant Current: Yellow	20A +0/-0.3A, when battery voltage >10.5V (Step 1 until Vbat = 14.7V)	10A +0/-0.3A, when battery voltage >21.0V (Step 1 until Vbat = 29.4V)	5A +0.1/-0.3A,, when battery voltage >42.0V (Step 1 until Vbat = 58.8V)
Step 2. Constant Voltage: Flashing Yellow	14.7V ±0.1V and charge current is tapering (Step 2 until I charge <2.4A or >4h)	29.4V ±0.2V and charge current is tapering (Step 2 until I charge <1.4A or >4h)	58.8V ±0.2V and charge current is tapering (Step 2 until I charge <0.7A or >4h)
Step 3. Charge Completed: Green	13.7V ±0.2V, supply current up to maximum 18A for possible parallel load (Step 3 until I charge >18A)	27.4V ±0.1V, supply current up to maximum 10A for for possible parallel load (Step 3 until I charge >8.5A)	54.8V ±0.1V, supply current up to maximum 5A for possible parallel load (Step 3 until I charge >3.5A)
Charge timer (Step 2, CV):		4h	
Restart voltage:	6.5V	13.0V	26.0V
Restart charge current and voltage approx.:	>18A or <13V in 10 sec.	>8.5A or <26V in 10 sec.	>3.5A or <52V in 10 sec.
Formation charge:	Low current start-up of deeply discharged battery.		
Float charge:	20A pulses at safe float voltage level for maximum topping of battery capacity	10A pulses at safe float voltage level for maximum topping of battery capacity	
Indication when "battery not connected":	LED flashing Green (1s/1s)	Green "PULSE" LED flashing Green (1s/1s)	
Temperature compensation of charge voltage:	-3 to -4mV/0C pr. cell When delivered with temp. sensor		
Ripple:	<100mVp-p		
Efficiency (at 100% load, 230V) approx.:	>91%	>92%	
Switch frequency approx.:	65kHz		
Leakage current from battery with mains switched off:	<140µA @ 12V	<130µA @ 24V	<140µA @ 48V
Protection:	Protected against reversed polarity Error Indication: Red (2 blinks) Short circuit proof Thermal protection Prevents sparking Charge timer: 4h Safety timer: 72h Error Indication: Red (5 blinks) Charging of wrong lower voltage battery pack (e.g. 6V) will be limited to 2.4A and terminated after 30min Indication: Red (4 blinks) Defect battery: Error Indication: Red (6 blinks) - Battery does not accept pulse current in float mode, and batteryvoltage drops below 21V after opening output relay Charging battery >16.0.0V terminated immediately Error Indication: LED is off	Protected against reversed polarity Error Indication: Red (2 blinks) Short circuit proof Thermal protection Prevents sparking Charge timer: 4h Safety timer: 72h Error Indication: Red (5 blinks) Charging of wrong lower voltage battery pack (e.g. 12V) will be limited to 1.4A and terminated after 30min Indication: Red (4 blinks) Defect battery: Error Indication: Red (6 blinks) - Battery does not accept pulse current in float mode, and batteryvoltage drops below 21V after opening output relay Charging battery >32.0V terminated immediately Error Indication: LED is off	Protected against reversed polarity Error Indication: Red (2 blinks) Short circuit proof Thermal protection Prevents sparking Charge timer: 4h Safety timer: 72h Error Indication: Red (5 blinks) Charging of wrong lower voltage battery pack (e.g. 36V) will be limited to 0.7A and terminated after 30min Indication: Red (4 blinks) Defect battery: Error Indication: Red (6 blinks) - Battery does not accept pulse current in float mode, and batteryvoltage drops below 21V after opening output relay Charging battery >63.5V terminated immediately Error Indication: LED is off
Temperature range:	**Operating:** -25 to +40°C / **Storage:** -25 to +65°C		
Derating:	Charge current automatically reduced to approx. 15A at 40°C	Charge current automatically reduced to approx. 7.5A at 40°C	Charge current automatically reduced to approx. 3.5A at 40°C
Safety:	EN 60601-1		
Insulation class:	Double insulated (Class II)		
Insulation voltage (primary–secondary):	4000VAC/5700VDC		
EMC standards:	EN 60601-1-2: 2015 (Edition 4)		
Input terminal:	2 pin IEC60320 or mains cable		
Output terminals:	Cord with Insulated battery clips and temp. sensor	Cord with Insulated battery clips and temp. sensor or XLR plug	
Protection against ingress (IP-code):	IP44		
Recommended battery capacity:	100-1000Ah	50-500Ah	25-250Ah
Dimensions:	210×113×53mm		
Weight approx.:	With mains cable: 1500g With IEC60320: 1300g	With mains cable: 1400g With IEC60320: 1150g	With mains cable: 1400g With IEC60320: 1150g

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