

SMC-HF PROCESSOR CONTROLLED FULLY AUTOMATIC CHARGER



- Low weight
- Compact
- High efficiency
- Soft start
- Adjustable to different battery types and capacities
- Power factor correction PFC
- 12-80V, 20-150A

SMC-HF

SMC-HF



SMC-HF 1600

PROCESSOR CONTROLLED FULLY AUTOMATIC CHARGER

- For all types of batteries
- Sizes from 12V/20A to 80V/80A
- Standard charging curve IU1aU
- Connected to 1-phase or 3-phase (normal) mains socket
- Temperature-regulated fan cooling on all models
- Overheating protected
- Short circuit and wrong polarity protected
- 1-phase model can be used as onboard charger
- Multicolour LED showing the charging process
- Special version IP 54 and laboratory unit available
- Supplied with cables and bracket for wall mounting

The small charger for the large battery

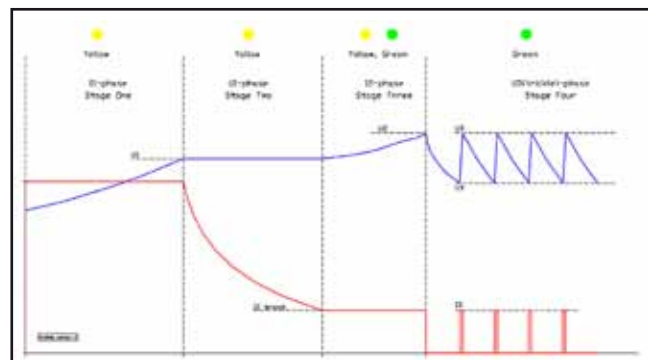
SMC-HF chargers are controlled by the built-in processor. The diagram below shows an example of IU1aU characteristics. Other characteristics are available on request.

All chargers in the SMC-HF family provide constant current up to, for example, 2.40 V/cell, hereafter constant voltage at this level. The current drops to a pre-programmed level (depending on the size and type of battery) to later remain constant at this level for a time calculated for the charger depending on the degree of discharge. Charging ends with pulsed maintenance charging.

The charging progress is shown by an LED which is orange during charging, green when fully charged and flashing red when indicating a fault.

A fan starts to increase cooling if necessary. The fan is temperature-regulated and runs silently. The output is electronically protected against wrong polarity (fuse) and short circuit. SMC-HF 600, 800 and 1600 are the perfect choices for onboard charging.

SMC-HF standardised charging curve



SMC-HF 600/800

The charger can easily be adjusted to a "chemical acid circulation" charging algorithm to reduce charging time. It is achieved by current pulses during U1 and I2 charging phases. The current pulses also mean that the over charging time can be shortened. This results in shorter charging time.



Safety functions

- The charger requires a voltage of 1.4–2.9V/cell from a battery in order to start. Without connecting the battery the charger has no voltage.
- The charger operates with different safety switch off timers. If these times are exceeded, the charger will switch off and indicate an error, or switch over to the next sequence.
- Automatic power reduction in the case of insufficient cooling.
- Softstart before the charger reaches full power.



There is a special vibration-absorbing installation kit for onboard installation in trucks, cleaning machines and other electric vehicles such as golf cars, etc. Standard mounting kit is included in the delivery. Set of anti-vibration pads has to be ordered separately.

Options

SMC-HF charger is also available as;

- Laboratory unit (SMP) for service and battery maintenance.
- With temperature compensation.
- With external LED.
- Drive interlock when used as a built-in charger.
- IP 54



SMC-HF 6000 and 8000W

The SMC-HF 6000 and 8000 has the genius handling solutions as the other models. However the bigger models are equipped with large LED:s that gives a much brighter light which will be seen by the operators from long distance.

The battery voltage and current is easily adjusted by toggling the button a few times.

The environmental IP classification is the same as other SMC-HF, IP20. The weight of the charger is among the lowest on the market for the equivalent power, just 15 kg for a SMC-HF 48V/130A. With other words, it is a very light heavy duty charger. The efficiency has reached a very high level of 94%.



SMC-HF 600/800/1600W

are with their compact measurements the ideal charger to be built-in to trucks, scrubbers, sweepers and other electric vehicles.

Current electric vehicles have larger battery capacities than in the past. This has put high demands on the charger. It should be smaller in size and at the same time being able to produce a higher output.

The chargers are able to charge conventional open ventilated lead/acid, valve regulated GEL, NiCd, Litium and AGM batteries. The various chargers can charge batteries from 40-700 Ah.

SMC-HF

The size of the battery charger with regard to the size of the battery and available charging time.

Type description				Recommended battery size with standard charger FVLA (wet)		Recommended battery size with standard charger VRLA (GEL)		Number of phases / mains current (A)		Weight ~kg	
				Charging time (IUIU)							
Type	Battery voltage (V)	Current (A)	Cabinet size	8 hours* cap.Ah/5h	12 hours cap.Ah/5h	12 hours cap.Ah/5h	14 hours cap.Ah/5h	1-phase 220-230 (V)	3-phase 380-400 (V)		
SMC-HF	12	20	P4	124	237	117	140	1,5		1,5	
		30	P4	186	355	175	205	2,5		1,5	
		50	P4	310	592	292	350	3,5		1,5	
		60	P6	371	710	350	420	4,5		3,1	
	24	20	P4	124	237	117	140		3		1,5
		30	P4	186	355	175	205		4,5		1,5
		45	P6	278	533	265	315		6,5		3,1
		60	P6	371	710	350	420		8,5		3,1
		80	E3	495	947	460	560		11		10
		100	E3	619	1 184	585	700		14		10
		120	E3	742	1 421	700	840		16		10
		150	T2	929	1 776	880	1 050			7,3	15
	36	20	P4	124	237	117	140		4,5		3,1
		40	P6	248	474	233	280		10		3,1
		60	E3	371	710	350	420		12		10
		80	E3	495	947	460	560		16		10
		100	T2	619	1 184	585	700			7,2	15
		130	T2	805	1 539	765	910			9,4	15
		150	T2	929	1 776	880	1 050			10,8	15
		48	15	P4	93	175	88	105		4,5	
30	P6		186	355	175	205		9		3,1	
40	E3		248	474	233	280		11		10	
60	E3		371	710	350	420		16		10	
80	T2		495	947	460	560			7,7	15	
100	T2		619	1 184	585	700			9,6	15	
130	T2		805	1 539	765	910			12,5	15	
72-80	40		T2	248	474	233	280			6,4	15
	60	T2	371	710	350	420			9,7	15	
	80	T2	495	947	460	560			13	15	

*With our chemical acid circulation (ionic mixing) the charging time can be about 1 hour less than the values shown in the table.

Standard chargers include:

Cabinet P4 and P6: Primary cable 2.5 m with contact.

3-phase charger: Primary cable 3 m, with contact (No contact delivered at switchable chargers)

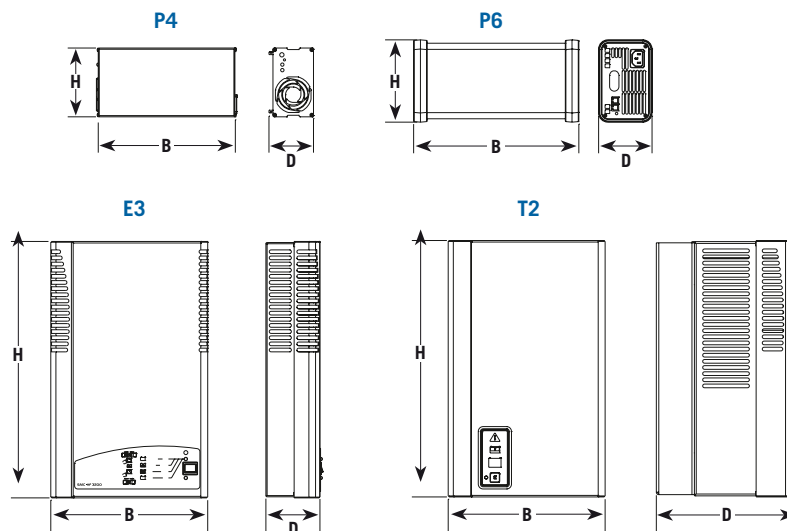
Cabinet P4 and P6: Secondary twin cable length 2 m.

Cabinet E3 and T2: Secondary twin cable length 3 m.

Dimensions and data:

Cabinet	Height	Width	Depth
Type	H	B	D
P4	112	230	75
P6	135	299	87
E3	425	255	90
T2	417	255	229

All cabinets are classified as IP20. Other classifications can be obtained as an option. All measurements in mm.



The right is reserved to make changes without prior notice.