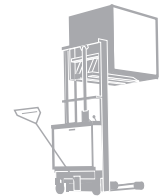




SHF
**Chargers for Small
Traction Batteries**
Powerbloc
Powerbloc dry
Fiamm Motive Power®
XFC™



Small HF chargers for batteries and blocs

SHF

The SHF high frequency chargers are intended for all types of vented lead acid batteries and valve regulated blocs (AGM and Gel). This is achieved by separate settings of the microprocessor. They are extremely compact in size, and light. Standard charging curve is IU1aU, this means charging with maximum current until the gassing voltage has been reached. This voltage is then kept constant until the current has decreased to a limit value specific to each battery model. The charger will recharge the battery in 8 to 14 hours, dependant upon the relationship between the charger size selected and the battery capacity.

The high efficiency and power factor result in very low input current requirements allowing for larger batteries to be recharged from a single phase supply.

The charging process is illustrated by the following colours on the tri-coloured LED:

Amber – Charging
Green – Charge complete
Flashing Red – Fault

Features and benefits

- Programmable charge profile: Multiple profiles for different battery technologies.
- EMC Compliant: Conforms to EN61000-6-3 residential, commercial and light & EN61000-6-2 industry
- Automatic equalise: Ensures the battery is always fully charged and ready for use.
- Fully automatic operation: Automatic reset and start up.
- Charge start delay: Ensures safe connection of battery.
- LED display: Shows state of charge and fault conditions, with option for remote indication.
- Ease of installation: 13 A plug and appliance socket fitted on wall mounted units and spiral cable with 13 A plug fitted for onboard units.
- Fault protection and installation: Protection from damage due to battery, charger or operator errors.
- Compact design: Can be utilised as an onboard charger as well wall mounted.
- Interlock facility: Eliminates the possibility of the machine being driven away whilst the charger is still connected to the mains.



SHF 250, 300

The 250 and 300 Watt chargers are filled and sealed according to enclosure class IP65 and highly shockproof.

SHF 600, 800, 1600

The 600, 800 and 1600 Watt chargers are suitable for onboard applications, with anti-vibration installation kits, remote and interlock relay available on request.



Technical data

| | SHF 250 | SHF 300 | SHF 600 | SHF 800 | SHF 1600 |
|-------------------------|--------------------------------------|---------|--|------------|------------|
| Supply Voltage | 230 V+/- 15% Single phase | | 230 V+/- 10% Single phase | | |
| Frequency | 47 – 63 Hz | | 45 – 65 Hz | | |
| Current | 1.4 A | 1.8 A | 3.5 A | 4.5 A | 9 A |
| Power factor | Close to unity | | | | |
| Max output | 250 W | 300 W | 600 W | 800 W | 1600 W |
| Efficiency | 90% | | > 86% | | |
| Switch frequency | 50kHz – 130kHz | | 100 kHz | | |
| Weight (incl.cables) | 1.6 kg | | 1.5 kg | 1.5 kg | 3.1 kg |
| Dimensions (mm) (WxDxH) | 193x99x48 | | 251x112x73 | 251x112x73 | 299x135x87 |
| Enclosure + IP class | IP 65, 1 earthed mains cable | | IP20, installed horizontally : Electrical II protective earthed | | |
| Safety | CE – marked and RoHs certified | | | | |
| Cables | AC input & DC output cables supplied | | | | |
| Ambient temp. | - 25 to 50°C | | -5 to 40°C | | |

Charger Selection Table

| Output Current (A) | Nominal 8hr Recharge (Vented) (Ah) | Nominal 12hr Recharge (Vented) (Ah) | Nominal 12hr Recharge (Gel VR) (Ah) |
|--------------------|------------------------------------|-------------------------------------|-------------------------------------|
| 8 | 47 - 66 | 40 - 103 | 41 - 60 |
| 10 | 59 - 88 | 91 - 122 | 51 - 76 |
| 15 | 89 - 117 | 123 - 183 | 77 - 113 |
| 20 | 118 - 147 | 184 - 244 | 102 - 151 |
| 25 | 148 - 180 | 245 - 305 | 128 - 189 |
| 30 | 181 - 216 | 306 - 366 | 153 - 227 |
| 35 | 217 - 252 | 367 - 427 | 179 - 264 |
| 40 | 253 - 288 | 428 - 488 | 204 - 302 |
| 45 | 289 - 324 | 489 - 549 | 230 - 340 |
| 50 | 325 - 360 | 550 - 610 | 255 - 378 |
| 60 | 361 - 432 | 611 - 732 | 306 - 453 |

Case sizes

| Output Voltage (V) | Output Current (A) | | | | | | | | | | | | |
|--------------------|--------------------|----|----|----|----|----|----|----|----|----|----|----|----|
| | 8 | 10 | 11 | 15 | 17 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 60 |
| 12 | | | | P4 | P3 | P4 | P4 | P4 | P4 | P4 | P4 | P4 | |
| 24 | P3 | P4 | P3 | P4 | | P4 | P4 | P4 | P6 | P6 | P6 | P6 | P6 |
| 36 | | P4 | | P4 | | P4 | P6 | P6 | P6 | | | | |
| 48 | | P4 | | P4 | | P6 | P6 | P6 | | | | | |

| Case size | Dimensions | | |
|------------------|------------|-----|----|
| | W | D | H |
| P3 (SHF 250,300) | 193 | 99 | 48 |
| P4 (SHF 600) | 251 | 112 | 73 |
| P4 (SHF 800) | 251 | 112 | 73 |
| P6 (SHF 1600) | 299 | 135 | 87 |

All dimensions are given in mm
Technical details are subject to alterations without notice



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