

TMF12120(12V 120Ah/20HR) Charging Algorithm

STEP	CHRG METHOD	CHRG VALUE	TERMINATION	Ah	CHRG characteristics
*	Danger stop mode	–	<10 V ~ >16 V		If the battery voltage is less than 10V or higher than 16V, the charger required to be stop its charging operation.
Step 1	CC charge (safe mode)	6 A	>12 V 120 min		With the battery voltage is over 10V and less 12V, the battery required to be charged by 6A for 2 hours until the battery voltage become 12V.
Step 2	CC charge (constant current charging)	8 A	>14.8 V 900 min		With 8A constant current, the battery required to be charged until 14.4V battery voltage. The charging time limited within 900 minutes.
Step 3	CV charge (constant voltage charging)	7.5 A 15.3 V	<1 A 180 min		The battery required to be charged by 15.3V constant voltage with 7.5A for limited up to 180 minutes or charged until 1.0A charging current reduce. Charging operation need to be stop automatically.
Step 4	Pulse method Equalizing charge. (equality charging)	5 A	* Time on: 20 sec * Time off: <14 V * Duration: 180 min		If the battery voltage is down under 14.0V, it is required to be charged automatically with 5A 20 seconds pulse charging uring 180 minutes. The charger is required to be designed performing pulse charging every 30 days.
<p>** compensation for charging voltage: 0.03V per 12V battery per 1℃ temperature $0.03 \text{ V} \times 14 \text{ battery} = 0.42\text{V} / 1^\circ\text{C}$ (0.40V/1℃)</p> <p>The TMF requested discharge range is within DOD 50% and accept DOD 80 % one-time per month.</p> <p>This charging Algorithm based on actual 60 AH discharge condition.</p>					