

Recommended Steca charge controller settings for the Aquion Aspen 48S battery



The following settings have been selected through co-operation between Steca Elektronik and Aquion Energy. They represent recommended example values for cyclical applications as are typical in many solar PV applications. These settings are applicable to the Aquion Aspen 48S battery.

Make sure to always follow the requirements and guidelines from the battery manufacturer and verify the settings with the data sheet of your batteries before applying them. Please contact your retailer in case of uncertainty. Read the Steca charge controller manual before applying these settings.



Aquion Aspen 48S battery
© Aquion Energy

The Steca Tarom MPPT 6000-M closely matches Aquion Energy's "Two-stage (Bulk & Absorption)" charging method, which is the preferred charging method for the Aspen 48S battery (consult Aquion Energy's "Aspen Battery Installation & Operation Manual" for more details). The Tarom MPPT 6000-M is therefore the preferred solar charge controller for this battery type with the following settings:

- Battery type:
 - Main menu → Battery settings → Battery type → Li-Ion battery
- Battery capacity:
 - Main menu → Battery settings → Battery capacity → 40 Ah
- Maximum charging current :
 - Main menu → Battery settings → Current limit device → 20 A
- Charge voltage settings:
 - Main menu → Battery settings → Li-Ion battery settings:
 - Number of cells: 12
 - Cell voltage: 4.0 V
 - Charge voltage: 4.95 V
 - Charge activation: 4.65 V
This default value may be adjusted according to your requirements.
 - Charge Timer: 120 min.
 - Temperature range: Min. temperature -5°C, Max. temperature 40°C.
- *It is strongly recommended to use the external temperature sensor Steca PA TS-S and to activate it in the Tarom MPPT 6000-M:*
 - Main menu → Battery settings → Bat. temperature sensor → External

Using the Aquion Aspen 48S battery with the Steca Taron MPPT 6000-M/-S and Taron 4545-48 Charge Controllers

Latest update: 31.08.2016

The Steca Taron MPPT 6000-S and Taron 4545-48 are able to fulfill Aquion Energy's "Three-stage (Bulk, Absorption & Float)" charging method (consult Aquion Energy's "Aspen Battery Installation & Operation Manual" for more details). The following settings apply to the Taron MPPT 6000-S or Taron 4545-48 for this alternative charging method:

- Battery type:
 - Main menu → Battery settings → Battery type → Lead acid Gel/AGM
- Battery capacity:
 - Main menu → Battery settings → Battery capacity → 40 Ah
- Battery control mode:
 - Main menu → Battery settings → Battery control mode → SOC control mode → Voltage control
- Charge voltage settings:
 - Main menu → Battery settings → Charge voltage:
 - Float charge voltage: 55.0 V
 - Boost charging:
 - Starting Threshold: 45.6 V
 - Boost charge voltage: 59.5 V
- Boost charge duration & temperature compensation:
 - Main menu → Battery settings → Expert menu → Enter code [17038], then press [SET] for 1 second
 - Boost charge duration: 120 min.
This should already be the default value. This value may be increased up to 240 minutes (4 hours) if desired, but not above so as to remain within battery specifications.
 - Temp. compensation → On/Off: Off
- Max. current (only for the Taron MPPT 6000-S):
 - Main menu → Battery settings → Current limit device → 20 A
Please note that for a PWM charge controller such as the Taron 4545-48 the total MPP current of the PV module array should not be above 20A to remain within the battery charging current specifications.