

**MC2010**



Unit: mm

**MC4010**



Unit: mm

* A combination of multiple tracking algorithms enables tracking the maximum power point quickly and

accurately

* Innovative Max Power Point Tracking(MPPT) technology, tracking efficiency >99.9%
* Full digital technology, high charge conversion efficiency up to 98%
* LCD display design, read operating data and working condition easily
* Real-time energy statistics function
* 12/24V or 48V automatic recognition
* Flexible System battery selection: Liquid, Gel, AGM and Lithium
* Extends battery life through accurate remote temperature sensor
* Controller is protected against over-temperature due to built-in power reduction function
* Four stages battery charging process: MPPT, boost, equalization, float
* Dual automatic protection to avoid exceeding the rated charging power and current
* Multiple load control modes: Always on, Street lamp, User-defined mode
* IoT wireless communication or Bluetooth (internal or external) communication functions optional
* Optional APP version for Bluetooth communication
* With the wireless communication function of the IoT, the controller can be connected remotely through IoT/GPRS
* Monthly charging data can be calculated and displayed by grouping and graphs
* Based RS-485 standard Modbus protocol with RJ11 interface to maximize the communication needs of different occasions
* Perfect Heat dissipation design
* Full automatic electronic protect function for increased charge controller availability



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Item** | **MC2010** | **MC4010** | **MC6015** |
| **Battery Parameters** | System Voltage | 12V/24V automatical recognization | 12V/24V/48V automatical recognization |
| Max Charging Current | 20A | 40A | 60A |
| MPPT Charging Voltage | before boost or equal charging stage |
| Boost Voltage@25℃ | 14.0~14.8V/28.0~29.6V @25℃(default:14.5/29V) | 14.0~14.8V/28.0~29.6V/56.0~59.2V(default:14.5/29.0/58.0V) |
| Equal Voltage@25℃ | 14.0~15.0V/28.0~30.0V @25℃(default:14.8/29.6V)(Liquid, AGM) | 14.0~15.0V/28.0~30.0V/56.0~60.0V(default:14.8/29.6/59.2V) |
| Float Voltage@25℃ | 13.0~14.5V/26.0~29.0V @25℃(default:13.7/27.4V) | 13.0~14.5V/26.0~29.0V/52.0~58.0V(default:13.7/27.4/54.8V) |
| Low Voltage Disconnect | 10.8~11.8V/21.6~23.6V(default:11.2/22.4V) | 10.8~11.8V/21.6~23.6V/43.2~47.2V(default:11.2/22.4/44.8V) |
| Reconnect Voltage | 11.4~12.8V/22.8~25.6V(default:12.0/24.0V) | 11.4~12.8V/22.8~25.6V/45.6~51.2V(default:12.0/24.0/48.0V) |
| Overcharge Protect | 15.8V/31.3V | 15.8/31.3/62.3V |
| Charging target voltage | 10.0~32.0V(Lithium, default: 14.4V) | 10.0~64.0V(Lithium, default: 29.4V) |
| Charging recovery voltage | 9.2~31.8V(Lithium, default: 14.0V) | 9.2~63.8V(Lithium, default: 28.7V) |
| Low voltage disconnect | 9.0~30.0V(Lithium, default: 10.6V) | 9.0~60.0V(Lithium, default: 21.0V) |
| Low voltage reconnect | 9.6~31.0V(Lithium, default: 12.0V) | 9.6~62.0V(Lithium, default: 22.4V) |
| Temperature Compensation | 35V | 65V |
| Battery Type | -4.17mV/K per cell (Boost, Equal), -3.33mV/K per cell (Float) |
| Max Voltage on BatteryTerminal | Liquid, GEL, AGM, Lithium(default: GEL) |
| **Panel Parameters** | Max Voltage on PVTerminal(-20℃) \*1 | 100V | 150V |
| Max Voltage on PVTerminal(25℃) | 90V | 138V |
| Max Input Power | 260W/520W | 520W/1040W | 750/1500/3000W |
| Dusk/Dawn detect voltage | 8.0V/16.0V | 8.0V/16.0V/32.0V |
| MPPT Tracking Range | (Battery Voltage+1V) ~ Voc\*0.9 \*2 |
| **Load****Parameters** | Output Current | 20A | 30A |
| Work mode | Always on, Street lamp, User-defined mode |
| **System Parameters** | Max tracking efficiency | >99.9% |
| Max charge conversion | 98% |
| Dimensions | 136.6\*136.6\*67.1mm | 196.5\*136.6\*97.1mm | 262.5\*186.5\*97.5mm |
| Weight | 830g | 1300g | 2500g |
| Self consumption | ≤8mA (12V); ≤12mA (24V) | ≤16mA (12V); ≤12mA (24V)；≤10mA (48V) |
| Communication | RS485 (RJ11 interface) |
| Optional | IoT、Cyber-BT |
| Grounding | Common Negative |
| Power ternimals | 6AWG (16mm²) |
| Ambient temperature | -20 ~ +55℃ |
| Storage temperature | -25 ~ +80℃ |
| Ambient humidity | 0~100%RH |
| Protection degree | IP32 |
| Max Altitude | 4000m |

\*1. Maximum solar panel voltage at minimum ambient operating temperature.

\*2. Voc: PV-Module open circuit voltage.

\*3. Slash separate values for 12V/24V/48V nominal system voltage.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Item** | **MC2010-BT** | **MC4010-BT** | **MC6015-BT** |
| **Battery Parameters** | System Voltage | 12V/24V automatical recognization | 12V/24V/48V automatical recognization |
| Max Charging Current | 20A | 40A | 60A |
| MPPT Charging Voltage | before boost or equal charging stage |
| Boost Voltage@25℃ | 14.0~14.8V/28.0~29.6V @25℃(default:14.5/29V) | 14.0~14.8V/28.0~29.6V/56.0~59.2V(default:14.5/29.0/58.0V) |
| Equal Voltage@25℃ | 14.0~15.0V/28.0~30.0V @25℃(default:14.8/29.6V)(Liquid, AGM) | 14.0~15.0V/28.0~30.0V/56.0~60.0V(default:14.8/29.6/59.2V) |
| Float Voltage@25℃ | 13.0~14.5V/26.0~29.0V @25℃(default:13.7/27.4V) | 13.0~14.5V/26.0~29.0V/52.0~58.0V(default:13.7/27.4/54.8V) |
| Low Voltage Disconnect | 10.8~11.8V/21.6~23.6V(default:11.2/22.4V) | 10.8~11.8V/21.6~23.6V/43.2~47.2V(default:11.2/22.4/44.8V) |
| Reconnect Voltage | 11.4~12.8V/22.8~25.6V(default:12.0/24.0V) | 11.4~12.8V/22.8~25.6V/45.6~51.2V(default:12.0/24.0/48.0V) |
| Overcharge Protect | 15.8V/31.3V | 15.8/31.3/62.3V |
| Charging target voltage | 10.0~32.0V(Lithium, default: 14.4V) | 10.0~64.0V(Lithium, default: 29.4V) |
| Charging recovery voltage | 9.2~31.8V(Lithium, default: 14.0V) | 9.2~63.8V(Lithium, default: 28.7V) |
| Low voltage disconnect | 9.0~30.0V(Lithium, default: 10.6V) | 9.0~60.0V(Lithium, default: 21.0V) |
| Low voltage reconnect | 9.6~31.0V(Lithium, default: 12.0V) | 9.6~62.0V(Lithium, default: 22.4V) |
| Temperature Compensation | 35V | 65V |
| Battery Type | -4.17mV/K per cell (Boost, Equal), -3.33mV/K per cell (Float) |
| Max Voltage on BatteryTerminal | Liquid, GEL, AGM, Lithium(default: GEL) |
| **Panel****Parameters** | Max Voltage on PVTerminal(-20℃) \*1 | 100V | 150V |
| Max Voltage on PVTerminal(25℃) | 90V | 138V |
| Max Input Power | 260W/520W | 520W/1040W | 750/1500/3000W |
| Dusk/Dawn detect voltage | 8.0V/16.0V | 8.0V/16.0V/32.0V |
| MPPT Tracking Range | (Battery Voltage+1V) ~ Voc\*0.9 \*2 |
| **Load Parameters** | Output Current | 20A | 30A |
| Work mode | Always on, Street lamp, User-defined mode |
| **System Parameters** | Max tracking efficiency | >99.9% |
| Max charge conversion | 98% |
| Dimensions | 136.6\*136.6\*67.1mm | 196.5\*136.6\*97.1mm | 262.5\*186.5\*97.5mm |
| Weight | 830g | 1300g | 2500g |
| Self consumption | ≤8mA (12V); ≤12mA (24V) | ≤16mA (12V); ≤12mA (24V)；≤10mA (48V) |
| Communication | BlueTooth, RS485 (RJ11 interface) |
| Optional | IoT |
| Grounding | Common Negative |
| Power ternimals | 6AWG (16mm²) |
| Ambient temperature | -20 ~ +55℃ |
| Storage temperature | -25 ~ +80℃ |
| Ambient humidity | 0~100%RH |
| Protection degree | IP32 |
| Max Altitude | 4000m |

\*1. Maximum solar panel voltage at minimum ambient operating temperature.

\*2. Voc: PV-Module open circuit voltage.

\*3. Slash separate values for 12V/24V/48V nominal system vol