

## MPPT series

DM60/DM120/DM160/DM200

MES60/MES120/MES160/MES200



### Performance characteristics

- Advanced MPPT charging technology, 15% to 30% higher than PWM charging efficiency.
- Multi-peak tracking technology, higher tracking accuracy under shading conditions.
- Boosting constant current algorithm, accurate load efficiency control.
- Charge with accurate constant pressure algorithm, charging ripple will be lower and the service life of lithium battery will be extended.
- Historical status record.
- Remote IoT function.
- Available for all types of batteries.
- The third generation microwave induction technology, strong anti-interference ability, long sensing distance.
- Multi-stage induction setting, more flexible lighting and electric quantity control.

### Parameters

| Models   | DM60/MES60            | DM120/MES120                                   | DM160/MES160                                   | DM200/MES200                                    | Parameters adjustable | Default |
|--|-----------------------|--|--|---|-----------------------|---------|
| Zero load loss                                   | R : ≤5mA<br>W : ≤20mA | R ≤6mA/12V; ≤4mA/24V<br>W ≤18mA/12V; ≤13mA/24V | R ≤6mA/12V; ≤4mA/24V<br>W ≤18mA/12V; ≤13mA/24V | R ≤10mA/12V; ≤5mA/24V<br>W ≤25mA/12V; ≤15mA/24V |                       |         |
| System voltage                                   | 12V                   | 12V/24V  | 12V/24V  | 12V/24V   |                       | Lead    |
| Max load power                                   | 60W/12V               | 60W/12V ; 120W/24V                             | 80W/12V ; 160W/24V                             | 100W/12V ; 200W/24V                             |                       |         |
| Load output voltage                              | 15~50V                | 15~60V   | 15~60V   | 15~75V  |                       |         |
| Load periods                                     | 9 periods + predawn   | 9 periods + predawn                            | 9 periods + predawn                            | 9 periods + predawn                             |                       |         |
| Rated charge current                             | 10A                   | 10A  | 15A  | 20A   |                       |         |
| Max solar panel power                            | 130W/12V              | 130W/12V ; 260W/24V                            | 200W/12V ; 400W/24V                            | 260W/12V ; 520W/24V                             |                       |         |
| Solar panel input voltage                        | < 50V                 |  | < 60V  | < 95V   |                       |         |
| MPPT tracking efficiency                         |                       |  | > 99%  |   |                       |         |
| Charge conversion efficiency                     |                       |  | 85%-98% ( typically 97% )                      |   |                       |         |
| Load conversion efficiency                       |                       |  | 90% ~ 96%                                      |   |                       |         |
| Load current accuracy                            |                       |  | ±3% ( load current > 300mA )                   |   |                       |         |
| Load current accuracy (Lead-acid)                |                       |  | (Boost charge voltage + 0.2V) ; ×2/24V(25°C)   |   |                       | 14.6V   |
| Equalizing charge time (Lead-acid)               |                       |  | 2 hours  |   |                       |         |
| Equalizing charge interval (Lead-acid)           |                       |  | 30 days  |   |                       |         |
| Boost charge voltage (Lead-acid)                 |                       |  | 7.5V ~ 17.0V ; ×2,24V system                   |   | ✓                     | 14.4V   |
| Boost charge time (Lead-acid)                    |                       |  | 4 hours  |   |                       |         |
| Floating charge voltage (Lead-acid)              |                       |  | 7.5V ~ 17V ; ×2/24V(25°C)                      |   | ✓                     | 13.8V   |
| Temperature compensation coefficient (Lead-acid) |                       |  | -3.0mV/°C/2V                                   |   |                       |         |
| Overcharge voltage (lithium)                     |                       |  | 7.5V ~ 17.0V ; ×2,24V system                   |   | ✓                     | 14.4V   |
| Overcharge return voltage (lithium)              |                       |  | 7.5V ~ 17.0V ; ×2,24V system                   |   | ✓                     | 13.8V   |
| Over discharge voltage                           |                       |  | 7.5V ~ 17.0V ; ×2,24V system                   |   | ✓                     | 11.0V   |
| Over discharge return voltage                    |                       |  | 7.5V ~ 17.0V ; ×2,24V system                   |   | ✓                     | 12.5V   |
| Light control voltage                            |                       |  | 3V ~ 11V; ×2,24V system                        |   | ✓                     | 5V      |
| Operating temperature                            |                       |  | -35°C ~ +65°C                                  |   |                       |         |
| IP rating  |                       |  | IP67   |   |                       |         |
| Weight (g)                                       | 260                   | 400  | 510  | 770   |                       |         |
| Dimensions (mm)                                  | 80*82*22.6            | 114*88.3*24.5                                  | 142*88.3*24.5                                  | 155*114.4*34                                    |                       |         |
| Installation size (mm)                           | 66*75                 | 74*82.3  | 102*82.3                                       | 116*102   |                       |         |

Notice: -ES series products can be equipped with external body induction probe.