



Made in  
Germany

**MSTE SOLAR**



**5 Years  
Warranty**

# MPT<sup>®</sup> Xtra

Charge Controller

Rough environmental condition -Fine! The charge controllers with IP65 protection are reliable even with existence of dust, sand, humidity or insects.

The MPT<sup>®</sup> Xtra charge controllers are especially developed to realize solar systems with a higher solar voltage. Standard charge controller are not suitable. On the market there is available a wide range of low-cost solar modules with 48 up to 72 cells with a higher voltage.

Installation time and effort is reduced because of the advantage of the series wiring of the solar modules.

In addition the Xtra MPT<sup>®</sup> charge controllers generate a higher electric power yield as well during diffused light and when the solar module temperature is high.

| MPT <sup>®</sup> 230-12                |                                                                                                                          |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Technical Data                         |                                                                                                                          |
| DC-input (solar)                       |                                                                                                                          |
| Maximum power                          | 230W                                                                                                                     |
| Maximum voltage                        | 58V                                                                                                                      |
| Recommended MPP-voltage                | 20V to 42V                                                                                                               |
| Maximum current                        | 14A                                                                                                                      |
| DC-output (battery)                    |                                                                                                                          |
| System voltage                         | 12V                                                                                                                      |
| Voltage range                          | 9,5V to 16V                                                                                                              |
| Maximum charging current (nom. power)  | 22A                                                                                                                      |
| Types of battery                       | Lead-Gel, AGM, Acid, Lithium-Ion (adjustable)                                                                            |
| Final charging voltage                 | 13,5V to 14,7V (adjustable)                                                                                              |
| Final charging voltage Lithium-Ion     | 14,4V at delivery, factory modifiable                                                                                    |
| Features                               |                                                                                                                          |
| Display                                | 1 LED: green                                                                                                             |
| Protective Devices                     | reverse current, overvoltage (fine protection) , over-temperature, overload, reverse battery, short-circuit, overcurrent |
| Derating overtemperature of the device | >50°C                                                                                                                    |
| Interface                              | BATCONTROLLER <sup>®</sup> E, TTL serial, BMS, temperature sensor KTY                                                    |
| General Data                           |                                                                                                                          |
| Efficiency                             | <97%                                                                                                                     |
| Parallel Operation                     | up to 8 charge controllers                                                                                               |
| Self-consumption                       | 0,12W/10mA                                                                                                               |
| Cooling method                         | passive cooling, without fan                                                                                             |
| Degree of protection (IEC60529)        | IP65                                                                                                                     |
| Temperature range (nom. power)         | -25°C to +35°C                                                                                                           |
| Dimensions (W/H/D)                     | 275mm/192mm/85mm                                                                                                         |
| Weight                                 | 3kg                                                                                                                      |
| Enclosure                              | steel, coated                                                                                                            |
| Recommended wire cross section         | 6mm <sup>2</sup>                                                                                                         |
| Certificate                            | conformity EMC89/336/EEC                                                                                                 |