Tigo® energy

Tigo Energy® Dual Maximizer™- ES (MM-2ES) Data Sheet

For residential, commercial and utility scale photovoltaic solar arrays, the Tigo Energy® Maximizer™ system optimizes the power output of each module; delivers module-level data for operational management and performance monitoring; and provides the ability to deactivate the high voltage DC bus for safer installation, maintenance or fire fighting. Tigo Energy Dual Maximizers are key components of the system which reside at each module (one per up to two solar modules). The Dual Maximizer provides data acquisition, communication to the Tigo Energy® Maximizer™ Management Unit, and power point control. The very small electronics footprint of the Maximizer has been designed to minimize cost and maximize reliability. Tigo Energy Maximizer MM-2ES is ideal for new construction or retrofit applications around the world.

Tigo Energy's patented "Impedance Matching" approach manages the energy harvest and sends information to the Maximizer Management Unit for reporting and control. The Tigo Energy Dual Maximizer (MM-2ES) connects in a series topology. MM-2ES maintains best-in-class system conversion efficiencies.

The Tigo Energy Dual Maximizer includes the PV-Safe™ technology which greatly enhances the safety of a PV solar installation. As part of the Tigo Energy Maximizer system, this function can be activated with a safety button or via a remote management console. The system can also be activated by fire personnel to avoid exposure to voltage levels typically in excess of 400 volts.

The Tigo Energy Dual Maximizer is packaged in a NEMA3R enclosure (water and weather resistant), and conforms to UL and IEEE safety standards. There are Module Maximizer options to fit any PV module, crystalline silicon or thin-film, regardless of output voltage or power rating.

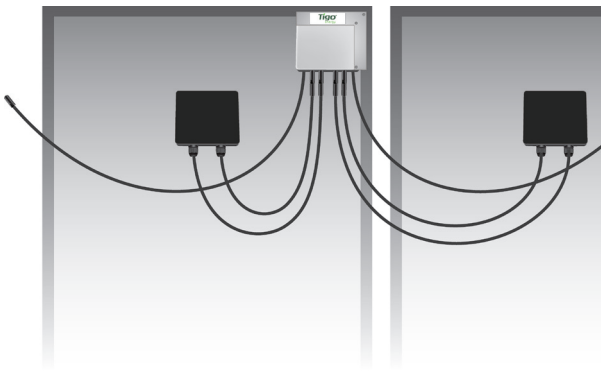
Green Business Bay Area

The Tigo Energy Dual Maximizer is designed to integrate seamlessly with the industry-leading Tigo Energy Maximizer System. Each unit can be used with either one or two PV modules, giving system designers added flexibility. In addition, the Dual Maximizer can be mixed with single Module Maximizers in the same system – they can be connected on the same string, and can use the same MMU and Gateway communications system simultaneously.

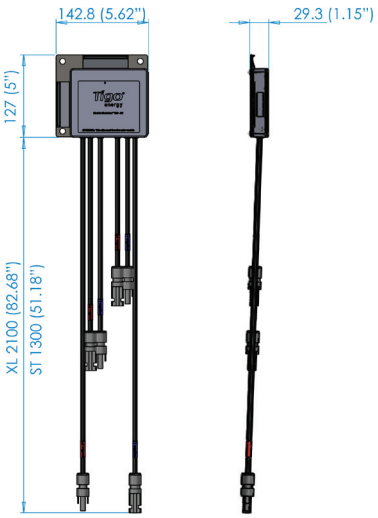
Dual Maximizer - ES Technical Specifications

Input data (per module)	MM-2ES50	MM-2ES75
Maximum power	300W	350W
Maximum input DC voltage (Voc)	52V	75V
Vmp range*	16-48V	30-65V
Maximum continuous current (Imp)	9.5A	6.5A
Maximum input current (Isc)	10A	7.5A
* Vmp = Voltage at maximum power = Maximum power voltage		
Output Data (DC)		
Maximum output power	600W	700W
Maximum continuous current	9.5A	6.5A
Maximum string voltage	1000V	1000V
Mechanical Data		
Operating temperature range	-30°C +70°C	
Cooling	Natural Convection	
Enclosure environmental rating	IP-65, NEMA3R	
Features		
Compliance	UL1741  TÜV EN 62109-1:2010	
Panel connector	NEC 2008 compliant, MC4 compatible (for retrofit) MC3 connectors	
Bus connector	NEC 2008 compliant 40AMP	

Specifications subject to change. Always check the table on the Tigo Energy Module Maximizer label for specifications as supported by that particular unit.



Tigo Energy Dual Maximizer - ES shown connected to two PV modules.



Optimize the energy harvest of your PV system using the Tigo Energy Maximizer to:

- accelerate system payback
- maximize the power output of the array under any condition
- reconsider previously rejected projects because of unfavorable shade or orientation
- maintain best-in-class conversion efficiency
- manage the system with module-level data to minimize operational costs and keep the system at peak performance throughout its lifetime
- introduce an unprecedented level of safety for new and existing PV solar installations
- simplify the balance-of-system design, especially for high Voc or thin-film modules

ORDERING INFORMATION:

MM - 2ES50 - MC4 - ST

50/75*
Maximum Voltage must be highher than PV module Voc

MC3/MC4/TYCO
Connector type

XL/ST**
Output cable length

XL (2100mm) for -

ST (1300mm) for -

* MM2-ES75 is available only with MC4 connectors

** MM2-ES XL version is available only with MC4 connectors

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