



# GEN3 Microinverter (2-in-1)

TSOL-MS600/MS700/MS800/MX800/MX900/MX1000



Daisy Chain



Trunk Cable & Balcony

## Maximized Efficiency

Individual optimization, se-parate dedicated MPPT for each panel.

New topology design, max. efficiency up to 96.7%.

## Flexibility

Suitable for TSOL-ESK series AC module solution.

Plug & play installation, Easy to install.

## Safety

Max. DC voltage 60V. No threat for high DC voltage.

Integrated LoM protection function. Ensure the safety of power grid.

## Reliability

Die casting design and glue filling technology. Better thermal dissipation.

Standard 12 years warranty, Quality guaranteed.



VDE 0126 VDE 4105 EN 50549 INMETRO RD 1699 G 98

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## Technical Data (Daisy Chain)

| Model                                          | MS600                                                                  | MS700      | MS800      | MX800                     | MX900      | MX1000     |
|------------------------------------------------|------------------------------------------------------------------------|------------|------------|---------------------------|------------|------------|
| Input(DC)                                      |                                                                        |            |            |                           |            |            |
| Recommended Module Power (Wp)                  | 300 ~ 550+                                                             | 300 ~ 550+ | 300 ~ 550+ | 300 ~ 600+                | 300 ~ 600+ | 300 ~ 600+ |
| Quantity of PV Module                          | 1 to 2                                                                 | 1 to 2     | 1 to 2     | 1 to 2                    | 1 to 2     | 1 to 2     |
| Start up Voltage per Input@Rated condition (V) | 22                                                                     | 22         | 22         | 22                        | 22         | 22         |
| MPPT Voltage Range per Input (V)               | 16 ~ 60                                                                | 16 ~ 60    | 16 ~ 60    | 16 ~ 60                   | 16 ~ 60    | 16 ~ 60    |
| Max. Input Voltage per Input (V)               | 60                                                                     | 60         | 60         | 60                        | 60         | 60         |
| Short-current(A)                               | 20                                                                     | 20         | 20         | 20                        | 20         | 20         |
| Max. Input Current per Input (A)               | 14                                                                     | 14         | 14         | 16                        | 16         | 16         |
| Quantity of MPPT                               | 2                                                                      | 2          | 2          | 2                         | 2          | 2          |
| Quantity of DC Inputs                          | 2                                                                      | 2          | 2          | 2                         | 2          | 2          |
| Output [AC]                                    |                                                                        |            |            |                           |            |            |
| Nominal Continous Output Power (W)             | 600                                                                    | 700        | 800        | 800                       | 900        | 1000       |
| Max Output Current [A]                         | 3                                                                      | 3.19       | 4          | 4                         | 4.5        | 5          |
| Nominal Output Voltage [V]                     | 220/230/240, L/N/PE                                                    |            |            |                           |            |            |
| Nominal Frequency [Hz]                         | 50/60                                                                  |            |            |                           |            |            |
| Power Factor                                   | >0.99 default, 0.8 leading ... 0.8 lagging                             |            |            |                           |            |            |
| Output Current Harmonic Distortion             | <3%                                                                    |            |            |                           |            |            |
| Maximum units per 12AWG branch                 | 12                                                                     | 10         | 9          | 9                         | 8          | 7          |
| Maximum units per 10AWG branch                 | 15                                                                     | 13         | 12         | 12                        | 10         | 9          |
| Efficiency                                     |                                                                        |            |            |                           |            |            |
| Peak Inverter Efficiency                       | 96.7%                                                                  |            |            |                           |            |            |
| EU Efficiency                                  | 96.5%                                                                  |            |            |                           |            |            |
| Nominal MPPT Efficiency                        | 99.9%                                                                  |            |            |                           |            |            |
| Night Time Power Consumption                   | <50 mW                                                                 |            |            |                           |            |            |
| Mechanical Data                                |                                                                        |            |            |                           |            |            |
| Dimensions [WxHxD mm]                          | 250 * 223 * 30                                                         |            |            | 261 * 228 * 32            |            |            |
| Weight [kg]                                    | 3.1                                                                    |            |            | 3.3                       |            |            |
| General Data                                   |                                                                        |            |            |                           |            |            |
| Communication                                  | WiFi (Bluetooth)                                                       |            |            | WiFi (Bluetooth) or RS485 |            |            |
| Cable/Assembling                               | AC Cable up to 2.43m                                                   |            |            |                           |            |            |
| Type of Isolation                              | HF Isolation                                                           |            |            |                           |            |            |
| Type of Enclosure                              | IP67                                                                   |            |            |                           |            |            |
| Cooling                                        | Natural convection                                                     |            |            |                           |            |            |
| Operating Ambient Temperature Range            | -40 ~ +65 °C (derating of over 50°C Ambient Temperature@ PV input 30V) |            |            |                           |            |            |
| Relative Humidity                              | 100%                                                                   |            |            |                           |            |            |
| Max. Operating Altitude Without Derating [m]   | 2000                                                                   |            |            |                           |            |            |

※ The AC voltage and frequency range may vary depending on specific country grid.

## Wiring Diagram (Daisy-chain)



### Maximum units per AC branch

| MODEL  | 12AWG | 10AWG |
|--------|-------|-------|
| MS600  | 12    | 15    |
| MS700  | 10    | 13    |
| MS800  | 9     | 12    |
| MX800  | 9     | 12    |
| MX900  | 8     | 10    |
| MX1000 | 7     | 9     |

Technical Data (Trunk Cable)

| Model                                          | MS600                                      | MS700      | MS800      | MX800      | MX900      | MX1000     |
|------------------------------------------------|--------------------------------------------|------------|------------|------------|------------|------------|
| Input(DC)                                      |                                            |            |            |            |            |            |
| Recommended Module Power (Wp)                  | 300 ~ 550+                                 | 300 ~ 550+ | 300 ~ 550+ | 300 ~ 600+ | 300 ~ 600+ | 300 ~ 600+ |
| Quantity of PV Module                          | 1 to 2                                     | 1 to 2     | 1 to 2     | 1 to 2     | 1 to 2     | 1 to 2     |
| Start up Voltage per Input@Rated condition (V) | 22                                         | 22         | 22         | 22         | 22         | 22         |
| MPPT Voltage Range per Input (V)               | 16 ~ 60                                    | 16 ~ 60    | 16 ~ 60    | 16 ~ 60    | 16 ~ 60    | 16 ~ 60    |
| Max. Input Voltage per Input (V)               | 60                                         | 60         | 60         | 60         | 60         | 60         |
| Short-current(A)                               | 20                                         | 20         | 20         | 20         | 20         | 20         |
| Max. Input Current per Input (A)               | 14                                         | 14         | 14         | 16         | 16         | 16         |
| Quantity of MPPT                               | 2                                          | 2          | 2          | 2          | 2          | 2          |
| Quantity of DC Inputs                          | 2                                          | 2          | 2          | 2          | 2          | 2          |
| Output [AC]                                    |                                            |            |            |            |            |            |
| Nominal Continous Output Power (W)             | 600                                        | 700        | 800        | 800        | 900        | 1000       |
| Max Output Current [A]                         | 3                                          | 3.19       | 4          | 4          | 4.5        | 5          |
| Nominal Output Voltage [V]                     | 220/230/240, L/N/PE                        |            |            |            |            |            |
| Nominal Frequency [Hz]                         | 50/60                                      |            |            |            |            |            |
| Power Factor                                   | >0.99 default, 0.8 leading ... 0.8 lagging |            |            |            |            |            |
| Output Current Harmonic Distortion             | <3%                                        |            |            |            |            |            |
| Maximum units per 12AWG branch                 | 12                                         | 10         | 9          | 9          | 8          | 7          |
| Maximum units per 10AWG branch                 | 15                                         | 13         | 12         | 12         | 10         | 9          |

Efficiency

|                              |        |
|------------------------------|--------|
| Peak Inverter Efficiency     | 96.7%  |
| EU Efficiency                | 96.5%  |
| Nominal MPPT Efficiency      | 99.9%  |
| Night Time Power Consumption | <50 mW |

Mechanical Data

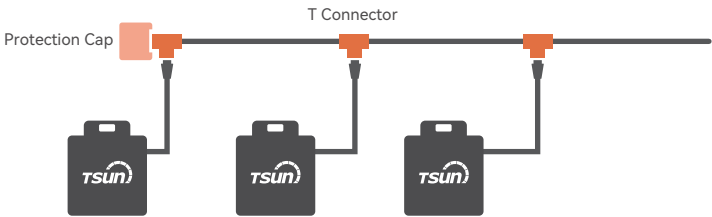
|                       |                |                |
|-----------------------|----------------|----------------|
| Dimensions [WxHxD mm] | 250 * 223 * 30 | 261 * 228 * 32 |
| Weight [kg]           | 2.6            | 2.8            |

General Data

|                                              |                                                                        |                           |
|----------------------------------------------|------------------------------------------------------------------------|---------------------------|
| Communication                                | WiFi (Bluetooth)                                                       | WiFi (Bluetooth) or RS485 |
| Cable/Assembling                             | AC Cable up to 0.5m with T connector                                   |                           |
| Type of Isolation                            | HF Isolation                                                           |                           |
| Type of Enclosure                            | IP67                                                                   |                           |
| Cooling                                      | Natural Convection                                                     |                           |
| Operating Ambient Temperature Range          | -40 ~ +65 °C (derating of over 50°C Ambient Temperature@ PV input 30V) |                           |
| Relative Humidity                            | 100%                                                                   |                           |
| Max. Operating Altitude Without Derating [m] | 2000                                                                   |                           |

※ The AC voltage and frequency range may vary depending on specific country grid.

Wiring Diagram (Trunk cable)



Maximum units per AC branch

| MODEL  | 12AWG | 10AWG |
|--------|-------|-------|
| MS600  | 12    | 15    |
| MS700  | 10    | 13    |
| MS800  | 9     | 12    |
| MX800  | 9     | 12    |
| MX900  | 8     | 10    |
| MX1000 | 7     | 9     |

Technical Data (Balcony)

| Model                                          | MS600                                      | MS700      | MS800      | MX800      | MX900      | MX1000     |
|------------------------------------------------|--------------------------------------------|------------|------------|------------|------------|------------|
| Input(DC)                                      |                                            |            |            |            |            |            |
| Recommended Module Power (Wp)                  | 300 ~ 550+                                 | 300 ~ 550+ | 300 ~ 550+ | 300 ~ 600+ | 300 ~ 600+ | 300 ~ 600+ |
| Quantity of PV Module                          | 1 to 2                                     | 1 to 2     | 1 to 2     | 1 to 2     | 1 to 2     | 1 to 2     |
| Start up Voltage per Input@Rated condition (V) | 22                                         | 22         | 22         | 22         | 22         | 22         |
| MPPT Voltage Range per Input (V)               | 16 ~ 60                                    | 16 ~ 60    | 16 ~ 60    | 16 ~ 60    | 16 ~ 60    | 16 ~ 60    |
| Max. Input Voltage per Input (V)               | 60                                         | 60         | 60         | 60         | 60         | 60         |
| Short-current(A)                               | 20                                         | 20         | 20         | 20         | 20         | 20         |
| Max. Input Current per Input (A)               | 14                                         | 14         | 14         | 16         | 16         | 16         |
| Quantity of MPPT                               | 2                                          | 2          | 2          | 2          | 2          | 2          |
| Quantity of DC Inputs                          | 2                                          | 2          | 2          | 2          | 2          | 2          |
| Output [AC]                                    |                                            |            |            |            |            |            |
| Nominal Continous Output Power (W)             | 600                                        | 700        | 800        | 800        | 900        | 1000       |
| Max Output Current [A]                         | 3                                          | 3.19       | 4          | 4          | 4.5        | 5          |
| Nominal Output Voltage [V]                     | 220/230/240, L/N/PE                        |            |            |            |            |            |
| Nominal Frequency [Hz]                         | 50/60                                      |            |            |            |            |            |
| Power Factor                                   | >0.99 default, 0.8 leading ... 0.8 lagging |            |            |            |            |            |
| Output Current Harmonic Distortion             | <3%                                        |            |            |            |            |            |

Efficiency

|                              |        |
|------------------------------|--------|
| Peak Inverter Efficiency     | 96.7%  |
| EU Efficiency                | 96.5%  |
| Nominal MPPT Efficiency      | 99.9%  |
| Night Time Power Consumption | <50 mW |

Mechanical Data

|                       |                |                |
|-----------------------|----------------|----------------|
| Dimensions [WxHxD mm] | 250 * 223 * 30 | 261 * 228 * 32 |
| Weight [kg]           | 2.6            | 2.8            |

General Data

|                                              |                                                                        |
|----------------------------------------------|------------------------------------------------------------------------|
| Communication                                | WiFi (Bluetooth)                                                       |
| Cable/Assembling                             | AC Cable up to 0.5m                                                    |
| Type of Isolation                            | HF Isolation                                                           |
| Type of Enclosure                            | IP67                                                                   |
| Cooling                                      | Natural Convection                                                     |
| Operating Ambient Temperature Range          | -40 ~ +65 °C (derating of over 50°C Ambient Temperature@ PV input 30V) |
| Relative Humidity                            | 100%                                                                   |
| Max. Operating Altitude Without Derating [m] | 2000                                                                   |

※ The AC voltage and frequency range may vary depending on specific country grid.

Wiring Diagram(Balcony)

