

GEN3 Microinverter (1-in-1)

TSOL-MS300/MS350/MS400/MX400/MX450/MX500



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.

Technical Data (Daisy Chain)

Model	MS300	MS350	MS400	MX400	MX450	MX500
Input(DC)						
Recommended Module Power (Wp)	300 ~ 550+	300 ~ 550+	300 ~ 550+	300 ~ 600+	300 ~ 600+	300 ~ 600+
Quantity of PV Module	1	1	1	1	1	1
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	14	14	14
Quantity of MPPT	1	1	1	1	1	1
Quantity of DC Inputs	1	1	1	1	1	1
Output [AC]						
Nominal Continuous Output Power (W)	300	350	400	400	450	500
Max Output Current [A]	1.45	1.59	2	2	2.25	2.5
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	23	20	17	17	15	14
Maximum units per 10AWG branch	31	26	23	23	20	18
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]	164 * 225 * 30					
Weight [kg]	2.1					
General Data						
Communication	WiFi (Bluetooth)					
Cable/Assembling	AC Cable up to 1.45m					
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.

Maximum units per AC branch

MODEL	12AWG	10AWG
MS300	23	31
MS350	20	26
MS400	17	23
MX400	17	23
MX450	15	20
MX500	14	18

Wiring Diagram (Daisy-chain)



CE VDE 0126 VDE 4105 EN 50549 RD 1699 G 98

TSUNESS Co., Ltd

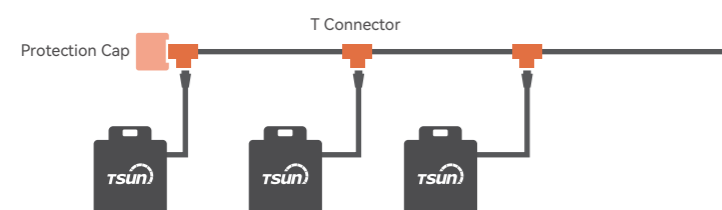
sales@tsun-ess.com www.tsun-ess.com +86-512-66186028

Technical Data (Trunk Cable)

Model	MS300	MS350	MS400	MX400	MX450	MX500
Input(DC)						
Recommended Module Power (Wp)	300 ~ 550+	300 ~ 550+	300 ~ 550+	300 ~ 600+	300 ~ 600+	300 ~ 600+
Quantity of PV Module	1	1	1	1	1	1
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	14	14	14
Quantity of MPPT	1	1	1	1	1	1
Quantity of DC Inputs	1	1	1	1	1	1
Output [AC]						
Nominal Continuous Output Power (W)	300	350	400	400	450	500
Max Output Current [A]	1.45	1.59	2	2	2.25	2.5
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	23	20	17	17	15	14
Maximum units per 10AWG branch	31	26	23	23	20	18
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]	164 * 225 * 30					
Weight [kg]	1.75					
General Data						
Communication	WiFi (Bluetooth)					
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					

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Wiring Diagram (Trunk cable)



Maximum units per AC branch

MODEL	12AWG	10AWG
MS300	23	31
MS350	20	26
MS400	17	23
MX400	17	23
MX450	15	20
MX500	14	18

Technical Data (Balcony)

Model	MS300	MS350	MS400	MX400	MX450	MX500
Input(DC)						
Recommended Module Power (Wp)	300 ~ 550+	300 ~ 550+	300 ~ 550+	300 ~ 600+	300 ~ 600+	300 ~ 600+
Quantity of PV Module	1	1	1	1	1	1
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	14	14	14
Quantity of MPPT	1	1	1	1	1	1
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Power Factor	>0.99 default, 0.8 leading ... 0.8 lagging					
Output Current Harmonic Distortion	<3%					
Efficiency						
Peak Inverter Efficiency	96.7%					
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Nominal MPPT Efficiency	99.9%					
Night Time Power Consumption	<50 mW					
Mechanical Data						
Dimensions [WxHxD mm]	164 * 225 * 30					
Weight [kg]	1.75					
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					

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Wiring Diagram(Balcony)

