

Omnik New Energy Solar Inverter

Omniksol-1k-TL/Omniksol-1.5k-TL/Omniksol-2k-TL



Omniksol-2k-TL Photon Efficiency **No.1** up to 3kW
in the world----- Photon tested Jan. 2012.



Features

- Transformerless design, high efficiency (Max.97.5%,Euro.96.6%)
- High MPPT accuracy (>99.9%)
- Wide DC input range (120-500 Vdc), compatible with different module technologies
- Easy to wire, install and operate
- IP 65 design, suitable for indoor and outdoor installation
- 5 years warranty (10~25 years as option)

Certificates



ENEL2010 C10/11 RD1663 TF3.2.1

Omnik New Energy Solar Inverter Technical Data

Omniksol-1k-TL/Omniksol-1.5k-TL/Omniksol-2k-TL

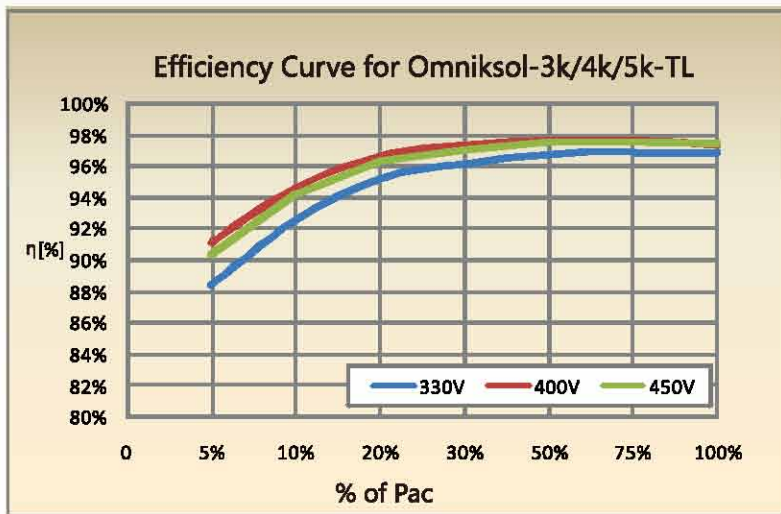
Type	Omniksol-1k-TL	Omniksol-1.5k-TL	Omniksol-2k-TL
Input (DC)			
Max. PV-Generator Power [W]	1300	1750	2300
Max. DC voltage [V]	500	500	500
MPPT DC voltage Range [V]	80-300	120 - 450	120 - 450
Turn off DC voltage [V]	80	120	120
Max. DC Current [A]	16	18	18
Nominal DC Current [A]	8.5	14	16.5
Number of DC Connection	1	1	1
DC-Connection	MC4	MC4	MC4
Number of MPP trackers	1	1	1
Turn on Power [W]	10	10	10
Output (AC)			
Max. AC Power [W]	1100	1650	2200
Nominal AC Power [W]	1000	1500	2000
Max. AC Current [A]	5.8	9.0	12.0
Nominal AC Current [A]	4.3	6.5	8.5
Grid voltage Range	According to VDE 0126-1-1, RD1663, ENEL2010,C10/11,G83/1, AS4777		
Grid Frequency Range	According to VDE 0126-1-1, RD1663, ENEL2010,C10/11,G83/1, AS4777		
Power Factor	0.99 (>30% of Full Load)		
THD(AC Output Current)	<2%		
AC Connector	Plug-in connector		
Power Consumption			
Own Consumption in Operation [W]	30		
Power Consumption at Night [W]	0		
Power Consumption at Standby [W]	6		
Efficiency			
Max. Efficiency (at 360VDC)	97.5%		
Euro. Efficiency (at 360VDC)	96.6%		
MPPT Efficiency	99.9%		
Safety and Protection			
Internal Overvoltage Protection	Yes		
DC Insulation Monitoring	Yes		
Earth Fault Protection	Yes		
Grid Monitoring	According to VDE 0126-1-1, RD1663, ENEL2010,C10/11,G83/1, AS4777		
Earth Fault Current Monitoring	According to VDE 0126-1-1, RD1663, ENEL2010,C10/11,G83/1, AS4777		
DC Current Monitoring	According to VDE 0126-1-1, RD1663, ENEL2010,C10/11,G83/1,AS4777		
Islanding Protection	According to VDE 0126-1-1, RD1663, G83/1, AS4777		
Normative Reference			
CE- Compliant According to	EN 62109, EN 61000-6-1, EN 61000-6-3, EN 61000-6-2, EN 61000-6-4 EN61000-3-2, EN61000-3-3, EN61000-3-12, EN61000-3-11		
Dimensions and Weight			
Dimensions (WxHxD) [mm]	330x425x130		
Weight [kg]	13		
Environmental Limits			
IP Protection Type	IP 65 according to IEC 60529		
Operating Temperature Range	-20°C to +60°C up to 40°C without derating		
Relative Humidity	0% to 98%, no condensation		
Maximum Altitude (above sea level)[m]	2000		
Noise Level[dBA]	<40		
General Data			
Isolation Type	Transformerless		
Cooling Concept	Natural Convection		
Housing	Iron housing for inside and outside installation		
Mounting Information	Wall bracket		
Display	3 LED, Backlight, 16 x 2 Character LCD		
Data Logger			
Data Communication Interfaces	RS485, Optional (Wi-Fi, GPRS, Ethernet)		
Computer Communication	RS232 as Option		
Standard Warranty	5 Years (Optional 10~25 years)		

Omnik New Energy Solar Inverter

Omniksol-3k-TL/Omniksol-4k-TL/Omniksol-5k-TL

Features

- Transformerless design, high efficiency (Max.97.6%,Euro. 97.0%)
- Multi MPPT channels
- High MPPT accuracy(>99.9%)
- Wide DC input range(120-590 Vdc), compatible with different module technologies
- Easy to wire, install and operate
- IP 65 design, suitable for indoor and outdoor installation
- 5 years warranty(10~25 years as option)



Certificates


 ENEL2010 C10/11 RD1663 TF3.2.1 VDE 0126-1-1

Omnik New Energy Solar Inverter Technical Data

Omniksol-3k-TL/Omniksol-4k-TL/Omniksol-5k-TL

Type	Omniksol-3k-TL	Omniksol-4k-TL	Omniksol-5k-TL
Input (DC)			
Max. PV-Generator Power [W]	3400	4500	5000
Max. DC voltage [V]		590	
MPPT DC voltage Range [V]		120 - 500*	
Turn off DC voltage [V]		120	
Max. DC Current [A]	18/18	18/18	18/18
Nominal DC Current [A]	28	33	33
Number of DC Connection		2	
DC-Connection		MC4	
Number of MPP Trackers		2	
Turn on Power [W]		10	
Output (AC)			
Max. AC Power [W]	3300	4400	4800
Nominal AC Power [W]	3000	4000	4600
Max. AC Current [A]	14.4	19.0	21.0
Nominal AC Current [A]	13	17.4	20
Grid voltage Range	According to VDE 0126-1-1, RD1663, ENEL2010, C10/11, G83/1, AS4777, EN50438		
Grid Frequency Range	According to VDE 0126-1-1, RD1663, ENEL2010, C10/11, G83/1, AS4777, EN50438		
Power Factor	0.99 (>30% of Full Load)		
THD(AC Output Current)	<2%		
AC Connector	Plug-in connector		
Power Consumption			
Own Consumption in Operation [W]	45	50	50
Power Consumption at Night [W]		0	
Power Consumption at Standby [W]		6	
Efficiency			
Max. Efficiency (at 360VDC)	97.5%	97.6%	97.6%
Euro. Efficiency (at 360VDC)	96.6%	97.0%	97.0%
MPPT Efficiency		99.9%	
Safety and Protection			
Internal Overvoltage Protection		Yes	
DC Insulation Monitoring		Yes	
Earth Fault Protection		Yes	
Grid Monitoring	According to VDE 0126-1-1, RD1663, ENEL2010, C10/11, G83/1, AS4777, EN50438		
Earth Fault Current Monitoring	According to VDE 0126-1-1, RD1663, ENEL2010, C10/11, G83/1, AS4777, EN50438		
DC Current Monitoring	According to VDE 0126-1-1, RD1663, ENEL2010, C10/11, G83/1, AS4777, EN50438		
Islanding Protection	According to VDE 0126-1-1, RD1663, G83/1, AS4777		
Normative Reference			
CE- Compliant According to	EN 62109, EN 61000-6-1, EN 61000-6-3, EN 61000-6-2, EN 61000-6-4 EN61000-3-2, EN61000-3-3, EN61000-3-12, EN61000-3-11		
Dimensions and Weight			
Dimensions (WxHxD)[mm]		367x526x153	
Weight [kg]	20	20	20
Environmental Limits			
IP Protection Type		IP 65 according to IEC 60529	
Operating Temperature Range	-20°C to +60°C up to 40°C without derating		
Relative Humidity	0% to 98%, no condensation		
Maximum Altitude (above sea level)[m]	2000		
Noise Level[dBA]	<40		
General Data			
Isolation Type	Transformerless		
Cooling Concept	Natural Convection		
Housing	Iron housing for inside and outside installation		
Mounting Information	Wall bracket		
Display	3 LED, Backlight, 16 x 2 Character LCD		
Data Logger			
Data Communication Interfaces	RS485, Optional (Wi-Fi, GPRS, Ethernet)		
Computer Communication	RS232 as Option		
Standard Warranty	5 Years (Optional 10~25 years)		

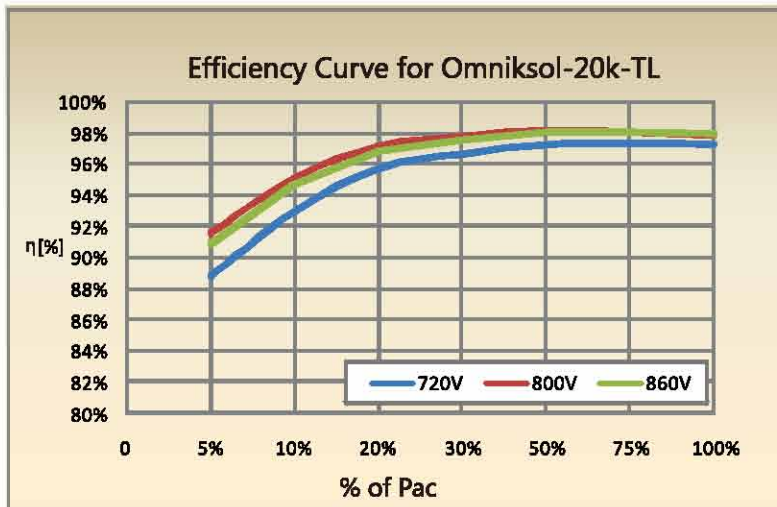
*The Vdc should be at least 150V for the inverter to startup.
This can drop down till 120V for MPPT to function correctly.

Omnirk New Energy Solar Inverter

Omniksol-13k-TL/Omniksol-17k-TL/Omniksol-20k-TL

Features

- Max. Efficiency 98.2%, Euro. Efficiency 97.8%.
- Double MPPT, MPPT accuracy up to 99.9%.
- IP65 design, work properly under severe outdoor circumstances.
- Full solution of safety protection, DC switch integrated.
- Flexible input and output connections, support RS485, Ethernet and USB communication.
- Transformerless design and high power density, lighter and more convenient for installation.



Certificates


 SAA CE G59 G83 ENEL2010 C10/11 Rd1699 VDE-AR-N-4105

Omnik New Energy Solar Inverter Technical Data

Omniksol-13k-TL/Omniksol-17k-TL/Omnik Sol-20k-TL

Type	Omniksol-13k-TL	Omniksol-17k-TL	Omniksol-20k-TL
Input(DC)			
Max. PV-Generator Power[W]	13500	17600	21200
Max. DC voltage[V]	1000	1000	1000
MPPT DC voltage Range[V]	400-800	440-850	480-850
Nominal DC voltage[V]	640	640	640
Max.DC Current(A/B)[A]	22/11	22/22	22/22
Number of MPP Trackers	2	2	2
DC Connection per MPPT	A:3 / B:3	A:3 / B:3	A:3 / B:3
Output(AC)			
Nominal AC voltage[V]	3/N/PE,230/400	3/N/PE,230/400	3/N/PE,230/400
Frequency[Hz]	50, 60	50, 60	50, 60
Max. AC Power[W]	13000	17000	19200
Nominal AC Power[W]	13000	17000	19200
Max. AC Current[A]	20	26	29
Nominal AC Current[A]	18.8	24.6	28
Power Factor	0.9i ... 1 ... 0.9c	0.9i ... 1 ... 0.9c	0.9i ... 1 ... 0.9c
Harmonic Distortion(THD)	<2%	<2%	<2%
Power Consumption at Night[W]	<0.6	<0.6	<0.6
Power Consumption at Standby[W]	<12	<12	<12
Efficiency			
Max. Efficiency	98%	98.1%	98.2%
European Efficiency	97.5%	97.6%	97.8%
MPPT Efficiency	99.9%	99.9%	99.9%
Safety and Protection			
DC Surge Protection	Type III	Type III	Type III
DC Insulation Monitoring	Integrated	Integrated	Integrated
Earth Fault Protection	Integrated	Integrated	Integrated
Grid Monitoring	According to VDE 0126-1-1, RD1699, ENEL, G59, AS4777	According to VDE 0126-1-1, RD1699, ENEL, G59, AS4777	According to VDE 0126-1-1, RD1699, ENEL, G59, AS4777
Earth Fault Current Monitoring	According to VDE 0126-1-1, RD1699, ENEL, G59, AS4777	According to VDE 0126-1-1, RD1699, ENEL, G59, AS4777	According to VDE 0126-1-1, RD1699, ENEL, G59, AS4777
Electricity Fuse Protection	Integrated	Integrated	Integrated
DC Switch	Integrated	Integrated	Integrated
Normative Reference			
CE Compliant According to	IEC62109,EN61000-6-2,EN61000-6-3, EN61000-3-12,EN61000-3-11	IEC62109,EN61000-6-2,EN61000-6-3, EN61000-3-12,EN61000-3-11	IEC62109,EN61000-6-2,EN61000-6-3, EN61000-3-12,EN61000-3-11
Dimensions and Weight			
Dimension (WxHxD) [mm]	575x655x240	575x655x240	575x655x240
Weight[Kg]	44.5	45	45
Mounting Information	Wall Bracket	Wall Bracket	Wall Bracket
IP Protection Type	IP65 (EN 60529)	IP65 (EN 60529)	IP65 (EN 60529)
Environmental Limits			
Operating Temperature Range	-20°C to +60°C	-20°C to +60°C(>55°C derating)	-20°C to +60°C(>45°C derating)
Relative Humidity	0% to 98%(no condensation)	0% to 98%(no condensation)	0% to 98%(no condensation)
Maximum Altitude(above sea level)	0 to 2000m	0 to 2000m	0 to 2000m
Noise Level[dBA]	<45dB(with fan<50dB)	<45dB(with fan<50dB)	<45dB(with fan<50dB)
Communication			
Monitoring Connection	RS485, Ethernet	RS485, Ethernet	RS485, Ethernet
Software Upgrade	RS232(USB)	RS232(USB)	RS232(USB)
LCD Display	800 x 480 TFT Graphic Display	800 x 480 TFT Graphic Display	800 x 480 TFT Graphic Display
Standard Warranty	5 years(Optional 10~25 years)	5 years(Optional 10~25 years)	5 years(Optional 10~25 years)

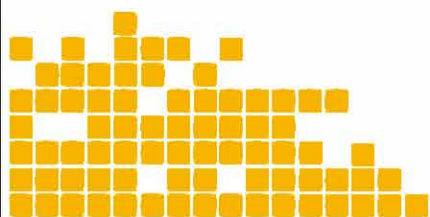
New Product-Hybrid Inverter



Omnikhyd-3k-TL/Omnikhyd-5k-TL

Features

- Transformerless design, high efficiency(Max.97.6%,Euro. 97.0%)
- Wide MPPT range 250-450Vdc, compatible with different module technologies
- Easy to wire, install and operate
- IP21 design, suitable for indoor installation
- 5 years standard warranty(10 years as option)



Omnik New Energy- Hybrid Inverter Technical Data

Omnikhyd -3k-TL/Omnikhyd-5k-TL

Type	Omnikhyd-3k-TL	Omnikhyd-5k-TL
DC input data		
Max. PV-generator power[W]	3300	5500
Max. DC voltage[V]		500
MPPT voltage range[V]		250 - 450
Turn off DC voltage[V]		120
Max. DC current[A]	13	2x14 per String
Nominal DC current[A]	12	2x12 per String
Number of DC connection	1	2
Number of MPP trackers	1	2 fully independent
Turn on power[W]	10	12
Battery Charge data		
Norminal DC voltage[V]		48
Norminal charge current[A]	25	50
Max charge current[A]	50	75
Suggested battery capacity[Ah]	200	310
Suggested stored energy [kWh]	9.6	15
Battery types		Gel, AGM, NiCd, L-Hon
Battery discharge data		
Norminal DC voltage[V]		48
Norminal discharge current[A]	62	110
Max discharge current[A]	69	200
Discharge time at power 100W[h]	96	150
Discharge time at power 1kW[h]	9.6	15
Discharge time at power 3kW[h]	3.2	5
Discharge time at power 5kW[h]	1.9	3
AC Output data (Grid output & Load output)		
AC Connector		Plug-in connector(Grid & Load separate)
Power connection		Single phase
Rated AC power[W]	3000	5000
Max. AC Power[W]	3300	5500
Output voltage range[V]		180-264 (limited by local anti-islanding regulations)
Grid frequency range		45-55 Hz (limited by local anti-islanding regulations)
Rated current[A]	13.0	21.7
Max. current[A]	14.3	23.9
Power factor		0.99 (>30% of Full Load)
Harmonic distortion (THD) at rated output		<2%
Power consumption at night[W]		<1
Power consumption at standby[W]		6
Efficiency		
PV to AC Max. efficiency		97.6%
PV to AC Euro efficiency (at 360VDC)		97.0%
PV to AC MPPT efficiency		99.9%
Battery to AC efficiency		94.5%
PV to Battery to AC efficiency		91.0%
AC to Battery to AC efficiency		91.0%
Safety equipment		
Internal overvoltage protection		Integrated
DC Insulation monitoring		Integrated
Earth fault protection		Integrated
Mains monitoring		VDE 0126-1-1, RD1663, DK5940, AS4777,G83/1,C10/11, EN60950-1
Earth fault current monitoring		VDE 0126-1-1, RD1663, DK5940, AS4777,G83/1,C10/11, EN60950-1
DC current monitoring		VDE 0126-1-1, RD1663, DK5940, AS4777,G83/1,C10/11, EN60950-1
Islanding protection		VDE 0126-1-1, RD1663, DK5940, AS4777,G83/1,C10/11, EN60950-1
Normative reference		
CE- compliant according to	EN 62109, EN 61000-6-1, EN 61000-6-3, EN 61000-6-2, EN 61000-6-4 EN61000-3-2, EN61000-3-3, EN61000-3-12, EN61000-3-11	
General data		
Dimensions (WxHxD) [mm]	415X420X170	
Weight [kg]	16	18
Housing	Iron housing for inside and outside installation	
Mounting information	build in cabinet	
Operating temperature range	-20°C to +60°C (up 50°C derating)	
Relative humidity	0% to 98%, no condensation	
Site altitude	Up to 2000m without derating above sea level	
IP protection type	IP 21 according to IEC 60529	
Isolation type	Transformerless	
Cooling concept	adjustable fan control	
Noise level	< 40 dBA	
LED display	3	
LCD display	Graphic display	
Computer Communication	RS232	
Standard warranty	5 years (optional 10~25 years)	



Omniksol-3k-TL2
Omniksol-4k-TL2
Omniksol-5k-TL2

ENEL2010 C10/11 RD1663 TF3.2.1

Features	Advantage	Benefit
Standard 10 years warranty, extensional up to 15 years	Longer life cycle	more stable and reliable
Built-in GPRS as option	Plug and play	No commissioning work to get real-time remote monitoring
Built-in Wifi as option	Free monitoring fee for data transmission	More convenient monitoring solution without any charge
External Inductor and built-in fan	Very lower internal temperature	Longer life cycle
Smaller and lighter, 5kW only 16kg	Easy transportation and installation	Saving storage and installation space
High performance DSP for algorithm control	Faster CPU speed	Higher inverter control accuracy
VDE-AR-N 4105 certification	Adjustable active and reactive power	Meet the latest certification and regulations
High performance topology design	Maximum conversion efficiency up to 97.8%, CEC up to 97.3%	Increase system payback ability
Dual MPPT design	More flexible system design	Fit in various installation environments
Multi-button touch interface	User friendly operation	Easy to operate



Omnik New Energy Solar Inverter Technical Data

Omniksol-3k-TL2/Omniksol-4k-TL2/Omniksol-5k-TL2

Type	Omniksol-3k-TL2	Omniksol-4k-TL2	Omniksol-5k-TL2
Input (DC)			
Max.PV-Generator Power [W]	3400	4600	5200
Max DC Voltage [V]		590	
Rated Voltage [V]		360	
MPPT DC Voltage Range [V]		120 - 500*	
Turn off DC Voltage [V]		90	
Max. DC Current [A]	12*2	16*2	18*2
Nominal DC Current [A]	10*2	13*2	14*2
Number of DC Connection		2	
Max. Input Power, each MPPT [W]	2000	2600	3000
DC-Connection		MC4	
Number of MPP trackers		2	
Turn on Power [W]		10	
Output (AC)			
Max. AC Power [VA]	3300	4400	5000
Nominal AC Power [W]	3000	4000	4600
Max. AC Current [A]	14.4	19.0	22.0
Nominal AC Current [A]	13.0	17.4	20.0
Grid Voltage Range		185V...276V (depending on regional settings)	
Rated Frequency		50Hz and 60Hz	
Power Factor		0.95 capacitive...0.95 inductive	
THD (AC Output current)		<2%	
AC Connector		Plug-in connector	
Power consumption			
Power Consumption at Night [W]		<1	
Power Consumption at Standby [W]		6	
Efficiency			
Max. Efficiency	97.8%	97.8%	97.8%
Euro Efficiency	97.1%	97.3%	97.3%
MPPT Efficiency		99.9%	
Safety and protection			
Internal Overvoltage Protection		Yes	
DC Insulation Monitoring		Yes	
Earth Fault Protection		Yes	
Grid Monitoring		According to VDE 0126-1-1, VDE-AR-N 4105, RD1669, ENEL2010, C10/11, G83/1, AS4777	
Earth Fault Current Monitoring		According to VDE 0126-1-1, VDE-AR-N 4105, RD1669, ENEL2010, C10/11, G83/1, AS4777	
DC Current Monitoring		According to VDE 0126-1-1, VDE-AR-N 4105, RD1669, ENEL2010, C10/11, G83/1, AS4777	
Islanding Protection		According to VDE 0126-1-1, VDE-AR-N 4105, RD1663, G83/1, AS4777	
Normative reference			
CE- Compliant According to		EN 62109, EN 61000-6-1, EN 61000-6-3, EN 61000-6-2, EN 61000-6-4 EN61000-3-2, EN61000-3-3, EN61000-3-12, EN61000-3-11	
Dimensions and weight			
Dimensions (WxHxD) [mm]		352x421x162.5	
Weight [kg]	16.5	16.5	16.5
Environmental limits			
IP Protection Type		IP 65 according to IEC 60529	
Operating Temperature Range		-20°C to +60°C, up to 45°C without derating	
Relative Humidity		0% to 98%, no condensation	
Maximum Altitude (above sea level) [m]		2000	
Noise Level [dBA]		< 40	
General data			
Isolation Type		Transformerless	
Cooling Concept		Convection	
Housing		Iron housing for inside and outside installation	
Mounting Information		Wall bracket	
LED Display		3	
LCD Display		Backlight, 20 x 4 Character LCD	
Data Logger		RS485, USB, Optional (Wi-Fi, GPRS)	
Data Communication Interfaces		USB	
Computer Communication		USB	
Standard Warranty		10 Years (Optional 15 years)	

*The V_{dc} should be at least 150V for the inverter to startup.
This can drop down till 120V for MPPT to function correctly.