Solar Grid Connected Inverter

Trannergy Co., Ltd.

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Excellent Features and Performance

- High efficiency across wide operation range
- Wide range of input DC and MPPT voltage
- Two MPPT intelligent identification
- Low turn-off DC voltage
- DC switch option

Built-in Protection Features

- IP65 protection against water and dust
- Working ambient temperature from -25℃ to 60℃
- Convection and fan cooling design
- Warranty available for 5, 10, 15, 20 years
- Reverse-polarity protection minimizes potential damage

Product Overview

High Reliability

- The Trannergy PV grid tied inverter offers applicable protection features including over and under voltage and frequency safeguards, anti-islanding protection, residual-current monitoring, isolation failure detection, DC component detection, overheat, earthing fault, and etc.

Friendly and easy to use

- Dedicated Monitoring Portal and Mobile App
- Wifi, Ethernet, GPRS, RS485, RS232/RS485/RS422/Ethernet/WiFi/GRPS communication interface
- Support Solar-Log, PVOutput

Solar Grid Connected Invert

About Trannergy

Trannergy, dedicated for developing, manufacturing and marketing of solar inverters, is one of the leading brands in the solar industry. With high efficiency, top quality, easy installations and convenient after-sales services, Trannergy's solar inverters have been running in tens of thousands of residential roofs and commercial PV plants all over the world, including UK, Australia, Germany, Denmark, Holland, Austria, Italy, France, Ukraine, Belgium, Mexico, Sri Lanka, East Asia etc. We are working closely with our global customers to offer them first-class products and services.

Reliable Products

Trannergy's solar inverters have a strong emphasis on quality and reliability. Our strict quality control system ensures compliance with ISO9001:2008, ISO14001:2004, and grid safety regulation of VDE AR-N-4105, VDE 0126-1-1+A1, G83/1, G83/2, G59/2, G59/3, EN50438, AS4777(SAA), CEI021, RD1663, IEC61727, UTE C15-712, MEA, PEA, etc. All key components are from brand name suppliers, and every inverter are tested thoroughly before shipment – Function test, burn-in test and grid-tied running test to ensure the long-term performance of our products.

Technology Innovation

Trannergy highly regards the continuous technology innovation as our core competitiveness. We have an experienced R&D team with profound knowledge of power electronics technology and development. We have a strong engineering team with hands on application experience for solar inverters. We focus on user experience with various communication options for our solar inverters. We are committed to developing high efficiency, high reliability and best value for money PV inverters to meet the growing and changing market demand.

Global Services

Trannergy has established a global network with warehouses and local after sales services in Europe, Australia and Asia. Wherever and whenever you are, the Trannergy team will always be of your service.

Products Liability Insurance

Trannergy Products are insured up to a maximum of $3,000,000.

Product Advantage

Residential Solar System

Commercial / Ground Solar System

SGN Series Single Phase 1MPPT	SGN Series Single Phase 2MPPT	TRB Series Three Phase	TRN Series Three Phase	TRM Series Three Phase
				
SGN 1300 TL	SGN 3400 TL	TRB 4000 TL	TRN 010KTL	TRM 030KTL
SGN 1800 TL	SGN 4000 TL	TRB 5000 TL	TRN 012KTL	TRM 033KTL
SGN 2300 TL	SGN 4600 TL	TRB 6000 TL	TRN 015KTL	
SGN 2700 TL	SGN 5400 TL	TRB 8000 TL	TRN 017KTL	
SGN 3000 TL		TRB 9000 TL	TRN 020KTL	
		TRB 010K TL	TRN 025KTL	

1kW 3kW 5kW 9kW 10kW 20kW 25kW 33kW

Customer Service

Trannergy, as an international trading company, has established a global network with warehouses and local after sales services in Europe, Australia and Asia. Wherever and whenever you are, the Trannergy team will always offer you the soonest response and most effective solutions.

With a well established after-sales service system, Trannergy's full line of products are insured up to a maximum of $3,000,000 liability insurance by CHUBB (The Chubb Group of Insurance Companies) .

- Global service network
- Local pre-sales and after-sales support
- 24 hours / 7 days response
- Professional service team
- Flexible customized service
- High insurance coverage

CHUBB
$3,000,000 liability insurance by CHUBB

Global Network

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Project Reference

Since its establishment in 2010, tens of thousands of Trannergy inverters have been successfully running in residential roofs and commercial PV plants of more than 40 countries, including UK, Australia, Germany, Denmark, Holland, Austria, Italy, France, Ukraine, Belgium, Mexico, Sri Lanka, East Asia etc.

We are committed to developing high efficiency, high reliability and best value for money PV inverters to meet the growing and changing market demand. We are working closely with our global customers to offer them first-class products and services.

Technical Data

SGN1300TL
SGN1800TL
SGN2300TL
SGN2700TL
SGN3000TL

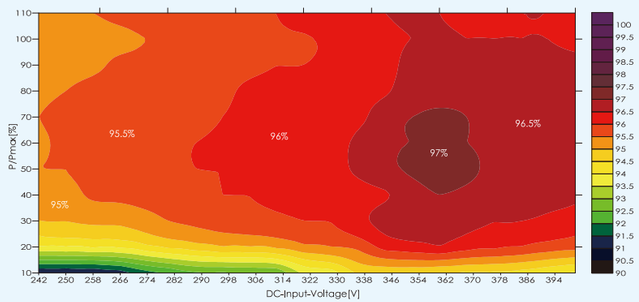
Features:

- Maximum efficiency 97.5%
- High efficiency across wide operation range
- Wide range of input DC and MPPT voltage
- Low turn-off DC voltage
- IP65 protection against water and dust
- DC switch option

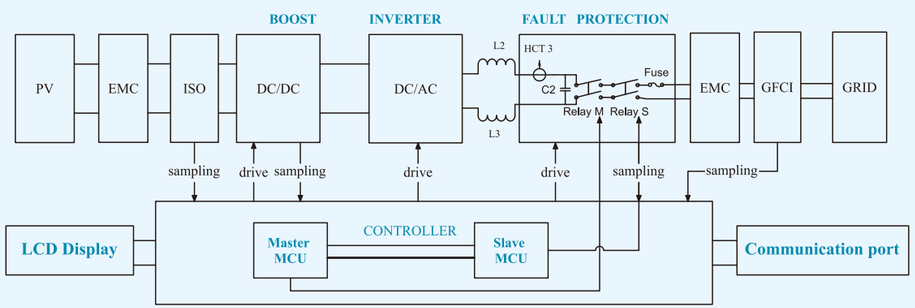
Certificates and Approvals:

CE, NB/T32004-2013(CQC), VDE AR-N-4105, VDE 0126-1-1+A1, G83/1, G83/2, G59/2, G59/3, EN50438, AS4777(SAA), CEI 0-21, RD1663, IEC61727, ROHS, REACH

Efficiency Curve (SGN1800TL):



Circuit Diagram:



SGN Series

SGN1300TL / SGN1800TL / SGN2300TL / SGN2700TL / SGN3000TL

Model	SGN1300TL	SGN1800TL	SGN2300TL	SGN2700TL	SGN3000TL
Rated AC power	1000 W	1500 W	2000 W	2500 W	2800 W
Maximum AC power	1100 VA	1650 VA	2200 VA	2500 VA	3080 VA
Input					
Maximum input power	1300 W	1800 W	2300 W	2700 W	3200 W
Maximum DC input voltage	500 Vdc	500 Vdc	500 Vdc	500 Vdc	500 Vdc
MPPT operating voltage range	50 - 450 Vdc	70 - 450 Vdc	70 - 450 Vdc	70 - 450 Vdc	70 - 450 Vdc
Startup voltage	50 Vdc	60 Vdc	60 Vdc	60 Vdc	60 Vdc
Initial feeding voltage	60 Vdc	90 Vdc	90 Vdc	90 Vdc	90 Vdc
MPPT number	1	1	1	1	1
Maximum input current	12 Adc	12 Adc	12 Adc	12 Adc	12 Adc
Number of DC inputs	1	1	1	1	1
DC switch	Optional	Optional	Optional	Optional	Optional
Output					
AC voltage	220 / 230 / 240 Vac				
AC phase	Single phase				
AC voltage range	180 - 270 V (May vary as per corresponding country's grid standard)				
Frequency range	50 Hz, 60Hz / -5 Hz ... +5 Hz				
Power factor	> 0.99 , 0.8 leading...0.8 lagging controllable				
Maximum current	6.0 Aac	8.4 Aac	11.3 Aac	12.8Aac	15.7 Aac
DC current injection	< 20 mA	< 20 mA	< 20 mA	< 20 mA	< 20 mA
Current Harmonic Distorsion THDi	< 1%	< 1%	< 1%	< 1%	< 1%
System					
Maximum efficiency	>97.1%	> 97.3%	> 97.3%	> 97.5%	> 97.5%
European efficiency	>96.5%	> 96.7%	> 96.7%	> 96.9%	> 96.9%
MPPT efficiency	>99.9%	> 99.9%	> 99.9%	> 99.9%	> 99.9%
Night power consumption	< 0.2 W	< 0.2 W	< 0.2 W	< 0.2 W	< 0.2 W
Topology	Transformerless				
Heat dissipation	Nature Convection				
Insulation monitoring	Yes				
DC reverse-polarity protection	Yes				
AC over current protection	Yes				
Anti-Islanding protection	Yes				
Residual current detection	Yes				
Thermal protection	Yes				
General Parameters					
Dimensions(W×H×D)	380 x 320 x 140 mm				
Weight	12 kg	13 kg	13 kg	13 kg	13 kg
Display	LCD 2 x 16 characters				
Function key	1	1	1	1	1
Data interface	RS232 / RS485/ RS422 / Ethernet / WiFi / GPRS / USB				
Ambient temperature range	-25 °C - +60 °C				
Operating altitude	< 2000m				
Protection degree	IP65				
Noise emision	< 30dB				
Warranty	Standard 5 years 10/15/20/25 years extension optional				
Certifications					
Safety/EMC	IEC62109-1, IEC62109-2, EN61000-6-2, EN61000-6-3, AS/NZS3100				
Grid code	NB/T32004-2013(CQC), VDE AR-N-4105, VDE 0126-1-1+A1, G83/1, G83/2, G59/2, G59/3, EN50438, AS4777(SAA), CEI 0-21, RD1663, IEC61727, UTE C15-712, MEA, PEA				

Technical Data

SGN3400TL
SGN4000TL
SGN4600TL
SGN5400TL

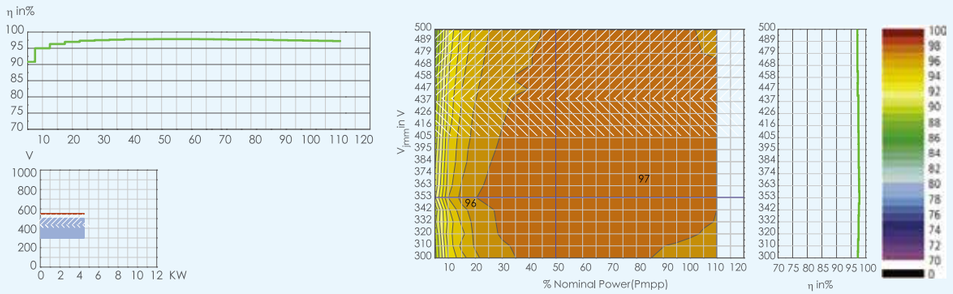
Features:

- Max efficiency 97.8%
- High efficiency across wide operation range
- Wide range of input DC and MPPT voltage
- Low turn-off DC voltage
- IP65 protection against water and dust
- Dual independent MPPT input
- DC switch option

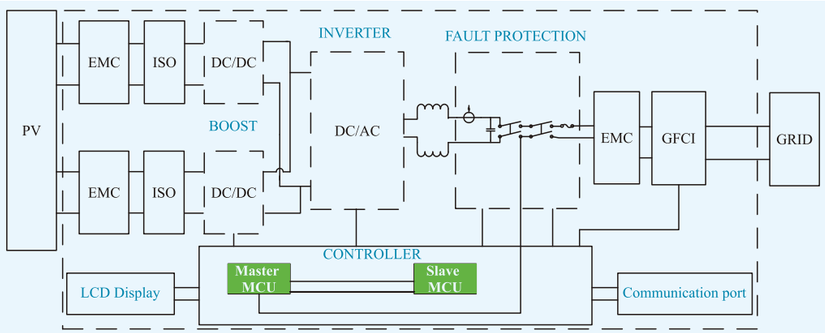
Certificates and Approvals:

CE, NB/T32004-2013(CQC), VDE AR-N-4105, VDE 0126-1-1+A1, G83/1, G83/2, G59/2, G59/3, EN50438, AS4777(SAA), CEI 0-21, RD1663, IEC61727, ROHS, REACH

Efficiency Curve From Photon Lab (SGN4600TL):



Circuit Diagram:



SGN Series

SGN3400TL / SGN4000TL / SGN4600TL / SGN5400TL

Model	SGN3400TL	SGN4000TL	SGN4600TL	SGN5400TL
Rated AC power	3000 W	3680 W	4000 W	4600 W
Maximum AC power	3300VA	3680 VA	4400 VA	5000 VA
Input				
Maximum input power	3400 W	4000 W	4600 W	5400 W
Maximum DC input voltage	580 Vdc	580 Vdc	580 Vdc	580 Vdc
MPPT operating voltage range	90 - 530 Vdc	90 - 530 Vdc	90 - 530 Vdc	90 - 530 Vdc
Startup voltage	90 Vdc	90 Vdc	90 Vdc	90 Vdc
Initial feeding voltage	110 Vdc	110 Vdc	110 Vdc	110 Vdc
MPPT number	2	2	2	2
Maximum input current	12 Adc / 12 Adc	12 Adc / 12 Adc	12 Adc / 12 Adc	12 Adc / 12 Adc
Number of DC inputs	1+1	1+1	1+1	1+1
DC switch	Optional	Optional	Optional	Optional
Output				
AC nominal voltage	220 / 230 / 240 Vac			
AC connection	Single phase			
AC voltage Range	180 - 270 V (May vary as per corresponding country's grid standard)			
Frequency range	50 Hz, 60Hz / -5 Hz ... +5 Hz			
Power factor	> 0.99 , 0.8 leading…0.8 lagging controllable			
Maximum output current	16.0 Aac	16.0 Aac	22.5 Aac	26.0 Aac
DC current injection	< 20 mA	< 20 mA	< 20 mA	< 20 mA
THDi	< 1%	< 1%	< 1%	< 1%
System				
Maximum efficiency	> 97.8%	> 97.8%	> 97.8%	> 97.8%
European efficiency	> 97.3%	> 97.3%	> 97.3%	> 97.3%
MPPT efficiency	> 99.9%	> 99.9%	> 99.9%	> 99.9%
Night power consumption	< 0.2 W	< 0.2 W	< 0.2 W	< 0.2 W
Topology	Transformerless			
Heat dissipation	Nature Convection			
Insulation monitoring	Yes			
DC reverse-polarity protection	Yes			
AC over current protection	Yes			
Anti-Islanding protection	Yes			
Residual current detection	Yes			
Thermal protection	Yes			
General Parameters				
Dimensions(W×H×D)	500 x 360 x 150 mm			
Weight	21 kg	21 kg	21 kg	21 kg
Display	LCD 2 x 16 Characters			
Function key	1	1	1	1
Data interface	RS232 / RS485/ RS422 / Ethernet / WiFi / GPRS / USB			
Ambient temperature range	-25 °C - +60 °C			
Operating altitude	< 2000 m			
Protection degree	IP65			
Noise emision	< 30dB			
Warranty	Standard 5 years 10/15/20/25 years extension optional			
Certifications				
Safety/EMC	IEC62109-1, IEC62109-2, EN61000-6-2, EN61000-6-3, AS/NZS3100			
Grid code	NB/T32004-2013(CQC), VDE AR-N-4105, VDE 0126-1-1+A1, G83/1, G83/2, G59/2, G59/3, EN50438, AS4777(SAA), CEI 0-21, RD1663, IEC61727, UTE C15-712, MEA, PEA			

Technical Data

TRB4000TL
TRB5000TL
TRB6000TL
TRB8000TL
TRB9000TL
TRB010KTL

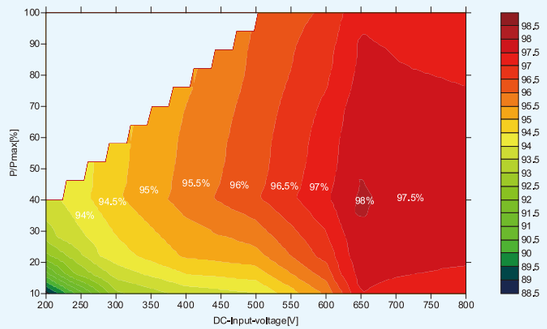
Features:

- Max efficiency 98.1%
- Film capacitor design to assure long lifecycle
- Fanless cooling design
- Low noise, extremely silent
- IP65 protection against water and dust
- Wide range of input DC and MPPT voltage

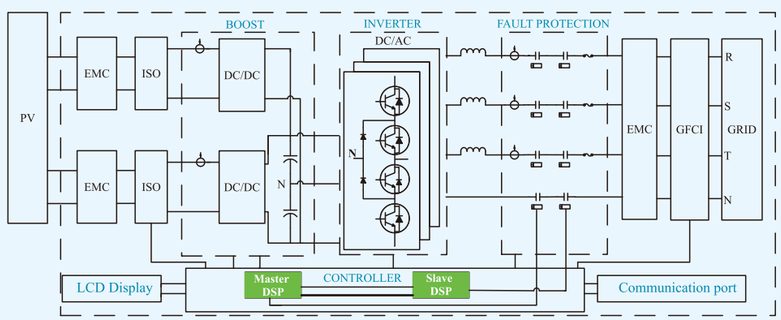
Certificates and Approvals:

CE, NB/T32004-2013(CQC), VDE AR-N-4105, VDE 0126-1-1+A1, G83/1, G83/2, G59/2, G59/3, EN50438, AS4777(SAA), CEI 0-21, RD1663, IEC61727, ROHS, REACH

Efficiency Curve (TRB6000TL):



Circuit Diagram:



TRB Series

TRB4000TL / TRB5000TL / TRB6000TL / TRB8000TL / TRB9000TL / TRB010KTL

Model	TRB4000TL	TRB5000TL	TRB6000TL	TRB8000TL	TRB9000TL	TRB010KTL
Rated AC power	4000 W	5000 W	6000 W	8000 W	9000 W	9600 W
Maximum AC power	4000 VA	5000 VA	6000 VA	8000 VA	9000 VA	10000 VA
Input						
Maximum input power	4250 W	5250 W	6300 W	8400 W	9450 W	10400 W
Maximum DC input voltage	1000 Vdc	1000 Vdc	1000 Vdc	1000 Vdc	1000 Vdc	1000 Vdc
MPPT operating voltage range	200 - 800 Vdc	200 - 800 Vdc	200 - 800 Vdc	200 - 800 Vdc	200 - 800 Vdc	200 - 800 Vdc
Startup voltage	180 Vdc	180 Vdc	180 Vdc	180 Vdc	180 Vdc	180 Vdc
Initial feeding voltage	210 Vdc	210 Vdc	210 Vdc	210 Vdc	210 Vdc	210 Vdc
MPPT number	2	2	2	2	2	2
Maximum input current	10 Adc / 10 Adc	10 Adc / 10 Adc	10 Adc / 10 Adc	10 Adc / 10 Adc	10 Adc / 10 Adc	10 Adc / 10 Adc
Number of DC inputs	1+1	1+1	1+1	1+1	1+1	1+1
DC switch	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Output						
AC nominal voltage	3N - PE 380/400 Vac					
AC connection	Three phase					
AC voltage Range	310 Vac - 470 Vac					
Frequency range	50 Hz, 60Hz / -5 Hz ... +5 Hz					
Power factor	> 0.99, 0.9 leading...0.9 lagging controllable					
Maximum output current	7.0 Aac	8.5 Aac	10 Aac	12.5 Aac	14.0 Aac	14.6 Aac
DC current injection	< 20 mA	< 20 mA	< 20 mA	< 20 mA	< 20 mA	< 20 mA
THDi	< 3%	< 3%	< 3%	< 3%	< 3%	< 3%
System						
Maximum efficiency	> 98.1%	> 98.1%	> 98.1%	> 98.1%	> 98.1%	> 98.2%
European efficiency	> 97.4%	> 97.4%	> 97.4%	> 97.6%	> 97.6%	> 97.6%
MPPT efficiency	> 99.9%	> 99.9%	> 99.9%	> 99.9%	> 99.9%	> 99.9%
Night power consumption	< 0.2 W	< 0.2 W	< 0.2 W	< 0.2 W	< 0.2 W	< 0.2 W
Topology	Transformerless					
Heat dissipation	Nature Convection					
Insulation monitoring	Yes					
DC reverse-polarity protection	Yes					
AC over current protection	Yes					
Anti-Islanding protection	Yes					
Residual current detection	Yes					
Thermal protection	Yes					
General Parameters						
Dimensions(W×H×D)	540 x 190 x 470 mm					
Weight	23 kg	23 kg	23 kg	24 kg	24 kg	24 kg
Display	3.5 inch LCD					
Function key	4					
Data interface	RS232 / RS485 / RS422 / Ethernet / WiFi / GPRS / USB					
Ambient temperature range	-25 °C - +60 °C					
Operating altitude	< 2000m					
Protection degree	IP65					
Noise emision	< 35dB					
Warranty	Standard 5 years 10/15/20/25 years extension optional					
Certifications						
Safety/EMC	IEC62109-1, IEC62109-2, EN61000-6-2, EN61000-6-3, AS/NZS3100					
Grid code	NB/T32004-2013(CQC), VDE AR-N-4105, VDE 0126-1-1+A1, G83/1, G83/2, G59/2, G59/3, EN50438, AS4777(SAA), CEI 0-21, RD1663, IEC61727, UTE C15-712, MEA, PEA					

Technical Data

TRN010KTL
TRN012KTL
TRN015KTL
TRN017KTL
TRN020KTL
TRN025KTL

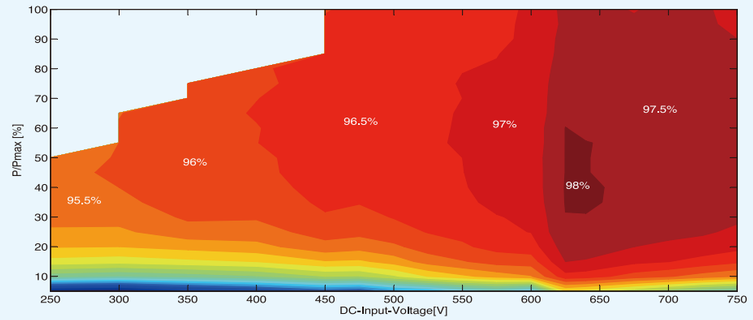
Features:

- Max efficiency 98.2%
- High efficiency across wide operation range
- Wide range of input DC and MPPT voltage
- Dual independent MPPT input
- Integrated DC switch

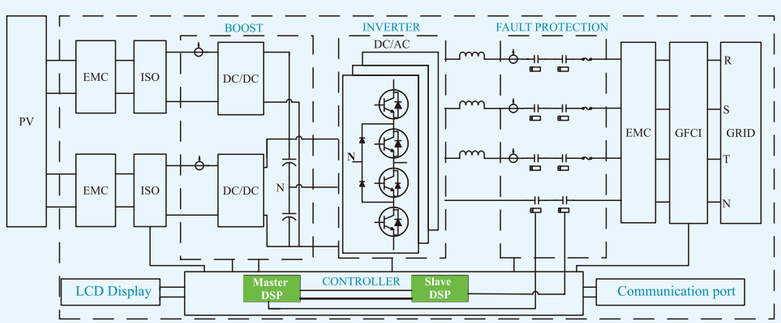
Certificates and Approvals:

CE, NB/T32004-2013(CQC), VDE AR-N-4105, VDE 0126-1-1+A1, G83/1, G83/2, G59/2, G59/3, EN50438, AS4777(SAA), CEI 0-21, RD1663, IEC61727, ROHS, REACH

Efficiency Curve (TRN017KTL):



Circuit Diagram:



TRN Series

TRN010KTL / TRN012KTL / TRN015KTL / TRN017KTL / TRN020KTL / TRN025KTL

Model	TRN010KTL	TRN012KTL	TRN015KTL	TRN017KTL	TRN020KTL	TRN025KTL
Rated AC power	10000 W	12000 W	15000 W	17000 W	20000 W	25000 W
Maximum AC power	10000 VA	12000 VA	15000 VA	17000 VA	20000 VA	25000 VA
Input						
Maximum input power	11000 W	13000 W	16000 W	18200 W	21500 W	27000 W
Maximum DC input voltage	1000 Vdc	1000 Vdc	1000 Vdc	1000 Vdc	1000 Vdc	1000 Vdc
MPPT operating voltage range	250 - 800 Vdc	250 - 800 Vdc	250 - 800 Vdc	250 - 800 Vdc	250 - 800 Vdc	250 - 800 Vdc
Startup voltage	200 Vdc	200 Vdc	200 Vdc	200 Vdc	200 Vdc	200 Vdc
Initial feeding voltage	300 Vdc	300 Vdc	300 Vdc	300 Vdc	300 Vdc	300 Vdc
MPPT number	2	2	2	2	2	2
Maximum input current	10 Adc / 10 Adc	10 Adc / 20 Adc	20 Adc / 20 Adc	20 Adc / 20 Adc	20 Adc / 20 Adc	20 Adc /30 Adc
Number of DC inputs	1+1	1+2	2+2	2+2	2+2	2+3
DC switch	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Output						
AC nominal voltage	3N - PE 380/400 Vac					
AC connection	Three phase					
AC voltage Range	310 Vac - 470 Vac					
Frequency range	50 Hz, 60Hz / -5 Hz ... +5 Hz					
Power factor	> 0.99, 0.8 leading…0.8 lagging controllable					
Maximum output current	15.5 Aac	18.5 Aac	23.0 Aac	26.0 Aac	30.5 Aac	38.0 Aac
DC current injection	< 1‰	< 1‰	< 1‰	< 1‰	< 1‰	< 1‰
THDi	< 3%	< 3%	< 3%	< 3%	< 3%	< 3%
System						
Maximum efficiency	> 98.1%	> 98.1%	> 98.2%	> 98.2%	> 98.3%	> 98.3%
European efficiency	> 97.6%	> 97.6%	> 97.7%	> 97.7%	> 97.8%	> 97.8%
MPPT efficiency	> 99.9%	> 99.9%	> 99.9%	> 99.9%	> 99.9%	> 99.9%
Night power consumption/Night display	< 0.2 W/Optional	< 0.2 W/Optional	< 0.2 W/Optional	< 0.2 W/Optional	< 0.2 W/Optional	< 0.2 W/Optional
Topology	Transformerless					
Heat dissipation	Smart Fan cooling					
Insulation monitoring	Yes					
DC reverse-polarity protection	Yes					
AC over current protection	Yes					
Anti-Islanding protection	Yes					
Residual current detection	Yes					
Thermal protection	Yes					
General Parameters						
Dimensions(W×H×D)	520 x 180 x 700 mm					
Weight	35 kg	35 kg	35 kg	35 kg	35 kg	35 kg
Display	3.5 inch LCD					
Function key	4					
Data interface	RS232 / RS485 / RS422 / Ethernet / WiFi / GPRS / USB					
Ambient temperature range	-25°C - +60 °C					
Operating altitude	< 2000m					
Protection degree	IP65					
Noise emision	< 45dB					
Warranty	Standard 5 years 10/15/20/25 years extension optional					
Certifications						
Safety/EMC	IEC62109-1, IEC62109-2, EN61000-6-2, EN61000-6-3, AS/NZS3100					
Grid code	NB/T32004-2013(CQC), VDE AR-N-4105, VDE 0126-1-1+A1, G83/1, G83/2, G59/2, G59/3, EN50438, AS4777(SAA), CEI 0-21, RD1663, IEC61727, UTE C15-712, MEA, PEA					

Technical Data

TRM030KTL

TRM033KTL

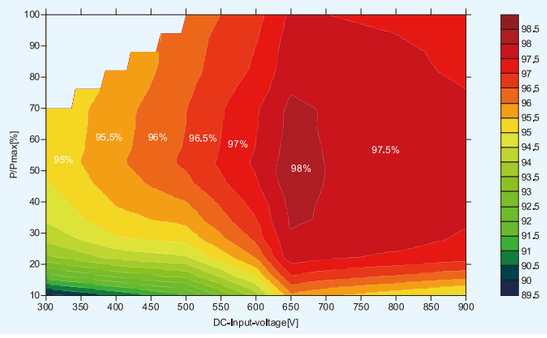
Features:

- Max efficiency 98.3%
- Internal DC switch, fuse, and surge protection
- Small footprint, easy installation
- Dual MPPT
- Reactive / Active power control
- Able to display at night

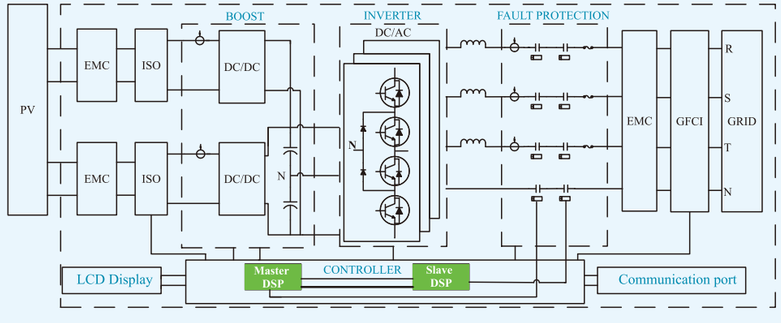
Certificates and Approvals:

CE, NB/T32004-2013(CQC), VDE AR-N-4105, VDE 0126-1-1+A1, G83/1, G83/2, G59/2, G59/3, EN50438, AS4777(SAA), CEI 0-21, RD1663, IEC61727, ROHS, REACH

Efficiency Curve (TRM030KTL):



Circuit Diagram:



TRM Series

TRM030KTL / TRM033KTL

Model	TRM030KTL	TRM033KTL
Rated AC power	30000 W	33000 W
Maximum AC power	30000 VA	33000 VA
Input		
Maximum input power	32000 W	35000 W
Maximum DC input voltage	1000 Vdc	1000 Vdc
MPPT operating voltage range	250 - 800 Vdc	250 - 800 Vdc
Startup voltage	200 Vdc	200 Vdc
Initial feeding voltage	300 Vdc	300 Vdc
MPPT number	2	2
Maximum input current	30 Adc / 30 Adc	30 Adc / 30 Adc
Number of DC inputs	3+3	3+3
DC switch	Integrated	Integrated
Output		
AC nominal voltage	3N - PE 400 Vac	
AC connection	Three phase	
AC voltage Range	310 Vac - 470 Vac	
Frequency range	50 Hz, 60Hz / -5 Hz ... +5 Hz	
Power factor	> 0.99, 0.8 leading...0.8 lagging controllable	
Maximum output current	45.5 Aac	48 Aac
DC current injection	< 2.5‰	< 2.5‰
THDi	< 3%	< 3%
System		
Maximum efficiency	> 98.3%	> 98.3%
European efficiency	> 97.9%	> 97.9%
MPPT efficiency	> 99.5%	> 99.5%
Night power consumption/Night display	< 0.2 W/Optional	< 0.2 W/Optional
Topology	Transformerless	
Heat dissipation	Smart Fan cooling	
Insulation monitoring	Yes	
DC reverse-polarity protection	Yes	
AC over current protection	Yes	
Anti-Islanding protection	Yes	
Residual current detection	Yes	
Thermal protection	Yes	
General Parameters		
Dimensions(W×H×D)	590 x 230 x 780 mm	
Weight	47 kg	47 kg
Display	3.5 inch LCD	
Function key	4	
Data interface	RS232 / RS485/ RS422 / Ethernet / WiFi / GPRS / USB	
Ambient temperature range	-25°C - +60 °C	
Operating altitude	< 2000m	
Protection degree	IP65	
Noise emision	< 45dB(<55dB with Fan)	
Warranty	Standard 5 years 10/15/20/25 years extension optional	
Certifications		
Safety/EMC	IEC62109-1, IEC62109-2, EN61000-6-2, EN61000-6-3, AS/NZS3100	
Grid code	NB/T32004-2013(CQC), VDE AR-N-4105, VDE 0126-1-1+A1, G83/1, G83/2, G59/2, G59/3, EN50438, AS4777(SAA), CEI 0-21, RD1663, IEC61727, UTE C15-712, MEA, PEA	

Trannergy Monitoring Portal

As shown below, Trannergy inverter could be monitored remotely by Trannergy-log (webpage portal) , and it's mobile app, after installed Trannector Card (Plug- in module) or connected to Trannector Box (External box).

1.Trannergy - Log (Webpage Portal)

Trannergy - Log is a free website platform that developed by Trannergy for inverter monitoring. You can login to see your data any place, any time via a PC.

Features:

- Monitoring @ log.trannergy.com
- Multi-level account management
- Automatic alarms configurable
- Data and event reports sent via email

2.Trannergy - Log App (For mobile / pad)

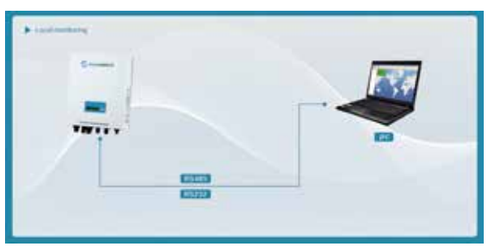
Trannergy - Log App is a free application for inverter monitoring with IOS/Android system mobiles or pad, etc.

Features:

- IOS (iphone, ipad) / Android supported
- Real-time and historical data displayed
- Daily / monthly / annual / overall data
- CO2 savings, weather and sensor data displayed
- Local mode enables direct access to system data via WiFi
- Able to support PVOutput.org

3.Trannergy - PVCS (Monitoring software)

PVCS is a PC software that allow customer to monitor Trannergy inverter locally.
When connecting a PC to the inverter via RS485 or RS232, the user can also monitor the inverter's operation data via software PVCS.



Features:

- Energy and power monitoring via PC
- Fault log or monitor funtion
- Monitoring 32 inverters via RS485 connection
- Able to control the inverter

4.Hardware options:

Trannergy developed varies hardware (Trannector Series) to realize the connection from Trannergy inverter to internet to support Trannergy - Log.

1)Trannector Card (Plug - in Module)

Features:

- Plug-in hardware design
- Out door application (IP65)
- Cost efficient
- Easy installation and configuration
- Able to refurnish existing inverters

Options:

1. Trannector Card - WIFI
2. Trannector Card - GPRS
3. Trannector Card - Ethernet
4. Trannector Card - RS485
5. Trannector Card - RS232
6. Trannector Card - USB

2)Trannector Box (External Box)

Features:

- Connect to inverter groups via RS485
- Support up to 32 inverters
- Storage of over 25 years
- Easy installation and configuration
- Able to refurnish existing inverters

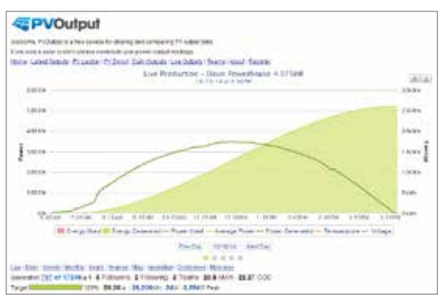
Options:

1. Trannector Box - WIFI / Ethernet
2. Trannector Box - GPRS

5.Compatible products of partners:

1)Support Solar-Log

All Trannergy inverters support Solar-Log via RS485 Interface. Support Power Management function and auto configuration. Solar-Log is a monitoring hardware and software solution popular in Germany. Especially support Power Management function for VDE4105 and EEG2012 standard.



2)Support PVOutput.org

Trannergy-Log could upload all data to PVOutput with easy access. PVOutput.org (http://www.pvoutput.org/) is a free website platform for sharing, comparing and monitoring live solar photovoltaic (PV) and energy consumption data.