MAKE IN INDIA

# What a SOLAR INVERTER aspires to be ...

www.thea-energy.com

Empowering tomorrow with new energy

SE-TH01 2.0TL1 | SE-TH01 3.0TL1 | SE-TH01 3.6TL1 | SE-TH01 4.0TL1 | SE-TH01 5.0TL1 | SE-TH01 6.0TL1

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| Model | 2.0TL1 | 3.0TL1 | 3.6TL1 | 4.0TL1 | 5.0TL1 | 6.0TL1 |
|---|---|---|---|---|---|---|
| **Efficiency** | | | | | | |
| **Max. Efficiency** | 97.8% | 97.8% | 97.8% | 98.2% | 98.2% | 98.2% |
| **European Efficiency** | 96.5% | 96.8% | 96.8% | 97.0% | 97.3% | 97.4% |
| **Input (PV)** | | | | | | |
| **Max. Input Voltage** | 550V | | | | | |
| **Max. PV Configuration** | 150% | | | | | |
| **Rated Input Voltage** | 360V | | | | | |
| **Max. Input Current** | 15A | | | 30A (2*15A) | | |
| **Max.Short Circuit Current** | 20A | | | 40A (2*20A) | | |
| **Start Input Voltage** | 70V | | | 90V | | |
| **MPPT Operating Voltage Range** | 70V-540V | | | | | |
| **Max. Number of PV Strings** | 1 | | | 2(1/1) | | |
| **No. of MPPTS** | 1 | | | 2 | | |
| Output (Grid) | | | | | | |
| **Rated AC Active Power** | 2,000W | 3,000W | 3,600W | 4,000W | 5,000W | 6,000W |
| **Max. AC Apparent Power** | 2,200VA | 3,300VA | 3,600VA | 4,400VA | 5,500VA | 6,000VA |
| **Max. AC Output Current** | 10A | 15A | 16A | 20A | 25A | 27.3A |
| **Rated AC Voltage** | 220V/230V, L+N+PE | | | | | |
| **AC Voltage Range①** | 160V-300V (Adjustable) | | | | | |
| **Rated Grid Frequency** | 50Hz/60Hz | | | | | |
| **Grid Frequency Range②** | 45Hz-55Hz/55Hz-65Hz (Adjustable) | | | | | |
| **THDI** | <3%@Rated Power | | | | | |
| **DC Current Injection** | <0.5%@Rated Current | | | | | |
| **Power Factor** | >0.99 Rated power (Adjustable 0.8 LD-0.8 LG) | | | | | |
| Protection | | | | | | |
| **DC Switch** | Support | | | | | |
| **Anti-Islanding Protection** | Support | | | | | |
| **AC Overcurrent Protection** | Support | | | | | |
| **AC Short Circuit Protection** | Support | | | | | |
| **DC Reverse Connection** | Support | | | | | |
| **Surge Arrester** | DC Type III/AC Type III | | | | | |
| **Insulation Detection** | Support | | | | | |
| **Leakage Current Protection** | Support | | | | | |
| General | | | | | | |
| **Topology** | Transformerless | | | | | |
| **IP Rating** | IP65 | | | | | |
| **Night Self Consumption** | <1W | | | | | |
| **Cooling** | Natural cooling | | | | | |
| **Operating Temperature Range** | -25°C to 60°C | | | | | |
| **Relative Humidity Range** | 0-100% | | | | | |
| **Max. Operating Altitude** | 4000m | | | | | |
| **Dimensions (W*H*D)** | 320mm*344mm*137mm | | | 350mm*347mm*137mm | | |
| **Weight** | 6.5Kg | | | 8.5Kg | | |
| HMI & COM | | | | | | |
| **Display** | Wireless & App + LED, LCD (Optional) | | | | | |
| **Communication** | Optional: RS485/WiFi/GPRS/LAN | | | | | |
| **Certification** | | | | | | |
| **Safety** | IEC62109, IEC61727, IEC62116 | | | | | |
| **Grid Code** | IEC61683, IEC60068, IEC61000 | | | | | |
| **BIS (R-51002593)** | IS 16221 (Part 2): 2015, IS 16169: 2014 | | | | | |

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**SE-TH01 5.0TL3** | **SE-TH01 6.0TL3** | **SE-TH01 8.0TL3** | **SE-TH01 10.0TL3**

**SE-TH01 15.0TL3** | **SE-TH01 20.0TL3** | **SE-TH01 25.0TL3** | **SE-TH01 30.0TL3**

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| Model | 5.0TL3 | 6.0TL3 | 8.0TL3 | 10.0TL3 | 15.0TL3 | P10.0TL3 | P15.0TL3 | 20.0TL3 | 25.0TL3 | 30.0TL3 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Efficiency** | | | | | | | | | | |
| **Max. Efficiency** | 98.2% | | | | 98.3% | 98.4% | | | | |
| **European Efficiency** | 97.8% | | | | | | 98.0% | | | |
| **Input (PV)** | | | | | | | | | | |
| **Max. Input Voltage** | 1100V | | | | | | | | | |
| **Max. PV Configuration** | 150% | | | | | | | | | |
| **Rated Input Voltage** | 620V | | | | | | | | | |
| **Max. Input Current** | 2*15A | | | | 15A+30A | | 2*30A | | | 40A/30A |
| **Max.Short Circuit Current** | 2*20A | | | | 20A+40A | | 2*40A | | | 50A/37.5A |
| **Start Input Voltage** | 180V | | | | | | | | | |
| **MPPT Operating Voltage Range** | 160V-1000V | | | | | | | | | |
| **Max. Number of PV Strings** | 2(1/1) | | | | 3(1/2) | | 4(2/2) | | | |
| **No. of MPPTs** | 2 | | | | | | | | | |
| **Output (Grid)** | | | | | | | | | | |
| **Rated AC Active Power** | 5,000W | 6,000W | 8,000W | 10,000W | 15,000W | 10,000W | 15,000W | 20,000W | 25,000W | 30,000W |
| **Max. AC Apparent Power** | 5,500VA | 6,600VA | 8,800VA | 11,200VA | 16,700VA | 11,000VA | 16,500VA | 22,000VA | 27,500VA | 33,000VA |
| **Max. AC Output Current** | 3*8.4A | 3*10.1A | 3*13.4A | 3*17A | 3*25.3A | 3*16.8A | 3*25.3A | 3*33.7A | 3*39.8A | 3*50.2A |
| **Rated AC Voltage** | 380V / 400V / 415V, 3P+N+PE | | | | | | | | | |
| **AC Voltage Range①** | 260V-510V (Adjustable) | | | | | | | | | |
| **Rated Grid Frequency** | 50Hz / 60Hz | | | | | | | | | |
| **Grid Frequency Range②** | 45Hz-55Hz / 55Hz-65Hz (Adjustable) | | | | | | | | | |
| **THDI** | <3%@Rated Power | | | | | | | | | |
| **DC Current Injection** | <0.5%@Rated Current | | | | | | | | | |
| **Power Factor** | >0.99 Rated power (Adjustable 0.8 LD - 0.8 LG) | | | | | | | | | |
| **Protection** | | | | | | | | | | |
| **DC Switch** | Support | | | | | | | | | |
| **Anti-Islanding Protection** | Support | | | | | | | | | |
| **AC Overcurrent Protection** | Support | | | | | | | | | |
| **AC Short Circuit Protection** | Support | | | | | | | | | |
| **DC Reverse Connection** | Support | | | | | | | | | |
| **Surge Arrester** | AC Type II / DC Type II | | | | | | | | | |
| **Insulation Detection** | Support | | | | | | | | | |
| **Leakage Current Protection** | Support | | | | | | | | | |
| **General** | | | | | | | | | | |
| **Topology** | Transformerless | | | | | | | | | |
| **IP Rating** | IP66 | | | | | | | | | |
| **Night Self Consumption** | <1W | | | | | | | | | |
| **Cooling** | Natural cooling | | | | | | Fan cooling | | | |
| **Operating Temperature Range** | -25°C to 60°C | | | | | | | | | |
| **Relative Humidity Range** | 0-100% | | | | | | | | | |
| **Max. Operating Altitude** | 4000m | | | | | | | | | |
| **Dimensions (W*H*D)** | 398mm*460mm*190mm | | | | | | | | | |
| **Weight** | 16.8Kg | | | | 18.7Kg | | 20.3Kg | | | |
| **HMI & COM** | | | | | | | | | | |
| **Display** | Wireless & App + LED, LCD (Optional) | | | | | | | | | |
| **Communication** | RS485, Optional: WiFi / GPRS / 4G / LAN | | | | | | | | | |
| **Certification** | | | | | | | | | | |
| **Safety** | IEC62109, IEC61727, IEC62116 | | | | | | | | | |
| **Grid Code** | IEC61683, IEC60068, IEC61000 | | | | | | | | | |
| **BIS (R-51002593)** | IS 16221 (Part 2) : 2015, IS 16169 : 2014 | | | | | | | | | |

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**SE-TH 01 40.0TL3** | **SE-TH 01 50.0TL3** | **SE-TH 01 60.0TL3**

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| Model | 30.0TL3 | 40.0TL3 | 50.0TL3 | 60.0TL3 |
|---|---|---|---|---|
| **Efficiency** | | | | |
| **Max Efficiency** | 98.5% | | | 98.6% |
| **European Efficiency** | 98.0% | | 97.9% | 98.0% |
| **Input (PV)** | | | | |
| **Max. Input Voltage** | 1,100V | | | |
| **Max. PV Configuration (STC)** | 150% | | | |
| **Rated Input Voltage** | 620V | | | |
| **Max. Input Current** | 40A + 2*32A | | 40A + 3*32A | |
| **Max. Short Circuit Current** | 50A + 2*45A | | 50A + 3*45A | |
| **Start Input Voltage** | 200V | | | |
| **MPPT Operating Voltage Range** | 180V-1000V | | | |
| **Max. Number of PV Strings** | 2/2/2 | | 2/2/2/2 | |
| **No. of MPPTs** | 3 | | 4 | |
| **Output (Grid)** | | | | |
| **Rated AC Active Power** | 30,000W | 40,000W | 50,000W | 60,000W |
| **Max. AC Apparent Power** | 33,400VA | 44,500VA | 55,600VA | 66,700VA |
| **Max. AC Output Current** | 3*51A | 3*67.5A | 3*84.3A | 3*92A |
| **Rated AC Voltage** | 380V / 400V / 415V, 3P+N+PE or 3P+PE | | | |
| **AC Voltage Range①** | 320V-520V (Adjustable) | | | |
| **Rated Grid Frequency** | 50Hz / 60Hz | | | |
| **Grid Frequency Range②** | 45Hz-55Hz / 55Hz-65Hz (Adjustable) | | | |
| **THDI** | <3%@Rated Power | | | |
| **DC Current Injection** | <0.5%@Rated Current | | | |
| **Power Factor** | >0.99 Rated power (Adjustable 0.8 LD - 0.8 LG) | | | |
| **Protection** | | | | |
| **DC Switch** | Support | | | |
| **Anti-Islanding Protection** | Support | | | |
| **AC Overcurrent Protection** | Support | | | |
| **AC Short Circuit Protection** | Support | | | |
| **DC Reverse Connection** | Support | | | |
| **Surge Arrester** | AC Type II / DC Type II | | | |
| **Insulation Resistance Detection** | Support | | | |
| **Leakage Current Protection** | Support | | | |
| **General** | | | | |
| **Topology** | Transformerless | | | |
| **IP Rating** | IP66 | | | |
| **Night Self Consumption** | <1W (Standard) | | | |
| **Cooling** | Natural Cooling | Fan Cooling | | |
| **Operating Temperature Range** | -25°C to 60°C | | | |
| **Relative Humidity Range** | 0-100% | | | |
| **Max. Operating Altitude** | 4000m | | | |
| **Dimensions (W*H*D)** | 635mm*530mm*224mm | | | 635mm*530mm*233mm |
| **Weight** | 36Kg | 40Kg | 42Kg | |
| **HMI & COM** | | | | |
| **Display** | Wireless & App + LED, LCD (Optional) | | | |
| **Communication** | RS485, Optional: WiFi / GPRS | | | |
| **Certification** | | | | |
| **Safety** | IEC62109, IEC61727, IEC62116 | | | |
| **Grid Code** | IEC61683, IEC60068, IEC61000 | | | |
| **BIS (R-51002593)** | IS 16221 (Part 2) : 2015, IS 16169 : 2014 | | | |

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**SE-TH 110.0TL3 kW** | **SE-TH 125.0HTL3 kW**

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| Model | 110.0TL3 | 125.0HTL3 |
|---|---|---|
| **Efficiency** | | |
| Max. Efficiency | 98.6% | 98.8% |
| European Efficiency | 98.2% | 98.4% |
| **Input (PV)** | | |
| Max. Input Voltage | 1100V | |
| Max. PV Configuration | 150% | |
| Rated Input Voltage | 620V | |
| Max. Input Current | 3*40A + 6*32A | |
| Max.Short Circuit Current | 3*50A + 6*45A | |
| Start /Min. Operating Voltage | 250V/200V | |
| MPPT Operating Voltage Range | 200V-1000V | |
| Max. Number of PV Strings | 18(9*2) | |
| No. of MPPTs | 9 | |
| **Output (Grid)** | | |
| Rated AC Active Power | 110,000W | 125,000W |
| Max. AC Apparent Power | 123,000VA | 139,000VA |
| Max. AC Output Current | 3*187A | 3*167.3A |
| Rated AC Voltage | 400V, 3P+N+PE | |
| AC Voltage Range① | 187V-300V / 320V-520V | |
| Rated Grid Frequency | 50Hz / 60Hz | |
| Grid Frequency Range② | 45Hz-55Hz / 55Hz-65Hz (Adjustable) | |
| THDI | <3%@Rated Power | |
| DC Current Injection | <0.5%@Rated Current | |
| Power Factor | >0.99 Rated power (Adjustable 0.8 LD - 0.8 LG) | |
| **Protection** | | |
| DC Switch | Support | |
| Anti-Islanding Protection | Support | |
| AC Overcurrent Protection | Support | |
| AC Short Circuit Protection | Support | |
| DC Reverse Connection | Support | |
| Surge Arrester | DC Type II / AC Type II | |
| Insulation Detection | Support | |
| PV String Monitoring | Support | |
| Leakage Current Protection | Support | |
| **General** | | |
| Topology | Transformerless | |
| IP Rating | IP66 | |
| Night Self Consumption | <5W | |
| Cooling | Fan cooling | |
| Operating Temperature Range | -25°C to 60°C | |
| Relative Humidity Range | 0-100% | |
| Max. Operating Altitude | 4000m | |
| Dimensions (W*H*D) | 936mm*678mm*365mm | |
| Weight | 92Kg | |
| **HMI & COM** | | |
| Display | Wireless & App + LED, LCD (Optional) | |
| Communication | RS485, Optional: WiFi / GPRS / LAN | |
| **Certification** | | |
| Safety | IEC62109, IEC61727, IEC62116 | |
| Grid Code | IEC61683, IEC60068, IEC61000 | |

# Thea

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**GPRS Communication Module SEGPRS-R**

- **WIFI COMMUNICATION MODULE SE WIFI-R**
- **GPRS COMMUNICATION MODULE SE GPRS-R**
- **DATA LOGGER V1000+**
- **4G COMMUNICATION MODULE SE 4G-R**

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# GPRS Communication Module SEGPRS-R

- Plug and play, quick and convenient
- Mobile internet monitoring, best suited for rural and remote areas

| Model | SEGPRS-R |
|---|---|
| Connection | TTL serial |
| **INPUT(DC)** | |
| Standard | GSM/GPRS |
| Distances | —— |
| Setting | Plug and Play |
| **Input** | |
| Input Voltage | DCSV |
| Static Power Consumption | <2W |
| **General** | |
| Operating Temperature | -2s$^{0}$c~60°c |
| Humidity | 10%~900,1) |
| Protection | IP65 |
| Dimension (L •w•H) | 71.4mm•11mm*38mm |
| **Certification** | |
| Safety | FCC, CE, ROHS |

# Communication Accessories

- WIFI COMMUNICATION MODULE SE WIFI-R
- GPRS COMMUNICATION MODULE SE GPRS-R
- DATA LOGGER V1000+
- 4G COMMUNICATION MODULE SE 4G-R

| Model | SEWIFI-R | SEGPRS-R | V1000+ | SE 4G-R |
|---|---|---|---|---|
| Standard | TTL | TTL | Inverter: RS485 Router: RJ45 | TTL |
| Distances | 802.11 b/g/n | GSM/GPRS | 40pcs | FDD/TDD - LTE |
| Transmission maximum distance | 100m Unobstructed environment | | 1200m | |
| Setting | APP/WEB | Plug and Play | LED | Plug and Play |
| **Input** | | | | |
| Input Voltage | DC 5V | DC 5V | Input: AC 90V-250V 50/60Hz Output: DC 5V | DC 5V |
| Static Power Consumption | <1.6W | <2W | 1A | <3.5W |
| **General** | | | | |
| Operating Temperature | -25℃~60℃ | -25℃~60℃ | -25℃~55℃ | -25℃~60℃ |
| Humidity | 0%~100% relative humidity, no condensation | 0%~100% relative humidity, no condensation | 10%~95% relative humidity, no condensation | 0%~90% relative humidity, no condensation |
| Protection | IP65 | IP65 | IP20 | IP65 |
| Dimension (L •w•H) | 71.4mm*71mm*38mm | 71.4mm*71mm*38mm | 118mm*78mm*29mm | 122.8mm*79mm*34mm |
| **Certification** | | | | |
| Safety | FCC, CE, ROHS | FCC, CE, ROHS | FCC, CE, ROHS | FCC, CE, ROHS |

# USP

- Elite team of THEA has experience of over 2 decades & 150 MW of Solar Projects across. the country.
- We offer solutions as a package, so relax leave the optimization to us
- PAN India sales & service network.
- Widest range of product portfolio in industry.....2kW - 125kW range
- Most inverters with multiple MPPT to ensure enhanced generation at any site condition making the project more economically viable.
- Inbuilt DC & AC side protection through SPDs, Type II and fuses (check model).
- Inbuilt string level monitoring (check model).
- All Inverters are Bluetooth enabled for easiest configuration, software upgrades & dato download.
- Use our app theatouch for the fastest and easiest configuration, remote monitoring and firmware updates.
- Cast Aluminium body combines robustness with appeasing looks with omission of moving components like fan in most of the models thereby ensuring a high reliability factor.
- All our products are made with Tier A components for the highest reliability

## About Thea

# Thea Solar Inverters.. State of Art Technology backed by a Country Wide Support Network

Thea Solar Inverters are a Make in India venture by a team of technocrats with the distinction of being among the few pioneers who ventured into Renewable Energy as early as 1995.

A team that has produced the inverters for the first MW Solar PV plant in the country in August 2009 and has made the first indigenous solar inverters as early in 1998. A team that has the unique distinction of supplying to global customers while the Indian Solar Photovoltaic Industry was at its nascent stage.

Thea Solar inverters are a result of our almost 3 decades of access, active usage and fine tuning of leading edge technology from across the globe to meet the needs of Indian customers and partner them in  their user experience through a world class ecosystem of service network in most of the Tier I and II cities of the country.

# Monitoring

The Smartphone revolution is taking over the world. Apps are changing the way we interact with our customers, bankers, friends and the world. We decided to join in the revolution by changing the way we interact with our inverters.

Our engineers realised the dream developing theatouch a standalone app which revolutionises your interaction with your Thea inverters.

The theatouch app is the MMI (man machine interface) between you and your thea inverters. This unique MMI allows you to connect to your Thea inverters either locally through Bluetooth or through the remote monitoring portal.

Locally over bluetooth you can see the live generation AC and DC Voltages, currents, fault status etc. You can even configure your inverter to change high/low voltage cut off, change the power factor of the inverters, reduce / increase power. Yes you can even download the history data of the Inverter, the fault status and update the firmware of your inverter.

The remote portal from the same app gives you access to the generation data and also in the near future will allow you to update firmware remotely. Control your solar Inverters from the remote portal with just a click of a button, real time generation of unique key send to your email ID ensures that there is no misuse by somebody else.

Easy monitoring through WIFI / BLUETOOTH / GPRS / RS 485 based Data Logger — yes we have all options available.

Enjoy the combination of theatouch and thea inverters - unleash the power of your solar PV power plant.

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# What a SOLAR INVERTER aspires to be ...

## Registered Office:

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