

Growatt MIN 2500~6000TL-X

- Maximum efficiency 98.4%
- Dual MPP trackers
- Type II SPD on DC side
- Supports export control
- Touch key and OLED display



P O W E R
- I N G O
T O M O -
R R O W O



| Datasheet | MIN 2500TL-X | MIN 3000TL-X | MIN 3600TL-X | MIN 4200TL-X | MIN 4600TL-X | MIN 5000TL-X | MIN 6000TL-X |
|-----------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|-----------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|

Input Data

| | | | | | | | |
|--------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Max. recommended PV power (for module STC) | 3500W | 4200W | 5040W | 5880W | 6440W | 7000W | 8100W |
| Max. DC voltage | 500V | 500V | 550V | 550V | 550V | 550V | 550V |
| Start voltage | 100V | 100V | 100V | 100V | 100V | 100V | 100V |
| MPP work voltage range/nominal voltage | 80V-500V /360V | 80V-500V /360V | 80V-550V /360V | 80V-550V /360V | 80V-550V /360V | 80V-550V /360V | 80V-550V /360V |
| Max. input current | 12.5A/12.5A | 12.5A/12.5A | 12.5A/12.5A | 12.5A/12.5A | 12.5A/12.5A | 12.5A/12.5A | 12.5A/12.5A |
| Max. short-circuit current | 16A/16A | 16A/16A | 16A/16A | 16A/16A | 16A/16A | 16A/16A | 16A/16A |
| Number of independent MPP trackers / strings per MPP tracker | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 |

Output (AC)

| | | | | | | | |
|-------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Rated AC output power | 2500W | 3000W | 3600W | 4200W | 4600W | 5000W | 6000W |
| Max. AC apparent power | 2500VA | 3000VA | 3600VA | 4200VA | 4600VA | 5000VA | 6000VA |
| Max. output current | 11.3A | 13.6A | 16A | 19A | 20.9A | 22.7A | 27.2A |
| AC nominal voltage | 230V(160V-300V) | 230V(160V-300V) | 230V(160V-300V) | 230V(160V-300V) | 230V(160V-300V) | 230V(160V-300V) | 230V(160V-300V) |
| AC grid frequency | 50Hz/60Hz ± 5Hz | 50Hz/60Hz ± 5Hz | 50Hz/60Hz ± 5Hz | 50Hz/60Hz ± 5Hz | 50Hz/60Hz ± 5Hz | 50Hz/60Hz ± 5Hz | 50Hz/60Hz ± 5Hz |
| Adjustable power factor | 0.8leading... 0.8lagging | 0.8leading... 0.8lagging | 0.8leading... 0.8lagging | 0.8leading... 0.8lagging | 0.8leading... 0.8lagging | 0.8leading... 0.8lagging | 0.8leading... 0.8lagging |
| THDi | <3% | <3% | <3% | <3% | <3% | <3% | <3% |
| AC connection | Single phase | Single phase | Single phase | Single phase | Single phase | Single phase | Single phase |

Efficiency

| | | | | | | | |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|
| Max. efficiency | 98.2% | 98.2% | 98.2% | 98.4% | 98.4% | 98.4% | 98.4% |
| Euro weighted efficiency | 97.1% | 97.1% | 97.2% | 97.5% | 97.5% | 97.5% | 97.5% |
| MPPT efficiency | 99.9% | 99.9% | 99.9% | 99.9% | 99.9% | 99.9% | 99.9% |

Protection Devices

| | | | | | | | |
|-----------------------------------------------------------------|---------|---------|---------|---------|---------|---------|---------|
| DC reverse polarity protection | yes | yes | yes | yes | yes | yes | yes |
| DC switch | yes | yes | yes | yes | yes | yes | yes |
| DC surge protection | Type II | Type II | Type II | Type II | Type II | Type II | Type II |
| Output over current protection | yes | yes | yes | yes | yes | yes | yes |
| Output over voltage protection-varistor | yes | yes | yes | yes | yes | yes | yes |
| Ground fault monitoring | yes | yes | yes | yes | yes | yes | yes |
| Grid monitoring | yes | yes | yes | yes | yes | yes | yes |
| Integrated all - pole sensitive leakage current monitoring unit | yes | yes | yes | yes | yes | yes | yes |

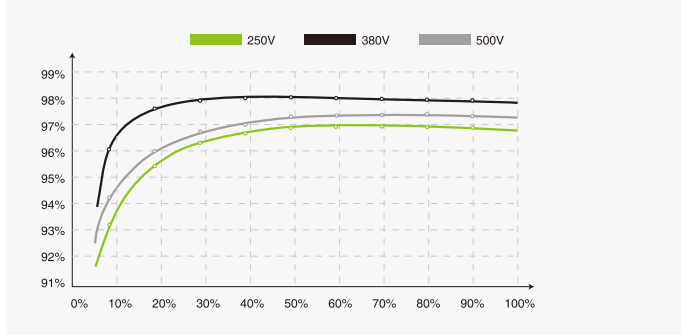
General Data

| | | | | | | | |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Dimensions (W / H / D) in mm | 375/350/160 | 375/350/160 | 375/350/160 | 375/350/160 | 375/350/160 | 375/350/160 | 375/350/160 |
| Weight | 10.8KG | 10.8KG | 10.8KG | 10.8KG | 10.8KG | 10.8KG | 10.8KG |
| Operating temperature range | -25°C ... +60°C | -25°C ... +60°C | -25°C ... +60°C | -25°C ... +60°C | -25°C ... +60°C | -25°C ... +60°C | -25°C ... +60°C |
| Noise emission (typical) | ≤25 dB(A) | ≤25 dB(A) | ≤25 dB(A) | ≤25 dB(A) | ≤25 dB(A) | ≤25 dB(A) | ≤25 dB(A) |
| Altitude | 4000m | 4000m | 4000m | 4000m | 4000m | 4000m | 4000m |
| Self-Consumption night | < 0.5W | < 0.5W | < 0.5W | < 0.5W | < 0.5W | < 0.5W | < 0.5W |
| Topology | Transformerless | Transformerless | Transformerless | Transformerless | Transformerless | Transformerless | Transformerless |
| Cooling concept | Natural | Natural | Natural | Natural | Natural | Natural | Natural |
| Environmental Protection Rating | IP65 | IP65 | IP65 | IP65 | IP65 | IP65 | IP65 |
| Relative humidity | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

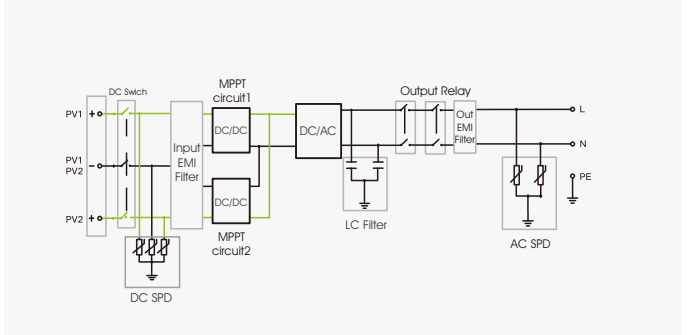
Features

| | | | | | | | |
|------------------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| DC connection | H4/MC4(opt) | H4/MC4(opt) | H4/MC4(opt) | H4/MC4(opt) | H4/MC4(opt) | H4/MC4(opt) | H4/MC4(opt) |
| AC connection | Connector | Connector | Connector | Connector | Connector | Connector | Connector |
| Display | OLED+LED | OLED+LED | OLED+LED | OLED+LED | OLED+LED | OLED+LED | OLED+LED |
| Interfaces: RS485 / USB / Wi-Fi/ 4G / RF | yes / yes / opt / opt / opt | yes / yes / opt / opt / opt | yes / yes / opt / opt / opt | yes / yes / opt / opt / opt | yes / yes / opt / opt / opt | yes / yes / opt / opt / opt | yes / yes / opt / opt / opt |
| Warranty: 5 years / 10 years | yes / opt | yes / opt | yes / opt | yes / opt | yes / opt | yes / opt | yes / opt |

Growatt MIN 6000 TL-X efficiency



Growatt MIN 2.5-6KTL-X topology



CE, IEC62109, G83, VDE0126-1-1, VFR2014, G59, AS4777, AS/NZS 3100, CEI0-21, VDE-AR-N4105, EN50438, CQC, IEC61683, IEC60068, IEC61727, IEC62116