

AE 3TL 8-23 kW

The new generation



- \\ Future-proof
- \\ Worldwide use
- \\ Flexibly decentralized

The new generation is based on the successful platform which delivers maximum yields with no maintenance. Working hand-in-hand with our customers, we have further improved the devices, making them even more future-proof, user-friendly and reliable.

Whether you add accumulators in future, integrate the PV system in smart grids or the regulations change – the new software means you're well equipped for the future.

Plan and build your decentralized PV project flexibly. The simple layout can be rapidly multiplied, particularly with large systems. Partial systems connected to the grid during the construction phase provide early yields.

The devices are designed for worldwide use, with special versions for North America (UL version) and Japan (JP version). Even the most demanding requirements are met by our premium product, the AE 3TL 20-SCI. Thanks to silicon carbide technology, it achieves peak efficiency of 98.7 % and is ideal for high ambient temperatures.

\\ Now with
Sunclix DC connection technology:
Permanently good contact with
no special tools \\

- UL-version for North America available.
 - JP-version for Japan available.
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TECHNICAL DATA

AE 3TL 8 AE 3TL 10 AE 3TL 13 AE 3TL 17 AE 3TL 20 AE 3TL 23-MV

Art. no. 867R008.010 867R010.010 867R013.010 867R017.010 867R020.010 867R023.010

DC DATA

| | | | | | | |
|--------------------------------|----------------------|-------------|-------------|-------------|-------------|-------------|
| Recommended max. PV power, kWp | 9.9 | 12.0 | 15.6 | 20.4 | 24.0 | 27.6 |
| MPPT range, V | 370 ... 850 | 410 ... 850 | 480 ... 850 | 460 ... 850 | 490 ... 850 | 575 ... 850 |
| DC start voltage, V | 350 | 350 | 350 | 350 | 350 | 350 |
| Max. voltage DC, V | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Max. current DC, A | 23.0 | 25.0 | 31.1 | 38.3 | 41.8 | 41 |
| MPP trackers | 1 | 1 | 1 | 1 | 1 | 1 |
| Number of DC inputs | 6 x Phoenix Sunclix® | | | | | |
| DC disconnection switch | Yes | Yes | Yes | Yes | Yes | Yes |

AC DATA

| | | | | | | |
|---|--------------------|-------------|-------------|-------------|-------------|-------------|
| AC nominal power, kW | 8.25 | 10.0 | 13.0 | 17.0 | 20.0 | 23.0 |
| Apparent power, kVA | 8.25 | 10.0 | 13.0 | 17.0 | 20.0 | 23.0 |
| AC grid connection | L1, L2, L3, N, PE | | | | | |
| Nominal power factor / range | 1 / 0,8i ... 0,8c | | | | | |
| Nominal voltage AC, V | 400 | 400 | 400 | 400 | 400 | 460 |
| Voltage range AC, V | 320 ... 460 | 320 ... 460 | 320 ... 460 | 320 ... 460 | 320 ... 460 | 368 ... 529 |
| Nominal frequency / frequency range, Hz | 50, 60 / 45 ... 65 | | | | | |
| Max. current AC, A | 3 x 12 | 3 x 16 | 3 x 21 | 3 x 29.2 | 3 x 29.2 | 3 x 29.2 |
| Max. THD, % | 2.5 | 2.5 | 2.5 | 1.8 | 1.8 | 1.8 |
| Max. efficiency, % | 98.0 | 98.0 | 98.0 | 98.2 | 98.2 | 98.3 |
| European efficiency, % | 97.3 | 97.4 | 97.5 | 97.8 | 97.8 | 98.1 |
| Feed-in starting at, W | 20 | 20 | 20 | 20 | 20 | 20 |
| Self consumption in night operation, W | < 0,5 | < 0,5 | < 0,5 | < 0,5 | < 0,5 | < 0,5 |

CHARACTERISTICS

| | | | | | | |
|---|--|-----------------|-----------------|-----------------|-----------------|-----------------|
| Cooling | Natural convection | | | | | |
| Ambient temperature, °C | -25 ... +55 | -25 ... +55 | -25 ... +55 | -25 ... +55 | -25 ... +55 | -25 ... +55 |
| Relative ambient humidity, % | 0 ... 100 | 0 ... 100 | 0 ... 100 | 0 ... 100 | 0 ... 100 | 0 ... 100 |
| Site altitude | 4000* | 4000* | 4000* | 4000* | 4000* | 4000* |
| Noise, dBA | < 45 | < 45 | < 45 | < 45 | < 45 | < 45 |
| Internal overvoltage protection (EN 61643-11) | Type 3 | Type 3 | Type 3 | Type 3 | Type 3 | Type 3 |
| Protection class (IEC 62109) | I | I | I | I | I | I |
| Overvoltage category (EN 60664-1) | DC: II, AC: III | DC: II, AC: III | DC: II, AC: III | DC: II, AC: III | DC: II, AC: III | DC: II, AC: III |
| Environmental classification (IEC 721-3-4) | 4K4H | 4K4H | 4K4H | 4K4H | 4K4H | 4K4H |
| Certification, EC conformity | Current certificates can be found at http://www.advanced-energy.com/3TLcerts | | | | | |
| SZS or grid protection | Acc. to VDE 0126-1-1 | | | | | |

GENERAL DATA

| | | | | | | |
|--------------------------------|---|------|------|------|------|------|
| Interfaces | Ethernet, RS485, irradiation and temperature sensor | | | | | |
| Type of protection (IEC 60529) | IP65 | IP65 | IP65 | IP65 | IP65 | IP65 |
| Dimensions W x H x D, mm | 535 x 601 x 277 | | | | | |
| Weight, kg | 38.4 | 38.4 | 38.4 | 38.4 | 38.4 | 38.4 |

*Note the derating of the DC voltage.

Subject to modification. Technical specifications are subject to change without notice.

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