AE 1TL 1.8–4.2 kW

For private households

- Light and compact
- Maximum efficiency
- Integrated data logger

The AE 1TL is a single-phase string inverter for small PV systems, for example on homes or carports. Private PV systems are now being used more than ever before to cover part of individual energy requirements.

The AE 1 TL helps people who are interested in saving energy and money with this step towards increased independence in energy matters. An investment in a private PV system pays for itself in a short period of time, provided you employ an inverter which has a high efficiency, is cost-effective with regard to the installation costs and allows maintenance-free operation. The AE 1TL satisfies these requirements: Intelligent MPP tracking, light weight (11 kg), convection cooling, and an integrated data logger with which you can keep control of your yield without additional costs. Thanks to the protective class IP65, the AE 1TL is protected against dust and rain.

TECHNICAL DATA	AE 1TL 1.8	AE 1TL 2.3	AE 1TL 3.0	AE 1TL 3.6	AE 1TL 4.2
Art. no.	801R1K8	801R2K3	801R3K0	801R3K6	801R4K2
DC DATA					
Recommended max. PV power, kWp	2.2	2.9	3.8	4.5	5.2
MPPT range, V	160 ... 500	205 ... 500	270 ... 500	350 ... 700	360 ... 700
DC start voltage, V	125	125	125	350	350
Max. voltage DC, V	600	600	600	845	845
Max. current DC, A	11.5	11.5	11.5	12	12
MPP trackers	1	1	1	1	1
Number of DC inputs	1 x Phoenix Sunclix®				
DC disconnection switch	Yes	Yes	Yes	Yes	Yes
AC DATA					
AC nominal power, kW	1.9	2.4	3.2	3.7	4.2
Max. apparent power, kVA	1.8	2.3	3.0	3.6	4.2
AC grid connection	L, N, PE	L, N, PE	L, N, PE	L, N, PE	L, N, PE
Nominal power factor / range	1 / 0.95i ... 0.95c				
Nominal voltage AC, V	230	230	230	230	230
Voltage range AC, V	185 ... 276	185 ... 276	185 ... 276	185 ... 276	185 ... 276
Nominal frequency / frequency range, Hz	50, 60 / 45 ... 65				
Max. current AC, A	12.0	14.0	14.0	16.0	18.5
Max. THD, %	2.0	2.0	2.0	2.0	2.0
Max. efficiency, %	98.0	98.0	98.0	98.6	98.6
European efficiency, %	97.4	97.6	97.7	98.3	98.2
Feed-in starting at, W	10	10	10	10	10
Self consumption in night operation, W	< 4	< 4	< 4	< 4	< 4
CHARACTERISTICS					
Cooling	Natural convection				
Ambient temperature, °C	-15 ... +60	-15 ... +60	-15 ... +60	-15 ... +60	-15 ... +60
Relative ambient humidity, %	0 ... 100	0 ... 100	0 ... 100	0 ... 100	0 ... 100
Site altitude, m above sea level	2,000	2,000	2,000	2,000	2,000
Noise, dBA	< 23	< 25	< 29	< 29	< 31
Internal overvoltage protection (EN 61643-11)	Type 3	Type 3	Type 3	Type 3	Type 3
Protection class (IEC 62109)	II	II	II	II	II
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
Environmental classification (IEC 721-3-4)	4K4H	4K4H	4K4H	4K4H	4K4H
Certificates / power supply connection conditions	Current certificates can be found on our website				
SZS or grid protection	Acc. to VDE 0126-1-1				
GENERAL DATA					
Interfaces	Ethernet, RS485				
Type of protection (IEC 60529)	IP65	IP65	IP65	IP65	IP65
Dimensions W x H x D, mm	399 x 657 x 224				
Weight, kg	11	11	11	11	11

REFUsol GmbH | Uracher Straße 91 | 72555 Metzingen | Germany | Tel. +49 7123 969-0 | Fax +49 7123 969-165 | info@refusol.com

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