

Solar inverter

KS series 1,5-5 KW

EFFEKTA KS solar inverters, as part of a photovoltaic system, convert direct current from solar modules into alternating current, and feed this into the electrical power grid. At the input end there is usually a DC converter with Maximum Power Point Tracker (MPPT) that supplies power to the intermediate circuit. There is a single-phase inverter at the output end that supplies power to the power supply grid and that is synchronized automatically with that power grid. The KS series of solar inverter with an output rating of 1500 to 5000 Watts is ideal for private use. These inverters are available as models with 1 MPP Tracker (ST) or 2 MPP Trackers (DT).



■ Details



Control panel of DT



View of the underside

Bottom of the DT models (2 MPPT trackers) with DC connector panel, AC output, communication ports, and optional integrated DC disconnect switch (view without cooling fins)

Characteristics

- Euro efficiency up to 96.8%
- High MPPT accuracy
- Fast MPPT calculation method
- Extreme low power loss at night
- Very high conversion efficiency
- Perfect cooling concept
- No derating up to 50°C during operation
- Easy to install
- DC cable connection without special tools
- Comprehensive electronic protection
- Monitoring of insulation resistance
- LCD panel with data (monitoring / operation)
- RS232/RS485 communication (optional WLAN)
- DC switch can be integrated into the housing

Specification

KS		1500ST	2000ST	3000ST	3600ST	3000DT	3600DT	4200DT	5000DT	
Input (DC)	Nominal DC power	1650 WP	2200 WP	3100 WP	3900 WP	3100 WP	3900 WP	4300 WP	5100 WP	
	Max. DC power (±10~20%)	1800 WP	2400 WP	3300 WP	4000 WP	3300 WP	4000 WP	4600 WP	5500 WP	
	Max. DC voltage [V]	500 VDC					600 VDC			
	Max. input current [A]	11	13	19	22	2 x 12	2 x 14	2 x 16	2 x 17	
	Number of MPP tracker / Strings per MPP tracker	1 / 1	1 / 2			2 / 2				
	MPPT voltage range	150-450 VDC*					150-500 VDC*			
	Max. DC power per MPP tracker	1800 W	2400 W	3300 W	4000 W	1800 W	2200 W	2500 W	3000 W	
Output (AC)	Nominal AC power [W]	1500	2000	3000	3600	3000	3600	4200	5,0/4,6K**	
	Max. AC power [W]	1650	2200	3100	3700	3100	3700	4300	5,1/4,6K**	
	Max. output current [A]	9	11	15	18	15	18	21	24	
	Rated output current (rms) [A]	6,5	8,7	13	15,6	13	15,6	18,3	21,7	
	Wire / Nominal AC voltage	1 / N / PE, 230 VAC								
	AC voltage window	184 V~264 V								
	AC grid frequency / range [Hz]	50 Hz (country-specific settings)								
	Power factor (cosφ)	1					0.9 leading- 0.9 lagging			
	Total harmonic distortion (THDi)	< 3%								
	Efficiency	Max. efficiency	> 96,0 %	> 97,5 %						
Euro-efficiency		> 95,0 %	> 96,5 %							
MPPT efficiency		> 99,9 %								
General data	Dimensions (W / H / D) [mm]	335 x 580 x 180				400 x 637 x 190				
	Weight [kg]	15,8	18,2			22				
	Operating temperature range	-20 C ~ +40 °C								
	Ingress protection	IP65 (not intended for outdoor use)								
	Topology	transformer-less								
	Internal DC consumption (stand-by / night)	< 5 W / < 0,2 W					< 12 W / < 0,2 W			
	Cooling concept	convection cooling								
	Noise (typical) [dB]	< 25 dB								
	LCD display	Ja								
	Interface	RS485 standard; RS232, external WIFI o. Ethernet (option)								
	Standard warranty [year]	5								
	DC switch	Option (can be integrated into the housing)								
	Protection	DC reverse-polarity protection	Yes							
All-pole fault current monitoring		Yes								
AC short-circuit protection		Yes								
Ground fault monitoring		Yes								
Regulations / standards	Safety	EN 62109-1, EN 62109-2, VDE V 0126-1-1, VDE V 0124-100, VDE AR N 4105								
	EMC	EN 61000-6-2, EN 61000-6-3								
	Certifications	CE								

* Exceeding or outside of MPPT voltage range: Error message, no power feeding

** Accordance to VDE-AR-N-4105