



Vertical Axis Wind Turbine Power System Model: DS1500


PRODUCT SPECIFICATIONS

General Specifications			
Rated Power	1.5kW	Rated Wind Speed	12 m/s
Rated Speed	290 rpm	Cut in Wind Speed	<3 m/s
Cut out Wind Speed	15 m/s	Survival Wind Speed	60 m/s
Dimensions/Weight			
Rotor Diameter	2.8 m		
Rotor Height	2.9 m		
Tower Height	4.0 m		
Total Height	6.9 m		
Turbine Weight	380kg w/o tower		
Rotor Specifications			
External Darrieus	3 Blades		
Internal Savonius	2 layers		
Blades Material	Anodized Aluminum		
Axis Material	Galvanized Steel SS400		
Generator Specifications		Power Curve	
Generator Type	AC, 3phase, Synchronism PMG		
Rated Output	1.5kW		
Braking System			
Automatic	Automatic dump-load and 3-phase short circuit braking system		
Manual	Mechanical Drum Brake		
Operation Conditions			
Ambient Temperature	-10~40°C		
Ambient Humidity	95% max.		



Vertical Axis Wind Turbine Power System Model: DS1500

PRODUCT SPECIFICATIONS

WT21500 Grid tied inverter	Specifications of WT21500 inverter	
	Output power	1500W
	Maximum power	1600W
	Input	
	Generator Required	3-phase AC PM Generator
	Nominal AC Voltage	200Vac rms
	Working range	48Vac \pm 5% ~ 230Vac \pm 5%
	MPPT range	48 to 210 Vac
	Initial feeding voltage	48Vac
	Max. input current	15 A
	System Cut-out voltage	240V
	Output	
	Operational voltage	192 to 254 VAC
	Maximum Output current	9 A
	Operational frequency	50/60Hz
	Power factor	>0.99 @ Full-Load
	Current distortion	<5%
	Maximum Efficiency	>90%
	Anti-Islanding	Yes
	Environment	
	Protection degree	IP45
	Operation temperature	-20 to 40°C
	Humidity	0 to 95%, non-condensing
	Heat Dissipation	Convection
	Acoustic noise level	<40dB,A-weighted
	Communication & features	RS232 standard, SNMP optional(not yet ready)
	Mechanical	
	WxDxH (mm)	480x370x185
	Weight (kg)	20kg
Certificate	VDE0126. /ce	



Vertical Axis Wind Turbine Power System Model: DS1500

PRODUCT SPECIFICATIONS

TYPE	GCI-1500
Nominal Power	1.5KVA
Max. DC power	$P_{DC,max}=1600W$
Max. DC voltage	$V_{DC,max}$ 450 V DC
Nominal DC range	V_{DC} 70 V - 400 V DC
Efficiency	η max > 94 %
Europe Efficiency	η euro > 92 %
Max. input current	$I_{DC,max}$ 10 A DC
Voltage ripple	$V_{PP} < 10 \%$
Pole confusion protection	Fuse
Nominal AC output power	1400 W AC
Maximum AC output power	1500 W AC
Operating range utility voltage	200 – 260 V AC
Operating range utility frequency	49– 50.3 Hz
Total Harmonic Distortion (THD)	$THD_{IAC} < 5 \%$
Power factor	> 0.98
Utility monitoring	V_{AC} ; f_{AC} Islanding protection V_{AC} ; f_{AC} in accordance with ER G83/1, UL 1741, IEEE929
Short circuit protection	Current controlled, Fuse
External Interfaces	Data transmission via electrically isolated RS485
Internal consumption during operation	<15 W
Internal consumption during stand-by	< 15W
Night time consumption	<15W
Operation Surroundings Temperature	$-10^{\circ}C \sim +40^{\circ}C$
Operation Surroundings Humidity	0~90%
Size & Weight	Size (w x h x d): 267 x 483 x 124 mm Weight:13kg
Waterproof Class	IP42
Certification	CE