



ECOSHIELD
TO A BETTER FUTURE

SINGLE PHASE HYBRID INVERTER

(REGISTERED FINNISH BRAND)

ES-HY 10KW

FEATURES:-



Colorful touch LCD, IP66 protection degree



AC coupling to retrofit existing solar system



Max. 16 pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel



Max. charging/discharging current of 210A



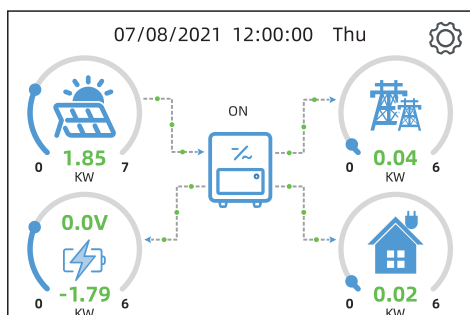
6 time periods for battery charging/discharging



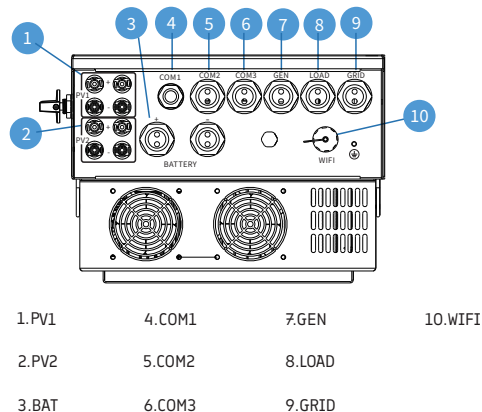
Support storing energy from diesel generator



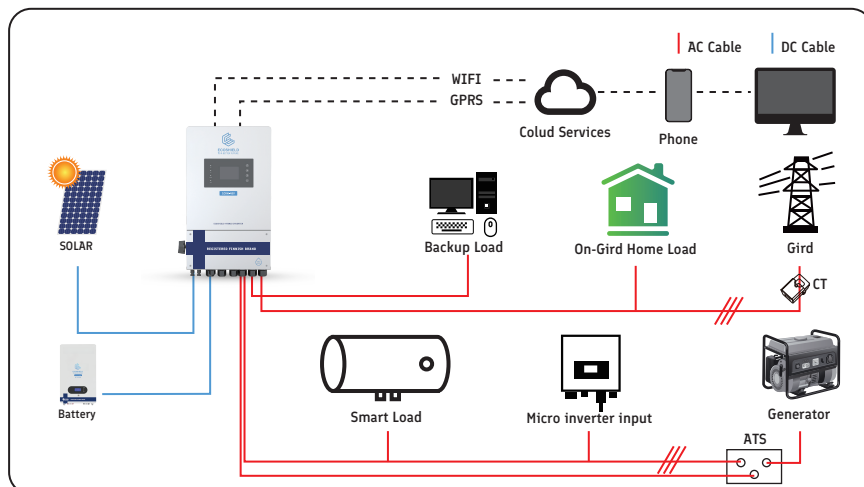
LCD DISPLAY ICONS



PRODUCT CHARACTERISTICS



BASIC SYSTEM ARCHITECTURE



Data Sheet

WebSite: www.ecoshieldfi.com

Model	ES-HY 10KW
Battery input data	
Battery Type	Lead-acid or Lithium-ion
Battery Voltage Range(V)	40-60
Max. Charging Current(A)	210
Max. Discharging Current(A)	210
Charging Strategy for Li-Ion Battery	Self-adaption to BMS
Number of Battery Input	1
PV String Input Data	
Max. PV access Power(W)	20000
Max. PV Input Power(W)	16000
Max. PV Input Voltage(V)	500
Start-up Voltage(V)	125
PV Input Voltage Range(V)	125-500
MPPT Voltage Range(V)	150-425
Full Load MPPT Voltage Range(V)	200-425
Rated PV Input Voltage(V)	370
Max. Operating PV Input Current(A)	26+26
Max. Input Short-Circuit Current(A)	34+34
No. of MPP Trackers/No. of Strings MPP Tracker	2/2+2
Max. Inverter Backfeed Current to The Array	0
AC Input Data	
Rated AC Input Active Power(W)	10000
Max. AC Input Active Power(W)	11000
Peak Power(off grid)(W)	2 times of rated power, 10s
Rated AC Input/Output Current(A)	45.5/43.5
Max. Rated AC Input/Output Current(A)	50/47.9
Max. Continuous AC Pass through(grid to load)(A)	50
Max. Output Fault Current(A)	100
Max. Output Over current Protection(A)	140
Rated Input Voltage/Range(V)	220V/230V 0.85Un-1.1Un
Grid Connection Form	L+N+PE
Rated Input Grid Frequency/Range	50Hz/45Hz-55Hz 60Hz/55Hz-65Hz
Power Factor Adjustment Range	0.8 leading-0.8 lagging
Total Harmonic Distortion(THDI)	<3% (of nominal power)
DC Injection Current	<0.5% In
Efficiency	
Max.Efficiency	97.60%
Euro Efficiency	96.50%
MPPT Efficiency	>99%
Equipment Protection	
DC Polarity Reverse Connection Protection	Yes
AC Output Overcurrent Protection	Yes
AC Output Overvoltage Protection	Yes
AC Output Short Circuit Protection	Yes
Thermal Protection	Yes
DC Terminal Insulation Impedance Monitoring	Yes
DC Component Monitoring	Yes
Ground Fault Current Monitoring	Yes
Arc fault circuit interrupter(AFCI)	Optional
Power Network Monitoring	Yes
Island Protection Monitoring	Yes
Earth Fault Detection	Yes
DC Input Switch	Yes
Overvoltage Load Drop Protection	Yes
Residual Current (RCD) Detection	Yes
Surge Protection Level	Type II(DC) / Type II(AC)
Interface	
Display	LCD+LED
Communication Interface	RS232, RS485, CAN
Monitor Mode	GPRS/WIFI/Bluetooth/4G/LAN(optional)
General Data	
Operating Temperature Range	-40 to +60℃ , >45℃ Derating
Permissible Ambient Humidity	0-100%
Permissible Altitude	2000m
Noise(dB)	<30 dB
Ingress Protection(IP) Rating	IP66
Inverter Topology	Non-Isolated
Over Voltage Category	OVC II(DC), OVC III(AC)
Weight(kg)	25
Cabinet size(mm)(W×H×D) (Excluding connectors and brackets)	340×580×234
Warranty	5 Years (10Years Optional)
Type of Cooling	Intelligent Air Cooling
Grid Regulation	IEC 61727, IEC 62116, EN 50549
Safety EMC/Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2