

TCL



RESIDENTIAL ESS

ALL IN ONE THREE PHASE

HANDELSBERG



SAFE AND RELIABLE

- CATL LFP cells, long cycle life with proven performance
- Module, pack and system, 3-level safety protection
 - IP65 certification



HIGH EFFICIENCY

- Modular battery design, combining up to 40.96kwh of storage (5.12kwh per battery)
- Support diesel generator control (DI/DO)
- Support 200% PV input, on & off grid parallel



SIMPLE AND FLEXIBLE

- AC and DC coupling, working for new installation or retrofit
- Compact, easy to install



OUTAGE BACK UP

- Emergency energy use in the event of a grid failure



INTELLIGENT MANAGEMENT

- Visualize energy flow
- Monitor and optimize energy use
- Easy to setup and connect



Battery Model		TCL-RL-B5K	
Physical			
Battery type	LFP (LiFePO4)		
Weight	54kg		
Dimension (W x H x D)	540 x 490 x 240mm		
IP Protection	IP65		
Warranty	5 Years Product Warranty, 10 Years Performance Warranty		
Electrical			
Energy Capacity	5.12kwh		
Usable Capacity	4.6kwh		
Depth of Discharge (DoD)	90%		
Nominal Voltage	51.2V		
DC Circuit Breaker	125A		
Operating Voltage Range	44.8-56.5V		
Internal Resistance	<20mΩ		
Cycle Life	10000 cycles		
Operation			
Max. Charge/Discharge Current	50A/80A		
Rated DC power	4096W		
Max. Charge/Discharge Power	2825W/4096W		
Operating Temperature Range	-10°C to +50°C charging -10°C to +50°C discharging		
Humidity	0-95% (No condensation)		
BMS			
Modules Connection	Max.8,in parallel		
Capacity	200/400/600/800Ah		
Power Consumption	<2W		
Communication	CAN & RS485		
Monitoring Parameters	System voltage, current, cell voltage, cell temperature, PCBA temperature measurement		
Certificate			
Safety(Cell)	Pack: IEC/EN 62619;UN38.3 Cell: IEC/EN 62619;UN38.3;UL1973		

Hybrid Inverter Model		TCL-RTL-10K	
PV String Input			
Max. Continuous PV Input Power	20kW		
Max. DC Voltage	1100V		
Nominal Voltage	720V		
MPPT Voltage Range	140V-1000V		
MPPT Voltage Range (Full Load)	420V-850V		
Start Voltage ¹	200V		
Number of MPPT	2		
Strings Per MPPT	1		
Max. Input Current Per MPPT	15A		
Max. Short-circuit Current Per MPPT	20A		
AC Output (Grid)			
Nominal AC Output Power	10kW		
Max. AC Apparent Power	11kVA		
Nominal AC Voltage	400Vac		
AC Grid Frequency Range	50 / 60Hz ± 5Hz		
Nominal Output Current	14.5A		
Max. Output Current	16A		
Power Factor (cos φ)	0.8leading-0.8lagging *		
THDi	< 3%		
Battery Input			
Battery Type	LFP (LiFePO4)		
Nominal Battery Voltage	51.2V		
Charging Voltage Range	44-58V		
Max. Charging Current	160A		
Max. Discharging Current	200A		
Battery Capacity	200/400/600/800Ah		
AC Output (Backup)			
Nominal AC Output Power	9.2kW		
Max. AC Output Power	10kVA		
Nominal Output Current	13.3A		
Max. Output Current	14.5A		
Nominal Output Voltage	400V		
Nominal Output Frequency	50/60Hz		
Output THDv (@Linear Load)	<2% (Linear Load)		
Efficiency			
Max. PV Efficiency	97.60%		
Euro. PV Efficiency	97.00%		
Protection			
Anti-islanding Protection	Yes		
Output Over Current Protection	Yes		
DC Reverse Polarity Protection	Yes		
String Fault Detection	Yes		
AC/DC Surge Protection	DC Type II;AC Type III		
Insulation Detection	Yes		
AC Short Circuit Protection	Yes		
General Specifications			
Dimensions W x H x D	540*980*240mm		
Weight	49kg		
Operating Temperature Range	-25°C~+60°C		
Cooling Type	Natural Convection		
Max. Operation Altitude	2000m		
Operation Humidity	0-95% (No Condensation)		
IP Class	IP65		
Topology	Battery Isolation		
Communication	RS485/CAN2.0/WIFI/4G		
Display	LCD/APP		

* 0.95leading-0.95lagging for Germany. ¹. Minimum voltage for inverter to start power output.



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TCL PHOTOVOLTAIC TECHNOLOGY

 **HANDELSBERG**
<https://www.handelsberg.de>