



HYD

15K / 20KTL-3PH

15 / 20 kW

THREE-PHASE ENERGY STORAGE INTEGRATED INVERTER

- Various operational modes for optimal performance
- Up to 2 MPPTs, allowing a flexible configuration
- Maximum two battery inputs
- Off-grid output can be connected to an unbalanced load, and separate three-phase production is supported
- Multiple parallel systems, more flexible system solutions
- Fully digital operation, enabling higher control accuracy

Battery Input Data		
Battery type	Lithium-ion, Lead-acid	
No. of battery input	2	
Battery voltage range (V)	180 – 800	
Battery voltage range for full load (V)	300 – 800	400 – 800
Rated charging/discharging power (W)	15000	20000
Max. charging/discharging current (A)	50 (25 / 25)	
Peak charging/discharging current, duration (A, s)	70 (35 / 35), 60	
Charging strategy for battery	Self-adaptation to BMS	
Communication interfaces	CAN (RS485)	
PV String Input Data		
Recommended max. PV input power (Wp)	22500 (11250 / 11250)	30000 (15000 / 15000)
Max. DC voltage (V)	1000	
Start-up operating voltage (V)	200	
MPPT voltage range (V)	180 – 960	
Rated DC voltage (V)	600	
Full power MPPT voltage range (V)	350 – 850	450 – 850
Max. input current (A)	25 / 25	
Max. short current (A)	30 / 30	
No. of MPP trackers	2	
No. of strings per MPP tracker	2	
AC Output Data (on-grid)		
Rated AC power (W)	15000	20000
Max. AC power output to utility grid (VA)	16500	22000
Max. AC power from the utility grid (VA)	30000	40000
Max. AC current output to utility grid (A)	24	32
Max. AC current from the utility grid (A)	44	58
Rated grid voltage	3 / N / PE, 230 / 400	
Grid voltage range	184 – 276 Vac	
Rated grid frequency	50 / 60 Hz	
Grid frequency range	45 – 55 Hz / 55 – 65 Hz	
Output power factor	ca. 1 (adjustable 0.8 leading to 0.8 lagging)	
Output THDi (@Rated output)	< 3%	
AC Output Data (Back-up)		
Rated output power (W)	15000	20000
Max. output power (VA)	16500	22000
Peak output power, duration (VA, s)	22000, 60	
Rated output current (A)	29	
Max. output current (A)	21.7	32
Peak output current, duration (A, s)	32, 60	
Rated output voltage	3 / N / PE, 230 / 400	
Rated output frequency	50 / 60 Hz	
Output THDv (@symmetrical load)	< 3%	
Switch time	< 10 ms	
Efficiency		
MPPT efficiency	99.9%	
Euro efficiency	97.7%	
Max. efficiency	98.2%	
Max. battery charge/discharge efficiency	97.8%	
Protection		
DC switch	Optional	
PV reverse polarity protection	Yes	
Output overcurrent protection	Yes	
Output overvoltage protection	Yes	
Anti-islanding protection	Yes	
Residual current detection	Yes	
Insulation resistor detection	Yes	
Surge protection level	PV: Type II standard, AC: Type II standard	
Battery reverse protection	Yes	
General Data		
Dimension (mm)	571.4*515*264.1	
Weight (kg)	37	
Inverter topology	Transformerless	
Standby self-consumption (W)	< 15	
Operating temperature range	-30°C – 60°C	
Relative humidity	0 – 100%	
Noise	< 45 dB	
Operating altitude	< 4000 m	
Cooling	Forced airflow	
Protection degree	IP65	
Feature		
DC terminal	MC4	
Grid AC terminal	5P Connector	
Back-up AC terminal	5P Connector	
Display	LCD	
Monitoring interfaces	RS485 / WiFi / CAN2.0 / Ethernet / Bluetooth	
Parallel operation	Yes	
Standard warranty	Standard 5 years, optional: up to 20 years	
Certifications & Standards		
EMC	EN 61000-6-1, EN 61000-6-3	
Safety	IEC 62109-1, IEC 62109-2, IEC 62040 – 1	
Grid	VDE V 0124-100, V0126-1-1, VDE-AR-N 4105, CEI 0-16 / CEI 0-21, EN 50549, G98 / G99, UTE C15-712-1	