



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

Datasheet	HYD 15KTL-3PH		HYD 20KTL-3PH
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)	24		
Rated output voltage	32, 60		
Rated output frequency	3 / N / PE, 230 / 400		
Output THDv (@symmetrical load)	50 / 60 Hz		
Switch time	< 3%		
	< 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		