



C&I Energy Storage Inverter Series

Three-phase hybrid inverter

R50KH3

KEY STRENGTHS

- Max. PV input power: 75kW, wide MPPT voltage range of 150–850V.
- Features dual battery ports rated at 80A each, compatible with mainstream 314Ah battery cells.
- IP65 protection ensures reliable outdoor performance in temperatures from -30°C to +60°C.
- Integrates 4 MPPTs for multiple PV string configurations, with up to 20A*2 input current per MPPT and compatibility with high-power PV modules.
- Supports 100% unbalanced loads for enhanced flexibility in asymmetric C&I application.

Model	R30KH3	R40KH3	R50KH3
Battery data			
Max. charging / discharging power (kW)	33	44	55
Battery voltage range (V)	150~800		
Max. charging / discharging current(A)	80*2		
No. of battery input	2		
Battery type	Lithium-ion		

Model	R30KH3	R40KH3	R50KH3
DC input data			
Max. PV input power (kW)	45	60	75
Max. PV voltage (V)		1,000	
MPPT voltage range (V)		150~850	
Start-up voltage (V)		180	
Max. input current per MPPT (A)		40 / 40 / 40 / 40	
Max. short-circuit current (A)		60 / 60 / 60 / 60	
No. of MPPT trackers		4	
No. of PV strings per MPPT		2	
Rated input voltage (V)		600	
AC output data (on-grid)			
Rated AC output active power (kW)	30	40	50
Max. AC output apparent power (kVA)	33	44	55
Rated AC output current (A)	45.6	60.8	76
Max. AC output current (A)	50.1	66.9	83.6
Max. continuous AC pass-through(grid to load) (A)		200	
Rated grid voltage (V)		380 / 400	
Power factor		> 0.99 (0.8 Leading ~ 0.8 Lagging)	
Grid type		3W+N+PE	
Rated grid frequency (Hz)		50/60	
THDi		< 3%	
AC output data (off-grid)			
Rated output power (kW)	30	40	50
Max. apparent power (kVA)	33	44	55
Rated output voltage (V)		380 / 400, 0.85Un-1.1Un	
Back-up switch time (ms)		<10	
Grid type		3W+N+PE	
THDu		< 2%	
Protection			
Island protection		Supported	
PV reverse polarity protection		Supported	
Battery reverse polarity protection		Supported	
Insulation monitoring		Supported	
Residual current monitoring		Supported	
AC over current protection		Supported	
AC over power protection		Supported	
Back-up output short protection		Supported	
Short circuit protection		Supported	
Display and communication			
HMI		APP; touch panel	
BMS		RS485,CAN	
EMS		RS485	
Meter		RS485	
Supported communication interface		WIFI or 4G or GPRS	
General data			
Dimensions W*D*H (mm)		530*280*850	
Weight (kg)		73	
Ingress protection		IP65	
Operating temperature range (°C)		-30~60	
Inverter topology		Non-isolated	
Relative humidity		0~100%	
Operating altitude (m)		4,000(>2,000 power derating)	
Cooling		Forced air cooling	
Noise emission (dB)		≤65	
Installation		Wall mounted type	