

INSOLA

Residential On-grid Inverters

R3 Note Series



Compatible with 500W+ PV modules



150% PV input oversizing &
110% AC overloading



Remote firmware upgrade



Optional AFCI & Smart PID
recovery function



Type II SPD for both DC and AC



Wider MPPT voltage range
(140 ~ 1000V)

Model	R3-6K	R3-8K	R3-10k	R3-12K
PV Input				
Max. Recommended PV Power [Wp]	9000	12000	15000	18000
Max. PV Power for single MPPT [Wp]	4500	6000	7500	9000
Max. PV Input Voltage [V]	1100			
MPPT Voltage Range [V]	140 ~ 1000			
Rated PV Input Voltage [V]	600			
Start-up Voltage [V]	160			
No. of MPP Trackers	2			
No. of Input Strings per Tracker	1/1			
Max. PV Input Current [A]	16/16			
Max. Short-circuit Current [A]	20/20			
AC Output				
Rated AC Output Power [W]	6000	8000	10000	12000
Max. AC Output Apparent Power [VA]	6600	8800	10000	13200
Max. AC Output Current [A]	10	13.4	16.7	20
Rated AC Voltage [V]	3 / N / PE, 220 / 380, 230 / 400			
Grid Frequency [Hz]	50/60			
Adjustable Power Factor [cosφ]	0.8 leading ~ 0.8 lagging			
Output THDi (@Rated Output)	< 3%			
Efficiency				
Max. Efficiency	98.4%	98.5%	98.5%	98.5%
Euro Efficiency	97.5%	98.0%	98.0%	98.0%
Protection				
DC Insulation Monitoring	Integrated			
Input Reverse Polarity Protection	Integrated			
Anti-island Protection	Integrated			
Residual Current Monitoring	Integrated			
AC Overcurrent Protection	Integrated			
AC Short-circuit Protection	Integrated			
DC Surge Protection	Integrated (Type II)			
AC Surge Protection	Integrated (Type II)			
AFCI Protection	Optional			
PID Recovery Function	Optional			
DC Switch	Integrated			
General Data				
Dimensions (W * H * D) [mm]	428 * 385 * 185			
Weight [kg]	15			
Display	LED + OLED			
Communication	RS485, USB Update, Optional: WiFi, 4G, Ethernet			
Ambient Temperature Range [°C]	-25 ~ +60			
Relative Humidity	0 ~ 100%			
Operating Altitude [m]	≤ 2000			
Night Self-consumption [W]	< 1			
Topology	Transformerless			
Cooling	Natural			
Ingress Protection	IP65			
Noise [dB]	< 35			
Certifications & Standards				
Grid Regulation	NB/T 32004, ORDINANCE No.140, EN50549-1, EN50549-PL, IEC61727/IEC62116			
Safety Regulation	EN 62919-1, EN 62619-2			
EMC	EN IEC 61000-6-1, EN IEC 61000-6-2, EN IEC 61000-6-3, EN IEC 61000-6-4			