

INSOLA



Residential On-grid Inverters

R1 Macro Series



Compatible with 500W+ PV modules



150% PV input oversizing



Optional AFCI protection function



Remote firmware upgrade



Type II SPD for both DC and AC



Built - in zero export function

Model	R1-3.68K	R1-5k	R1-6k
PV Input			
Max. Recommended PV Power [Wp]	5500	7500	9000
Max. PV Power for single MPPT [Wp]	2800	3750	4500
Max. PV Input Voltage [V]	600		
MPPT Voltage Range [V]	80~550		
Rated PV Input Voltage [V]	360		
Start-up Voltage [V]	100		
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]	3680	5000	6000
Max. AC Output Apparent Power [VA]	3680	5500	6000
Max. AC Output Current [A]	16	25	27.3
Rated AC Voltage [V]	L / N / PE, 220 / 230		
Grid Frequency [Hz]	50/60		
Adjustable Power Factor [cosφ]	0.8 leading ~ 0.8 lagging		
Output THDi (@Rated Output)	< 3%		
Efficiency			
Max. Efficiency	97.9%	97.9%	97.9%
Euro Efficiency	97.2%	97.2%	97.2%
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		
DC Switch	Optional		
General Data			
Dimensions (W * H * D) [mm]	353 * 320 * 150		
Weight [kg]	10		
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]	< 25		
Certifications & Standards			
Grid Regulation	VDE 0126-1-1, ORDINANCE No.140, G98/G99		
Safety Regulation	IEC 62109-1, IEC 62109-2, EN 62919-1, EN62619-2		
EMC	EN IEC 61000-6-1, EN IEC 61000-6-3		