Rayleigh Instruments
EST. 1964

Telephone : +44 (0) 1245 428500
Email : sales@rayleigh.com

RI-ENERGYFLOW-MODULAR

Modular Inverter & Battery Solution for Solar and Energy Storage

Product Description

The RI-ENERGYFLOW-MODULAR system is a family of modular inverters and battery storage units.

This elegant energy storage solution is available with a choice of three inverters:-

RI-ENERGYFLOW-MODULAR-3.68kW
RI-ENERGYFLOW-MODULAR-5.00kW
RI-ENERGYFLOW-MODULAR-6.00kW

Once you have decided on the inverter that is right for your needs you also have a choice of 4 battery sizes from 5.12kWh to 20.40kWh:-

RI-ENERGYPACK-MODULAR-5.1
RI-ENERGYPACK-MODULAR-10.2
RI-ENERGYPACK-MODULAR-15.3
RI-ENERGYPACK-MODULAR-20.4

The units are supplied in an integrated modular housings that are easy to install and easy on the eye.

- Modular single phase storage solution
- Choice of 3 inverters and 4 battery sizes
- Maximum Solar input array sizes - 4.8kW, 6.5kW or 7.5kW
- Power output versions - 3.68kW, 5kW or 6kW
- Choice of 5.12kWh, 10.24kWh, 15.36kWh or 20.40kWh battery sizes
- Back-up, self-use, off-grid and force time user modes
- Easy indoor or outdoor installation - IP65 rated
- Can be configured to operate as a back-up supply
- Short Circuit, AC Leakage, Grounding, Anti-islanding, Overload, Surge, Temperature and DC Polarity protection
- Simple operation - Programmable software, App control and remote cloud monitoring

BSI - PAS63100:2024 Standards

Our **RI-ENERGYPACK-MODULAR** battery units have heated blankets so that battery life is not degraded with external installation. Additionally, all DC power cable connections are concealed by the integral cable covers, which can only be accessed by use of a tool, for PAS63100:2024 compliance.

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Inverters / Battery Configurations

Technical Data - Inverters

RI-ENERGYFLOW-MODULAR-	3.68kW	5.00kW	6.00kW
PV input data			
Max. PV-generator power	4800W	6500W	7500W
Max. DC Voltage		580V	
Nominal voltage		400V	
MPPT Voltage Range		120...550V	
Start-up Voltage		130V	
Max. DC current (Input A / Input B)		15A / 15A	
Numbers of MPPT		2	
Strings per MPPT		1	
Max. Short-circuit current per MPPT		18A	
Type of DC Connector		MC4	
AC Output data (On-gird)			
Nominal AC power	3680W	5000W	6000W
Max. Input current		32A	
Max. AC Power	3680W	5000W	6000W
Max. AC Current	16A	22A	25A
Nominal AC Voltage		230V	
Grid frequency/ range		50/60Hz (±5Hz), (adjustable)	
Output Power factor		0.8 leading ~ 0.8 lagging (adjustable)	
Output THDi (@Nominal Output)		<3%	

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RI-ENERGYFLOW-MODULAR-	3.68kW	5.00kW	6.00kW
AC Output data (Back-up)			
Max. Output Apparent Power	4000VA	5000VA	6000VA
Nominal Output Voltage	230V (Fluctuation range ±0.2%)		
Nominal Output Frequency	50/60Hz (Fluctuation range ±0.2%)		
Max. Output Current	16A	20A	20A
Harmonic distortion [THD] at rated output	<2% (Linear load)		
Peak power [VA], Duration	6900VA, 10s		
Battery Input Data			
Battery Type	LFP (LiFePO4)		
Nominal Battery Voltage	51.2V		
Max. Charging Voltage	57.6V		
Max. Charging/Discharging Current	50A / 80A	100A / 100A	100A / 100A
Communication interfaces	RS485 / CAN		
Efficiency			
Max. efficiency	97.6%		
Euro efficiency	97%		
Max. Battery to Load Efficiency	94%		
Battery charged by PV Max. Efficiency	98%		
General data			
Dimension [W x H x D]	540 x 640 x 240 mm		
Weight	32kg		
Mounting	Wall fixing		
User Interface	LCD/App		
Communication	RS485 / CAN2.0 / WIFI / 4G		
Operating Temperature Range	0°C...+55°C (Charging) / –20°C...+55°C (Discharging)		
Relative Humidity	0...95% (No condensation)		
Operating Altitude	<2000m		
Standby Self Consumption	2W per module		
Topology	Battery Isolation		
Cooling	Natural Convection		
Protection Grades	IP65		
Noise	<25db		
Warranty	5year Product Warranty, 10 Year Performance Warranty*		
Protection	Bipolar DC Switch Protection (125A/Pole) DC Isolator Switch Anti-islanding Protection Output Overcurrent Protection DC Reverse Polarity Protection String Fault Detection AC/DC Surge Protection - DC Type II, AC Type III Insulation Detection AC Short-circuit Protection		

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Certification & Standards

Grid Regulation	IEC60529, IEC60068, IEC61683, IEC62116, IEC61727, EN50549-1, AS4777.2, NRS097, VDE-AR-N-4105, CEI0-21, G98, G99, C10/C11
Safety Regulation	IEC 62109-1, IEC 62109-2
EMC	IEC/EN61000-6-1, IEC/EN61000-6-2, EN61000-6-3, IEC/EN61000-6-4, IEC/EN61000-3-11, EN 61000-3-12

Technical Data - Batteries

RI-ENERGYPACK-MODULAR-	5.1	10.2	15.3	20.4
Nominal Energy	5.12kWh	10.24kWh	15.36kWh	20.40kWh
Voltage Range	44.8V...56.5V			
Nominal Voltage	51.2V			
Max. Charging Current	50A	100A	100A	100A
Max. Discharging Current	80A	100A	100A	100A
Rated DC Power	4096W			
Battery Type	LFP (LiFePO4)			
Communication	CAN and RS485 compatible			
Max. Storage Period	6 months			
Humidity Range	0...95% (Non condensing)			
Ambient Temperature	–10°C...50°C (Charging) / –10°C...50°C (Discharging)			
Storage Temperature Range	–20°C...50°C			
IP Grade	IP65			
Depth of Discharge (DOD)	90%			
Battery weight	Approx. 54Kg	Approx. 108Kg	Approx. 162Kg	Approx. 216Kg
Nominal Energy(kWh)	5.1kWh	10.2kWh	15.3kWh	20.4kWh
Max Power(kW)	4.096kW Charge / 2.825kW Discharge	5.65kW Charge / 5.12kW Discharge	5.65kW Charge / 5.12kW Discharge	5.65kW Charge / 5.12kW Discharge
Cycle Life	10,000			
Charging Current(A)	50A (3.6kW Inverter) / 100A (5kW Inverter) (for inverter only)			
Discharge Current(A)	80A (3.6kW Inverter) / 100A (5kW Inverter) (for inverter only)			
Ventilation and Heating type	Passive Cooling / Heated Blanket			

Certification & Standards

Regulations	IEC/EN 62619;UN38.3 BSI - PAS63100:2024 compliant

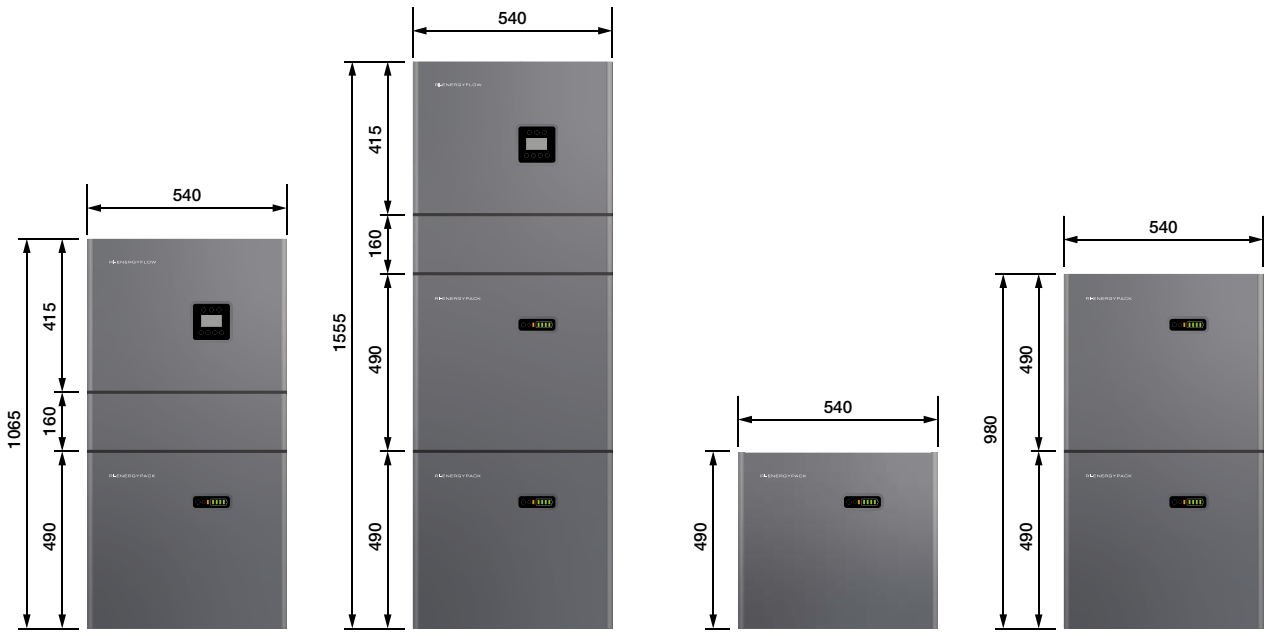
NOTE:

1. The Maximum current is determined by the smaller value between the maximum current ratings of the inverter and the battery pack.

For example, if the configuration is “one 3.68kW inverter” + “two battery pack”, then the maximum current is 50A for charging and 80A for discharging.

2. The cooling method for battery pack is natural convection. For the inverters, active cooling is used for the 5kw unit and passive cooling for the 3.68kw unit.

Dimensions (mm)



Model Selection Table

Inverter and Battery Size	Model
3680W AC output Inverter with 5.12kWh Battery Storage	RI-ENERGYFLOW-MODULAR-3.68kW/5.12kWh
3680W AC output Inverter with 10.24kWh Battery Storage	RI-ENERGYFLOW-MODULAR-3.68kW/10.2kWh
3680W AC output Inverter with 15.36kWh Battery Storage	RI-ENERGYFLOW-MODULAR-3.68kW/15.3kWh
3680W AC output Inverter with 20.40kWh Battery Storage	RI-ENERGYFLOW-MODULAR-3.68kW/20.4kWh
5000W AC output Inverter with 5.12kWh Battery Storage	RI-ENERGYFLOW-MODULAR-5.00kW/5.12kWh
5000W AC output Inverter with 10.24kWh Battery Storage	RI-ENERGYFLOW-MODULAR-5.00kW/10.2kWh
5000W AC output Inverter with 15.36kWh Battery Storage	RI-ENERGYFLOW-MODULAR-5.00kW/15.3kWh
5000W AC output Inverter with 20.40kWh Battery Storage	RI-ENERGYFLOW-MODULAR-5.00kW/20.4kWh
6000W AC output Inverter with 5.12kWh Battery Storage	RI-ENERGYFLOW-MODULAR-6.00kW/5.12kWh
6000W AC output Inverter with 10.24kWh Battery Storage	RI-ENERGYFLOW-MODULAR-6.00kW/10.2kWh
6000W AC output Inverter with 15.36kWh Battery Storage	RI-ENERGYFLOW-MODULAR-6.00kW/15.3kWh
6000W AC output Inverter with 20.40kWh Battery Storage	RI-ENERGYFLOW-MODULAR-6.00kW/20.4kWh