

## RI-ENERGYFLOW-3P-SERIES-50



### Product Description

The RI-ENERGYFLOW-3P-SERIES-50 range forms part of an expanding family of inverters from Rayleigh Instruments.

These inverters are designed for small industrial and commercial projects. With fuse free design, optional AFCI function and other multiple protections, ensures a higher safety level of operation.

A maximum efficiency of 99% with a maximum DC input voltage of 1100V, a wider MPPT range and a lower start-up voltage of 160V, guarantees an earlier generation of power and a longer working time. An advanced ventilation system also ensures the inverter dissipates heat efficiently.

50% DC input oversizing capability allows users to increase significantly the power output by adding extra solar panels.

10% AC output overloading enables this inverter to be operated on its full capacity by adding extra reflections from the backside of bifacial panels, thus maximizing solar powered energy generation, giving you a higher yield.

### 3 Phase On-Grid Inverters

- Available as 30kW, 36kW, 40kW and 50kW - Three Phase, 3/4 MPPT versions
- 40A Input current per MPPT
- Compatible with high-wattage panels
- Remote monitoring
- Compact Size and weight
- Wide MPPT range (180...1000V)
- 150% DC input oversizing and 110% AC overloading
- Low Start-up voltage (160V)
- Remote Firmware update
- Optional AFCI & Smart PID recovery function
- Type II SPD for both DC and AC
- IP65 Rated
- Easy installation
- G98 and G99 compliant

### DC Input Data

Model - RI-ENERGYFLOW-3P-SERIES-50-	30KW	36KW	40KW	50KW
Recommended Max. PV Power [Wp]	45000	54000	60000	75000
Max. PV power for single MPPT [Wp]	15000	15000	15000	20000
Max. PV Input Voltage [V]	1100			
MPPT Voltage Range [V]	180...1000			
Rated Input Voltage [V]	600			
Start-up Voltage [V]	200			
No. of MPP Trackers	3		4	
No. of Input Strings per Tracker	2 / 2 / 2		2 / 2 / 2 / 2	
Max. Input Current Per MPPT [A]	40 / 40 / 40		40 / 40 / 40 / 40	
Max. Short-circuit Current per MPPT [A]	50 / 50 / 50		50 / 50 / 50 / 50	

### AC Output Data

Model - RI-ENERGYFLOW-3P-SERIES-50-	30KW	36KW	40KW	50KW
Rated AC Power [W]	30000	36000	40000	50000
Max. Output Power [VA]	33000	39600	44000	55000
Max. AC Current [A]	50	60	66.6	83.3
Rated AC Voltage / Range [V]	3 / N / PE, 380, 400; ±20%; 3 / PE, 380, 400; ±20%			
Grid frequency / range [Hz]	50 / 60Hz ±5			
Adjustable Power Factor [cos Φ]	0.8 leading ~ 0.8 lagging			
Output THDi (@Rated Output)	<3%			

### Efficiency

Model - RI-ENERGYFLOW-3P-SERIES-50-	30KW	36KW	40KW	50KW
Max. Efficiency	99.00%			
Euro Efficiency	98.50%			

### Protection

Model - RI-ENERGYFLOW-3P-SERIES-50-	30KW	36KW	40KW	50KW
DC Switch	Integrated			
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			
AFCI Protection	Optional			
Anti-PID function	Optional			
DC Surge Protection	Integrated (Type II)			
AC Surge Protection	Integrated (Type II)			

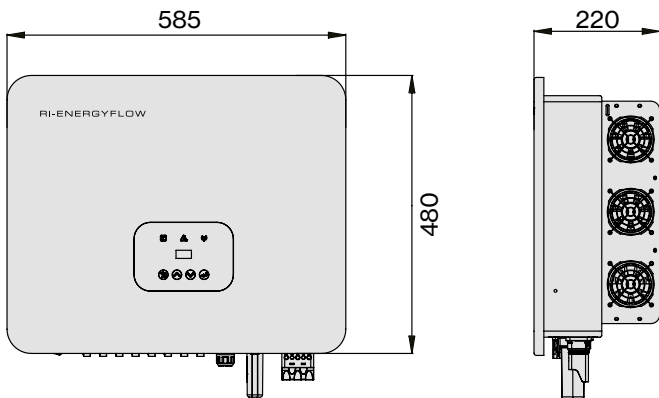
### General Specifications

Model - RI-ENERGYFLOW-3P-SERIES-50-	30KW	36KW	40KW	50KW
Size (Width x Height x Depth) [mm]	585 x 480 x 220			
Weight [kg]	37			
User Interface	LED + OLED			
Communication	RS485 and USB or Wifi or 4G (Optional)			
Ambient Temperature Range [°C]	-25...+60			
Relative Humidity	0...100%			
Operating Altitude [m]	≤2000			
Standby Self Consumption [W]	<0.2			
Topology	Transformerless			
Cooling	Fan			
Enclosure	IP65			
Noise [dB]	< 60			
Warranty (conditions apply)	10 years			

### Certification & Standards

Grid Regulation	VDE-AR-N4105, EN 50549, G98, G99
Safety Regulation	IEC 62109-1, IEC 62109-2
EMC	IEC 61000-6-1, EN 61000-6-3

### Dimensions (mm)



### Model Selection Table

Description	Model
30kW AC Output Inverter	RI-ENERGYFLOW-3P-SERIES-50-30KW
36kW AC Output Inverter	RI-ENERGYFLOW-3P-SERIES-50-36KW
40kW AC Output Inverter	RI-ENERGYFLOW-3P-SERIES-50-40KW
50kW AC Output Inverter	RI-ENERGYFLOW-3P-SERIES-50-50KW