

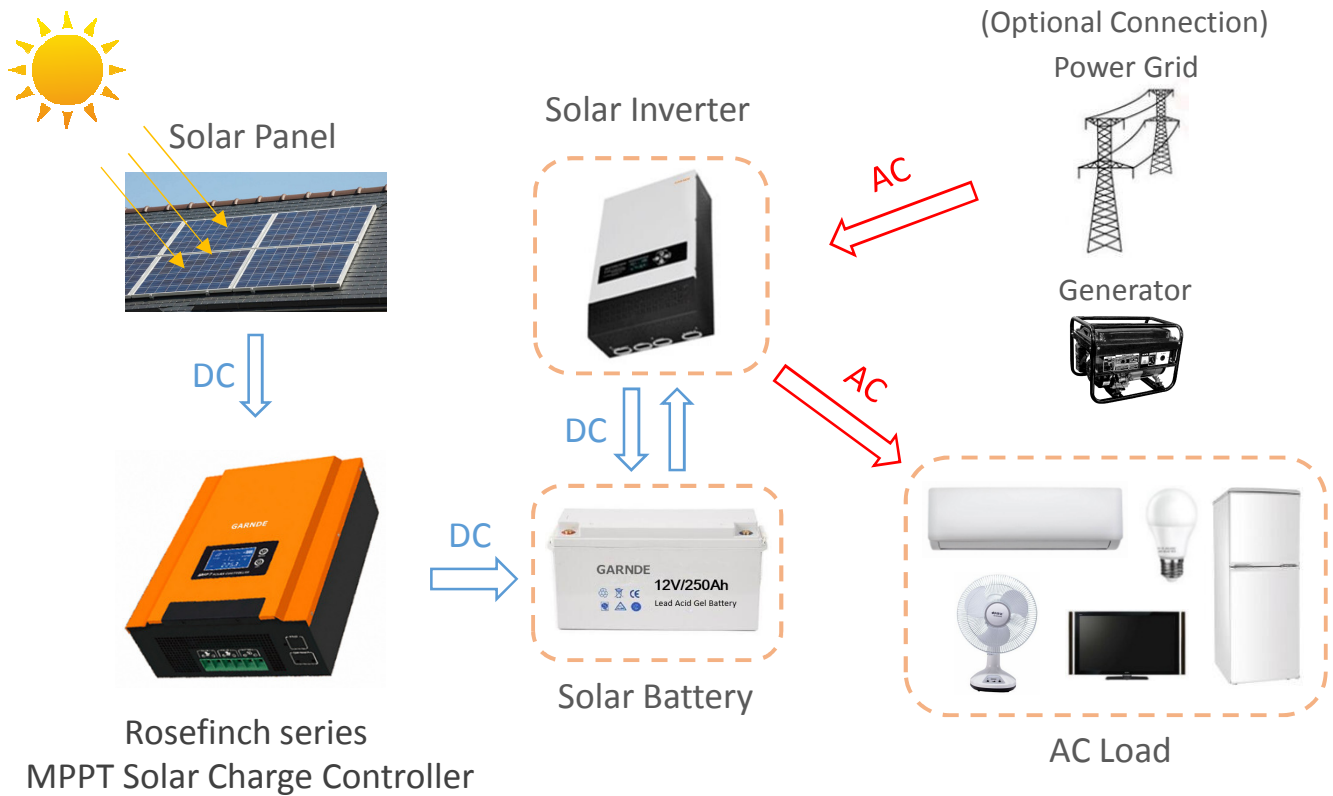
Rosefinch series

MPPT Solar Charge Controller



INTRODUCTION

Rosefinch series solar charge controllers are developed for off-grid solar system and battery backup solar system. Maximum Power Point Tracking (MPPT) charging technology can increase 20-30% power usage efficiency of solar panels more than PWM charging technology. Efficiency up to 99% MPPT charging, the adventurer increases battery lifespan by regulating the charge flowing from the solar panels to the battery bank.



FUNCTIONAL CHARACTERISTICS

- Auto identification and selection of system voltage
- High performance 32 bits CPU
- Wide PV input voltage range, convenient for system configuration
- MPPT charge mode, increase power usage efficiency of solar panels
- LCD display, intelligent batteries charging status display
- Running status display of solar panels, batteries and loads
- Optional RS485 communication port, convenient for user integration management
- Over-charge protection, over-discharge protection, over-load protection, short-circuit protection and battery wrong-connecting protection, anti-thunder-stroke protection

TECHNICAL SPECIFICATIONS

| | Rosefinch XS | | | Rosefinch S | | | |
|---------------------------------|--|------------|---------|--|---------|---------|--------|
| Model | RF48-10 | RF48-20 | RF48-30 | RF48-40 | RF48-50 | RF48-60 | |
| INPUT | | | | | | | |
| Max. PV Input Voltage | 150V | | | | | | |
| MPPT Voltage Range | 12V | 15V - 120V | | | | | |
| | 24V | 30V - 120V | | | | | |
| | 48V | 60V - 120V | | | | | |
| Max. PV Input Power | 12V | 140 W | 280 W | 420 W | 560 W | 700 W | 840 W |
| | 24V | 280 W | 560 W | 840 W | 1120 W | 1400 W | 1680 W |
| | 48V | 560 W | 1120 W | 1680 W | 2240 W | 2800 W | 3360 W |
| BATTERY CHARGING | | | | | | | |
| Battery System Voltage | 12V/24V/48V auto recognition | | | | | | |
| Max. Charging Current | 10A | 20A | 30A | 40A | 50A | 60A | |
| Charging mode | Maximum Power Point Tracking (MPPT) | | | | | | |
| Charging method | Three stages: Constant Current (MPPT); Constant Voltage; Floating Charge | | | | | | |
| Max. Charging Efficiency | 99% | | | | | | |
| Battery Types Supported | Lead Acid Battery, Gel Battery, Flooded Battery, Lithium Battery | | | | | | |
| PROTECTION | | | | | | | |
| Overload Protection | 1.5 times rated current 3s overload protection action, automatic recovery in 1 minute | | | | | | |
| Output Short Circuit Protection | Hardware protection fuses, automatic recovery in 10 minute | | | | | | |
| Over Temperature Protection | Charging or discharging stopped when controller temperature over 75°C, Charging or discharging recovery when temperature back to 55°C | | | | | | |
| OTHERS | | | | | | | |
| Cooling Method | Intelligent Control Cooling Fan | | | | | | |
| Remote Control | Optional | | | | | | |
| Communication Method | RS485 | | | | | | |
| Own Consumption | < 20mA | | | | | | |
| Operating Ambient Temperature | -15°C - 50°C | | | | | | |
| Storage Temperature | -20°C - 60°C | | | | | | |
| Protection Grade | IP20 | | | | | | |
| Dimensions | 185 x 135 x 65 mm (7.3 x 5.3 x 2.6 inches) | | | 240 x 143 x 74 mm (9.4 x 5.6 x 2.9 inches) | | | |
| Net Weight | 1.15 kgs (2.5 lbs) | | | 1.80 kgs (4.0 lbs) | | | |
| Packing | 38 x 25 x 52 cm / 8 pcs; 11.0 kgs/8 pcs | | | 42 x 31 x 27 cm / 4 pcs; 8.0 kgs/4 pcs | | | |
| Warranty | 2 years | | | | | | |

TECHNICAL SPECIFICATIONS

| | Rosefinch M | | Rosefinch L | | Rosefinch XL | |
|---------------------------------|--|-------------|-------------------------|--------------|------------------------|-------------|
| Model | RF48-80 | RF48-100 | RF96-50 | RF96-100 | RF192-50 | RF216-50 |
| INPUT | | | | | | |
| Max. PV Input Voltage | 150V | | 300V | | 450V | |
| MPPT Voltage Range | 48V | 60V - 120V | | | | |
| | 96V | 96V - 240V | | | | |
| | 192V | 192V - 360V | | | | |
| | 216V | 216V - 360V | | | | |
| Max. PV Input Power | 48V | 4480 W | 5600 W | | | |
| | 96V | | | 5600 W | 11200 W | |
| | 192V | | | | 11200 W | |
| | 216V | | | | | 12600 W |
| BATTERY CHARGING | | | | | | |
| Battery System Voltage | 12V/24V/48V auto recognition | | 96V | | 192V | 216V |
| Max. Charging Current | 80A | 100A | 50A | 100A | 50A | 50A |
| Charging mode | Maximum Power Point Tracking (MPPT) | | | | | |
| Charging method | Three stages: Constant Current (MPPT); Constant Voltage; Floating Charge | | | | | |
| Max. Charging Efficiency | 99% | | | | | |
| Battery Types Supported | Lead Acid Battery, Gel Battery, Flooded Battery, Lithium Battery | | | | | |
| PROTECTION | | | | | | |
| Overload Protection | 1.5 times rated current 3s overload protection action, automatic recovery in 1 minute | | | | | |
| Output Short Circuit Protection | Hardware protection fuses, automatic recovery in 10 minute | | | | | |
| Over Temperature Protection | Charging or discharging stopped when controller temperature over 75°C, Charging or discharging recovery when temperature back to 55°C | | | | | |
| OTHERS | | | | | | |
| Cooling Method | Intelligent Control Cooling Fan | | | | | |
| Remote Control | Optional | | | | | |
| Communication Method | RS485 | | | | | |
| Own Consumption | < 20mA | | | | | |
| Operating Ambient Temperature | -15°C - 50°C | | | | | |
| Storage Temperature | -20°C - 60°C | | | | | |
| Protection Grade | IP20 | | | | | |
| Dimensions | 280 x 180 x 100 mm | | 315 x 250 x 108 mm | | 400 x 300 x 162 mm | |
| Net Weight | 3.7 kgs | | 4.5 kgs | 5.6 kgs | 10 kgs | 11 kgs |
| Packing | 49 x 35 x 35 cm / 4 pcs | | 37 x 31 x 34 cm / 2 pcs | | 46 x 38 x 21 cm / 1 pc | |
| | 16.0 kgs / 4 pcs | | 11 kgs/2 pcs | 13 kgs/2 pcs | 11 kgs/1 pc | 12 kgs/1 pc |
| Warranty | 2 years | | | | | |

TECHNICAL SPECIFICATIONS

| | | Rosefinch XL | | Rosefinch XXL | | | |
|---------------------------------|------------------------|--|-------------|------------------------|-------------|-----------|-----------|
| Model | | RF240-50 | RF384-50 | RF192-100 | RF216-100 | RF240-100 | RF384-100 |
| INPUT | | | | | | | |
| Max. PV Input Voltage | | 500V | 800V | 450V | | 500V | 800V |
| MPPT Voltage Range | 192V | 192V - 360V | | | | | |
| | 216V | 216V - 360V | | | | | |
| | 240V | 240V - 400V | | | | | |
| | 384V | 384V - 640V | | | | | |
| Max. PV Input Power | 192V | | | 22400 W | | | |
| | 216V | | | | 25200 W | | |
| | 240V | 14000 W | | | | 28000 W | |
| | 384V | | | 22400 W | | | 44800 W |
| BATTERY CHARGING | | | | | | | |
| Battery System Voltage | | 240V | 384V | 192V | 216V | 240V | 384V |
| Max. Charging Current | | 50A | 50A | 100A | 100A | 100A | 100A |
| Charging mode | | Maximum Power Point Tracking (MPPT) | | | | | |
| Charging method | | Three stages: Constant Current (MPPT); Constant Voltage; Floating Charge | | | | | |
| Max. Charging Efficiency | | 99% | | | | | |
| Battery Types Supported | | Lead Acid Battery, Gel Battery, Flooded Battery, Lithium Battery | | | | | |
| PROTECTION | | | | | | | |
| Overload Protection | | 1.5 times rated current 3s overload protection action, automatic recovery in 1 minute | | | | | |
| Output Short Circuit Protection | | Hardware protection fuses, automatic recovery in 10 minute | | | | | |
| Over Temperature Protection | | Charging or discharging stopped when controller temperature over 75°C, Charging or discharging recovery when temperature back to 55°C | | | | | |
| OTHERS | | | | | | | |
| Cooling Method | | Intelligent Control Cooling Fan | | | | | |
| Remote Control | | Optional | | | | | |
| Communication Method | | RS485 | | | | | |
| Own Consumption | | < 20mA | | | | | |
| Operating Ambient Temperature | | -15°C - 50°C | | | | | |
| Storage Temperature | | -20°C - 60°C | | | | | |
| Protection Grade | | IP20 | | | | | |
| Dimensions | | 400 x 300 x 162 mm | | 530 x 410 x 162 mm | | | |
| Net Weight | | 10 kgs | 11 kgs | 14.5 kgs | | 17.5 kgs | |
| Packing | 46 x 38 x 21 cm / 1 pc | | | 60 x 49 x 21 cm / 1 pc | | | |
| | 11 kgs/1 pc | 12 kgs/1 pc | 16 kgs/1 pc | | 19 kgs/1 pc | | |
| Warranty | | 2 years | | | | | |

GARNDE

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