LESSO

# LET-XB2-HJ Series

## MPPT Solar Charge Controller

The LET-XB2-HJ series is a new generation of high-current MPPT charge and discharge controller. It features load output capability and delivers superior MPPT tracking and conversion efficiency. The series is compatible with various lithium battery types and supports three-stage charging management to extend battery lifespan. Its exceptional low-power design significantly reduces static consumption, prolonging system standby time.

Comprehensive electronic protection and flexible communication options (WiFi, Bluetooth, 4G, etc.) further enhance system reliability and monitoring capabilities. It is widely used in RVs, boats, industrial monitoring, and small to medium-sized solar power systems.

## Features

- Supports 12V/24V/36V/48V systems; Charge/Discharge current: 50A–100A
- All metal die-casting shell, IP43(1)
- Supports two PV inputs(2)
- Max. MPPT tracking efficiency: 99.9%; Max. Conversion efficiency: 98.5%
- Compatible with AGM, Gel, Flooded, LiFePO4 batteries, etc.
- Constant voltage output functio: Enables direct load supply with sufficient PV energy
- Communication interface with electrical isolation
  - · CAN: Parallel operation of up to 6 devices(with or without batteries)
  - · BMS: Ensures reliable lithium battery charge/discharge management(3)
  - · RS485: Optional Bluetooth, WiFi, or 4G modules(4)
- Real-time data recording, event logging, and power statistics function
- EMC compliant (CLASS B)

(1) IP32 without terminal cover

(2) LET-H100LN242-HJ, LET-H100LN2B2-HJ; LET-H100HN2R2-HJ;LET-H80HN242-HJ support two PV inputs

(3) Requires BMS-LINK module for others company batteries

(4) LET-XXXXXXBXX-HJ models feature integrated Bluetooth

| Model | LET-H50HN2R1-HJ | LET-H60LN2R1-HJ<br>LET-H60LN2B1-HJ | LET-H60HN2R1-HJ | LET-H75LN2R1-HJ |
|---|---|---|---|---|
| **Electrical Parameters** | | | | |
| Battery Rated Voltage | 12/24/48VDC~Auto | | | |
| Controller Operating Voltage Range | 8-62V | | | |
| Battery Type | AGM (Default) / Gel / Flooded / User | | | |
| Lithium Battery Type | LiFePO4 / Li (NiCoMn)O2 / User | | | |
| Rated Charging / Discharging Current | 50A | 60A | | 75A |
| Rated Charging Power | 650W/12V; 1,300W/24V; 2,600W/48V | 780W/12V; 1,560W/24V; 3,120W/48V | | 975W/12V; 1,950W/24V; 3,900W/48V |
| Maximum Charging Power | 650W/12V; 1,300W/24V; 2,600W/48V | 780W/12V; 1,560W/24V; 3,120W/48V | | 975W/12V; 1,950W/24V; 3,900W/48V |
| Rated Load Current | 50A | 60A | | 75A |
| Maximum Load Current | 50A | 60A | | 75A |
| PV Maximum Open-circuit Voltage | 200V (@ lowest temperature); 180V (@ 25°C) | 150V (@ lowest temperature); 138V (@ 25°C) | 200V (@ lowest temperature); 180V (@ 25°C) | 150V (@ lowest temperature); 138V (@ 25°C) |
| MPPT Operating Voltage Range | (Battery voltage plus 2V, and>28V) to 144V (@ 25°C) | (Battery voltage plus 2V, and>28V) to 108V (@ 25°C) | (Battery voltage plus 2V, and>28V) to 144V (@ 25°C) | (Battery voltage plus 2V, and>28V) to 108V (@ 25°C) |
| Tracking Efficiency | ≥ 99.5% | | | |
| Maximum Conversion Efficiency | 98.30% | 98.60% | 98.10% | 98.60% |
| Full Load Efficiency | 97.10% | 98.00% | 98.00% | 98.00% |
| Temperature Compensation Coefficient | -3mV/°C/2V (Default) | | | |
| Self-consumption (Enabled Communication) | 98mA/12V; 60mA/24V; 46mA/48V | | | |
| Self-consumption (Disabled Communication) | 48mA/12V; 25mA/24V; 14mA/48V | | | |
| Grounding Type | Common negative grounding | | | |
| Dry Contact (Oil Generator / Utility) | Rated value: 5A/30VDC; Maximum value: 0.5A/60VDC | | | |
| RS485 Communication Port | 5VDC/200mA (RJ45) | | | |
| **Mechanical Parameters** | | | | |
| Dimension (L*W*H) IP43 (Controller & White Terminal Cover) | 307×253×143mm | 320×263×143mm | | 320×263×158mm |
| Dimension (L*W*H) IP32 (Controller Only) | 307×202×134mm | 320×212×134mm | | 320×212×149mm |
| Mounting Dimension (L*W) | 295×130mm | 308×140mm | | |
| Mounting Hole Size | Φ7mm | | | |
| Wiring Terminal | 6AWG/16mm² | 2AWG/35mm² | | |
| Recommended Cable | 6AWG/16mm² | | | 4AWG/25mm² |
| Net Weight IP43 (Controller & White Terminal Cover) | 5.07kg | 5.88kg | 5.93kg | 6.56kg |
| Net Weight IP32 (Controller Only) | 4.86kg | 5.66kg | 5.71kg | 6.34kg |
| **Environmental Parameters** | | | | |
| Operating Temperature Range | -25°C to +60°C (Derating when temperature is higher than 40°C) | | | |
| LCD Temperature Range | -20°C to +70°C | | | |
| Storage Temperature Range | -30°C to +70°C | | | |
| Relative Humidity | 5%-95% (N.C) | | | |
| Altitude | < 5,000M (Derating when altitude is higher than 2,000m) | | | |
| Enclosure | Ip43 (Controller & White Terminal Cover); IP32 (Controller Only) | | | |
| Pollution Degree | PD2 | | | |
| **Certification** | | | | |
| Safety | EN/IEC62109-1 | | | |
| EMC | EN61000-6-1 / EN61000-6-3 | | | |
| FCC | 47 CFR Part 15, Subpart B | | | |
| ROHS | IEC62321-3-1 | | | |

Remarks: Specifications are subject to change without notice.

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| Model | LET-H75HN2R1-HJ | LET-H80HN2R2-HJ | LET-H100LF2R2-HJ<br>LET-H100LF2B2-HJ | LET-H100HF2R2-HJ |
|---|---|---|---|---|
| **Electrical Parameters** | | | | |
| Battery Rated Voltage | 12/24/48VDC~Auto | | | |
| Controller Operating Voltage Range | 8–62V | | | |
| Battery Type | AGM (Default) / Gel / Flooded / User | | | |
| Lithium Battery Type | LiFePO4 / Li (NiCoMn)O2 / User | | | |
| Rated Charging / Discharging Current | 75A | 80A | 100A | |
| Rated Charging Power | 975W/12V; 1,950W/24V; 3,900W/48V | 1,040W/12V; 2,080W/24V; 4,160W/48V | 1,300W/12V; 2,600W/24V; 5,200W/48V | |
| Maximum Charging Power | 975W/12V; 1,950W/24V; 3,900W/48V | 1,040W/12V; 2,080W/24V; 4,160W/48V | 1,300W/12V; 2,600W/24V; 5,200W/48V | |
| Rated Load Current | 75A | 80A | 100A | |
| Maximum Load Current | 75A | 80A | 100A | |
| PV Maximum Open-circuit Voltage | 200V (@ lowest temperature); 180V (@ 25°C) | 200V (@ lowest temperature); 180V (@ 25°C) | 150V (@ lowest temperature); 138V (@ 25°C) | 200V (@ lowest temperature); 180V (@ 25°C) |
| MPPT Operating Voltage Range | (Battery voltage plus 2V, and>28V) to 144V (@ 25°C) | | (Battery voltage plus 2V, and>28V) to 108V (@ 25°C) | (Battery voltage plus 2V, and>28V) to 144V (@ 25°C) |
| Tracking Efficiency | ≥ 99.5% | | | |
| Maximum Conversion Efficiency | 98.10% | 98.50% | 98.60% | 98.50% |
| Full Load Efficiency | 97.50% | 97.50% | 98.00% | 97.60% |
| Temperature Compensation Coefficient | -3mV/°C/2V (Default) | | | |
| Self-consumption (Enabled Communication) | 98mA/12V; 60mA/24V; 46mA/48V | | | |
| Self-consumption (Disabled Communication) | 48mA/12V; 25mA/24V; 14mA/48V | | | |
| Grounding Type | Common negative grounding | | | |
| Dry Contact (Oil Generator / Utility) | Rated value: 5A/30VDC; Maximum value: 0.5A/60VDC | | | |
| RS485 Communication Port | 5VDC/200mA (RJ45) | | | |
| **Mechanical Parameters** | | | | |
| Dimension (L*W*H) IP43 (Controller & White Terminal Cover) | 320×263×158mm | 352×263×158mm | | |
| Dimension (L*W*H) IP32 (Controller Only) | 320×212×149mm | 352×212×149mm | | |
| Mounting Dimension (L*W) | 308×140mm | 340×140mm | | |
| Mounting Hole Size | Φ7mm | | | |
| Wiring Terminal | 2AWG/35mm² | | | |
| Recommended Cable | 4AWG/25mm² | | 4AWG/35mm² | |
| Net Weight IP43 (Controller & White Terminal Cover) | 6.62kg | 7.79kg | 7.87kg | 7.87kg |
| Net Weight IP32 (Controller Only) | 6.40kg | 7.55kg | 7.63kg | 7.63kg |
| **Environmental Parameters** | | | | |
| Operating Temperature Range | -25°C to +60°C (Derating when temperature is higher than 40°C) | | | |
| LCD Temperature Range | -20°C to +70°C | | | |
| Storage Temperature Range | -30°C to +70°C | | | |
| Relative Humidity | 5%–95% (N.C) | | | |
| Altitude | < 5,000M (Derating when altitude is higher than 2,000m) | | | |
| Enclosure | Ip43 (Controller & White Terminal Cover); IP32 (Controller Only) | | | |
| Pollution Degree | PD2 | | | |
| **Certification** | | | | |
| Safety | EN/IEC62109-1 | | | |
| EMC | EN61000-6-1 / EN61000-6-3 | | | |
| FCC | 47 CFR Part 15, Subpart B | | | |
| ROHS | IEC62321-3-1 | | | |

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