

stored energy solutions for a demanding world



Model: 48NPFC10

NPFC Series

Narada NPFC series is a complete range of 48V LiFePO₄ (Lithium Iron Phosphate) battery products, for a wide variety of applications, such as telecom base station, UPS, renewable energy system, etc., with advanced life, standard size, light weight and strong environmental adaptability.

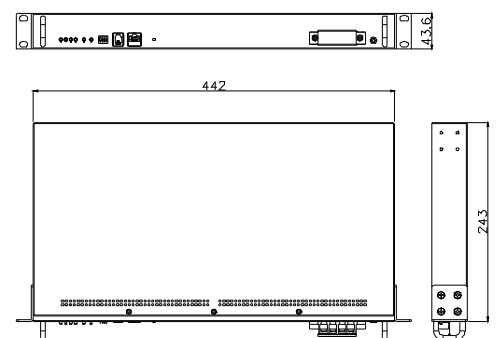


Battery Management System(BMS)

For standard Narada lithium battery module, BMS is applied to monitor voltage, current, temperature of cells and module, take protections against over-charge, over-discharge, over-current, over-temperature, under-temperature and short circuit, etc., and provide cell balancing and current limitation during charging process to ensure a reliable safety and excellent performance.

Meantime, Narada supply customized upper computer software for BMS communication via RS232 or RS485 to set parameters or read monitoring data.

Dimensions-mm



Specifications

| Battery Specification | | |
|----------------------------|-----------|---|
| Rated Voltage | | 48V |
| Rated Capacity | | 10Ah (C ₅ , 0.2C to 40.5V at 25°C) |
| Discharge Current (Max.) | | 10A |
| Discharge End Voltage | | 40.5V |
| Charge Current (Recomm.) | | 2A |
| Charge Current (Max.) | | 10A |
| Charge Voltage | | 54±0.5V |
| Dimensions | Width | 442mm (17.40 inches) |
| | Depth | 245mm (9.65 inches) |
| | Height | 44mm (1.73 inches, 1U) |
| Typical Weight | | 7.3kg |
| Layout of Front Panel | | |
| Status Indicators | | SOC / ALM / RUN |
| Communication Ports | | RS232 / RS485 |
| Communication in Parallel | | 16 models in maximum |
| Reset Key | | Available |
| Terminal Size | | M4 / 10mm (Screw size / Cable Width) |
| LCD Screen | | Optional |
| Breaker | | Optional |
| Operation Environments | | |
| Temperature Range | Discharge | -20 to +60 °C |
| | Charge | 0 to +60 °C |
| | Storage | 0 to +40 °C |
| Temperature Recommendation | Discharge | +15 to +35 °C |
| | Charge | +15 to +35 °C |
| | Storage | +15 to +30 °C |
| Humidity | | 5% to 95% |

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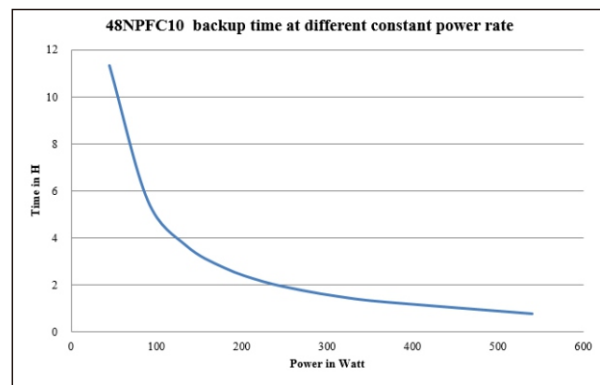
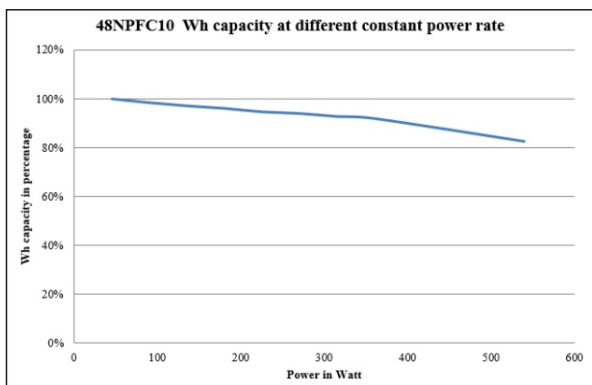
Constant Current Discharge Characteristics (25°C,77°F)

| End voltage | Current(A) | | | | | | | | | | 1C |
|-------------|------------|-------|------|-------|------|------|------|------|------|----|------|
| | 0.1C | 0.15C | 0.2C | 0.25C | 0.3C | 0.4C | 0.5C | 0.6C | 0.8C | 1C | |
| | Hours | | | | | | | | | | Min |
| 46.5V | 9.61 | 6.36 | 4.74 | 3.80 | 3.14 | 2.21 | 1.68 | 1.31 | 1.02 | | 41.3 |
| 45.0V | 9.79 | 6.49 | 4.85 | 3.89 | 3.23 | 2.39 | 1.88 | 1.53 | 1.17 | | 52.6 |
| 43.5V | 9.91 | 6.59 | 4.93 | 3.98 | 3.27 | 2.45 | 1.94 | 1.60 | 1.21 | | 55.7 |
| 42.0V | 10.00 | 6.65 | 4.97 | 3.97 | 3.30 | 2.48 | 1.97 | 1.63 | 1.23 | | 57.0 |
| 40.5V | 10.05 | 6.69 | 5.00 | 4.00 | 3.33 | 2.50 | 1.99 | 1.65 | 1.24 | | 57.9 |
| 39.0V | 10.07 | 6.71 | 5.02 | 4.02 | 3.34 | 2.50 | 2.00 | 1.66 | 1.24 | | 58.3 |

Discharge Data with Constant Power (25°C,77°F)

| End voltage | Power | | | | | | | | | 540W |
|-------------|-------|------|------|------|------|------|------|------|------|------|
| | 45W | 90W | 135W | 180W | 225W | 270W | 315W | 360W | 450W | |
| | Hours | | | | | | | | | Min |
| 46.5V | 10.89 | 5.34 | 3.50 | 2.55 | 1.96 | 1.57 | 1.29 | 1.07 | | -- |
| 45.0V | 11.09 | 5.45 | 3.59 | 2.65 | 2.07 | 1.70 | 1.44 | 1.24 | | 0.5 |
| 43.5V | 11.22 | 5.52 | 3.63 | 2.68 | 2.12 | 1.73 | 1.47 | 1.27 | | 33.1 |
| 42.0V | 11.30 | 5.56 | 3.66 | 2.71 | 2.13 | 1.76 | 1.49 | 1.30 | | 43.2 |
| 40.5V | 11.35 | 5.59 | 3.68 | 2.73 | 2.15 | 1.78 | 1.50 | 1.30 | | 46.5 |
| 39.0V | 11.38 | 5.60 | 3.69 | 2.74 | 2.16 | 1.79 | 1.51 | 1.32 | | 47.9 |

Performance Curves



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