

Lithium Iron Phosphate (LFP)



Features

- Simple installation and load/charge system integration (Pos/Neg termination)
- Advanced intelligent lithium battery management technology
- Energy transfer patented technology provides high cell utilization efficiency for prolong system operational life.
- Configuration flexibility, support parallel connection expansion up to 4 modules
- Integrated heating for cold temperature operation

Compliance

- UL1642, Standard for Lithium Batteries
- UL2054, Standard for Household and Commercial Batteries
- UL1973 Certified
- EN 61000-6-1:2007, Electromagnetic compatibility (EMC)
- EN 61000-6-3:2007+A1:2011, Electromagnetic compatibility (EMC)
- IEC 62133:2012, Battery Safety Testing
- UN 38.3
- IP65
- 47CFR Part 15 Subpart B Certified Class B)
- GR-487-CORE-2009 Corrosion Resistance

BMS – Alarming - Communication

- System monitoring of voltage, current, temperature of cells and module. Built in protection against over-current on discharge and recharge, over-temperature, low temperature, low and high voltage, and short circuit
- BMS maintenance and service communication via RS485 along with Modbus for simple interface with Inverters and other equipment

Narada MPL MPL-OM series 48V LFP (Li-Ion) battery system are designed to IP65 requirements and ideally suited for OSP, Telecom, 5G, CATV, Rail and any outdoor application. They can be install in parallel up to 4 Batteries max.

MPL series offer long cycle life, small size, reduced weight, and simplified installation for mounting to pole or enclosure. Batteries can be paralleled up to 200Ah. LFP chemistry makes it one of the safest technologies, suitable for high and low temperature operation and capable of .5C and higher discharge rates.

Dimensions and Specifications

End V	Ah 8hr to 40.5V 25C	Ah 1hr to 40.5V 25C	Max Discharge Current (A)
40.5	6.3	48.2	100

Width		Depth		Height	
(mm)	(in.)	(mm)	(in.)	(mm)	(in.)
310	12.2	448	17.6	222	8.74

Rack Units	Weight		Terminal
	(kg)	(lbs.)	
N/A	34.0	75.0	N/A

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Parallel Operation / Discharge Rate

48MPLhE50-OM	0.5C to 1C up to 4 Strings
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BMS/Battery Operating Parameters

Parameters	Units	Value
Charge voltage	V	54 ± 0.5
Equalization charge voltage	V	NA
Nominal charge current	A	0.2C
Charge current limitation	A	1.0C
Equalization charge interval	day	NA
Equalization charge duration	H	NA
Equalization charge	A	NA
Condition to float charge	A	0.05C
LVBD (Low voltage battery disconnect)	V	> 40.5

Operating Environment Limits

Maximum Recommended Temperature Range (°C)	Discharge	-20 ~ +60
	Charge	0 ~ +60
	Storage	0 ~ +40
Recommended Temperature (°C)	Discharge	+15 ~ +35
	Charge	+15 ~ +35
	Storage	+15 ~ +30
Humidity	5% ~ 95%	

Constant Current Rates@25C in Hours (Amps)

End	10	8	5	4	3.5	2.5	2	1.5	1	0.5
46.5	4.8	6.0	9.5	11.1	11.9	17.8	21.0	27.7	34.4	65.4
45.0	4.9	6.1	9.7	11.3	12.1	19.1	23.5	33.7	43.9	83.4
44.1	4.9	6.1	9.8	11.5	12.3	19.4	23.9	34.6	45.2	85.9
43.5	4.9	6.1	9.9	11.6	12.4	19.6	24.3	35.4	46.4	88.2
42.0	5.0	6.2	9.9	11.6	12.4	19.8	24.6	36.1	47.5	90.3
40.5	5.0	6.3	10.0	11.7	12.5	20	24.9	36.6	48.2	91.6

Over Temperature Protection	High temp. - charge	70±3°C
	Recover temp. - charge	60±3°C
	High temp. - discharge	70±3°C
	Recover temp. discharge	60±3°C
	Low temp. - charge	0±3°C
	Recover temp. - charge	5±3°C
	Low temp. - discharge	-10±3°C
	Recover temp. - discharge	0±3°C

Cycles - Temperature vs Depth of Discharge

Temp (°C)	100%	80%	60%	40%	20%
25	2000	3500	6000	12000	24000
35	1600	2800	4800	9600	19200
45	1200	2100	3600	7200	14400

Constant Current Rates@25C in Hours (Watts)

End	10	8	5	4	3.5	2.5	2	1.5	1	0.5
46.5	245	300	480	610	675	655	1100	1414	1934	3674
45.0	250	307	491	625	692	682	1167	1534	2227	4231
44.1	251	309	494	629	696	686	1181	1549	2264	4301
43.5	252	311	497	633	700	690	1192	1561	2294	4358
42.0	254	313	500	637	706	697	1200	1587	2334	4434
40.5	255	314	503	640	709	701	1209	1601	2348	4661

Accessories

Part No.	Description
FEN4850-CBLComMod	Module to Module Com Cable
FEN4850-CBLComPC	Comms to PC/laptop Cable
FEN4850-CBLComRec	Comms to Rectifier Cable (no connector at Rectifier end)
FEN4850-CBLDCPow	DC Power Cable
FEN4850-PMK	FEN4850 Pole and Wall Mount Kit