



IONPACK Ltd



## FLEXium 48/28/10 Specification 3.7.1

### 48V LiFePO<sub>4</sub>

| OPERATING CONDITIONS         |               |
|------------------------------|---------------|
| Nominal Voltage              | 51.2 V        |
| Nominal Capacity             | 28 Ah         |
| Total Energy                 | 1.4 kWh       |
| Impedance                    | 50 mΩ         |
| Self Discharge               | ~3% per month |
| Cycle Life at 100% DoD@ 0.2C | 5,000 cycles  |
| Series connection            | 1             |
| Parallel Connection          | 10            |

| DISCHARGE                                    |                  |
|----------------------------------------------|------------------|
| Standard Continuous discharge                | 10 A (20+ min)   |
| Maximum Continuous Discharge Current         | 25 A (10 min)    |
| Peak Discharge Current                       | 30 A (1 min)     |
| PCM Discharge Current Cut-off                | 40 A (3 seconds) |
| Max Solar Recommended Low Voltage Disconnect | 47 V             |
| Short Circuit Protection                     | 200-500μs        |

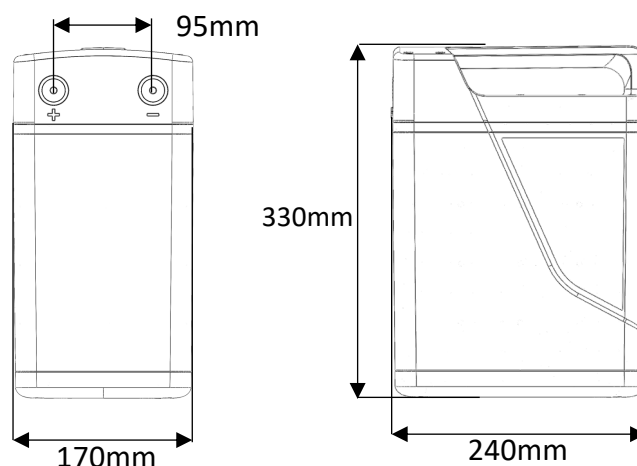
| CHARGE                      |             |
|-----------------------------|-------------|
| Charge/discharge efficiency | >97% @ 0.5C |
| Recommended Charge Current  | 10 A        |
| Peak Charge Current         | 25 A        |
| PCM Charge Current Cut-Off  | 28 A        |
| Fully Charged Voltage       | 56 V        |

| TEMPERATURE                 |             |
|-----------------------------|-------------|
| Storage Temperature         | -20 to 60°C |
| Discharge Temperature Range | -10 to 60°C |
| Charge Temperature Range    | 5 to 45°C   |

| MECHANICAL      |                                   |
|-----------------|-----------------------------------|
| Chemistry       | Cylindrical – LiFePO <sub>4</sub> |
| Case Dimensions | L330xW170xH240(mm)                |
| Weight          | Circa 15 kg                       |
| Terminal Type   | M8 brass threaded insert          |
| Terminal Torque | ≤5 Nm                             |
| Casing Type     | V0 Plastic Case                   |
| Casing IP       | IP 64                             |
| Communication   | RS485 via USB-A port              |

| BATTERY MANAGEMENT       |          |
|--------------------------|----------|
| BMS Type                 | Passive  |
| BMS Location             | Internal |
| Balance Current per Cell | 50 mA    |
| Overcharge / Discharge   | 40 A     |

| SAFETY                   |                            |
|--------------------------|----------------------------|
| Transportation           | UN3480, Class 9            |
| Battery Certification    | CE, UN38.3, RoHS, IEC62619 |
| UN Certification (Cells) | UN38.3                     |



This information is for technical reference only and should not be used as a basis for product guarantee or warranty.

## Specification 3.7.1

### Lithium IP64 48V LiFePO<sub>4</sub>

| DISCHARGE SPECIFICATIONS             |                     |
|--------------------------------------|---------------------|
| Nominal Voltage                      | 51.2 V              |
| 1 second rate constant power at 20°C | 2048 W/40 A         |
| 1 min rate constant power at 20°C    | 1536 W/30 A         |
| 10 min rate constant power at 20°C   | 1280 W/25 A         |
| 20+ min rate constant power at 20°C  | 512 W/10 A          |
| Short circuit current                | +40 A BMS regulated |
| 10 hr rate capacity to 47 V          | 27.53 Ah            |

| CHARGE SPECIFICATIONS                    |                  |
|------------------------------------------|------------------|
| Bulk Charge Voltage                      | 56-58.4 V        |
| Float charge Voltage*                    | 56-58.4 V        |
| Cyclic (or boost charge) at 20°C         | N/A              |
| Charge current                           | 10 A recommended |
| Charge current peak                      | 25 A max         |
| Charge time at 12 A Bulk charge to 58.4V | 2.65 hours       |
| Charge time at 12 A Bulk charge to 57.6V | 2.35 hours       |

| CAPACITY SPECIFICATIONS |             |
|-------------------------|-------------|
| Capacity @ 6A           | 276 minutes |
| Capacity @ 14A          | 117 minutes |
| 2 hour rate             | 28 Ah       |
| 5 hour rate             | 28 Ah       |
| 10 hour rate            | 28 Ah       |
| 20 hour rate            | 28 Ah       |

\* Lithium iron phosphate batteries do not require a float charge hence the bulk charge voltage and float charge voltage are the same

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## The Warranty Highlights

-  **5 years**, from date of purchase.  
**7 years** if installed by certified installer.
-  Guaranteed to maintain Ah rating for 3000 cycles to 80% of original specification under correct use conditions.
-  **Greater flexibility – Add More When Needed**  
Upgrade your battery capacity at any time.  
When you upgrade you extend your warranty for all the batteries in your system.
-  **Get Paid to Recycle** when you return battery for replacement.
-  **Full Warranty Terms and Conditions**  
[www.ionpack.co.uk](http://www.ionpack.co.uk)

