



Controllis

Better Power
Anywhere

Controllis IonLiFe[®] 48-105



Overview

The Controllis IonLiFe[®] 48-105 is a 105 Amp hour 48V lithium-ion phosphate battery pack designed specifically for telecommunications operations. Lithium-ion phosphate is an ideal chemistry for telecoms sites thanks to its high heat tolerance and excellent cycle life when used in hybrid applications.

The IonLiFe[®] 48-105 fits into a standard 19" ETSI rack and multiple units can be clustered to create a substantial battery bank for hybrid applications. The batteries communicate directly with the Controllis RSC-HMU hybrid system controller which also regulates the charge current and voltage supplied to the batteries from the Controllis DC generators. The tight monitoring and control between the batteries and DC generator ensures long battery life even in hybrid cyclic charging mode. The IonLiFe[®] 48-105 is also ideally suited to use with renewable solar and wind systems.

Technology Advantages

The lithium-ion phosphate chemistry used in the Controllis IonLiFe[®] 48-105 battery (LiFePO₄, sometimes abbreviated as LFP) offers considerable advantages over other lithium battery technologies and over lead-acid based batteries:

- Significantly better cycle life compared to lead and other lithium chemistries
- Higher safety than other lithium chemistries
- More compact and lighter weight than lead-acid of the same capacity
- Tight charging control and communications with the Controllis hybrid system controller
- Full remote visibility with Controllis Remote Management Server

Hybrid Applications

The IonLiFe[®] 48-105 battery is designed from the outset for hybrid applications. The combination of excellent scalability, very high cycle life and high round trip efficiency mean it is perfectly suited to hybrid cycling applications with or without renewable inputs such as solar and wind.

Standby Applications

The IonLiFe[®] 48-105 can also be used in standby applications where it is superior to lead-based solutions in terms of tolerance to heat and overall life. In a typical standby application the battery will have a life exceeding 15 years.

Controllis IonLiFe[®] 48-105: Specification

Nominal Voltage	48V
Capacity	105 Amp hours (at 0.2C discharge)
Discharge rate (normal)	50A
Discharge rate (maximum)	100A
Charge Voltage (typical)	53.5V
Charge current	≤ 20A per module
Charge mode	CC/CV managed by Controllis RSC
Operation Temp (charge)	0C to 45C
Operation Temp (discharge)	-10C to +55C
Operating Humidity	RH < 85%
BMS Protection	Over voltage Over current Over discharge Cell balancing Over temperature
Chemistry	LiFePO ₄
Case Construction	Welded steel, colour black
Dimensions	19" ETSI Rack 3.5 U high
Dimensions (L x W x H)	535mm x 437mm x 155mm
Weight	48 kg
Cycle life 50% DoD 0.2C	>7,000 cycles

