

PM4000A



Smart Charger Instructions for use

The PM4000 is a standalone desktop smart standard battery charger providing charge to the all Inspired Energy® brand “P” Series smart standard packs and hybrids irrespective of size, shape, voltage, cell chemistry or capacity. Complete with a medical grade universal power supply (110VAC-240VAC, 50-60HZ) for global compatibility.

What's in the box?

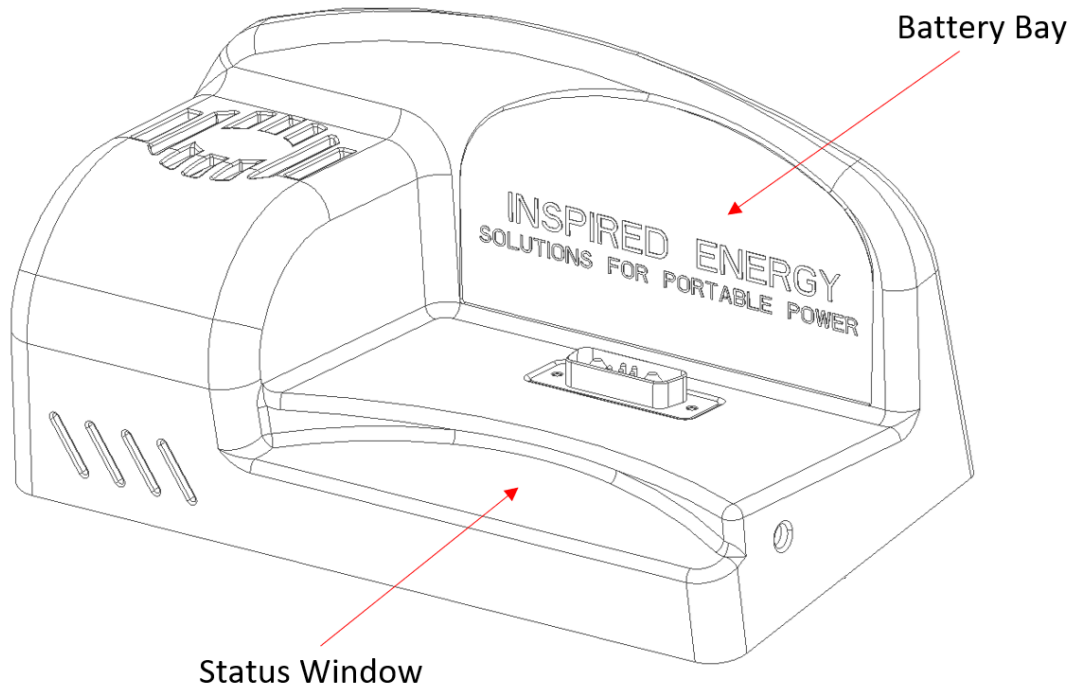
1. One PM4000 multi-bay desktop charger
2. One 36VDC 65W Class II medical power supply with universal mains input
3. One US Class II 2-pin mains cord mains cable

Safety:

1. Do not expose the charger or power supply to water or liquids.
2. Do not open the charger or power supply case, no user serviceable parts are inside.
3. Use only the manufacturer's power supply and observe terminal polarity.
4. Place the charger in a cool spot, away from external heat sources.

Using your Charger:

Place the charger on a flat, level surface away from sources of heat and moisture. Connect the power supply to the mains AC supply using the cable supplied. All LEDs illuminate for two seconds on power up.



Charging:

Place the battery into the battery bay ensuring that the 7-way connector is fully seated. The LEDs in the status window will provide status information and the charger will automatically begin charging.

LED Indication:

The status of the battery is indicated by the LEDs visible in the status window:

* Green flashing:	Battery charging
● Green solid:	Battery fully charged
● Red solid:	Error

Error Conditions:

Smart Charger: Unsuccessful Charger communications within 20sec timeout, voltage or current delivered is different from that reported by battery or exceeds maximums.

Battery: No Battery Communications within 210sec timeout

Recharge Time:

Different battery packs will require differing recharge times. The times given below are for a full charge from 0% to 100% state of charge. They are valid for all variants and custom hybrids of each battery model.

Battery Chemistry	Battery Model	Recharge Time (hours)
Li-ion	PB3037, PD3074	3.5
	PD3077	4.5
	PH2054, PH3054	3.5
	PH2059, PH3059	3.5

What are the SMBus and the SBS?

The Smart Battery System defines the parameters that are stored by an SBS-compliant battery. These parameters include full battery status and fuel gauging information. The System Management Bus is the language by which these parameters are communicated between the battery, the charger and the host device. For full details of the SBS information available from your battery please refer to the battery specification sheet available at www.inspired-energy.com.

How does the charger know what charge to deliver?

The charger unit is capable of sensing and delivering an appropriate charge to all Inspired Energy Li-ion “P” Series standard battery packs. Upon inserting the battery into the charger, the battery communicates to the charger over the SMBus telling the charger what type of cell chemistry it is and what type of charge regime it needs. The charger then configures its output to provide the charge regime requested by the battery. If no SMBus communications are issued from the battery, the charger interrogates the thermistor/resistor I.D. pin on the battery terminal and delivers an appropriate charge.

Compatibility:

The PM4000 is fully compatible with all Inspired Energy® brand “P” Series standard battery packs and their custom hybrids. For optimum results we recommend using only Inspired Energy® brand batteries. For a full list of all compatible Inspired Energy batteries, please visit:

www.inspired-energy.com

PM4000A Specification Summary

Weight:	316g / 11.2oz
Height:	88mm / 3.5"
Length:	180mm / 7"
Width:	92mm / 3.6"
Mating Connector:	7 pin D-sub (7W2) battery connector
Communications Compliances:	System Management Bus Rev 1.1, Smart Battery Data Specification Rev 1.1 and Smart Battery Charger Specification Rev 1.1 compliant
Power Supply:	100-240VAC, 36VDC, 65W, 119x60x36mm, 310g / 11oz Class II, UL listed, FCC & CE Compliant, RoHS Compliant
Mains Cord:	US Class II C7 AC, 125V 2-pin connector

