

PH4000A



Smart Charger Instructions for use

The PH4000 is a standalone desktop smart standard battery charger. It works with all Inspired Energy® brand “P” Series smart standard packs and hybrids up to a 5S voltage configuration.

What’s in the box?

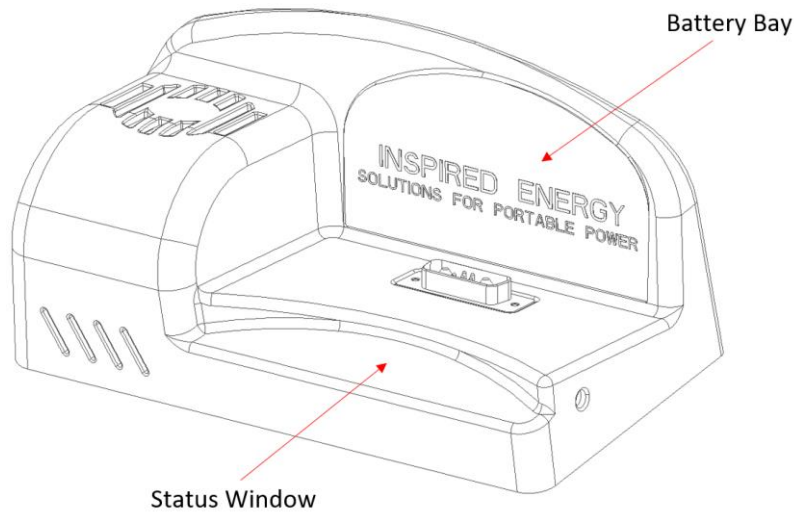
1. One PH4000 multi-bay desktop charger/calibrator
2. One 24VDC power supply with universal mains input
3. One mains cable
 - N. American chargers (PH4000A) are packed with a US 3-pin mains cord

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. Green and red 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 flashing: | Battery fuel gauge needs recalibration |
| ● Red solid: | Error |

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
	PE4068	3.5
	PH2054, PH3054	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?

Each charger unit is capable of sensing and delivering an appropriate charge to all Inspired Energy NiMH and 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 PH4000 is fully compatible with all Inspired Energy® brand “P” Series standard battery packs and their custom hybrids up to a 5S configuration. The PH4000 is not compatible with the 8S “P” Series standard battery packs. 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

PH4000A Specification Summary

Weight:	308g / 11oz
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, 24V, 2.5A DC, 115x53x38mm, 310g / 11oz UL listed, FCC & CE Compliant, RoHS Compliant
Mains Cord:	PH4000A - 110V N. American 3-pin connector

