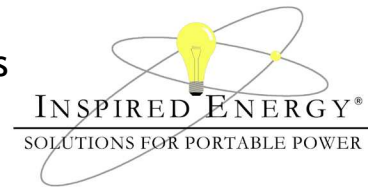


## Options for the Mini Belt Pack Units



The mini Belt packs have been designed to be modular in construction. This allows a huge variety of configurations, which makes the creation of part numbers difficult. For this reason we offer the following options, allow you to choose which you want, & then create a part number & design package to suit your particular configuration. Please note, not all of these options are available for low volume sampling. Due to the complexities of manufacturing we may recommend a pre-existing design for initial samples.

Options:

### 1) Choice of case designed to hold:

- the 204x range of battery packs, or
- The 205x range of battery packs

The mini belt packs have been designed with two different case tops to fit each of these battery product ranges.

The 204x battery range features 3 x Li ion 18650 cells side by side. All share the same cross-section & only differ in battery length.

The NC2040 is a 3-cell battery, the NF2040 & NF2047 have 6-cells, the Ni2040 has 9 & the NL2040 has 12. Although all of these batteries fit the MP204x & MC204x mini belt pack units, only the NC2040 & NF2040 are recommended for comfortable belt-mounted operation.

Similarly the 205x range consists of a family of batteries all with 4 x 18650 cells side by side. So the ND2053, ND2054 & ND2057 all have 4 cells, the NH2054 & NH2057 have 8 cells & the NL2050 & NL2054 have 12 cells. Again the mini belt pack units are intended for use with the 4-cell batteries. The 8 cell can be used at a stretch in a belt mounted application & although the 12-cell batteries physically fit, they would not be practical for belt-worn use.



### 2) Choice of Output Cable & Connector

- Coil cable unterminated. (heavy duty coil, extends from 2' to 5')
- 2-5' heavy duty coil cable terminated with 90° 5.5mm o.d. x 2.5mm i.d. Coaxial DC connector. (Center positive)
- 2-5' heavy duty coil cable terminated with 5.5mm o.d. x 2.1mm i.d. Coax. DC con. (Center +)
- 1-3' light duty coil cable with 90° 6.3mm o.d. x 3.0mm i.d. Coax. DC con. (Center +)
- 1-3' light duty coil cable with 90° 6.5mm o.d. x 1.4mm center pin Coax. DC con. (Center +)
- 3' Straight cable unterminated.
- 3' Straight cable terminated with Molex 39-01-4031, (Digi-Key WM23608-ND) Pin 1 +, Pin 3 -.

Tooling a molded DC connector incurs tooling costs & typically requires a minimum order quantity of 1,000 & may have 12-16 week lead times. Please contact us if the connector you require is not listed here, we may be able to add a non-overmolded connector, but again minimum order quantities may apply.

### 3) Choice of on-board charger

The circuit boards used for the mini belt pack units are pre-tooled to accept the components for a 30W on-board charger. If this option is chosen a 90-250VAC/50-60Hz : 24VDC AC:DC power supply is included & you have a choice of AC cables for use with the following AC outlets:

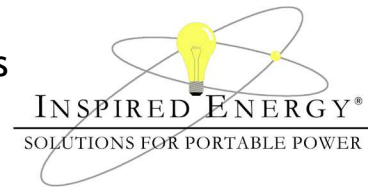
- N. American Nema

Inspired Energy 25440 NW 8<sup>th</sup> Place, Newberry FL 32669

US toll free: 1-888-5-INSPIRE (1-888-546-7747) Tel: 352 472 4855 Fax: 352 472 4859

www.inspiredenergy.com

## Options for the Mini Belt Pack Units



- b. European Schuko
- c. UK BSI

#### 4) Choice of Input Voltage Regulation

If the on-board charger option is chosen, it requires 24VDC as its input voltage. However you may require the unit to operate from a variety of different DC power sources such as a vehicle “cigarette-lighter” socket, or a solar panel. The circuit boards used for the mini belt pack units are pre-tooled to accept the components for an input voltage regulator which enables the unit to accept a range of input voltages from 9 to 24VDC and a range of input power from 4W upwards.

#### 5) Choice of Output Voltage Regulation (Boost Only)

The standard unit provides the battery voltage to the output cable. The output will therefore vary as the battery state of charge changes & will also be dependent on which battery is inserted into the case. Some applications however may require a regulated voltage from the unit. The circuit boards used for the mini belt pack units are pre-tooled to accept the components for an output voltage boost circuit which enables the unit to deliver a pre-determined regulated output voltage.

This is not a “dial-a-voltage” option in which the output can be altered by the end user. The desired voltage must be specified by the OEM prior to ordering & it will require the use of a specific voltage battery. (i.e. the function of the output voltage regulation is dependent upon the user putting the correct battery into the mini belt pack unit.) For example if the unit is ordered to operate from a nominal 7.2V battery & deliver a regulated output of 12.0V, then if a 14.4V battery is accidentally inserted, the output will not operate in order to protect the host device. The maximum output power is limited by the battery & by the heat dissipation limit of the boost circuit in the belt pack.