

**CH0002 Charger**

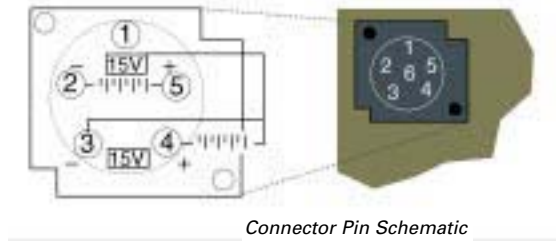
**Specifications**

Part Number	CH0002
Maximum Charge Rate:	1.0 Amp
Charge Termination Voltage:	16.8V
Weight:	432 g 15.2 oz
Material:	ABS G1SM
Color:	Black

Connector DC	2.5mm
Polarity:	Center Positive
Cable:	91.4 cm (24 in.)
Connector:	6 Pin
Dimensions:	174 x 123.7 x 53.6 mm 6.87 x 4.87 x 2.11 in



**Use with UBI-2590 (UBBL02) Lithium-Ion battery only**



**The CH0002 includes:**

- Charge Control Module
- 91.4 cm (36") cable with 6 - pin connector
- PS2524 - Universal Power Supply
- LCUL - Line cord

**Options:**

- VA2524 - Vehicle Power Adapter

## Specification - CH0002

<b>Batteries:</b>	Li-Ion, Li-Polymer	4 cell series
Termination	CC/CV	Voltage Point 0.2%
Max current	1000mA	+/- 6%
Top-off current	100mA	+/- 50mA for 60min.
Temperature range	0° C to 45° C	+/- 0.2° C

<b>Important:</b>	
Maximum input	30 VDC
Minimum input	19 VDC
Storage temperature	-25° C to 70° C

<b>Physical:</b>	
Dimensions	174.5 x 123.7 x 7 x 53.6 (mm) 6.87 x 4.87 x 2.11 (in.)
Weight	15.24 oz. (432g)
Material	ABS GSM
Color	Black
Input connector	2.5mm DC center positive

<b>L.E.D. Status Indications:</b>	
Off	No battery detected
Green Blinking	Charging
Green Steady on	Charge Complete
Red Blinking	Error: shorted terminals, invalid pack chemistry

### \* Description of operation with Lithium-Ion

A) At Start-up the charger pulses at current limit until the battery pack is detected. This allows the safety circuit to wake-up and protects against charging shorted packs.

B) When the pack is detected the current limit is set (voltage limited) and the LED flashes Green. When the current drops below limit/10 the LED is set to Green Steady On. When the current drops below 50 mA the current is turned off.

C) Every 24 hours the current is turned on for 1 hour or until it drops below 50 mA.

For complete charger instructions refer to: UBI-5133

# Specification - CH0002

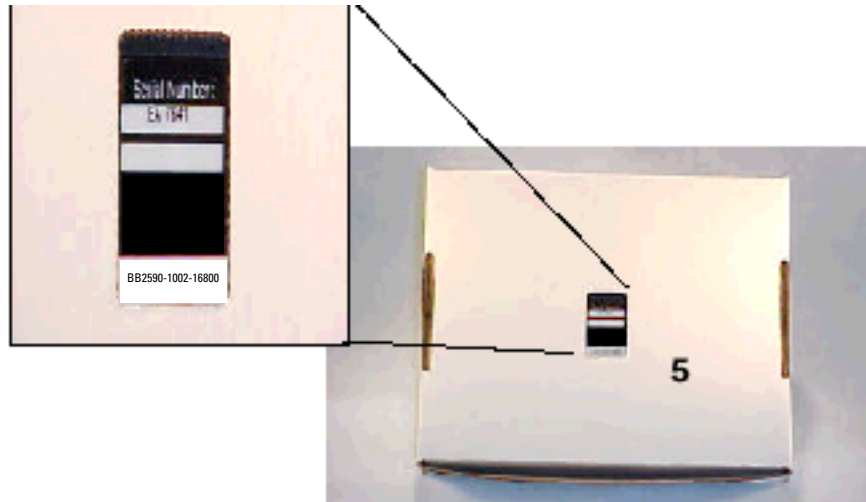
## Product part numbering

Series	- Milliamps	- Millivolts	- Power Supply	- Line Cord
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
BB2590	- 1002	- 16800	- PS2524 VA2524	LCUL - North America LCUK - United Kingdom LCEC - European Community LCJA - Japan LCAS - Australia LCCH - China LCAR - Argentina



- 1 – Line cord
- 2 – Charger
- 3 – Power Supply
- 4 – Kit PN Label
- 5 – Serial Number and Part Number

Instruction sheet not in picture



## Specification - Power Supply

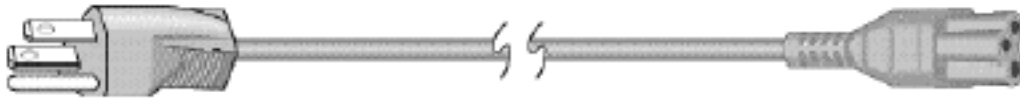


### Part Number: PS-2524

<b>Output Voltage</b>	24 VDC
<b>Output Cable</b>	18Awg - 72" Long
<b>Output Connector</b>	2.5mm Center Positive
<b>Input Voltage</b>	90 - 264 VAC, 47-63 Hz, Single Phase
<b>Input Connector</b>	IEC-320
<b>Dimensions</b>	76.2 x 43.2 x 147.3 mm (3.0" x 1.7" x 5.8")
<b>Weight</b>	482 g (17 oz.) typical
<b>Input Current</b>	1A Maximum at 90 VAC
<b>Inrush Current</b>	25 Amps max at 132 VAC / Cold Start 50 Amps max at 264 VAC / Cold Start

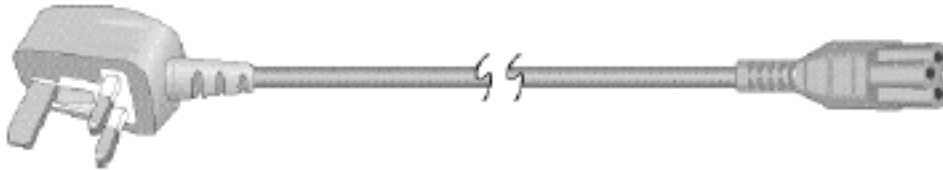
<b>Load Regulation</b>	5% from 20% to 100% load variation
<b>Line Regulation</b>	0.4% Full range
<b>Output Ripple</b>	+1% Pk-Pk typical; 2% Pk-Pk maximum
<b>Minimum Load</b>	0% - none required
<b>Overload Protection</b>	Automatic recovery
<b>Short Circuit Protection</b>	Automatic recovery
<b>Overvoltage Protection</b>	115 - 140%, Automatic recovery
<b>Overshoot</b>	No overshoot at turn on or off
<b>Transient Response</b>	1ms typical for return within 1% for 50% Load step change at 1A/usec. 5% maximum deviation
<b>Turn on Time</b>	0.5 seconds maximum for all units
<b>Hold up Time</b>	16msec minimum at nominal line
<b>Line Surge</b>	IEC 801-5 Level 4
<b>Switching Frequency</b>	100 KHz typical
<b>EMI</b>	Complies with FCC part 15 Class B, EN55011, EN55022, VFG243 Class B
<b>Safety Agencies</b>	UL/CSA (CNL) File#E142017; TUV/EN60950
<b>Leakage Current</b>	Less than 0.75mA
<b>Case</b>	ABS Molded Thermoplastic 94V-O
<b>Ambient Temperature</b>	Storage: -20° to 85° C Operating: 0° to 50° C
<b>Ambient Humidity</b>	10 to 90% Non-condensing
<b>Model Number</b>	SPU50-3, UP04811240
<b>Warranty</b>	1 year

## Specification - Line Cord



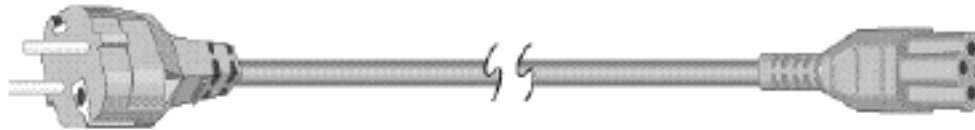
### **UL** SPECIFICATION:

<b>Country:</b>	North America	<b>Conductor:</b>	3x18AWG
<b>Connector AC:</b>	UL/CSA 3 prong	<b>Current:</b>	2.5A
<b>Connector DC:</b>	IEC-320-C5	<b>Voltage:</b>	125VAC
<b>Length:</b>	6 ft.	<b>Color:</b>	Black



### **UK** SPECIFICATION:

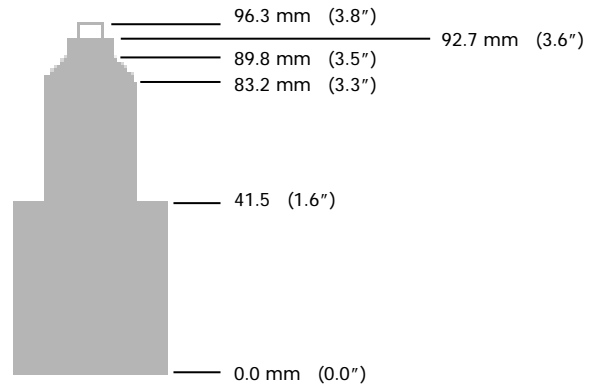
<b>Country:</b>	United Kingdom	<b>Conductor:</b>	3x18AWG
<b>Connector AC:</b>	BSI	<b>Current:</b>	2.5A
<b>Connector DC:</b>	IEC-320-C5	<b>Voltage:</b>	125VAC
<b>Length:</b>	6 ft.	<b>Color:</b>	Black



### **EC** SPECIFICATION:

<b>Country:</b>	European Com	<b>Conductor:</b>	3x18AWG
<b>Connector AC:</b>	European Universal	<b>Current:</b>	2.5A
<b>Connector DC:</b>	IEC-320-C5	<b>Voltage:</b>	125VAC
<b>Length:</b>	6 ft.	<b>Color:</b>	Black

## Vehicle - Adapter



Diameter expands from 20.9 (0.8")  
to 22.9 mm (0.9")

<b>Part Number:</b>	<b>VA2524</b>
<b>Output Current</b>	2.5 Amps maximum
<b>Output Voltage</b>	24 VDC +1.5V
<b>Output Power</b>	60 Watts maximum
<b>Output Cable</b>	2.44 m + 152.4 mm (8 ft. + 6 in.) extended
<b>Output Connector</b>	2.5 mm Center Positive
<b>Input Voltage</b>	13.6 VDC Nominal
<b>Input Connector</b>	Expanding Lighter Adapter
<b>Weight</b>	6.4 oz. typical
<b>Input Current</b>	8.0 Amp
<b>Load Regulation</b>	+ 7%
<b>Output Ripple</b>	100mV RMS
<b>Overload Protection</b>	Current limited
<b>Short Circuit Protection</b>	PEPI Resettable Fuse
<b>EMI</b>	Complies with FCC part 15 Class B, EN55011, EN55022, VFG243 Class B
<b>Case</b>	ABS Molded Thermoplastic 94-HB
<b>Ambient Temperature</b>	Storage: -20° to 85° C Operating: 0° to 45° C
<b>Ambient Humidity</b>	10 to 90% Non-condensing
<b>Warranty</b>	1 year