

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

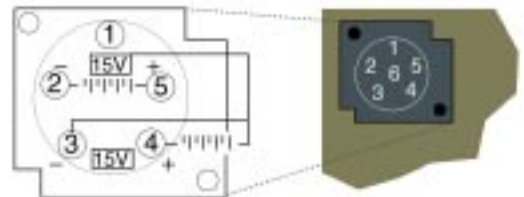
Connector DC	2.5mm
Polarity:	Center Positive
Cable:	91.4 cm (24 in.)
Connector:	6 Pin
Dimensions:	174 x 123.7 x 53.6 mm 6.87 x 4.87 x 2.11 in



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



Charge Cable Connector



Connector Pin Schematic

Agency Approvals			
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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

Batteries:	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

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

Physical:		
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	

Agency Approvals: CE, FCC Class B & Cispr 22

L.E.D. Status Indications:

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

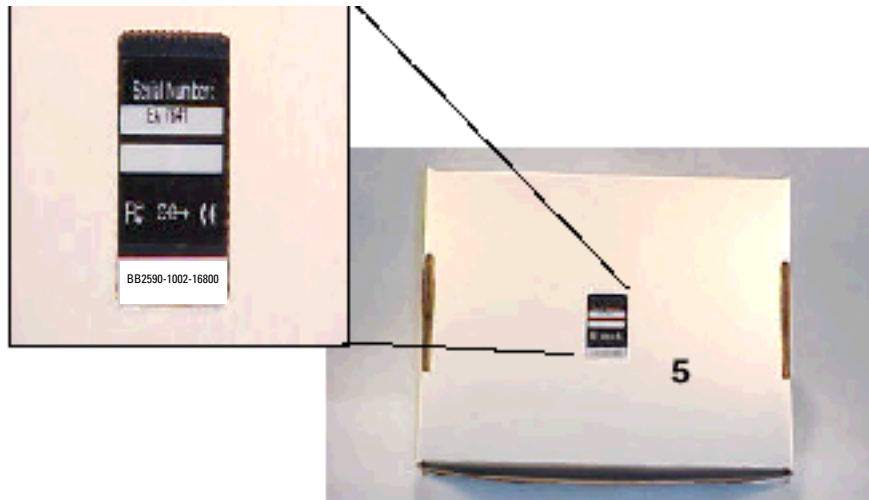
Product part numbering

Series	- Milliamps	- Millivolts	- Power Supply	- Line Cord
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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

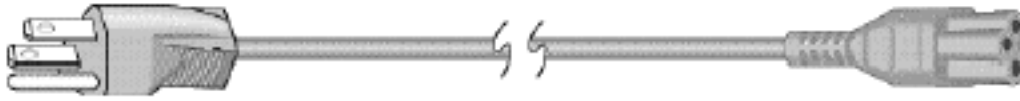


Part Number: PS-2524

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

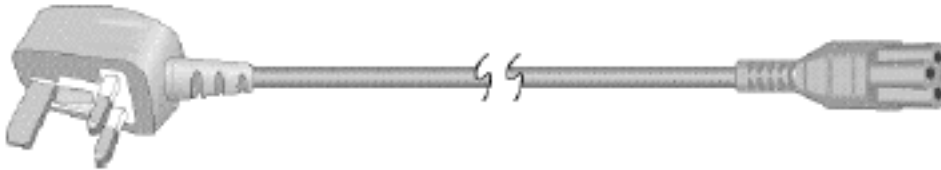
Load Regulation	5% from 20% to 100% load variation
Line Regulation	0.4% Full range
Output Ripple	+1% Pk-Pk typical; 2% Pk-Pk maximum
Minimum Load	0% - none required
Overload Protection	Automatic recovery
Short Circuit Protection	Automatic recovery
Overvoltage Protection	115 - 140%, Automatic recovery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

Specification - Line Cord



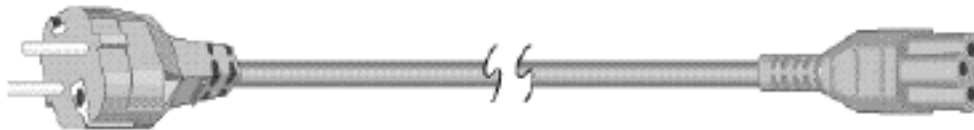
UL SPECIFICATION:

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



UK SPECIFICATION:

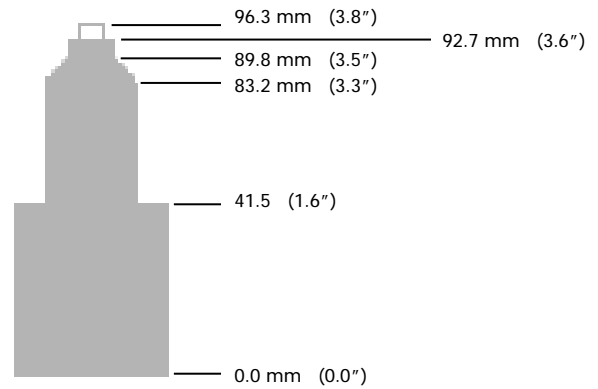
Country:	United Kingdom	Conductor:	3x18AWG
Connector AC:	BSI	Current:	2.5A
Connector DC:	IEC-320-C5	Voltage:	125VAC
Length:	6 ft.	Color:	Black



EC SPECIFICATION:

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

Vehicle - Adapter



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

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