CURTIS

Power Conversion

Battery Chargers

Model 1623

delta-q TECHNOLOGIES

Model 1623

Battery Chargers

The Curtis Model 1623 is a combination high-frequency battery charger and DC/DC converter in one package. Curtis Model 1623 battery chargers are ideal for use in material handling, airport, golf, aerial lift, sweeper/scrubber, utility, Light-On-Road and general industrial battery-powered vehicles.

FEATURES

- Integrated high-frequency battery charger and DC/DC converter saves space, weight, and cabling thereby minimizing the cost of inventory, installation, and service.
- Wide range AC mains input (85–265 VAC) allows use of one charger anywhere in the world and eliminates the need to stock and service multiple models.
- Convection cooling eliminates the need for a cooling fan, thereby increasing reliability and eliminating the need for fan replacement/service.
- Advanced, high-frequency, switchmode design allows more efficient (90% typ), faster charging and optimal charging independent of battery type or condition.
- IP66 protection allows reliable operation in harsh environments.
- Power Factor of >0.99 minimizes utility surcharges and optimizes the use of AC line power.
- Select from an extensive list of approved charge algorithms (default I_1, I_2, U, I_3).
- The chargers can store 10 separate algorithms which can be selected to match the specific batteries in use, thereby eliminating the need for multiple models and resulting in lower operating costs.
- Lightweight and compact size allows on-board use and offers space advantages over ferro-resonant chargers in traditional off-board installations.
- Extensive safety features such as reverse polarity and short circuit protection ensure safe operation for both the operator and the charger itself.
- Multi-color LED allows at-a-glance charge status determination.
- Battery temperature monitoring allows more accurate measurement and charging.

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SPECIFICATIONS

	Model 1623CS		
	4801	7201	9601
Charger DC Output:			
DC Output Voltage - nominal	48 V	72 V	96 V
DC Output Voltage - maximum	68 V	100 V	135 V
DC Output Current - maximum	18 A	12 A	8.5 A
Interlock Current - maximum	1 A	0.5 A	0.5 A
Battery Type	Specific to selected algorithm		
Reverse Polarity	Electronic protection – auto-reset		
Short Circuit	Electronic current limit		
Converter DC Output:			
No-load power draw	<0.7W	<0.7W	<0.9W
Battery DC input voltage range	35–87V	50–130V	60–150V
DC output voltage	13.5 ± 0.7V		
Continuous/peak output current	30A / 60A		
Output lines	Switched, direct (unswitched)		
AC Input			
AC Input Voltage - range	85–265VAC		
AC Input Voltage - nominal	120VAC / 230VAC rms		
AC Input Frequency	45–65 Hz		
AC Input Current - nominal	12A / 9.5A rms @ 120VAC or 5A rms @ 230VAC		
AC Power Factor - nominal	>0.99 @ 120VAC / >0.98 @ 230VAC		

Model 1623

Battery Chargers

SPECIFICATIONS continued

	Model 1623CS		
	4801	7201	9601
Mechanical			
Dimensions	28.0 x 24.6 x 11.0 cm (11 x 9.7 x 4.3″)		
Weight	<6 kg (<13 lbs)		
AC input connector	IEC320/C14 (requires country-specific cord		
DC output connector	–OEM specific with 12 AWG wire		
Environmental			
Environmental Enclosure	IP66 (NEMA4)		
Operating Temperature	–30°C to +50°C (–22°F to +122°F), derated above 30°C (86°F), below 0°C (32°F)		
Storage Temperature	–40°C to +70°C (–40°F to +158°F)		
Regulatory			
Safety	UL1564 3rd Edition, 107.2, EN 60335-2-29		
Emissions	FCC Part 15/ICES 003 Class A, EN 55011		
Immunity	EN 61000-3-2, EN 61000-3-3, EN 61000-4-2/-3/-4/-5/-6/-11		

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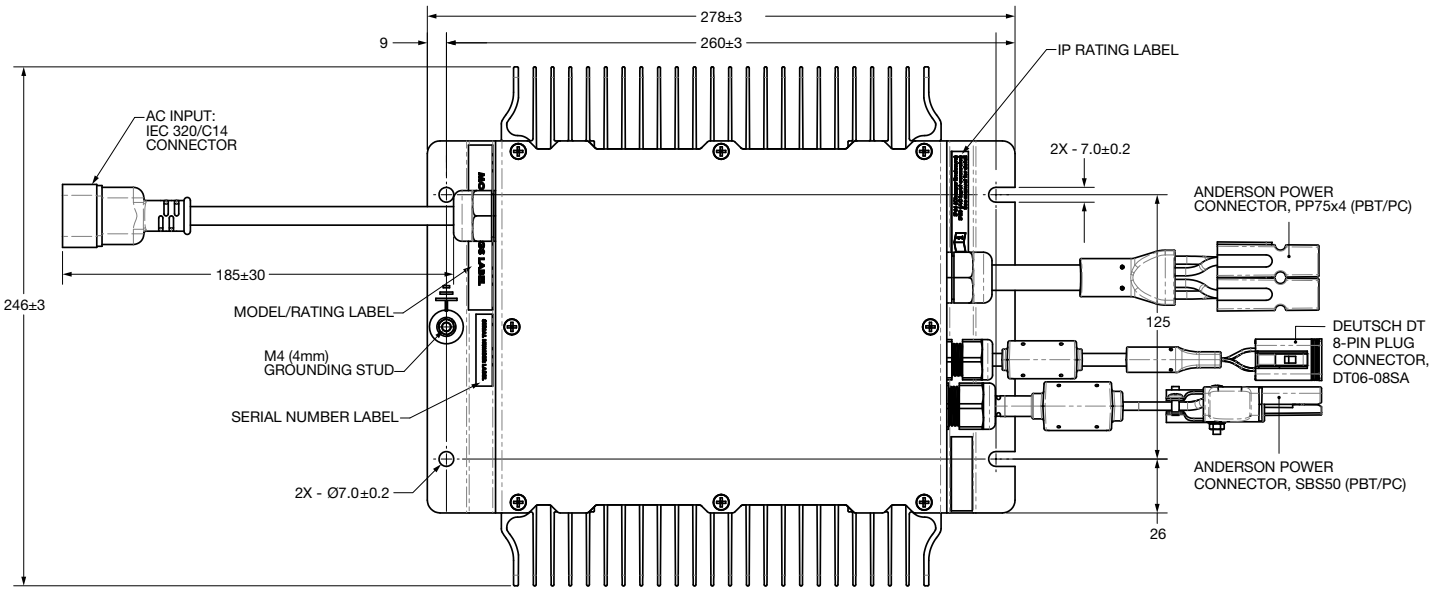
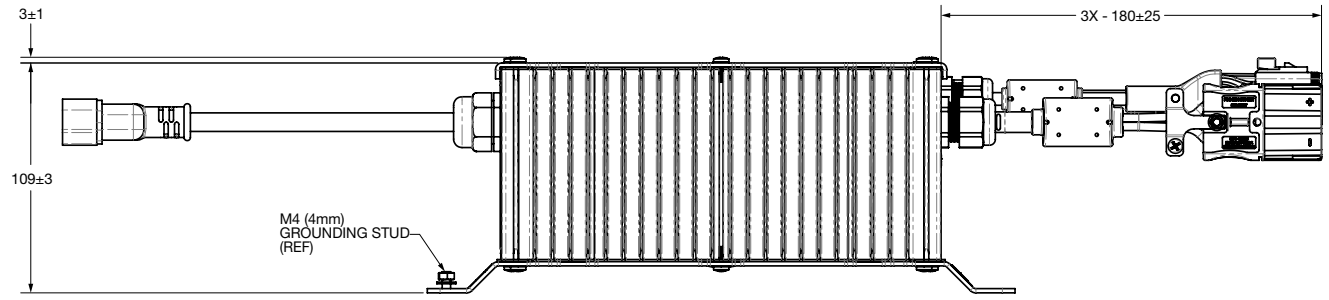
DIMENSIONS mm





NOTES:

1. All dimensions ±0.5 unless otherwise noted.
2. Mounting holes accept either 1/4" or metric M6 screws/bolts.

Anderson Power Connector, SBS50:	
DC Output '+'	White Wire
DC Output '–'	Black Wire

Anderson Power Connector, PP75X4:	
Blue	Switch Enabled
White	12V Switched
Black	GND

Pin	Deutsch DT 8-PIN Plug Connector, DT06-08SA:
PIN 1	TEMPERATURE SENSOR +
PIN 2	TEMPERATURE SENSOR –
PIN 3	INTERLOCK NC
PIN 4	INTERLOCK COM
PIN 5	INTERLOCK NO
PIN 6	LED +
PIN 7	LED –
PIN 8	FOR FUTURE USE

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PANEL MOUNT MATING CONNECTOR SPECIFICATIONS

DC Output Connector				
Mating Housing(Anderson Power):	**Pin**	**Assignment**	**Min. Wire Gauge**	**Mating Sockets (Bushing)**
24V – SBS50RED	–	Battery Negative	24-w36V: 12AWG 48-72V: 14AWG	12AWG:1339G3
36V – SBS50GRY				
48V – SBS50BLU				
72V – SBS50GRN				
96V – SBS50BRN	+	Battery Positive	96V: 16AWG	14-16AWG: 1339G2 (5913)
(or PSBS series for chemically resistant				

Signal Connector				
Mating Housing(Deutsch)	**Pin**	**Assignment**	**Min. Wire Gauge**	**Mating Sockets**
Deutsch DT04-08PA w/ W8P wedge lock	1	Temp Sense +	18AWG	14-18AWG: 1060-16-0122 (Stamped & Formed) 16-18AWG: 0460-202-16141 (Solid)
	2	Temp Sense –	18AWG	
	3	Relay NC	18AWG	
	4	Relay COM	18AWG	
	5	Relay NO	18AWG	
	6	LED +	18AWG	
	7	LED –	18AWG	
	8	NOT USED	Note: Use Sealing Plug (p/n 114017)	

DCi Connector				
Mating Housing(Anderson Power):	**Pin**	**Assignment**	**Min. Wire Gauge**	**Mating Sockets (Bushing)**
5916G4	Black	12V GND	12AWG	10-12AWG: 5953 (Low Detent))
5916	Blue	Switched O/P Enable	12AWG	
5916G7	Red	12V Un-Switched O/P	12AWG	
5916G5	White	12V Switched O/P	12AWG	

WARRANTY Two year limited warranty from time of delivery.

The Curtis Difference
You feel it when you drive it