



Delta-Q Technologies RQ Series

700W Battery Charger for Lithium and Lead-Acid Battery Chemistries

The RQ Series are compact, rugged and highly efficient automotive grade battery chargers. Designed for worldwide installation, they can optimally charge 24, 36 and 48 volt lead-acid and lithium-ion batteries. CAN bus communication (CANOpen and J1939 protocols) allows for a BMS to control charging, and for vehicle and telematics integration. Suitable for light electric on-road vehicles, outdoor power equipment, pallet trucks, and other industrial vehicles.



Available Models

24V

36V

48V

RQ700 Models



Features



High Reliability

IP67 rated to protect against water and dirt ingress. Designed to withstand automotive shock and vibration.



12V Auxiliary Output

RQ700 offers 12V-400mA of auxiliary power for the operation of small loads such as BMS wake-up and telematics.



Efficiency

Best in class power conversion efficiency compliant to latest CEC, DOE and NRCAN efficiency standards.



Global Standard Compliance

Compliance with North American, and European safety and EMC standards (FCC-B, EMC Directive - Class B, and UNECE R10*) and touch-safe voltage regulations allows for easy integration into electric vehicles



Enhanced Protection

Extensive protection features, such as short circuit, output over-voltage, and over-temperature protections, ensure reliable and safe operation.



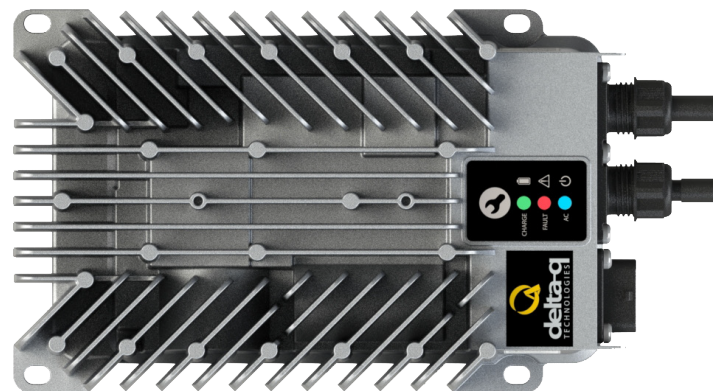
CAN bus Communications

CANOpen and J1939 protocols to interact with vehicle, telematics and lithium BMS. CAN bus can also update charger software, load charging profiles, and download charge tracking and diagnostic information.

OEM Features

- Wide AC input voltage (85-270V) for worldwide installation
- LEDs to indicate charging status, errors and faults.
- Push button to change to a different installed profile in the field
- Over-voltage AC grid connection protection to 420 VAC
- Safety interlock feature to prevent vehicle movement while charging
- Field programmable with up to 25 charge profiles
- Auto-recharge in maintenance mode
- Optional carrying handle for portability

Applications



DC Output	24V	36V	48V
Max DC output voltage	36 VDC	60 VDC	72 VDC
Max DC output current	30 A	20 A	15 A
Max DC output power	700 W		
Dry contact interlock current rating	Standard: 1.0 A Optional 5.0 A		
Lithium final charging voltage	24-36 VDC	36-60 VDC	48-72 VDC
Lithium cells in series	6 to 10	9 to 16	12 to 20
Battery type	Lead-acid (wet / AGM / gel), Lithium-ion		
Reverse polarity	Electronic protection with auto reset		
Short circuit	Electronic current limit		
AC Input	All Models		
AC input voltage range	85-270 VAC		
Nominal AC input voltage range	100-240 VAC (Derating below 108V)		
Nominal AC input frequency	50-60 Hz		
Max AC input current	7.5 A		
Nominal AC input current	6.5 A @ 120 VAC		
	3.2 A @ 240 VAC		
Nominal AC power factor	>0.99 @ 120 VAC, >0.98 @ 230 VAC		
Mechanical	All Models		
Dimensions	230 x 150 x 80 mm (9.0 x 5.9 x 3.14")		
Weight	2.8 kg (6.2 lbs)		
AC input connector	Locking IEC320/C14 AC Connector		
DC output connector	Standard: Ring terminals (OEM customizable)		
Signal Connector	Standard: Amphenol ATM 12 pins (OEM customizable)		
Mounting holes	M4 diameter slots		
Cooling	Natural convection		
Regulatory	All Models		
Efficiency	93% peak efficiency; California Energy Commission (CEC) and Department of Energy (DOE) Compliant		
Safety	CE, UL1564, CSA C22.2 No. 107.2, EN 60335-2-29, AUS/NZ60335-2-29 (RCM)*, KC*, PSE*, UKCA		
Emissions	All Models: FCC Part 15 / ICES 002 Class B, EN 61000-3-2, EN 61000-3-3, EN 61000-6-3, CISPR 14.1 RQ700 36V/48V: UNECE R10*		
Immunity	All Models: CISPR 14.2, EN 61000-6-2 (Industrial) RQ700 36V/48V: UNECE R10*		
Environmental	All Models		
Enclosure	IP67*** (NEMA6)		
Mechanical shock & vibration	Shock: ISO 16750-3 chap. 4.2.2. Vibration: ISO 16750-3 chap. 4.1.2.4 (Test IV: vehicle body) GMW 3172		
Operating temperature	-40°C to +65°C (-40°F to +149°F)		

*Pending regulatory approvals

**Standard under investigation

*** With appropriately rated connectors

Specifications are subject to change.

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