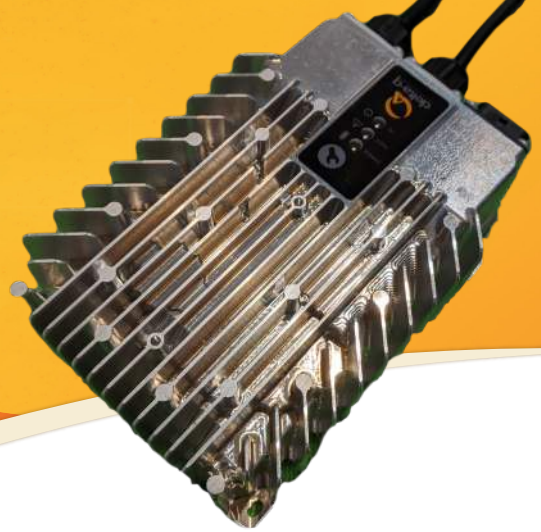
RQ Series

Delta-Q Technologies RQ Series

350W 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, its latest charging technology effectively charges lead-acid and lithium-ion batteries for optimal performance. CANbus communication (CANopen and J1939 protocols) allows for BMS to control charging, vehicle and telematics integration. Suitable for floor machines, pallet trucks, scissor lifts, OPE and e-mobility.



Available Models	12V	24V	36V	48V
RQ 350 Models	✓	✓	✓	✓

Features

Sealed and Rugged

IP66 rated to protect against water and dirt ingress. Designed to withstand automotive shock and vibration.

Residential and Automotive Emissions

FCC B / CISPR 14 compliant for installation on residential power circuits. UNECE R10 compliant for electromagnetic compatibility on road vehicles.

Safety

Protects against reverse polarity, short-cirucuit, overcurrent and AC over voltage up to 420V AC.

CANbus Communication

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

Efficiency

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

Charge Quality

Highly optimized charging to prolong battery life and application requirements using Delta-Q's extensive library of charging algorithms.

OEM Features

- Wide AC input voltage (85-270V) for worldwide installation
- LED's to indicate charging status, errors and faults. Push button to update charge profile in the field
- AC over voltage protection up to 420V AC for EU and Asia
- 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	12V	24V	36V	48V
Max DC output voltage	18 VDC	36 VDC	58 VDC	72 VDC
Max DC output current	15 A	13 A	10 A	7.5 A
Max DC output power	220 W	350 W		
Deep discharge recovery (Lead-acid minimum voltage)	0.1 Volts per cell			
Dry contact interlock current rating	Standard: 1.0 A Optional: 5.0 A			
Lithium final charging voltage	12-18 VDC	24-36 VDC	36-58 VDC	48-72 VDC
Lithium cells in series	3 to 5	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				
AC input voltage range	85-270 VAC			
Nominal AC input voltage range	120-240 VAC (Derating below 108V)			
Nominal AC input frequency	50/60 Hz			
Max AC input current	Up to 2.7 A	3.8 A		
Nominal AC input current	2.3 A @ 120 VAC	3.2 A @ 120 VAC		
	1.3 A @ 240 VAC	1.6 A @ 240 VAC		
Nominal AC power factor	>0.99 @ 120 VAC, >0.98 @ 230 VAC			
Mechanical	**All Models**			
Dimensions	200 x 145 x 60 mm (7.8 x 5.7 x 2.3”)			
Weight	1.5 kg (3.3 lbs)			
AC input connector	Locking IEC320/C14 AC connector			
DC output connector	OEM customizable			
Signal Connector	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, EN 60335-2-29, AS/NZS60335 (RCM)			
Emissions	**All Models:** FCC Part 15 / ICES 003 Class B, EN 61000-3-2, EN 61000-3-3, EN 61000-6-3, CISPR 14.1 **RQ 350W 48V:** UNECE R10			
Immunity	**All Models:** CISPR 14.2, EN 61000-6-2 (Industrial) **RQ 350W 48V:** UNECE R10			
Environmental	**All Models**			
Enclosure	IP66 (NEMA4)			
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)			

*Regulatory certifications pending

Specifications are subject to change.

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