



**650**



**Available models:**  
 24 V / 27 A    36 V / 18 A    48 V / 13.5 A

# Delta-Q IC650

## 650 W Industrial Battery Charger

Capable of charging lead acid (wet, AGM, gel) and lithium battery chemistries, the IC650 Charger is available in on- and off-board configurations. Optional CAN bus communication ensures seamless machine integration and AC/DC cabling is completely customizable. Applications include: scissor lifts, lift trucks, floor care machines, and golf cars.

**High Reliability**  
 Engineered using design for reliability. Validated for long service life in worst-case operating conditions. Tested to perform reliably and durably in automotive applications. Manufactured in a world class facility specializing in high reliability solutions.

**Charge Quality**  
 Charge profiles to precisely charge deep-cycle lead acid and lithium batteries. Developed in Delta-Qs battery lab to balance charge time, battery life and application requirements.

**Easy to Integrate**  
 Assists machine troubleshooting with built-in charge cycle tracking. Download data / upgrade software through USB host port. Optional CAN bus communication enables deep machine integration, diagnostics and control.

**Global + Efficient**  
 Capable of operating reliably on any single-phase grid worldwide. High-efficiency performance for electricity savings and shorter charge times.

## IC650 Charger Specifications

DC Output	24 VDC	36 VDC	48 VDC
Maximum DC output voltage	36 V	54 V	72 V
Maximum DC output current	27.1 A	18.1 A	13.5 A
Maximum DC output power	650 W		
Deep discharge recovery (minimum voltage)	1.2 V	1.8 V	2.4 V
Maximum C3 interlock	1.5 A		
signal current	(15 A with external interlock device, 24V model only)		
Battery type	Lead acid (Wet / AGM / GEL), lithium		
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	100-240 VAC
Nominal AC input frequency	50 / 60 Hz
Maximum AC input current	7.5 A
Nominal AC input current	7.3 A @ 100 VAC    6.0 A @ 120 VAC 3.1 A @ 230 VAC    2.9 A @ 240 VAC
Power factor	>0.99 @ 120 VAC    >0.98 @ 230 VAC

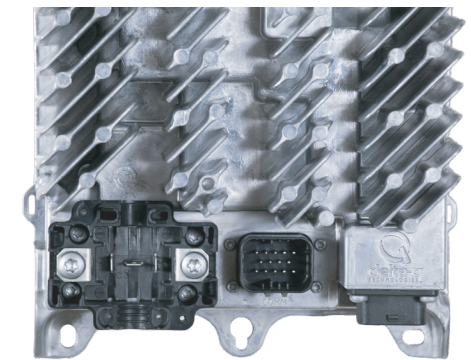
Regulatory	
Efficiency	93.5% peak, California Energy Commission compliant
Safety	UL1564, CSA 107.2, EN 60335-2-29/NZS60335 (RSM)
Emissions	FCC Part 15 / ICES 003 Class A, EN55011, EN 61000-6-4
Immunity	EN 61000-3-2, EN 61000-3-3, EN 61000-6-2

Mechanical	
Dimensions	25.2 x 18.6 x 8 cm (9.9 x 7.3 x 3.1 )
Weight	< 3 kg (< 6.5 lbs)
AC input connector	IEC320 / C14 (requires country-specific cord)
DC output connector	M6 threaded fasteners for ring terminals
Service port	Sealed (IP66) USB 2.0 Host Port (Type A) with dust cover
Mounting holes	Allows for safe installation on shelf, wall or bulkhead
Cooling	Normal operation in any orientation with passive cooling

Environmental	
Enclosure	IP66 (NEMA4)
Mechanical shock & vibration	GMW3172
Corrosion & humidity	
Thermal fatigue	
Operating temperature	-40°C to +65°C (-40F to 149F)    Derated at >40°C (104F)
Storage temperature	-40°C to +85°C (-40F to 185F)

Visit [delta-q.com/products](http://delta-q.com/products) to view the complete Delta-Q product portfolio.

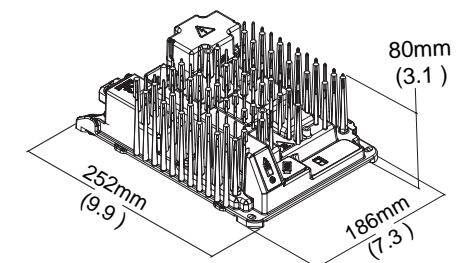
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### Usability Features

- + Optional CAN bus communication for machine integration or lithium BMS
- + Multi-color LED indicator for AC source, battery status, charging, error, fault
- + Numeric display for charge profile, alarm/fault codes
- + Field programmable with up to 25 charge profiles
- + Auto-recharge for low voltage in maintenance mode
- + OEM customizable, field
- + replaceable battery design

### Dimensions



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