LI-ION BATTERY PACK FOR AGV AND ROBOTS

Thunderbolt 48ESS100

Impact Clean Power Technology S.A.

ICPT develops, designs and produces the most advanced energy storage systems based on lithium-ion cells supported by state-of-the-art battery management and control systems. Our cutting-edge technology enables us to deliver integrated solutions for numerous challenging applications including innovative electric propulsion systems for road, water and air transport applications.
The highly efficient battery supply systems are able to operate in diverse environmental conditions and are noted for their reliability and long life.

Thunderbolt Battery Pack

This battery pack is destined for industrial applications only. It combines excellent energy density with great embedded safety and communication interface to master the system.

Thunderbolt Battery has a firm and compact mechanical construction. Its vibration proof in order to support mobile application such as robots, AGV's and small industrial vehicles. Batteries are customized to be connected in parallel to create higher capacity systems

The major area of business include

- Electric vehicles
- Automation and robotics
- Rolling stocks
- Power industry
- Telecommunication
- Auxiliary back up system/ UPS
- Mining

Impact Clean Power Technology S.A.

Al. Jerozollmske 424 A
Pruszkow 05-800, Poland
Phone: +48 22 758 68 65

Impact Clean Power Technology, Americas

19 Cody Court
Rockaway, NJ 07866 USA
Phone: +1 973 886 9663

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SYSTEM SPECIFICATION

Nominal Parameters	Nominal Voltage	50.4 V
	Operating voltage	42.0-58.1 V
	Nominal Capacity	100 Ah
	Rated energy	5 kWh
	Max Charge rate	70 A Continuous
	Max discharge rate	100 A Continuous
	Max pulse discharge rate	150 A
	Energy density	120 Wh/kg
	Number of cycles @80% DoD	>1500
	SOC energy metering	• Based on advanced ICPT algorithms • Available via CAN interface
	Data interface	CAN Bus
	Configuration modules	• Parallel operation • Up to 8 modules
Operating Conditions	Ambient operating temperature	0^0 C (32^0 F) - 45^0 C (113^0 F) continuous running
	Humidity	95% non-condensing
	Protection class	IP 64
Mechanical Parameters	Width x Length x height	365 mm x 329 mm x 248 mm
	Weight	42 kg
	Mechanical interface	Four M8 mounting brackets
	Insertion	Drop down lifting ears or threaded insert M6 x 1.25 x 25 mm deep, located on the top module
	Construction	Power coated Aluminum tray
	Power interface	Pig tail with APP SB175 connector
Safety	Safe cell design	Li-ion cells with venting device
	Thermal conductive and non-flammable filling among cells	UL-94V certified thermal conductive material
	ICPT advanced BMS	ICPT BMS system with : • Excellent measurement precision • Galvanic isolation • Multi-level fault detection system
	Cells thermal management	Passive to battery enclosure
	Internal protection	Contactor and Fuse inside
Standards	EMC	IEC 61000-4-3, IEC 61000-4-8 IEC 61000-6-2, IEC 61000-6-4
	Safety	UN 38.3 CE