



## IMPERIUM SMART 12V BATTERY CHARGERS

### IMPERIUM IS FORWARD THINKING AND ALL ABOUT LITHIUM

Lithium Batteries require a constant current/constant voltage charge and are unique in that almost every amp hour of charge delivered by the charger is accepted as one amp hour into the battery. Hence the need to deliver a constant current.

All Imperium chargers can be programmed for use with lithium batteries, and this setting delivers the optimum charge until peak voltage is met.



**IMP004**  
40A DC-DC

**IMP002**  
20A AC-DC



**IMP009**  
50A AC-DC



## THE PERFECT CHARGING SOLUTION LITHIUM, AGM OR GEL BATTERIES

- **Multistage Charging:** The entire range of Imperium battery multistage chargers are fully automatic.
- **Smart Charging:** The Imperium battery chargers will regulate their output based upon the loads connected and required.
- **LED Display (IMP009 only):** The "select and set" menu is easy to use and user friendly.
- **Multiple protection features:**
  - Reverse polarity protection
  - Over charge protection
  - Temperature protection, with cooling fan\* (\*IMP002 only)
  - Output short circuit protection
- **2 Year Warranty:** Backed up by excellent customer service support from Purple Line.

### MULTISTAGE CHARGING PROCESS

The recent advances in high capacity Lithium Battery technology has seen the need to develop battery chargers specifically suited to their needs, and the Imperium range of battery chargers are designed for exactly this kind of work - charging Lithium batteries efficiently, effectively and safely.

The Imperium range of battery chargers provide a fully automatic, "set and forget" solution to your battery charging needs. Lithium batteries require a multi-stage charge sequence for optimum charging performance. The stages are:



**STAGE 1**  
BULK OR BOOST CHARGE



**STAGE 2**  
ABSORPTION CHARGE



**STAGE 3**  
FLOAT



**STAGE 4**  
MAINTENANCE

Full specifications, technical data and details for the charging stages of each model can be found in the user manual, or on the product pages of the website at [www.purpleline.com.au/imperium](http://www.purpleline.com.au/imperium)

**2 YEAR**  
WARRANTY

## IMPERIUM 12V CHARGERS TECHNICAL DATA

Model Number	IMP002	IMP009	IMP004
Power Supply	AC-DC	AC-DC	DC-DC
Charger Output Current (Max)	20A	50A	40A

## OUTPUT VOLTAGE RANGE

Charge	14.6±0.3Vdc		14.4V-15.4V
Float	no float, is CC-CV mode	13.2V/13.5V/13.8V DC selectable(12V)	13.8V
Equalize	NO	14-14.7V	
Charging Control	stop charging when Voltage is 14.6V and current down to 1±0.3A	7 stages smart	7 stages smart
DC Output bank	Anderson SB50	2	
Selectable Battery Type	LiFePO4 batteries (capacity 40-120Ah)	AGM,GEL,WET, LITHIUM	Lion/AGM/Gel/Lead Acid/Calcium
Standby Current	0A		≤10mA

## CHARGER INPUT

Input Voltage (nominal)	100-240Vac	240V	9V-29V
Input Operating Range	90~264Vac	190-265V	40A
Input frequency Range	47~63 Hz	50Hz+/-3Hz	
Power Consumption	<3W standby; <29.5W working	≤0.1A	5% standby
Power Factor Correction	>0.9	NO	
Charger Efficiency	≥90% Vin=230 Vac, rated load	≥84%	93.60%

## PROTECTION & FEATURES

Reverse Polarity	RESTART	240V	YES
Over Charge	16.0V	190-265V	YES
Over Temperature	105°C	50Hz+/-3Hz	YES
Output Short Circuit	0A	≤0.1A	YES
Cooling	fan cooling	NO	FAN*2
Temperature Setting	105°C	Under protecton over 85°C	45°C runing Fan, 38°C OFF
Battery Temp Sensor Port	NO		NO

## DISPLAY

LCD Display (with back light)		Battery voltage, output current, charge status, overheat protection	NO
LED Display			YES

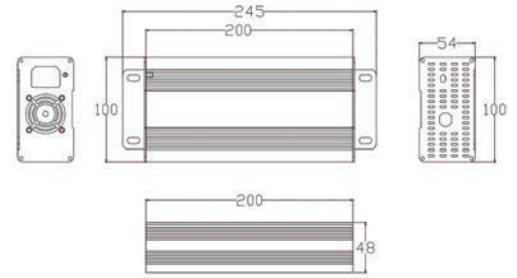
## INPUT AND OUTPUT CONNECTION

Input Connection	Australian standard 3P	Australian plug	
Output Connection	Anderson SB50	DC terminals	
DC Output Ground	NO	YES	

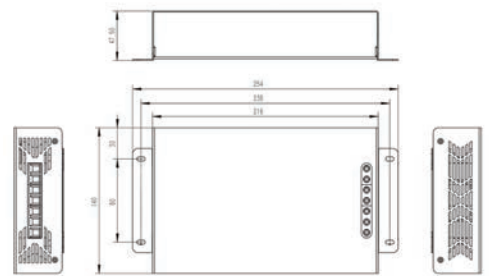
## ENVIRONMENTAL AND OPERATING TEMPERATURE

Storage Temp Range	-10-45°C	-30-70°C	-40°C-100°C
Operating Temp Range	-20-60°C	0-40°C	-20°C-50°C
Humidity	5-95%	20%-90%RH non-condensing	≤90%
Ingress Protection	IP20	Fuse	

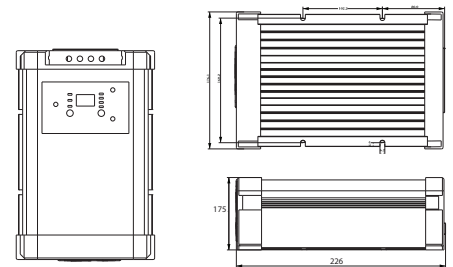
### IMP002



### IMP004



### IMP009



## BASE UNIT WEIGHT AND DIMENSIONS

Weight	1.5KGS	2KGS	1.304kg
Dimensions (LxWxH) mm	245 x100 x 54	276 x 175 x 95	254 x 140 x 47.5
Optional Accessories	AC wire: 1.48m length(include plug) DC wire: 1.22m length(include plug)	Fuse, AC plug, DC cable	NO
Regulatory Compliance	EN60335	AS/NZS	EMC

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