**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

All Imperium chargers can be programmed

for use with lithium batteries, and this setting delivers the optimum charge until

to deliver a constant current.

peak voltage is met.

Imperium



• Multistage Charging: The entire range of Imperium battery multistage chargers are fully automatic.

**N**el

- 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 3

FI OAT

STAGE 4 MAINTENANCE

STAGE 2

ABSORPTION

CHARGE

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





**IMP004** 

40A DC-DC

IMP002 20A AC-DC





03 9588 2959 enquiries@purpleline.com.au www.purpleline.com.au



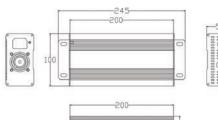


OUTPUT VOLTAGE RANCE   14.620.3Vdc   14.44/15.4V     Float   no float, is CC-CV   12.2V/13.5V/13.8V   Isav     Equalize   NO   14.4.7   13.8V     Charging Control   stop charging When Voltage is 14.6V and current down to 140.3A   7 stages smart   7 stages smart     DC Output bank   Anderson SB50   2   10.0A/04.00000000000000000000000000000000	IMPERIUM 12V CHARGERS TECH	HNICAL DAT	4	
Charge Output Current (Max)20A50A40AOUTPUT VOLTAGE RANCE14.42.03.Vdc14.42.03.Vdc14.42.03Floatnoffact, 6C.CV152.59812879 DC selectable/DD (Selectable/DD (Select	Model Number	IMP002	IMP009	IMP004
OUTPUT VOLTACE RANCE   14.6403Vdc   14.4V15.4V     Charge   14.6V15.4V   138V     Float   no float, is C-CV   132V/13SV/138V   100     Charging Control   NO   14-1.7V   7 stages smart   7 stages smart     Charging Control   atop charging when Voltage is 14.6V and current down to 10.3A   7 stages smart   7 stages smart     DC Output bank   Anderson 5850   2   -   -     Selectable Battery Type   LiFePO4 batteries (capacity 40-120.0H)   LIFPO4   AcMCELWET, UTHUM   Acid/Calcium     Standby Current   OA   -   s10mA   -   10mA     CHARCER INPUT   Do -264Vac   190-265V   40A   -   -     Input Operating Range   90-264Vac   190-265V   40A   -   -     Power Consumption   <329 standby	Power Supply	AC-DC	AC-DC	DC-DC
Charge14.6t.0.3Vdc14.4V.15.4VFloatnnfloat, is CC-CV mode.12.2V/15.3V/15.4V 12.2V/15.2V/15.4V 15.2V/15.2V/15.4V 15.2V/15.2V/15.2V/15.4V 15.2V/15.	Charger Output Current (Max)	20A	50A	40A
Flactno float, is C:-CV mode13.2V/13.SV/13.8V Diselectable(2N)13.8VEqualizeNO14-1-7V7Charging Controlstop charging when Voltage is LOG Vade vide or LOG Vide Vide Vide Vide Vide Vide Vide Vide	OUTPUT VOLTAGE RANGE			
Floatno float, is CC-CV Deselectable[20]13.8VEqualizeNO14-1-7V 3tages smart7 stages smartCharging Controlstop charging when Volage is 14-6V and current down to 120Ah7 stages smartDC Output bankAnderson SB502Selectable Battery TypeLiFePOA LiFePOAAMCELWET, LiFePOAStandby CurrentOA< store	Charge	14.6±0.3Vdc		14.4V-15.4V
Charging Controlstop charging is when visings is the own of is 03 and is own of is 03 and is 000 and is 03 and is 000 and is 03 and Selectable Battery TypeStop charging is is 03 and is 03 and is 03 and is 03 and is 03 and is 04 and is	Float			13.8V
when voltage is 14 6V and current down to 10.3.4and erson SB502DC Output bankAnderson SB502Selectable Battery TypeLIFEPOA Ligapacity 40- 120Ah)ACM.GEL.WET, LITHUMLion/ACM/Gel/Lead Acid/CalciumStandby CurrentOA=100mACHARGEE INPUTInput Voltage (nominal)100-240Vac240V9V-29VInput Voltage (nominal)100-240Vac240V9V-29VInput Voltage (nominal)00-240Vac2001A5% standbyPower Consumption<3W standby; < 29.5W working	Equalize	NO	14-14.7V	
Selectable Battery TypeLiFePO4 batteries (capacity 40- T20Ah)ACM.GEL.WET, LIFHUMLion/ACM/Gel/Lead Acid/CalciumStandby Current0A <t000000000000000000000000000< td=""><td>Charging Control</td><td>when Voltage is 14.6V and current down to</td><td>7 stages smart</td><td>7 stages smart</td></t000000000000000000000000000<>	Charging Control	when Voltage is 14.6V and current down to	7 stages smart	7 stages smart
LithiumLithiumAcid/CalciumStandby CurrentOA= 10mACHARGER INPUTInput Voltage (nominal)100-240Vac240V9V-29VInput Voltage (nominal)100-240Vac240V9V-29VInput frequency Range90-264Vac190-265V40AInput frequency Range90-264Vac190-265V40APower Consumption<3W standby: <39SW working	DC Output bank	Anderson SB50	2	
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;	Selectable Battery Type	batteries (capacity 40-		
Input Voltage (nominal)100-240Vac240V9V-29VInput Operating Range90-264Vac190-265V40AInput frequency Range47~63 H250H2+/-3H2Power Consumption<3W standby; <295W working	Standby Current	OA		≤10mA
Input Operating Range     90-264Vac     190-265V     40A       Input frequency Range     47~63 Hz     50Hz+/.3Hz     50Hz+/.3Hz       Power Consumption     <3W standby;	CHARGER INPUT			
Input frequency Range47~63 Hz50H2+/3H2Power Consumption<3W standby; <29.5W working	Input Voltage (nominal)	100-240Vac	240V	9V-29V
Power Consumption<3W standby; <295W working\$0.1A\$5% standbyPower Factor Correction>0.9NOCharger Efficiency290% Vin=230 Vac, rated load284%93.60%PROTECTION & FEATURES240VYESReverse PolarityRESTART240VYESOver Charge16.0V190-265VYESOver Charge16.0V190-265VYESOver Temperature05°C50Hz+/-3HzYESOutput Short Circuit0A\$0.1AYESCoolingfan coolingNOFAN*2Temperature Setting105°CUnder protecton 38°C OFF38°C OFFBattery Temp Sensor PortNONOS6°CDISPLAYLCD Display (with back light)Istandard 3PNoLED Display (with back light)Istandard 3PAustralian plugIstandard 3POutput ConnectionAnderson SB50DC terminalsIstandard 3PDutput ConnectionAnderson SB50DC terminalsIstandard 3PDC Uutput GroundNOYESENVIRONMENTAL AND OPERATIVE TEMPETEENVIRONMENTAL AND OPERATIVE TEMPETATURE50°C 10°C14°C*(10°C	Input Operating Range	90~264Vac	190-265V	40A
Constrained<29.5W workingInitial constraintsPower Factor Correction>0.9NOCharger Efficiency290% Vin=230 Vac, rated load284%93.60%PROTECTION & FEATURES240VYESReverse PolarityRESTART240VYESOver Charge16.0V190-265VYESOver Charge16.0V50Hz+/-3HzYESOutput Short Circuit0A60.1AYESCoolingfan coolingNOFAN*2Temperature Setting105°CUnder protector over 85°C38°C OFFBattery Temp Sensor PortNONOFAN*2LCD Display (with back light)NOSettery outge, output corrent, charge status, overfreat protectionNOLED DisplayInput ConnectionAustralian standard 3PNOOutput ConnectionAnderson SB50DC terminalsDOutput ConnectionNOYESENVIRONMENTAL AND OPERATIONESTORStardard 3PAustralian plugCouptu GroundNOYESENVIRONMENTAL AND OPERATIONESTORFAN*2ENVIRONMENTAL AND OPERATIONESTORAustralian plugCorrectionNOYESENVIRONMENTAL AND OPERATIONESTORFAN*2ENVIRONMENTAL AND OPERATIONAustralian Storage Temp RangeAufor: Aufor:	Input frequency Range	47~63 Hz	50Hz+/-3Hz	
Charger Efficiency290% Vin=230 Vac, rated load284%93.60%PROTECTION & FEATURESReverse PolarityRESTART240VYESOver Charge16.0V190-265VYESOver Temperature105°C50Hz+/.3HzYESOutput Short Circuit0A<0.1A	Power Consumption		≤0.1A	5% standby
Vac, rated loadVac, rated loadPROTECTION & FEATURESReverse PolarityRESTART240VYESOver Charge16.0V190-265VYESOver Temperature105°C50H2+/-3H2YESOutput Short CircuitOA≤0.1AYESCoolingfan coolingNOFAN*2Temperature Setting105°CUnder protecton over 85°C45°C runing Fan, 38°C OFFBattery Temp Sensor PortNONONONOVESVESIstery voltage, output sturrent, charge sturrent, overhaat protectionNOLCD Display (with back light)Ister voltage, output sturrent, charge sturrent, overhaat protectionNOInput ConnectionAustralian standard 3PAustralian plugOutput ConnectionAnderson SB50DC terminalsDC output GroundNOYESENVIRONMENTAL AND OPERATING TEMPERATUREVESStorage Temp Range~10-45°C~30-70°C-40°C-100°C-40°C-100°C				
Reverse PolarityRESTART240VVESOver Charge16.0V190-265VYESOver Temperature105°C50Hz+/-3HzYESOutput Short Circuit0As0.1AYESCoolingfan coolingNOFAN*2Temperature Setting105°CUnder protecton over 85°C45°C runing Fan, 38°C OFFBattery Temp Sensor PortNONOS0.14ISSPLAYLCD Display (with back light)VIBattery voltage, output current, charge status, overfhater protectionNOLED DisplayImput ConnectionAustralian standard 3PNOS0.14Output ConnectionAnderson SBS0DC terminalsImput ConnectionDC Output GroundNOYESS0.14Imput ConnectionDC Output GroundNOYESS0.14S0.14ENVIRONMENTAL AND OPERATURE TEMPERATURES0.70°C-40°C-100°C	Charger Efficiency		≥84%	93.60%
Over Charge16.0V190-265VYESOver Temperature105°C50Hz+/3HzYESOutput Short CircuitOA\$0.1AYESCoolingfan coolingNOFAN*2Temperature Setting105°CUnder protecton over 85°C45°c runing Fan, 38°c OFFBattery Temp Sensor PortNONOSOLDISPLAYLCD Display (with back light)NOSattery voltage, over heat protectionLED DisplayImage: Source SettingNOInput ConnectionAustralian standard 3PNOOutput ConnectionAnderson SB50DC terminalsDC Output GroundNOYESENVIRONMENTAL AND OPERATIVE TEMETEREStorage Temp Range~10-45°C~30-70°CAtor Charge Setting Range~10-45°C~30-70°C	<b>PROTECTION &amp; FEATURES</b>			
Over Temperature105°C50H2+/-3HzYESOutput Short Circuit0A\$0.1AYESCoolingfan coolingNOFAN*2Temperature Setting105°CUnder protecton over 85°C45°C runing Fan, 38°C OFFBattery Temp Sensor PortNONONODISPLAYLCD Display (with back light)Jettery Temp Sensor PortNOLED DisplayImage: Sensor PortNOYESImput Connection standard 3PNO Sensor PortInput ConnectionAuderson SB50DC terminalsOutput ConnectionNOYESENVIRONMENTAL AND OPERATING TEMPERATURESortone40°C-100°CENVIRONMENTAL AND OPERATING TEMPERATUREStorage Temp Range~10-45°C~30-70°C-40°C-100°C	Reverse Polarity	RESTART	240V	YES
Output Short CircuitOA\$0.1AYESCoolingfan coolingNOFAN*2Temperature Setting105°CUnder protecton over 85°C45°C runing Fan, 38°C OFFBattery Temp Sensor PortNONODISPLAYLCD Display (with back light)Sattery voltage, output current, charge status, over heat protectionNOLED DisplayImage: Temperature SettingNOInput ConnectionAustralian standard 3PAustralian plugOutput ConnectionAnderson SB50DC terminalsDC Output GroundNOYESENVIRONMENTAL AND OPERATING TEMPERATUREFAO*C-100°CStorage Temp Range~10-45°C~30-70°CAdvertaine Range~10-45°C-40°C-100°C	Over Charge	16.0V	190-265V	YES
ColingFan coolingNOFAN*2Temperature Setting105°CUnder protecton over 85°C45°C runing Fan, 38°C OFFBattery Temp Sensor PortNONODISPLAYLCD Display (with back light)Jattery voltage, output current, charge status, over heat protectionNOLED DisplayImage: Status output current, charge status, over heat protectionNOInput ConnectionAustralian standard 3PAustralian plugOutput ConnectionAnderson SB50DC terminalsDC Output GroundNOYESENVIRONMENTAL AND OPERATIVE TEMETATUREENVIRONMENTAL AND OPERATIVE TEMETATUREStorage Temp Range~10-45°C~30-70°C	Over Temperature	105°C	50Hz+/-3Hz	YES
Temperature Setting105°CUnder protecton over 85°C45°C runing Fan, 38°C OFFBattery Temp Sensor PortNONODISPLAYLCD Display (with back light)Battery voltage, output current, charge status, over heat protectionNOLED DisplayImage: Temp Sensor Port Port Port Port Port Port Port Po	Output Short Circuit	0A	≤0.1A	YES
over 85°C38°c OFFBattery Temp Sensor PortNONODISPLAYBattery voltage, output current, charge status, overheat protectionNOLCD Display (with back light)Image: Status output current, charge status, overheat protectionNOLED DisplayImage: Status output current, charge status, overheat protectionYESINPUT AND OUTPUT CONNECTIONImage: Status output current, charge status, overheat protectionYESInput ConnectionAustralian glugImage: Status output current, charge status overheat protectionImage: Status output current, charge status overheat protectionOutput ConnectionAuderson SB50DC terminalsImage: Status output current, status	Cooling	fan cooling	NO	FAN*2
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     ENVIRONMENTIAL AND OPERATING TEMPERATURE     Storage Temp Range   ~10-45°C   ~30-70°C   -40°C-100°C	Temperature Setting	105°C		
LCD Display (with back light)Battery voltage, output current, charge status, overheat protectionNOLED DisplayYESINPUT AND OUTPUT CONNECTIONInput ConnectionAustralian standard 3PAustralian plugOutput ConnectionAnderson SB50DC terminalsDC Output GroundNOYESENVIRONMENTAL AND OPERATING TEMPERATUREStorage Temp Range~10-45°C~30-70°C-40°C-100°C	Battery Temp Sensor Port	NO		NO
LED Displayoutput current, charge status; verhage status; verhage status;YESINPUT AND OUTPUT CONNECTIONYESInput ConnectionAustralian standard 3PAustralian plugOutput ConnectionAnderson SB50DC terminalsDC Output GroundNOYESENVIRONMENTAL AND OPERATING TEMPERATUREStorage Temp Range~10-45°C~30-70°CAnderson SB50C40°C-100°C	DISPLAY			
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	LCD Display (with back light)		output current, charge status,	NO
Input ConnectionAustralian standard 3PAustralian plug standard 3POutput ConnectionAnderson SB50DC terminalsDC Output GroundNOYESENVIRONMENTAL AND OPERATING TEMPERATUREStorage Temp Range~10-45°C~30-70°C	LED Display			YES
Input ConnectionAustralian standard 3PAustralian plug standard 3POutput ConnectionAnderson SB50DC terminalsDC Output GroundNOYESENVIRONMENTAL AND OPERATING TEMPERATUREStorage Temp Range~10-45°C~30-70°C	INPUT AND OUTPUT CONNECT	ON		
standard 3P Image: Standard 3P   Output Connection Anderson SB50 DC terminals   DC Output Ground NO YES   ENVIRONMENTAL AND OPERATING TEMPERATURE   Storage Temp Range ~10-45°C ~30-70°C	Input Connection		Australian plug	
DC Output Ground NO YES   ENVIRONMENTAL AND OPERATING TEMPERATURE   Storage Temp Range ~10-45°C ~30-70°C -40°C-100°C		standard 3P		
ENVIRONMENTAL AND OPERATING TEMPERATURE     Storage Temp Range   ~10-45°C   ~30-70°C   -40°C-100°C	Output Connection			
Storage Temp Range ~10-45°C ~30-70°C -40°C-100°C	·			
	ENVIRONMENTAL AND OPERAT			
Operating Temp Range     ~20-60°C     0-40°C     -20°C-50°C	Storage Temp Range			
	Operating Temp Range	~20-60°C	0-40°C	-20°C-50°C

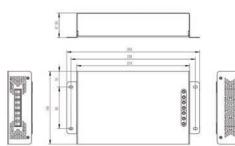
5-95%

IP20

**IMP002** 



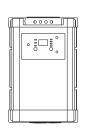


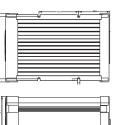




**IMP009** 

**IMP004** 





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)		NO			
Regulatory Compliance	EN60335	AS/NZS	EMC			

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<=90%

20%-90%RH

Fuse

non-condensing



Humidity

Ingress Protection

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