

High power

12 & 24V From 30 to 100A

# **Battery chargers HPOWER**











**AC universal** input



3 outputs

## **PRESENTATION**

Specialized in the design of automatic battery chargers for more than 30 years, CRISTEC is proud to offer you high quality battery chargers for the toughest conditions for professional and recreational purposes: HPOWER. They offer unwavering reliability thanks to a proven HF technology, for professional use in severe environmental conditions.

#### **PERFORMANCE**

Up to +50°C ambient with no derating allowing rated charge for intensive use in hot or confined place.

## **EASY AND ROBUST INSTALLATION**

Aluminum housing treated to withstand marine environment and a secure wiring compartment.

#### **PARALLEL OPERATION**

The chargers can be connected in parallel to increase the charging power: up to 4 units (balancing through Master-Slave function)

## **3 ISOLATED BATTERY BANKS**

Simultaneous recharge of 3 independent battery banks, without any current limitation.

## **CAN-BUS INTERFACE**

A serial BUS-CAN interface allows real-time control and configuration of **HPOWER** chargers.

## **LITHIUM READY**

They provide a 5-state charge curve for fast and complete charging of all types of batteries: open and sealed Leadacid, Calcium Lead-acid, AGM, Gel, Lithium Ion, etc.

#### **DNV CERTIFIED VERSION**

With integrated touch-screen control panel and relays board. Please consult us.



**CAN-BUS** interface







Part number							
March	Model	12V / 90A	24V / 45A	24V / 60A	24V / 80A	24V / 100A	
Vestings Prior 17 to 2007AC trapp phase automatic Progressive From 47 to 2007AC trapp phase Progressive From 47 to 2007AC trapp Progressive From 47 to 2007AC trap	Part number	HPO12-90	HPO24-45	HPO24-60	HPO24-80	HPO24-100	
Principle   Prin	Recommended battery bank (Pb)*	600 - 1200Ah	300 - 600Ah	500 - 800Ah	700 - 1000Ah	800 - 1300Ah	
From 17 to 459   Equation   From 17 to 459   Equations	NPUT						
	Voltage		Froi	m 90 to 265VAC single-phase autor	matic		
Recommended power for a generator  Toward Tactor  1  1500W  100W	Frequency	From 47 to 65Hz automatic					
The present factor of Services and Services	nput current consumption 230/115VAC	6,0A/16	6,0A	9,0A/20,0A	11,0A/20,0A	15,0A/30,0A	
Removable input fuses 2 2 200 250 V/C (6.3 x 12) (1/172) 2 x 250 4250 V/C (6.3 x 32) (1/172) 2 x 250 4250 V/C (6.3 x 32) 2 x 224 250 V/C (6.3 x 32) (1/172) 2 x 250 4250 V/C (6.3 x 32) 2 x 224 250 V/C (6.3 x 32) (1/172) 2 x 250 4250 V/C (6.3 x 32) 2 x 224 250 V/C (6.3 x 32) (1/172) 2 x 250 4250 V/C (6.3 x 32) (1/172) 2 x 250 4250 V/C (6.3 x 32) (1/172) 2 x 250 4250 V/C (6.3 x 32) (1/172) 2 x 250 4250 V/C (6.3 x 32) (1/172) 2 x 250 4250 V/C (6.3 x 32) (1/172) 2 x 250 V/C (6.3 x 32) (1/172) 2 x	Recommended power for a generator	1600	W	2100W	2800W	3520W	
Removable input fuses  2 x 20.0 x 20.	Power factor			1			
Commercion on threaded region towns   Commercion on threaded region towns   1 plantary banks   3 plantary panks   3 plantary	Efficiency			87% typical			
Number of battery banks 3 (including one for the empire battery): HBXT 6, HBXT 6 integrated isolates; 1 required - MAT Each bank combe used include, ally and deliver the mend current Commencion on threaded mode M8 90A/1282W 45A/1282W 60A/1710W 80A/2280W 100A/2850W	Removable input fuses					2 x 32A 250VAC (6,3 x 3 (F1/F2)	
As a SALVE Comment of the control of	OUTPUT						
Active current / power 90A/1282W 45A/1282W 65A/1210W 80A/2280W 100A/2850W 100	Number of battery banks	3 (including one for the engine	battery):+BATE,+BAT1et+BAT	2 (integrated isolator), 1 negative -BAT. E	each bank can be used individual	ly and deliver the rated current	
But on 100   But	Connection on threaded rods			M6		M8	
Lead-sealed at factory setting—Get, AGM, Caldium Lead, Lifekum, DC power supply mode act. Specific request on demand solved voltage  18.40 PC as factory setting for Lead-sealed sealed	Rated current / power	90A/1282W	45A/1282W	60A/1710W	80A/2280W	100A/2850W	
AA/DC as factory setting for Lead-sealed	Charging profile	IU or IUoU through internal dip switches (Boost, Absorption and Floating – factory setting). Selectable automatic Refresh					
Secret Voltage   Secr	Battery type	Lead-sealed as factory setting - Gel, AGM, Calcium Lead, Lithium, DC power-supply mode, etc. Specific request on demand					
Regulation folerance before  uputur diode and fuse   4 x 30A/32V 2 x 30A/32V 3 x 25A/32V 4 x 25A/32V 4 x 30A/32V 5	Boost voltage	28 8VDC as factory setting for Lead-sealed					
Peak to peak ripple  4 x 30A/32V 2 x 30A/32V 3 x x 25A/32V 4 x 25A/32V 4 x 25A/32V 4 x 30A/32V 2 x 30A/32V 3 x x 25A/32V 4 x 25A/32V 4 x 30A/32V 4 x 3	Floating voltage	27.6VDC as factory setting for Lead-sealed					
Automotive fuse in the minus pole -BAT		<1% (at rated conditions)					
In the minus pole -BAT  4 x 30A/32V  2 x 30A/32V  3 x 25A/32V  4 x 25A/32V  4 x 30A/32V  4 x 30A	Peak to peak ripple	<1% (at rated conditions)					
Sound level   Rated charge from -20°C to +50°C, derating above 50°C. Automatic charger switch off above 60°C; automatic restart when temperature decreases storage temperature   From -20°C a +70°C   Relative humidity   Up to 96 % without condensation  CASING  Material   Painted Aluminium   Dimensions (length, height, depth)   270 × 360 × 130 mm   270 × 410 × 130 mm   Weight   6,8 kg   9,0 kg   RRing screw (wall)   4 × M6 round screws   Protection factor   IP23   Protection   Start   Protection   Relative humidity   CE / Sécurity   EN60335-2-29   PROTECTIONS  Against leaking input surge by VDR (Voltage Dependant Resistor) - Not covered by warranty   Against output polarity reversal by fuse rupture   Against short-circuit and suggest   Against short-circuit and suggest   Against short-circuit and suggest   Against abnormal overheating by cutting off the charger   OPTIONS  Temperature probe®   Output voltage compensation (12V: -18mt//°C - 24V: -36mt//°C) 2.8m : STP-UNI-2.8 · Sm : STP-UNI-5.0   RIT-HPO-LINK: up to 4 units with real frime balancing feature		4 x 30A/32V	2 x 30A/32V	3 x 25A/32V	4 x 25A/32V	4 x 30A/32V	
Sound level  Rated charge from -20°C to +50°C, derating above 50°C. Automatic charger switch off above 60°C; automatic restart when temperature decreases storage temperature  From -20°C à +70°C Relative humidity  Up to 96 % without condensation  CASING  Material  Painted Aluminium  Dimensions (length, height, depth)  Reight	ENVIRONNEMENT						
Rated charge from -20°C to +50°C, derating above 50°C. Automatic charger switch off above 60°C; automatic restart when temperature decreases storage temperature  Relative humidity  Up to 96 % without condensation  CASING  Material  Painted Aluminium  Dimensions (lenght, height, depth)  270 x 360 x 130 mm  270 x 410 x 130 mm  Weight  6,8 kg  9,0 kg  Fixing screw (wall)  4 x M6 round screws  Protection factor  IP23  PCB protection  Water-repellent varnish  EC / CEM  EN61204-3  EC / Security  RROTECTIONS  Against leaking input surge by VDR (Voltage Dependant Resistor) - Not covered by warranty  Against ohort-circuit and surge  Against short-circuit and surge  Against abnormal overheating by cutting off the charger  DPTIONS  Temperature probe®  Output voltage compensation (12V : -18mV/°C · 24V : -36mV/°C) 2.8m : STP-UNI-2.8 · Sm : STP-UNI-5.0  RRTHPO-LINK : up to 4 units with real time balancing feature	Cooling	Electric fan controlled in temperature and current					
Relative humidity  Up to 96 % without condensation  CASING  Material  Painted Aluminium  Dimensions (lenght, height, depth)  Protection factor  Protection factor  EVE / CEM  EN 12024-3  EVE / Security  Report EVE / Security  Against leaking input surge by VDR (Voltage Dependant Resistor) - Not covered by warranty  Against shoot-circuit and surge  Against shoot-mail overheating by cutting off the charger  DOPTIONS  Temperature probe®  Output voltage compensation (12V: -18mV/°C - 24V: -36mV/°C) 2.8m: STP-UNI-2.8 - 5m: STP-UNI-5.0  RTP-140 - 18mV/°C - 24V: -36mV/°C) 2.8m: STP-UNI-2.8 - 5m: STP-UNI-5.0  RTP-140 - 18mV/°C - 24V: -36mV/°C) 2.8m: STP-UNI-2.8 - 5m: STP-UNI-5.0  RTP-140 - 18mV/°C - 24V: -36mV/°C) 2.8m: STP-UNI-2.8 - 5m: STP-UNI-5.0  RTP-140 - 18mV/°C - 24V: -36mV/°C) 2.8m: STP-UNI-2.8 - 5m: STP-UNI-5.0  RTP-140 - 18mV/°C - 24V: -36mV/°C) 2.8m: STP-UNI-2.8 - 5m: STP-UNI-5.0  RTP-140 - 18mV/°C - 24V: -36mV/°C) 2.8m: STP-UNI-2.8 - 5m: STP-UNI-5.0  RTP-140 - 18mV/°C - 24V: -36mV/°C) 2.8m: STP-UNI-2.8 - 5m: STP-UNI-5.0  RTP-140 - 18mV/°C - 24V: -36mV/°C) 2.8m: STP-UNI-5.0	Sound level	< 50 dBa at 1m					
Relative humidity  CASING  Material  Painted Aluminium  Dimensions (lenght, height, depth)  Protection (lenght, height, depth)  Protection factor  Protection factor  Protection  STANDARDS  CCE / Security  PROTECTIONS  Against leaking input surge by VDR (Voltage Dependant Resistor) - Not covered by warranty  Against short-circuit and surge  Against short-circuit and surge  Against abnormal overheating by cutting off the charger  OPTIONS  Remerature probe®  Output voltage compensation (12V : -18mV/*C - 24V : -36mV/*C) 2.8m : STP-UNI-2.8 · 5m : STP-UNI-5.0  Retailed mounting  KIT-HPO-LINK: up to 4 units with real time balancing feature	Operating temperature	Rated charge from -20°C to +50°C, derating above 50°C. Automatic charger switch off above 60°C; automatic restart when temperature decreases					
Material Painted Aluminium  Dimensions (lenght, height, depth) 270 x 360 x 130 mm 270 x 410 x 130 mm  Weight 6,8 kg 9,0 kg  Fixing screw (wall) 4 x M6 round screws  Protection factor [P23]  PCB protection Water-repellent varnish  STANDARDS  CE / CEM EN61204-3  CE / Security EN60335-2-29  PROTECTIONS  Against leaking input surge by VDR (Voltage Dependant Resistor) - Not covered by warranty  Against output polarity reversal by fuse rupture  Against short-circuit and surge  Against abnormal overheating by cutting off the charger  OPTIONS  Temperature probe® Output voltage compensation (12V : :18mV/*C • 24V : -36mV/*C) 2.8m : STP-UNI-2.8 · 5m : STP-UNI-5.0  RIT-HPO-LINK : up to 4 units with real time balancing feature	Storage temperature	From -20°C à +70°C					
Material Painted Aluminium  Dimensions (lenght, height, depth) 270 x 360 x 130 mm 270 x 410 x 130 mm  Weight 6,8 kg 9,0 kg  Fixing screw (wall) 4 x M6 round screws  Protection factor IP23  PCB protection Water-repellent varnish  STANDARDS  CE / CEM EN61204-3  CE / Security EN60335-2-29  PROTECTIONS  Against leaking input surge by VDR (Voltage Dependant Resistor) - Not covered by warranty  Against short-circuit and surge  Against short-circuit and surge  Against short-circuit and surge  OPTIONS  OUTput voltage compensation (12V : -18mV/°C - 24V : -36mV/°C) 2.8m : STP-UNI-2.8 · 5m : STP-UNI-5.0  Parallel mounting  KIT-HPO-LINK : up to 4 units with real time balancing feature	Relative humidity			Up to 96 % without condensation			
Dimensions (lenght, height, depth)  270 x 360 x 130 mm  270 x 410 x 130 mm  4 x M6 round screws  Protection factor  [P23  PCB protection  Water-repellent varnish  STANDARDS  CE / CEM  EN61204-3  CE / Security  EN60335-2-29  PROTECTIONS  Against leaking input surge by VDR (Voltage Dependant Resistor) - Not covered by warranty  Against output polarity reversal by fuse rupture  Against short-circuit and surge  Against abnormal overheating by cutting off the charger  OPTIONS  Temperature probe**  Output voltage compensation (12V : -18mW/*C · 24V : -36mW/*C) 2.8m : STP-UNI-2.8 · 5m : STP-UNI-5.0  Parallel mounting  KIT-HPO-LINK : up to 4 units with real time balancing feature	CASING						
Weight 6,8 kg 9,0 kg  Fixing screw (wall) 4 x M6 round screws  Protection factor IP23  PCB protection Water-repellent varnish  STANDARDS  CE / CEM EN61204-3  CE / Sécurity EN60335-2-29  PROTECTIONS  Against leaking input surge by VDR (Voltage Dependant Resistor) - Not covered by warranty  Against output polarity reversal by fuse rupture  Against short-circuit and surge  Against abnormal overheating by cutting off the charger  OPTIONS  Temperature probe <sup>(3)</sup> Output voltage compensation (12V : -18mV/°C + 24V : -36mV/°C) 2.8m : STP-UNI-2.8 • 5m : STP-UNI-5.0  Parallel mounting KIT-HPO-LINK : up to 4 units with real time balancing feature	Material						
Fixing screw (wall)  Protection factor  PCB protection  Water-repellent varnish  STANDARDS  CE / CEM EN61204-3  CE / Sécurity  EN60335-2-29  PROTECTIONS  Against leaking input surge by VDR (Voltage Dependant Resistor) - Not covered by warranty  Against output polarity reversal by fuse rupture  Against short-circuit and surge  Against abnormal overheating by cutting off the charger  OPTIONS  Temperature probe <sup>(h)</sup> Output voltage compensation (12V: -18mV/°C - 24V: -36mV/°C) 2.8m: STP-UNI-2.8 - 5m: STP-UNI-5.0  Parallel mounting  KIT-HPO-LINK: up to 4 units with real time balancing feature	Dimensions (lenght, height, depth)					270 x 410 x 130 mm	
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PCB protection  STANDARDS  CE / CEM EN61204-3  CE / Sécurity EN60335-2-29  PROTECTIONS  Against leaking input surge by VDR (Voltage Dependant Resistor) - Not covered by warranty  Against output polarity reversal by fuse rupture  Against short-circuit and surge  Against abnormal overheating by cutting off the charger  OPTIONS  Temperature probe <sup>(1)</sup> Output voltage compensation (12V : -18mV/°C - 24V : -36mV/°C) 2.8m : STP-UNI-2.8 • 5m : STP-UNI-5.0  Parallel mounting	Fixing screw (wall)						
EN61204-3  CE / CEM EN61204-3  CE / Sécurity EN60335-2-29  PROTECTIONS  Against leaking input surge by VDR (Voltage Dependant Resistor) - Not covered by warranty  Against output polarity reversal by fuse rupture  Against short-circuit and surge  Against abnormal overheating by cutting off the charger  OPTIONS  Temperature probe <sup>(1)</sup> Output voltage compensation (12V : -18mV/°C · 24V : -36mV/°C) 2.8m : STP-UNI-2.8 · 5m : STP-UNI-5.0  Parallel mounting  KIT-HPO-LINK : up to 4 units with real time balancing feature							
CE / CEM  EN61204-3  CE / Sécurity  EN60335-2-29  PROTECTIONS  Against leaking input surge by VDR (Voltage Dependant Resistor) - Not covered by warranty  Against output polarity reversal by fuse rupture  Against short-circuit and surge  Against abnormal overheating by cutting off the charger  OPTIONS  Temperature probe <sup>(1)</sup> Output voltage compensation (12V: -18mV/°C • 24V: -36mV/°C) 2.8m: STP-UNI-2.8 • 5m: STP-UNI-5.0  Parallel mounting  KIT-HPO-LINK: up to 4 units with real time balancing feature	PCB protection			Water-repellent varnish			
PROTECTIONS  Against leaking input surge by VDR (Voltage Dependant Resistor) - Not covered by warranty Against output polarity reversal by fuse rupture Against short-circuit and surge Against abnormal overheating by cutting off the charger  OPTIONS  Temperature probe <sup>(A)</sup> Output voltage compensation (12V:-18mV/°C • 24V: -36mV/°C) 2.8m: STP-UNI-2.8 • 5m: STP-UNI-5.0  KIT-HPO-LINK: up to 4 units with real time balancing feature	STANDARDS						
Against leaking input surge by VDR (Voltage Dependant Resistor) - Not covered by warranty  Against output polarity reversal by fuse rupture  Against short-circuit and surge  Against abnormal overheating by cutting off the charger  OPTIONS  Temperature probe <sup>(1)</sup> Output voltage compensation (12V: -18mV/°C • 24V: -36mV/°C) 2.8m: STP-UNI-2.8 • 5m: STP-UNI-5.0  KIT-HPO-LINK: up to 4 units with real time balancing feature							
Against leaking input surge by VDR (Voltage Dependant Resistor) - Not covered by warranty  Against output polarity reversal by fuse rupture  Against short-circuit and surge  Against abnormal overheating by cutting off the charger  OPTIONS  Temperature probe <sup>(1)</sup> Output voltage compensation (12V: -18mV/°C • 24V: -36mV/°C) 2.8m: STP-UNI-2.8 • 5m: STP-UNI-5.0  Parallel mounting  KIT-HPO-LINK: up to 4 units with real time balancing feature				EN60335-2-29			
Against output polarity reversal by fuse rupture  Against short-circuit and surge  Against abnormal overheating by cutting off the charger  OPTIONS  Temperature probe <sup>(2)</sup> Output voltage compensation (12V: -18mV/°C • 24V: -36mV/°C) 2.8m: STP-UNI-2.8 • 5m: STP-UNI-5.0  Parallel mounting  KIT-HPO-LINK: up to 4 units with real time balancing feature	PROTECTIONS						
Against short-circuit and surge  Against abnormal overheating by cutting off the charger  OPTIONS  Temperature probe <sup>(1)</sup> Output voltage compensation (12V: -18mV/°C • 24V: -36mV/°C) 2.8m: STP-UNI-2.8 • 5m: STP-UNI-5.0  Parallel mounting  KIT-HPO-LINK: up to 4 units with real time balancing feature			Against leaking input surge by VDR (Voltage Dependant Resistor) - Not covered by warranty				
Against abnormal overheating by cutting off the charger  OPTIONS  Temperature probe <sup>(1)</sup> Output voltage compensation (12V: -18mV/°C • 24V: -36mV/°C) 2.8m: STP-UNI-2.8 • 5m: STP-UNI-5.0  Parallel mounting KIT-HPO-LINK: up to 4 units with real time balancing feature							
OPTIONS  Temperature probe <sup>(1)</sup> Output voltage compensation (12V: -18mV/°C • 24V: -36mV/°C) 2.8m: STP-UNI-2.8 • 5m: STP-UNI-5.0  Parallel mounting KIT-HPO-LINK: up to 4 units with real time balancing feature							
Temperature probe <sup>(1)</sup> Output voltage compensation (12V: -18mV/°C • 24V: -36mV/°C) 2.8m: STP-UNI-2.8 • 5m: STP-UNI-5.0  Parallel mounting KIT-HPO-LINK: up to 4 units with real time balancing feature							
Parallel mounting KIT-HPO-LINK: up to 4 units with real time balancing feature			Against ab	normal overheating by cutting off	the charger		
2.4" remote color touch-screen control panel <sup>(2)</sup> UNI-DISPLAY-R: also available integrated on the front panel, please consult us		Out				NI-5.0	
	Temperature probe <sup>(1)</sup> Parallel mounting	Out	put voltage compensation (12 KIT-HPO-LIN	$2V: -18mV/^{\circ}C \cdot 24V: -36mV/^{\circ}C) 2.8$ IK: up to 4 units with real time bala	m : STP-UNI-2.8 • 5m : STP-UN ncing feature	NI-5.0	









