

BATTERY CHARGERS



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SINGLE BATTERY BANK SYSTEMS SELECTION CHART

SINGLE BATTERY BANK SYSTEMS

- Not Recommended
- OK
- Recommended



Average Battery Ratings
CCA: 700
Amp Hour: 100

PARASITIC LOADS IN AMPS			0	5	10	0	5	10	0	5	10	0	5	10	20	0	5	10
CHARGER SERIES	AMPS	PAGE																
AUTO CHARGE																		
AUTO CHARGE 12	12	9	Green	Green	Yellow	Green	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
AUTO CHARGE 12HO	20	9			Green	Green	Green	Green	Green	Yellow	Red	Red	Red	Red	Red	Red	Red	Red
AUTO CHARGE 1200	40	13						Green	Green	Green	Green	Green	Green	Green	Red	Red	Red	
LOW PROFILE																		
LPC 7	7	5	Green	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
LPC 20	20	6		Green	Green	Green	Green	Green	Green	Yellow	Red	Red	Red	Red	Red	Red	Red	Red
LPC 40	40	6						Green	Green	Green	Green	Green	Green	Green	Red	Red	Red	
LPC 80	80	7									Green	Green	Green	Green	Red	Red	Red	
EV																		
EV-20	20	8		Green	Green	Green	Green	Green	Green	Yellow	Red	Red	Red	Red	Red	Red	Red	Red
EV-40	40	8		Red	Red	Red	Red	Red	Green	Red	Red	Green	Red	Red	Red	Red	Red	Red
AUTO CHARGE / BATTERY SAVER																		
AUTO CHARGE 1000 PLC	18	10	Green	Green	Green	Green	Green	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
AUTO CHARGE 20/20	40	11						Green	Green	Green	Green	Red	Red	Red	Red	Red	Red	Red
AUTO CHARGE 35/10	45	14						Green	Green	Green	Green	Green	Green	Yellow	Red	Red	Red	
AUTO CHARGE 40/20	60	15							Green	Green	Green	Green	Green	Green	Red	Red	Red	
AUTO CHARGE D	33	20													Green	Green	Green	
WATERPROOF																		
WP-35	35	24		Red	Red	Red	Red	Red	Green	Red	Red	Yellow	Red	Red	Red	Red	Red	
PUMP PLUS																		
PUMP PLUS 1000 PLC	18	49	Green	Green	Green	Green	Green	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
PUMP PLUS 1200	40	50						Green	Green	Green	Green	Green	Green	Green	Red	Red	Red	
AC D PUMP PLUS	33	53													Green	Green	Green	

These chargers are for average recharge rates and average sized batteries. For specific applications, please contact our sales or engineering department with battery size, parasitic loads and required recharge time.

BATTERY CHARGERS

DUAL BATTERY BANK SYSTEMS SELECTION CHART

DUAL BATTERY BANK SYSTEMS

- Not Recommended
- OK
- Recommended



DDEC SYSTEMS



Main Battery



Engine Battery

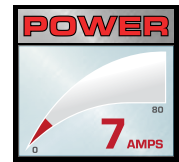


Average Battery Ratings
CCA: 700
Amp Hour: 100

PARASITIC LOADS IN AMPS			0			5			10			0			5			10		
BATTERY CHARGER SERIES	AMPS	PAGE	0			5			10			0			5			10		
AUTO CHARGE																				
AUTO CHARGE 11	10	17	Green	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red		
AUTO CHARGE 11HO	20	17	White	Green	Green	Green	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red		
AUTO CHARGE / BATTERY SAVER																				
AUTO CHARGE 2000 PLC	18	18	Green	Green	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red		
AUTO CHARGE 4000	45	19	White	White	Green	Green	Green	Green	Green	Green	Yellow	Red	Red	Red	Red	Red	Red	Red		
AUTO CHARGE D2	33	20	White	White	White	White	White	White	White	White	White	White	White	White	White	Green	Green	Green		
EURO																				
EURO II	12	23	Green	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red		
EURO II VHO	40	23	White	Green	Green	Green	Green	Green	Green	Green	Yellow	Red	Red	Red	Red	Red	Red	Red		
PUMP PLUS																				
PUMP PLUS HO	11	52	Green	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red		
PUMP PLUS 2000 PLC	18	51	Green	Green	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red		

These chargers are for average recharge rates and average sized batteries. For specific applications, please contact our sales or engineering department with battery size, parasitic loads and required recharge time.

Charge Single Battery Bank Power Sensitive Electronics Low Profile Case Fits in Tight Locations



Features

- 7A for charging a single battery bank
- Three step charging: bulk, absorption, and float
- Lightweight, small low profile size
- Clean output poses no interference with radios and other mobile devices

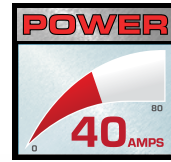


- Gel Cell/Lead-Acid switch selects the optimum charge/float voltages based on the battery type
- Included Charger Status indicator light changes color according to the output
- Current limiting prevents damage from an overload
- Load activated cooling fan allows for continuous operation at full-rated output
- A Float/3 Step selector switch protects the batteries when charging under a continuous load
- Meets CE requirements
- Includes a heavy duty stainless steel case designed for emergency vehicle use

Part Number	Description	Electrical Data				Dimensions			Wt.
		DC Volts	DC Amps	AC Volts	AC Amps	L	W	H	
445-4290-5	LPC 7	12	7	120 / 240	2.0 / 1.0	8.62"	4.93"	2.47"	3

LOW PROFILE CHARGER 40 WITH PLC - SINGLE BATTERY BANK

Charge Single Battery Bank with Parasitic Load Compensation (PLC) for Power Sensitive Electronics Low Profile Case Fits in Tight Locations



LPC 40

NEW LPC 40, PLC Features

- Newly enhanced LPC 40A with patented PLC (parasitic load compensation) technology
- Clean output poses no interference with radios and other mobile electronics
- Includes a 15A auxiliary output circuit with a power source selector switch for operating accessory loads i.e., air compressor pumps, handheld lights or handheld radios
- Front panel connections for remote display and auxiliary loads
- Includes a heavy duty aluminum case designed for emergency vehicle use
- User Selectable:
 - Battery Type
 - 3 Step or Float
 - 1, 5 or 10 hour timer
 - PLC



Remote Display Options



Bar Graph Display
091-200-IND

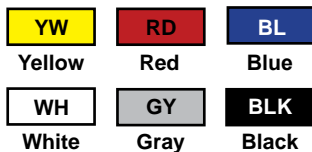


Status Center Display
in Watertight Case
For LPC 40: 091-194-IND-WT-XX



Status Center Display
For LPC 40: 091-194-IND

Color Options



Super Auto Eject
Deluxe Covers Available
for this product
see page 40

Optional Accessory

E-Z Slide Mount Plate: 091-200-EZM

For slide-in installation and removal of the LPC 40 or LPC 20 in hard to access areas with minimal vertical clearance



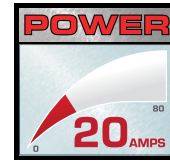
Part Number	Description	Electrical Data				Dimensions			Wt.
		DC Volts	DC Amps	AC Volts	AC Amps	L	W	H	
091-200-12	LPC 40, w/ Bar Graph Display	12	40	120	6.0	13.25"	6.80"	3.30"	7
091-200-12-194	LPC 40, w/ Status Center	12	40	120	6.0	13.25"	6.80"	3.30"	7
091-200-12-194-WT-XX	LPC 40, w/ Watertight Display	12	40	120	6.0	13.25"	6.80"	3.30"	7
091-200-EZM	EZ Slide Mount Plate for LPC 40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

All units also available in 240 VAC Input, contact the sales department for part number

Charge Single Battery Bank for Power Sensitive Electronics Low Profile Case Fits in Tight Locations

Features

- 20A and 80A for charging a single battery bank
- Clean output poses no interference with radios and other mobile electronics
- Includes a 15A auxiliary output circuit with power source selector switch for operating accessory loads i.e., air compressor pumps, hand lights or handheld radios
- Front panel connections for remote display and auxiliary loads
- Includes a heavy duty aluminum case designed for emergency vehicle use



LPC 20



LPC 80

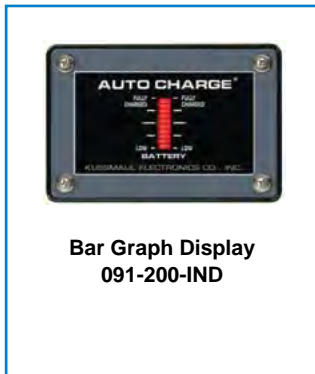


LPC 80



LPC 20

Remote Display Options



Bar Graph Display
091-200-IND



Super Auto Eject
Deluxe Covers Available
for this product
see page 40



Status Center Display
LPC 20: 091-194B-IND
LPC 80: 091-194C-IND



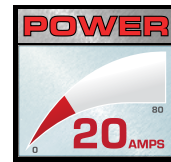
Status Center Display
in Watertight Case
LPC 20: 091-194B-IND
LPC 80: 091-194C-IND-WT-XX
Color Options see p6

Part Number	Description	Electrical Data				Dimensions			Wt.
		DC Volts	DC Amps	AC Volts	AC Amps	L	W	H	
091-206-12	LPC 80, w/ Bar Graph Display	12	80	120	13	13.75"	7.00"	4.09"	10
091-206-12-194C	LPC 80, w/ Status Center	12	80	120	13	13.75"	7.00"	4.09"	10
091-206-12-194C-WT-XX	LPC 80, w/ Watertight Display	12	80	120	13	13.75"	7.00"	4.09"	10
091-207-12	LPC 20, w/ Bar Graph Display	12	20	120	7.0	13.25"	6.80"	3.30"	7
091-207-12-194B	LPC 20 w/ Status Center	12	20	120	7.0	13.25"	6.80"	3.30"	7
091-207-12-194B-WT-XX	LPC 20 w/ Watertight Display	12	20	120	7.0	13.25"	6.80"	3.30"	7
091-200-EZM	EZ Slide Mount Plate for LPC 20 and LPC 40 (see page 6)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

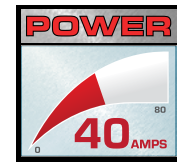
All units also available in 240 VAC Input, contact the sales department for part number

24 VDC version available, see Page 22 for details

Charge Single Battery Bank Auxiliary Output for Electronics Low Profile Design



EV 20



EV 40

Features

- 20 and 40A models available for charging a single battery bank
- Low profile design saves valuable space in compartments and/or under the seat
- Clean output poses no interference with radios and other mobile electronics
- A 15A auxiliary output circuit with a power source selector switch for operating accessory loads i.e. air compressor pumps, handheld lights or handheld radios
- Heavy duty terminal block for secure connections
- Durable powder coat finish
- Available as a kit with a remote battery meter
- Includes a heavy duty aluminum case designed for emergency vehicle use
- An optional mounting plate features slide-in and lock design for easy installation/removal under seats and other hard to access locations



Optional Accessories

EV-20 Features

- 20A rating with a clean output - no electronic interference
- 2 step charging: bulk, float, no overcharging
- Operates on 120V
- Lowest profile design, only 2.32" high

EV-40 Features

- Fast 3 step charging: Produces up to 40A output to quickly replenish batteries, then switches to lower float voltage maintenance mode to avoid overcharging
- Includes a battery type selector switch to program use with Gel Cell/Flooded Lead Acid/AGM batteries
- Operates on 90-250V input, auto range

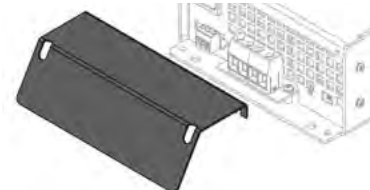
Remote Bar Graph Display: 023-5353-1

- Charger "On" LED
- Bar graph battery condition
- Operates when charger is not powered



Slide-in Mounting Plate Assembly: 444-5279-0

Easy installation under seats and hard to access locations

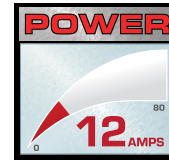


Kick Plate: 444-5280-0

Protects front panel connections

Part Number	Description	Electrical Data				Dimensions			Wgt.
		DC Volts	DC Amps	AC Volts	AC Amps	L	W	H	
445-5393-0	EV-20, Charger	12	20	120/240	3.1	13.12"	6.80"	2.32"	5
445-5399-0	EV-20, Charger & Display	12	20	120/240	3.1	13.12"	6.80"	2.32"	5
445-5262-0	EV-40, Charger	12	40	120/240	6.2	13.12"	6.80"	3.13"	7
445-5265-0	EV-40, Charger & Single Display	12	40	120/240	6.2	13.12"	6.80"	3.13"	8
445-5264-0	EV-40, Charger & Dual Display	12	40	120/240	6.2	13.12"	6.80"	3.13"	9
444-5279-0	Mounting Plate -- EV20/40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
444-5280-0	Kick Plate Guard -- EV20/40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Charge Single Battery Bank Provide Power for Onboard Electronics Front Panel Amp Meter



12



12 HO

Features

- 12 and 20A models available for charging a single battery bank
- Automatic operation regulates the output to a single battery bank
- Front panel amp meter indicates the output current (Optional vehicle side mount indicator available)
- Includes a heavy duty aluminum case with a protective front panel and wire strain relief designed for emergency vehicle use
- Auto Charge 12 is UL recognized

Optional Configurations

AC Outlet in Front Panel:
15A GFI duplex outlet with circuit breaker protection provides plug-in point for AC accessories (PIM option)



Dual Voltage Input:
Selector switch on front panel for 120 or 240V, 50-60 hz input (DV)



Model Shown is UL Recognized: Auto Charge 12

Remote Display Options



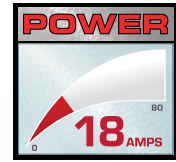
Bar Graph Display
Model 12: 091-165-016
Model 12HO: 091-199-001



LED Display
Model 12: 091-11-102-12

Part Number	Description	Electrical Data				Dimensions			Wgt.
		DC Volts	DC Amps	AC Volts	AC Amps	L	W	H	
091-165-12	Auto Charge 12	12	12	120	2.5	4.50"	5.50"	11.00"	12
091-165-12-DV	Auto Charge 12 DV	12	12	120/240	2.5/1.3	4.50"	5.50"	11.00"	12
091-170-12	Auto Charge 12 HO	12	20	120	4.7	4.25"	6.75"	12.75"	16
091-170-DV-12	Auto Charge 12 HO-DV	12	20	120/240	4.7/2.3	4.25"	6.75"	12.75"	16
091-170-PIM	Auto Charge 12 HO-PIM	12	20	120	4.7	4.25"	6.75"	12.75"	16
091-12PIM	Auto Charge 12 PIM	12	12	120	2.5	4.25"	6.75"	12.75"	12

Charge Single Battery Bank at 15 Amps Power Auxiliary Loads with 3 Amp *Battery Saver* Remote Display Included

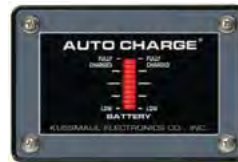


Features

- 15A battery charger with a 3A battery saver
- Microprocessor controlled, completely automatic operation regulates the output to a single battery bank
- Precision voltage controller senses the battery voltage, eliminating the need for sense wires
- Programmable Parasitic Load Compensation allows for the user to input the total accessory load on the vehicle (in amps). This allows the charger to shift the absorption stage set point so the battery voltage drops to the float voltage when desired current is reached
- Battery selection switch to select Gel Cell, Lead-Acid, AGM or Odyssey
- Float/3-Step Charge Mode Selection Switches
- Automatic current limit
- Battery Saver On/Off switch is used to bypass the Battery Saver and apply all 18A to charge the battery
- Patent pending



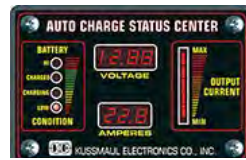
Remote Display Options



Bar Graph Display
091-199-001



**Super Auto Eject
Deluxe Covers Available
for this product
see page 40**

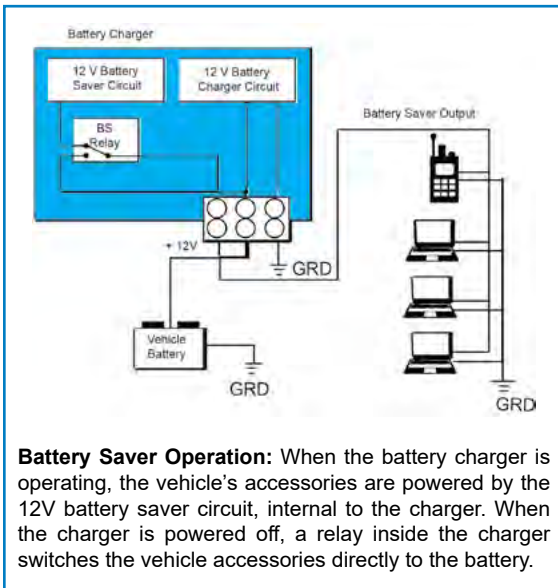


Status Center Display
091-194B-IND



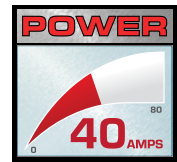
**Status Center Display in
Watertight Case**
091-194B-IND-WT-XX
Color Options see page 6

Battery Saver Wiring Diagram



Part Number	Description	Electrical Data				Dimensions			Wt.
		DC Volts	DC Amps	AC Volts	AC Amps	L	W	H	
091-215-12	Auto Charge 1000 PLC, w/ Bar Graph Display	12	15 / 3	120	3.5	9.35"	5.90"	4.725"	11
091-215-12-194B	Auto Charge 1000 PLC, w/ Status Center	12	15 / 3	120	3.5	9.35"	5.90"	4.725"	11
091-215-12-194B-WT-XX	Auto Charge 1000 PLC, w/ Watertight Display	12	15 / 3	120	3.5	9.35"	5.90"	4.725"	11

Charge Single Battery Bank at 20 Amps Power Auxiliary Loads with 20 Amp Battery Saver Front Panel Amp Meters

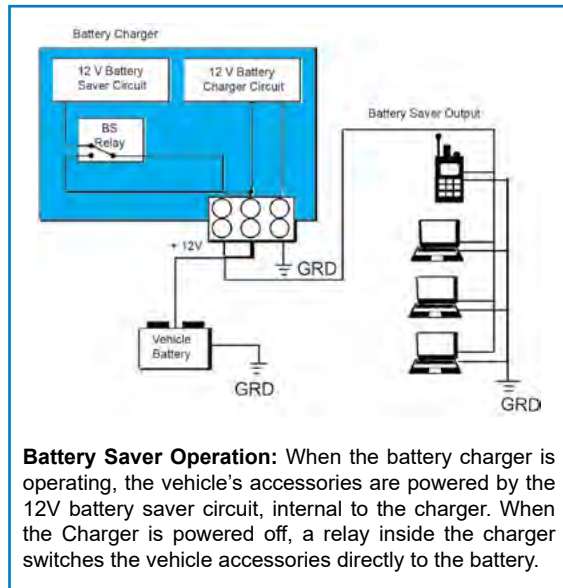


Features

- 20A battery charger with a 20A battery saver
- Automatic operation regulates output to a single battery bank
- Separate 20A ATC fuse protected Battery Saver output eliminates any drain on the vehicle battery when in the station
 - Automatically disconnects auxiliary vehicle loads from battery when the charger is energized and powers them from the internal power supply
 - Clean output poses no interference with radios and other mobile devices
 - 20A output with automatic overload current limit
- Dual cooling fans
- Reverse polarity protected
- AC input circuit breaker protection
- Includes a heavy duty aluminum case designed for emergency vehicle use



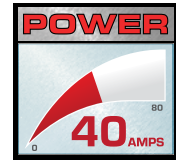
Battery Saver Wiring Diagram



Part Number	Description	Electrical Data				Dimensions			Wgt.
		DC Volts	DC Amps	AC Volts	AC Amps	L	W	H	
091-216-20/20	Auto Charge 20/20	12	20 / 20	120	8.5	13.125"	8.250"	5.233"	13

BATTERY CHARGERS

Next Generation Single Battery Bank at 40 Amps Power with Parasitic Load Compensation



Features

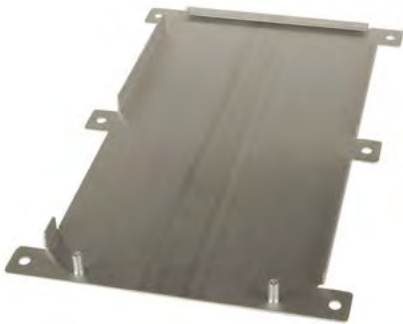
- NEW Parasitic Load Compensation (PLC) allows for user input of total accessory load amps on the vehicle. This allows the charger to shift the absorption stage set point so the battery voltage drops to the float voltage when desired current is reached
- Patented PLC Technology
- NEW Low Profile-reduced height and lighter in weight
- **Configurable for 3-Step or Float Charging**
- **Choice of Built-in Display options:**
 - Bar Graph or Digital
- **Choice of Remote Displays:**
 - Single Bar Graph
 - Auto Charge Status Center
 - Auto Charge Status Center in Watertight Case
- Optional E-Z Slide Mounting Plate for slide-in installation and removal of the Auto Charge 1200 charger located in hard to access areas
- Accommodates Lead -Acid, Gelled Electrolyte, AGM and Odyssey® battery types



Optional Accessory

E-Z Slide Mount Plate: 091-200-EZM

For slide-in installation and removal of the Auto Charge 1200 Remote charger in hard to access areas and spaces with minimal vertical clearance



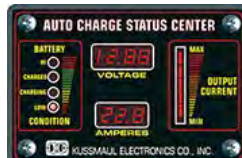
Remote Display Options



Bar Graph Display
091-199-001



**Super Auto Eject
Deluxe Covers Available
for this product
see page 40**



Status Center Display
091-194-IND

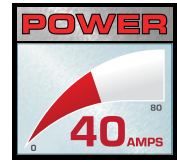


**Status Center Display in
Watertight Case
091-194-IND-WT-XX
Color Options see page 6**

Part Number	Description	Electrical Data				Dimensions			Wgt
		DC Volts	DC Amps	AC Volts	AC Amps	L	W	H	
091-187-12	Auto Charge 1200	12	40	120	6.0	13.25"	6.80"	3.30"	7
091-187-12-194	Auto Charge 1200 with status center	12	40	120	6.0	13.25"	6.80"	3.30"	7
091-200-EZM	EZ Slide Mount Plate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

All units also available in 240 VAC Input, contact the sales department for part number

Next Generation Low Profile Charger with PLC at 40 Amps Power Onboard Electronics Remote Display Included



Features

- NEW Patented Parasitic Load Compensation (PLC), adjustable for 5-35 amperes
- NEW Low Profile-reduced height and lower in weight
- Allows user input of total accessory load amps on vehicle
- Output voltage regulated
- Configurable for 3-Step or Float Charging
- Selectable for 1,5, or 10 hour Safety Timer while in 3-Step mode
- **Choice of Remote Display:**
 - Single Bar Graph
 - Auto Charge Status Center
 - Auto Charge Status Center in Watertight Case
 - Super Auto Eject Deluxe Cover- #091-55-234-XXX Bar Graph and #091-55-194-XXX Digital Display
- Accommodates Lead -Acid, Gelled Electrolyte, AGM and Odyssey® battery types



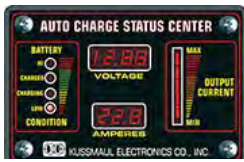
Remote Display Options



Bar Graph Display
091-199-001



**Super Auto Eject
Deluxe Covers Available
for this product
see page 40**



Status Center Display
091-194-IND

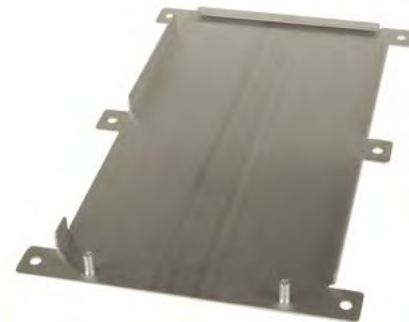


**Status Center Display in
Watertight Case**
091-194-IND-WT-XX
Color Options see page 6

Optional Accessory

E-Z Slide Mount Plate: 091-200-EZM

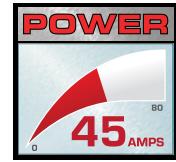
For slide-in installation and removal of the Auto Charge 1200 Remote charger in hard to access areas and spaces with minimal vertical clearance



Part Number	Description	Electrical Data				Dimensions			Wgt.
		DC Volts	DC Amps	AC Volts	AC Amps	L	W	H	
091-187-12-REMOTE	1200 Remote w/ Bar Graph	12	40	120	6	13.25"	6.80"	3.30"	7
091-187-12-R-194	1200 Remote w/ Status Center	12	40	120	6	13.25"	6.80"	3.30"	7
091-187-12-R-194-WT-XX	1200 Remote w/ Watertight S.C.	12	40	120	6	13.25"	6.80"	3.30"	7
091-200-EZM	EZ Slide Mount Plate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

All units also available in 240 VAC Input, contact the sales department for part number

Charge Single Battery Bank at 35 Amps Power Auxiliary Loads with 10 Amp *Battery Saver* Remote Display Included

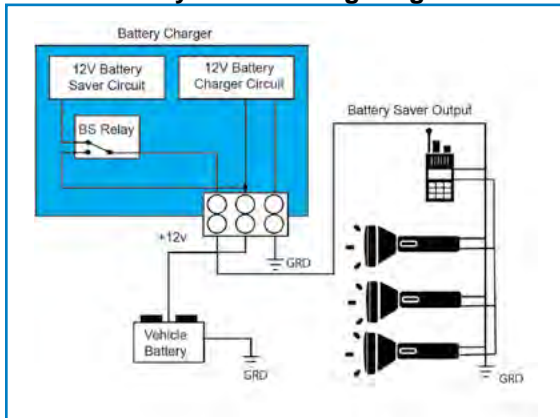


Features

- 35A battery charger with a 10A battery saver
- Automatic operation regulates the output to a single battery bank
- A patented built-in sense circuit checks the battery voltage 120 times per second to compensate for a voltage drop in the charging wires providing a quick re-charge and avoiding overcharging
- A separate 10A Battery Saver output eliminates any drain on the vehicle battery when in the station
 - Automatically disconnects any auxiliary vehicle loads from the battery when the charger is energized
 - Ideal for charging handheld lights and portable radios
 - 10A output with automatic overload current limit
 - **Not recommended for powering highly sensitive electronic loads**
- Front panel LED displays AC power applied and Battery Saver circuit overload
- A Remote Bar Graph Display is included
- Includes a heavy duty aluminum case with a protective front panel plate and wire strain relief designed for emergency vehicle use



Battery Saver Wiring Diagram



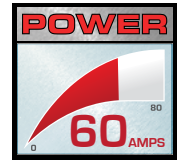
Battery Saver Operation: When the battery charger is operating, the vehicle's accessories are powered by the 12V battery saver circuit, internal to the charger. When the charger is powered off, a relay inside the charger switches the vehicle accessories directly to the battery.

Remote Display Options



Part Number	Description	Electrical Data				Dimensions			Wgt.
		DC Volts	DC Amps	AC Volts	AC Amps	L	W	H	
091-35/10	AC 35/10 w/ Bar Graph Display	12	35	120	10	14.00"	5.50"	5.25"	26

Charge Single Battery Bank at 40 Amps Power Auxiliary Loads with 20 Amp Battery Saver Remote Display Included

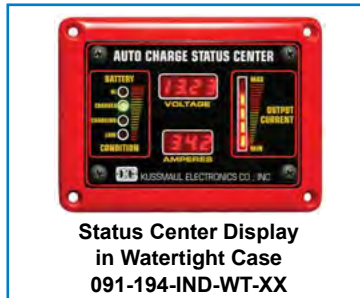


Features

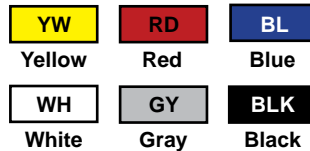
- 40A battery charger with a 20A battery saver
- Automatic operation regulates the output to a single battery bank
- Separate 20A ATC fuse protected Battery Saver output eliminates any drain on the vehicles battery when in the station
 - Clean output poses no interference with radios and other mobile devices
- Gel Cell, Lead-Acid, and AMG switch selects the optimum charge/float voltages based on the battery type
- 1-hour “boost” voltage for rapid battery recovery
- Automatic current limit
- Reverse polarity protected
- AC input circuit breaker protection



Remote Display Options



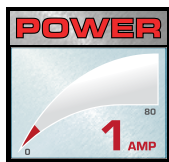
Color Options



Part Number	Description	Electrical Data				Dimensions			Wt.
		DC Volts	DC Amps	AC Volts	AC Amps	L	W	H	
091-216-40/20	Auto Charge 40/20 w/ Bar Graph Display	12	40 / 20	120	8.5	13.25"	7.13"	5.25"	13
091-216-40/20-194	Auto Charge 40/20 w/ Status Center	12	40 / 20	120	8.5	13.25"	7.13"	5.25"	13
091-216-40/20-194-WT-XX	Auto Charge 40/20 w/ Watertight Display	12	40 / 20	120	8.5	13.25"	7.13"	5.25"	13

Auto Charge 1

For Charging Small Batteries



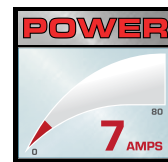
Auto Charge 1

Features

- 1A charge rate is ideal for small 12V batteries (5-20 Amp/Hour) and avoids overcharging
- Automatically charges the battery
- Low ripple output won't cause interference with the electronics
- Current limited so it cannot be overloaded
- Compact and sturdy molded case with mounting flanges for vehicle installation
- Fanless operation

Maintenance Master

For Auxiliary Generators



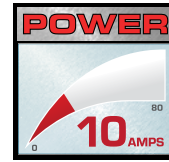
Maintenance Master

Features

- 5A, 12V charge rating (6 & 24V units also available)
- Designed specifically for maintaining generator start batteries
- Automatically shuts off when batteries are fully charged to avoid overcharging
- Ammeter indicates the charge rate
- Features a rugged aluminum case designed for industrial use
- Compact size and is wall mountable

Part Number	Description	Electrical Data				Dimensions			Wgt.
		DC Volts	DC Amps	AC Volts	AC Amps	L	W	H	
091-31-12	Auto Charge 1	12	1	120	.5	3.50"	2.25"	3.50"	3
091-7-12	Maintenance Master	12	5	120	1	5.30"	5.50"	9.75"	9
091-7-24	Maintenance Master, 24 Volt	24	2.5	120	1	5.30"	5.50"	9.75"	9

Charge Dual Battery Banks Power for Onboard Electronics Front Panel Amp Meter



10



11 HO

Features

- 10 and 20A models are available
- Automatically charges dual battery banks utilizing independent sense circuits that control voltage and current to each battery. Parasitic loads on one battery do not effect the second
- Full amperage output is available to either battery if the adjacent bank does not require charging, optimizing the use of available power when charging banks with differing parasitic load rates
- Front panel amp meter indicates the total output current
- Optional Remote Bar Graph display or LED indicator
- Includes a heavy duty aluminum case with a protective front panel plate and wire strain relief designed for emergency vehicle use
- Model 11, UL recognized



Optional Configurations

AC Outlet in Front Panel:
15A GFI duplex outlet with circuit breaker protection provides a plug-in point for AC accessories (PIM option)

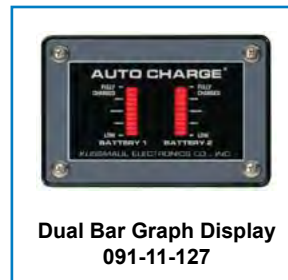


Dual Voltage Input:
Selector switch on the front panel for 120 or 240V, 50-60 hz. input (DV)



Model Shown is UL Recognized: Auto Charge 11

Remote Display Options



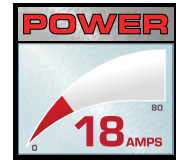
Dual Bar Graph Display
091-11-127



LED Display
091-11-102-12

Part Number	Description	Electrical Data				Dimensions			Wgt.
		DC Volts	DC Amps	AC Volts	AC Amps	L	W	H	
091-11-12	Auto Charge 11	12	10	120	2.5	4.375"	5.50"	11.375"	12
091-11DV-12	Auto Charge 11 DV	12	10	120/240	2.5/1.3	4.375"	5.50"	11.375"	12
091-11HO-12	Auto Charge 11 HO	12	20	120	4.7	4.25"	6.75"	12.75"	19
091-11HO-DV-12	Auto Charge 11 HO-DV	12	20	120/240	4.7/2.4	4.25"	6.75"	12.75"	19
091-11HO-PIM	Auto Charge 11 HO-PIM	12	20	120	4.7	4.25"	6.75"	12.75"	19
091-11PIM	Auto Charge 11 PIM	12	10	120	2.5	4.25"	6.75"	12.75"	12

Charge Dual Battery Banks at 15 Amps Power Auxiliary Loads with 3 Amp *Battery Saver* Remote Display Included

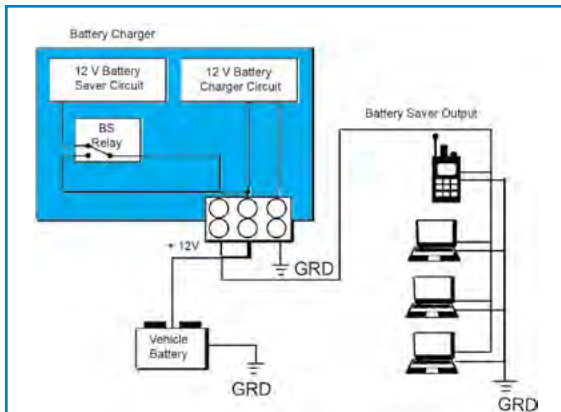


Features

- 15A charger with a 3A battery saver
- Automatically charges dual battery banks utilizing independent sense circuits that control the voltage and current to each battery. Parasitic loads on one battery do not effect the second
- Precision voltage controller senses the battery voltage which eliminates the need for sense wires
- Full amperage output is available to either battery bank if the adjacent bank does not require charging, optimizing the use of available power when charging banks with differing parasitic load rates
- Programmable Parasitic Load Compensation allows for the user to input the total accessory load on the vehicle (in amps). This allows the charger to shift the absorption stage set point so the battery voltage drops to the float voltage when the desired current is reached
- Separate 3A Battery Saver output eliminates any drain from auxiliary loads on the vehicle battery when in the station
 - Automatically disconnects auxiliary vehicle loads from the battery when the charger is energized and powers them from the internal power supply
- Includes a heavy duty aluminum case designed for emergency vehicle use



Battery Saver Wiring Diagram



Battery Saver Operation: When the battery charger is operating, the vehicle's accessories are powered by the 12V battery saver circuit, internal to the charger. When the charger is powered off, a relay inside the charger switches the vehicle accessories directly to the battery.



Remote Bar Graph Display Included: 091-39-IND

- Provides state-of-charge status when in the station
- Indicates charger "On" and operating

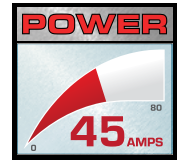
Remote Display Option



NEW Super Auto Eject Deluxe Cover with Bar Graph Display and Dual LED Indicator available for this product see page 40

Part Number	Description	Electrical Data				Dimensions			Wgt.
		DC Volts	DC Amps	AC Volts	AC Amps	L	W	H	
091-237-12	AC 2000 PLC, w/ Dual Bar Graph	12	15 / 3	120	3.5	9.35"	5.90"	4.725"	17

Next Generation Dual Output Charger at 45 Amps Remote Display Included



Features

- Next Generation 45A charger
- NEW- Low Profile-reduced height and lower in weight
- Designed for vehicles with dual battery system
- Output voltage regulated
- NEW-Acommodates Lead-Acid, Gelled Electrolyte, AGM and Odyssey® battery types
- Auxiliary 15 amp output circuit with AC/DC selector switch for operating accessory loads: air compressor pumps, handlights or handheld radios
- Front panel connections for remote display and auxiliary loads
- Includes a heavy duty aluminum case designed for emergency vehicle use
- Power "On" LED indicator
- System Status Indicator

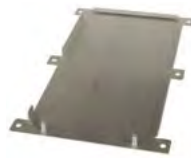


**Remote Bar Graph Display
Included:
091-39-IND**

- Provides state-of-charge status when in the station
- Indicates charger "On" and operating

Optional Accessory

E-Z Slide Mount Plate:
For slide-in installation and removal of the Auto Charge 4000 charger in hard to access areas and spaces with minimal vertical clearance



Remote Display Option

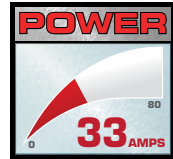


NEW Super Auto Eject Deluxe Cover with Bar Graph Display and Dual LED Indicator available for this product see page 40

Part Number	Description	Electrical Data				Dimensions			Wgt.
		DC Volts	DC Amps	AC Volts	AC Amps	L	W	H	
091-89-12	AC 4000, w/ Dual Bar Graph	12	45	120	6	13.25"	6.80"	3.30"	7
091-89-24	AC 4000, w/ Dual Bar Graph	24	20	120	3	13.25"	6.80"	3.30"	7
091-200-EZM	EZ Slide Mount Plate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Units also available in 240 VAC Input, contact the sales department for part number

Charge Dual or Triple Battery Banks at 28 Amps Power Auxiliary Loads with 5 Amp *Battery Saver* Remote Display Included

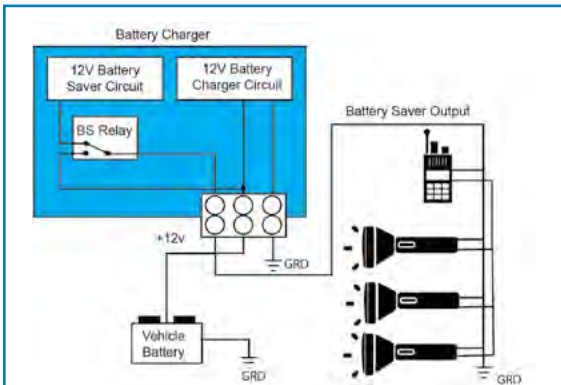


Features

- 28A battery charger with a 5A battery saver
- Designed for DDEC Vehicles
- Automatic operation regulates the output to multiple battery banks
- A patented built-in sense circuit checks the battery voltage 120 times per second to compensate for a voltage drop in charging wires providing a quick re-charge without overcharging
- Model D: two battery banks, Model D2: three battery banks
- Separate 5A Battery Saver output eliminates any drain from auxiliary loads on the vehicle battery when in the station
 - Automatically disconnects auxiliary vehicle loads from the battery when the charger is energized and powers them from the internal power supply
 - **Not recommended for powering highly sensitive electronic loads**
- Front panel LED displays AC power applied and Battery Saver circuit overload
- Includes a heavy duty aluminum case designed for emergency vehicle use



Battery Saver Wiring Diagram



Battery Saver Operation: When the battery charger is operating, the vehicle's accessories are powered by the 12V battery saver circuit, internal to the charger. When the charger is powered off, a relay inside the charger switches the vehicle accessories directly to the battery.



Remote Bar Graph Display Included with Auto Charge D: 091-66-IND

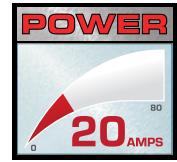


Remote Bar Graph Display Included with Auto Charge D2: 091-74-IND

- Provides state-of-charge status when in station
- Indicates charger "On" and operating

Part Number	Description	Electrical Data				Dimensions			Wgt.
		DC Volts	DC Amps	AC Volts	AC Amps	L	W	H	
091-66-12	AC D, w/ Dual Bar Graph	12	25 / 5	120	8	5.25"	7.0"	13.25"	27
091-74-12	AC D2, w/ Triple Bar Graph	12	25 / 5	120	8	5.25"	7.0"	13.25"	28

Charge Three Battery Banks at 20 Amps Power Onboard Electronics Front Panel Amp Meter



Features

- 20A for charging three battery banks
- Automatically charges three battery banks utilizing independent sense circuits that control the voltage and current to each battery. Parasitic loads on one battery do not effect the others
- Full amperage output is available to any battery if the adjacent banks do not require charging, optimizing the use of available power in charging banks with differing parasitic load rates
- Front panel amp meter indicates total output current
- Optional remote display
- Includes a heavy duty aluminum case with a protective front panel plate and wire strain relief designed for emergency vehicle use



Optional Configurations

AC Outlet in Front Panel:
15A GFI duplex outlet with circuit breaker protection provides a plug-in point for AC accessories (PIM option)



Dual Voltage Input:
Selector switch on the front panel for 120 or 240V, 50-60 hz. input (DV)



Remote Display Options



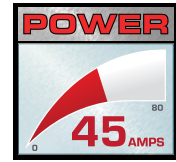
Bar Graph Display
091-118-022-12



LED Display
091-11-102-12

Part Number	Description	Electrical Data				Dimensions			Wgt.
		DC Volts	DC Amps	AC Volts	AC Amps	L	W	H	
091-10-12	Auto Charge 20	12	20	120	4.7	4.25"	6.75"	12.75"	22
091-10-24	Auto Charge 20, 24 Volt	24	10	120	4.7	4.25"	6.75"	12.75"	22
091-10-DV-12	Auto Charge 20 DV	12	20	120/240	4.7/2.3	4.25"	6.75"	12.75"	22
091-10PIM	Auto Charge 20 PIM	12	20	120	4.7	4.25"	6.75"	12.75"	22

Charge 24V Single Battery Bank Power Sensitive Electronics Low Profile Case Fits in Tight Locations



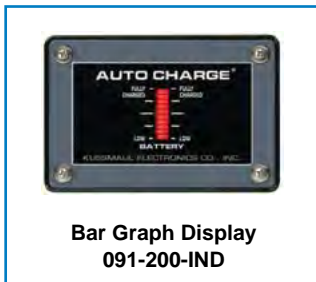
Features

- 45A charger for 24VDC vehicle configurations
- Light weight, small low profile size
- Clean output poses no interference with radios and other mobile devices
- 15A, 24VDC auxiliary output circuit with a power source selector switch for operating accessory loads i.e., air compressor pumps, handheld lights or handheld radios
- Front panel connections for a remote display and auxiliary loads
- Includes a heavy duty aluminum case designed for emergency vehicle use
- Remote battery sensing output to compensate for longer charging cables

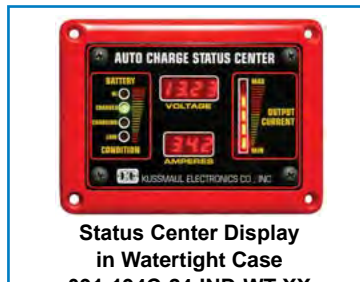


BATTERY CHARGERS

Remote Display Options



Bar Graph Display
091-200-IND



Status Center Display in Watertight Case
091-194C-24-IND-WT-XX



Status Center Display
091-194C-24-IND



Super Auto Eject Deluxe Covers Available for this product
see page 40

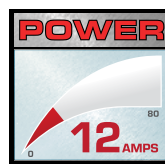
Color Options

- | | | |
|---------------------|-------------------|---------------------|
| YW
Yellow | RD
Red | BL
Blue |
| WH
White | GY
Gray | BLK
Black |

Part Number	Description	Electrical Data				Dimensions			Wt.
		DC Volts	DC Amps	AC Volts	AC Amps	L	W	H	
091-206-24	LPC 45, w/ Bar Graph Display	24	45	120	13	13.75"	7.00"	4.09"	10
091-206-24-194C	LPC 45, w/ Status Center	24	45	120	13	13.75"	7.00"	4.09"	10
091-206-24-194C-WT-XX	LPC 45, w/ Watertight Display	24	45	120	13	13.75"	7.00"	4.09"	10

12 VDC version available, see Page 7 for details

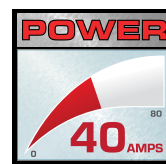
Charge Single, Dual or Triple Battery Banks 120/240V Source Front Panel Amp Meter



Euro Charger I



Euro Charger II



Euro Charger III



12A, Single or Dual Bank Output



18A, Triple Battery Bank



40A, Single or Dual Bank

Features

- 12, 18 and 40A models available
- Wide variety of input/output options to meet various international applications
- Automatically charges battery banks utilizing independent sense circuits that control the voltage and current to each battery. Parasitic loads on one battery do not effect the others
- Automatically charges and supports parasitic DC loads: data terminals, radios, hand lights, etc. assuring battery is ready for vehicle start
- Full amperage output is available to any battery if the adjacent banks do not require charging
- Front panel amp meter indicates the total output
- Optional LED or Bar Graph Remote Displays available
- 120/240V operation
- Meets CE requirements
- Includes a heavy duty aluminum case with a protective front panel plate and wire strain relief designed for emergency vehicle use

Remote Display Options



LED Display
091-90-012-12
For All Models



Single Bar Graph Display
091-94-12E
For Euro Charger I & I VHO



Dual Bar Graph Display
091-11-127-12
For Euro Charger II & II VHO



Triple Bar Graph Display
091-118-022-12
For Euro Charger III

Part Number	Description	Electrical Data				Dimensions			Wgt.
		DC Volts	DC Amps	AC Volts	AC Amps	L	W	H	
091-90-12	Euro Charger I	12	12	120/240	2.6/1.3	4.375"	5.50"	11.375"	12
091-90-24	Euro Charger I, 24 Volt	24	6	120/240	2.6/1.3	4.375"	5.50"	11.375"	12
091-162-12	Euro Charger I VHO	12	40	120/240	10/5	9.25"	9.375"	14.00"	33
091-162-24	Euro Charger I VHO, 24 Volt	24	20	120/240	10/5	9.25"	9.375"	14.00"	33
091-117-12	Euro Charger II	12	12	120/240	2.6/1.3	4.375"	5.50"	11.375"	17
091-117-24	Euro Charger II, 24 Volt	24	6	120/240	2.6/1.3	4.375"	5.50"	11.375"	17
091-143-12	Euro Charger II VHO	12	40	120/240	10/5	9.25"	9.375"	14.00"	39
091-143-24	Euro Charger II VHO, 24 Volt	24	20	120/240	10/5	9.25"	9.375"	14.00"	39
091-118-12	Euro Charger III	12	18	120/240	4.7/2.4	4.25"	6.75"	12.75"	19
091-118-24	Euro Charger III, 24 Volt	24	9	120/240	4.7/2.4	4.25"	6.75"	12.75"	19

Waterproof for Exposed Locations Remote Display Included



Features

- 40A for charging a single battery bank
- Sealed case allows for installations in exposed locations
- Frees in-cab and compartment space by allowing charger installation in areas not suitable for standard chargers
- Sealed terminals
- Rugged anodized aluminum case with an intergrated heat sinks for cool operation
- Remote bar graph display included
- Meets IP67



Remote Display Options

Bar Graph Display
091-200-IND

Status Center Display in Watertight Case
091-194-IND-WT-XX



Super Auto Eject
Deluxe Covers Available
for this product
see page 40

Status Center Display
091-194-IND

Color Options

- | | | |
|---------------------|-------------------|---------------------|
| YW
Yellow | RD
Red | BL
Blue |
| WH
White | GY
Gray | BLK
Black |

Part Number	Description	Electrical Data				Dimensions			Wgt.
		DC Volts	DC Amps	AC Volts	AC Amps	L	W	H	
091-261-12	WP 600, Waterproof Charger	12	40	120	6.0	13.25"	7.875"	4"	13

Unit also available in 240 VAC Input, contact the sales department for part number

Automatically Power Onboard Computers and MDT's When AC Line Applied to Truck Preserves Vehicle Battery



Battery Saver Low Ripple,HO

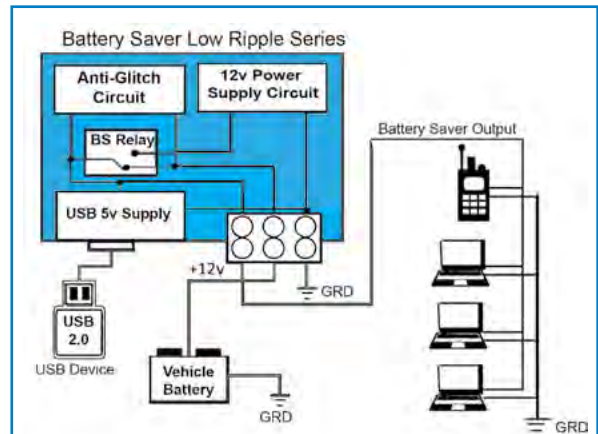


Battery Saver LR 40,VHO

Features

- 20A and 40A, 12V battery saver
- Relay removes auxiliary loads from the vehicle battery and connects to the battery saver preventing the battery from discharging when it's in the station
- Clean, low ripple output causes no interference with sensitive electronics
- Fast acting relay ensures "glitch" free power transfer
- Current limiting prevents an overload
- Factory set to 13.2V
- Front panel "Power On" indicator
- Designed for rigors of emergency vehicle use; heavy duty case and components
- **USB Model Only:**
 - Front panel USB interface is used for recharging electronic devices i.e., iPhone
 - 5.0V, 1A USB Output

Battery Saver Wiring Diagram



Battery Saver Operation: When the battery charger is operating, the vehicle's accessories are powered by the 12V battery saver circuit, internal to the charger. When the charger is powered off, a relay inside the charger switches the vehicle accessories directly to the battery.

Part Number	Description	Electrical Data				Dimensions			Wgt.
		DC Volts	DC Amps	AC Volts	AC Amps	L	W	H	
091-195-12	Battery Saver Low Ripple HO	12	20	120	4.5	2.50"	5.50"	13.00"	5
091-195-12-USB	Battery Saver Low Ripple HO, w/USB	12	20	120	4.5	2.50"	5.50"	13.00"	5
091-256-12	Battery Saver Low Ripple,VHO	12	40	120	4.5	2.50"	5.50"	13.00"	5