Legacy® Neo™ Battery Charger
Owner's Manual

To automatically be connected to your closest Service Center, call us toll-free at 1-800-DOUGLAS (1-800-368-4527)

Or, visit us at: http://www.douglasbattery.com/

I.B. 1619
Rev: C (8/5/14)

Model:	S/N:	AC Input Voltage
Installed by		Date

IMPORTANT
Read and understand your user's manual before installing, operating, or servicing this product.
DO NOT DESTROY THIS BOOK

TABLE OF CONTENTS

AC LINE VOLTAGE LETTER CODES

The following table describes the code letters to be used in new charger part numbers to indicate the AC line voltage(s) and AC line frequency at which the charger can be operated.

Code Letter	Voltage (Volts rms.)	Line Frequency (Hz)	Comments
C	600	50/60	Single or Three phase
Y	480	50/60	Single or Three phase
W	240	50/60	Single or Three phase

SPECIALTY CHARGER OPTIONS LIST

Suffix	Description
L10	10' of DC cable.
L13	13' of DC cable.
L15	15' of DC cable.
L18	18' of DC cable.
L20	20' of DC cable.
L25	25' of DC cable.

IMPORTANT SAFETY INSTRUCTIONS

1. This manual contains important safety and operating instructions. Before using the battery charger, read all instructions, **cautions** and **warnings** on the battery charger, the battery and the product using the battery.
2. This charger has been designed to charge flooded lead-acid and valve-regulated lead-acid (VRLA) storage batteries. Read and understand all setup and operating instructions before using the battery charger to prevent damage to the battery and to the charger.
3. **Do not** touch non-insulated parts of the output connector or the battery terminals to prevent electrical shock.
4. During charge, batteries produce hydrogen gas which can explode if ignited. Never smoke, use an open flame or create sparks in the vicinity of the battery. Ventilate well when the battery is in an enclosed space.
5. **Do not** disconnect the battery plug while the charger is on. Doing so will cause arcing and burning of the connector resulting in charger damage or battery explosion.
6. Lead-acid batteries contain sulfuric acid which causes burns. **Do not** get in eyes, on skin or on clothing. In cases of contact with eyes, flush immediately with clean water for 15 minutes. Seek medical attention immediately.
7. Only the factory can service this equipment. No user serviceable parts inside. De-energize all AC and DC power connections before disconnecting the charger.
8. The charger is **not** for outdoor use.
9. Do not expose the charger to moisture. Operating **conditions** should be 0º to 104º F; 0 to 90% relative humidity.
10. Do not operate the charger if it has been dropped, received a sharp hit, or otherwise damaged in any way.
11. For continued protection and to reduce the risk of fire, install charger on a wall constructed of non-combustible material such as stone, brick or grounded metal.

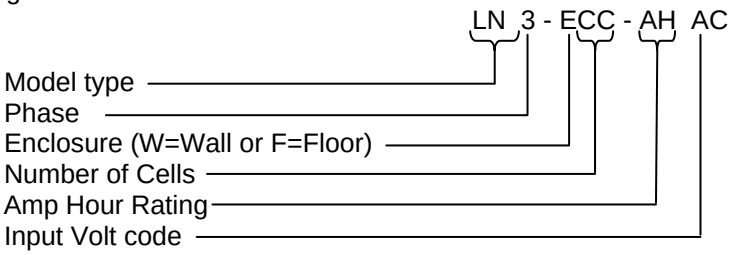
INSTRUCTIONS DE SÉCURITÉ IMPORTANTES

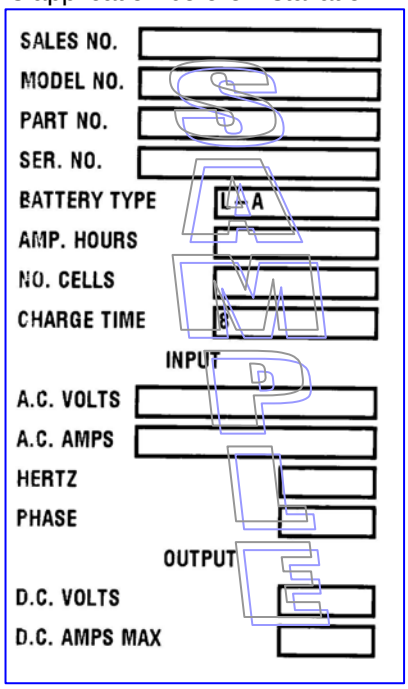
1. Ce manuel contient des informations et des consignes importantes pour l'emploi et l'utilisation du chargeur de batteries industrielles. Avant tout emploi, il est fortement conseillé de lire l'ensemble des instructions, recommandations, et avertissements concernant le chargeur et la batterie.
2. Ce chargeur est conçu pour charger inondées, scellé et TPPL plomb-acide batteries. Lire et comprendre toutes les instructions d'installation et de fonctionnement avant d'utiliser le chargeur de batterie pour éviter d'endommager la batterie et au chargeur.
3. Lisez toutes les condisnes d'installation et d'utilisation avant d'employer le chargeur de batterie pour empêcher des dommages à la batterie et / ou au chargeur.
4. **Ne pas être en contact avec** les pièces sous-tension non-isolées tels que la prise de charge ou des éléments de connexion de la batterie pour empêcher le choc électrique.
5. Pendant la charge, le dégagement d'hydrogène rend l'emploi de feu strictement interdit «risque d'explosion ». Ne jamais fumer, employer une flamme nue, ou créez les étincelles à proximité de la batterie. Ventiler suffisamment pour éviter toute condensation de gaz dans un espace restreint.
6. **Ne brancher ou débrancher la batterie que si le chargeur est à l'arrêt.** Faire ainsi risque d'endommager la prise de charge pouvant avoir pour conséquence des dommages du chargeur ou l'explosion de la batterie.
7. Les batteries d'acide au plomb contiennent l'acide sulfurique, qui cause des brûlures. Eviter le contact avec les yeux, la peau, ou sur l'habillement. Dans le cas de contact avec les yeux, et faut nettoyer immédiatement avec de l'eau propre pendant 15 minutes et consulter un médecin immédiatement.
8. Seul le personnel qualifié par l'usine peut entretenir cet équipement. Pour le service, veuillez contacter la société Douglas ou l'un de ces représentant (1-800-DOUGLAS) (1-800-368-4527)
9. Avant toute intervention d'entretien ou de réparation il faut s'assurer que le chargeur est hors tension et la batterie est déconnectée.
10. Le chargeur **n'est** pas pour un usage extérieur.
11. Ne pas exposer le chargeur à l'humidité. Les conditions de fonctionnement devraient être – 15° à 40°c; humidité relative de 0 à de 70%.
12. Ne pas mettre en fonctionnement le chargeur s'il a reçu un choc mécanique ou tout autre dommage di quel que façon.
13. Pour une protection permanente et pour réduire le risque du feu, installez les chargeurs sur un plancher ou un matériel non-combustible tel qu'un mur plein en béton, en brique, ou l'acier.

TECHNICAL INFORMATION

The nameplate, located on the outside of the charger, should be used to check this application before installation.

Part Number
This number specifies in general the characteristics of this particular charger and for this reason it is required in any discussion or correspondence regarding this unit.





Serial Number
This number indicates complete information about the specific charger. It must be supplied with the part number on any correspondence or discussion regarding this charger.

Battery Type
The chemical content construction of the battery this unit is designed to charge is given in this part of the nameplate. (L-A = Lead-Acid)

Ampere-Hours
The information supplied here is the maximum ampere-hour battery capacity which this unit has been designed to charge. Charging batteries with larger ampere-hour capacities might cause the charger to deviate.

Cells
This portion of the nameplate gives the number of battery cells that this unit will charge.

Input AC Volts
The nameplate shows the input voltage accommodated by this charger.
IMPORTANT: The charger will operate only on nominal line voltages stamped on the nameplate.
Failure to select the correct voltage will result in damage to the charger and/or the battery.

Input AC Amps
The external fusing and/or the line disconnect circuit breaker should be as specified in the National Electrical Code or other local code agencies. (AC fuse values can be found on the decal inside the charger.)

Hz
This gives the frequency in cycles per second of the AC input voltage. Under no conditions operate charger at a different frequency or from a generator with unstable frequency.

Phase
Number "3" indicates a Three Phase Charger. Number "1" indicates a Single Phase Charger.

DC Volts
This gives the nominal DC output voltage of the system.

Rated DC Amps
This is the nominal DC value of current that this unit will deliver to a battery that is 100% discharged.

INSTALLATION

Location
For maximum trouble-free service, choose a location which is free of excess moisture, dust and corrosive fumes. Also, avoid locations where temperatures are high or where liquids will drip on the charger. Allow 24 inches of clearance from the floor or the charger below, 36 inches from the ceiling and 18 inches from the sides of the charger for air circulation. Do not obstruct the ventilating openings or the space under the charger.

NOTE: Ambient air temperature cannot exceed 104oF / 40oC

Electrical Connections
To prevent failure of the charger, be sure it is connected to the correct line voltage.

On three phase units
Connect the charger as follows:
Phase A to L1 (fuse block)
Phase B to L2 (fuse block)
Phase C to L3 (fuse block)
Ground to the ground lug on the charger chassis.

On single phase units
Connect the charger as follows:
Line 1 to L1 (fuse block)
Line 2 to L2 (fuse block)
Ground to the ground lug on the charger chassis.

Connecting Input Power

WARNING: Make sure the AC power to the charger is OFF and the battery is disconnected before connecting the input power to the terminals of the charger.

Connect the input power to the appropriate terminals, ***including ground***. Follow your local electrical or National Electric Code in making these connections.

AC Connection
The user must provide suitable branch circuit protection and a disconnect method from the AC power supply to the charger to allow for safe operation.

Plug Polarity
The charging cable is connected to the DC output of the charger with the positive lead marked RED. The output polarity of the charger must be strictly observed when connecting to the battery (read warning above). Improper connection will open the DC fuse.

Grounding the Charger

DANGER: FAILURE TO GROUND THE CHARGER COULD LEAD TO FATAL ELECTRIC SHOCK. Follow National Electric Code for ground wire sizing.

Connect a grounding conductor to the lug provided on the horizontal support panel. This lug is marked as shown:

DESCRIPTION OF OPERATION

General

Legacy® Neo™ chargers are microprocessor-controlled. In the Ionic Profile, the processor calculates the battery's capacity so that the charging profile can be automatically adapted to the battery's actual state over a range of capacities. The charging coefficient is maintained absolutely on all types of batteries. Legacy Neo chargers adapt to the battery's capacity and its discharge level. As a result of our patented charging methodology, our chargers lower energy costs and extend battery life. Charging batteries used in cold storage applications with electrolyte temperatures below 68° F should use the cold storage profile selection (See Page 8).

This battery charger is designed to charge flooded lead-acid and valve-regulated lead-acid (VRLA) storage batteries with a maximum ampere-hour rating and with the number of cells as marked on the nameplate.

Charger Configuration

The default charger configuration settings are identified on the "Charger Configuration Switches" chart on Page 8. If changes are needed, adjustments can be made by changing the configuration switches as indicated on Page 8.

Beginning the Charge

When a battery is connected to the charger, the control board senses voltage and after a 30 second delay, the charger energizes.

Charging

Charging current is determined by the battery voltage and interaction of the charger. Charging current declines automatically as battery voltage rises during the charge. When the green LED illuminates the battery is ready for service.

AC Power Fail

If the AC power fails with a battery connected to the charger during a charge cycle, the charger will reset and start a new charge cycle when power is restored.

Series Charging

In series charging, the voltages of both batteries add up and must match charger's nameplate rating. Charger's Ampere-Hour rating must be equal to each of the batteries Ampere-Hour rating. Charge cycle will not start unless both batteries are connected.

GLOSSARY

Charging Coefficient
The ratio of the number of ampere-hours restored during charging to the number of ampere-hours consumed during discharge.

Charging Profile
The charging profile defines the rate of current charge over time. In the Ionic profile, the charger adapts to the battery's age and level of discharge. Controlling the overcharge coefficient, whatever the battery's discharge level, reduces the amount of electricity consumed.

Cold Storage Profile
In cold storage applications when a battery's electrolyte temperature will be lower than in normal ambient temperatures, the recognized voltage of the battery will increase as electrolyte temperature decreases. This inverse relationship between battery electrolyte temperature and battery voltage will cause undercharging of the battery unless adjustments to the charge profile are made to compensate for the lower electrolyte temperatures. This charging profile is an IEI (constant current, constant voltage, constant current) type. Please refer to page 8 for information on how to change to the Cold Storage profile and to select the appropriate Battery Temperatures for your applications. The recharge range is not valid for the cold storage profile. Please contact your Douglas Representative for additional details.

Desulphation Charging
A desulphation charge is performed before normal charging and starts automatically on a heavily discharged battery. The desulphation charge helps to remove sulphation from the battery plates**.**

Equalization Charging
Equalization charging can be performed before or after normal charging and balances the electrolyte densities in the battery's cells. Weekly equalization charges are required to keep the battery in peak operating condition.

IGBT (Insulated-Gate Bipolar Transistor)
The IGBT controls the charger output by rapidly switching the transformer primary at 20,000 to 30,000 cycles per second (Hz).

Ionic Profile
This is also called "ionic mixing". This type of charging profile consists of sending short pulses of current to stimulate gas formation in the active material, causing sulphuric acid to be distributed outside the plates. This system of mixing the electrolyte enables more rapid charging of flooded cell batteries subject to very high demands and balances out differences in density, homogenizing the electrolyte across the surface of the plates.

Nominal Temperature
The normal temperature of the battery after an eight hour rest in the area it is used**.**

Power Diodes
The power diodes rectify the AC input and the output of the transformer.

Refresh
Refresh enables the battery to be maintained at maximum charge all the time that it is connected to the charger. In Ionic mode after the charge completes, the charger supplies 20 seconds of current to the battery approximately every nine minutes for as long as the battery is connected.

VRLA Profile
This charging profile allows for valve-regulated lead-acid batteries to be charged. This charging profile is an IEIE (constant current, constant voltage, constant current, constant voltage) type.

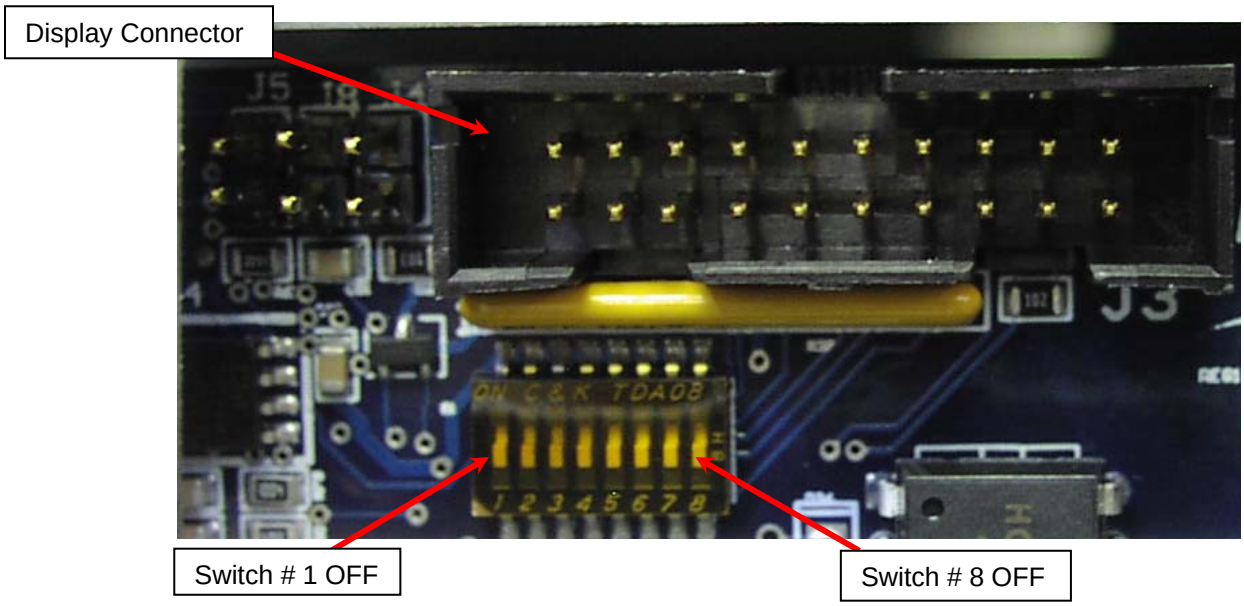
CHARGER CONFIGURATION SWITCHES

Highlighted Items are Default Value

CHARGER PROFILE SELECTION	SW1	SW2	SW3
Ionic (Flooded)	OFF	OFF	OFF
Cold Storage – 100% Start Rate	ON	OFF	OFF
Cold Storage – 80% Start Rate	OFF	ON	OFF
Cold Storage – 65% Start Rate	ON	ON	OFF
VRLA – 100% Start Rate	OFF	OFF	ON
VRLA – 80% Start Rate	ON	OFF	ON
VRLA – 65% Start Rate	OFF	ON	ON
CABLE LENGTH	**SW4**	**SW5**	
8 ft. (~2.4M)	OFF	OFF	
15 ft. (~4.6M)	ON	OFF	
20 ft. (~6.1M)	OFF	ON	
25 ft. (~7.6M)	ON	ON	
BATTERY TEMPERATURE	**SW6**	**SW7**	
68°F - 103°F	OFF	OFF	
23°F - 49°F	ON	OFF	
50°F - 67°F	OFF	ON	
104°F - 113°F	ON	ON	
EQUALIZE MODE **	**SW8**		
Equalize Every Fifth Cycle	OFF		
Equalize Every Cycle	ON		

****** Equalize Every Fifth Cycle counts only charge cycles for DoD >= 40% toward the count target of five successfully completed Ionic Profiles.

WARNING: Power must be removed and battery disconnected from the charger BEFORE changing charger configuration switches.



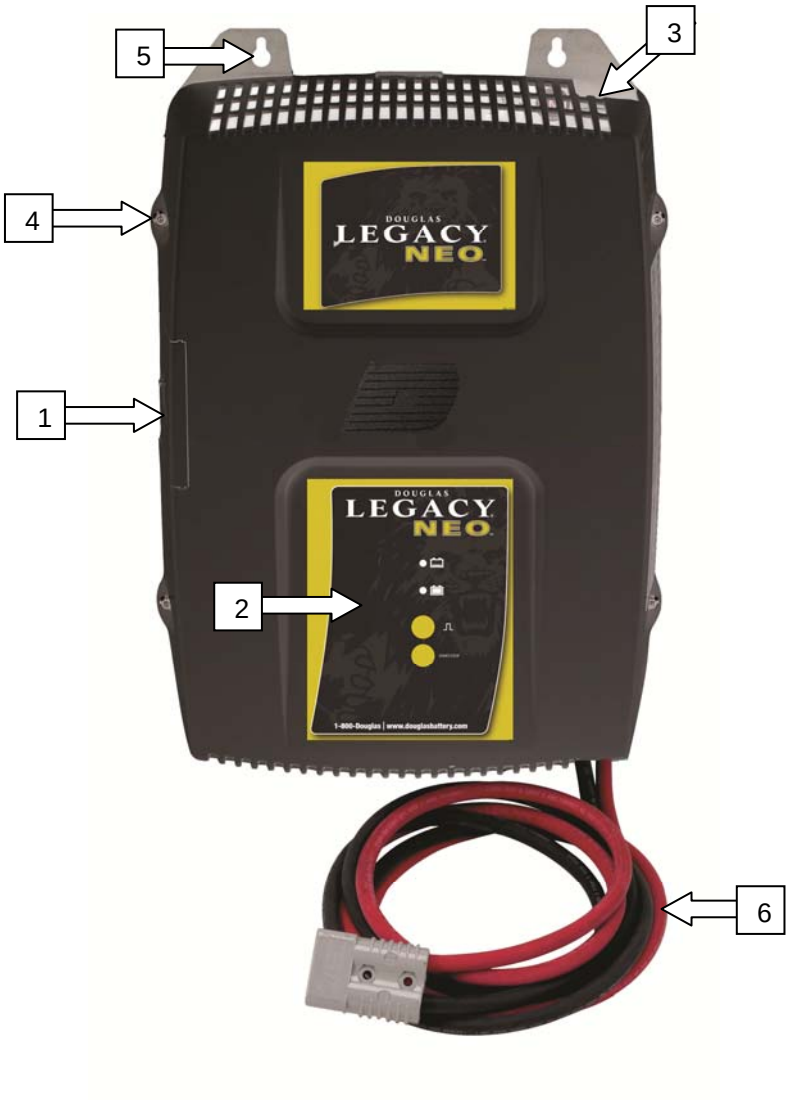
CHARGER AMP HOUR RANGES

Highlighted Items are Default Value

CHARGER AMP HOUR RANGES	LN1-12-875		LN1-18-625		LN3-12-875		LN3-18-625		LN3-18-750		LN3-24-375		LN3-24-450		LN3-24-625		LN3-24-750	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
Ionic	875	350	625	250	875	350	625	250	750	300	375	150	450	200	625	250	750	300
Cold Storage– 100%	875	701	625	501	875	701	625	501	750	601	375	301	469	376	625	501	750	601
Cold Storage– 80%	700	560	500	400	700	560	500	400	600	480	300	240	375	300	500	400	600	480
Cold Storage– 65%	569	455	406	325	569	455	406	325	488	390	244	195	305	244	406	325	488	390
VRLA – 100%	875	701	625	501	875	701	625	501	750	601	375	301	469	376	625	501	750	601
VRLA – 80%	700	560	500	400	700	560	500	400	600	480	300	240	375	300	500	400	600	480
VRLA – 65%	569	455	406	325	569	455	406	325	488	390	244	195	305	244	406	325	488	390

EXTERIOR WALL CABINET APPEARANCE

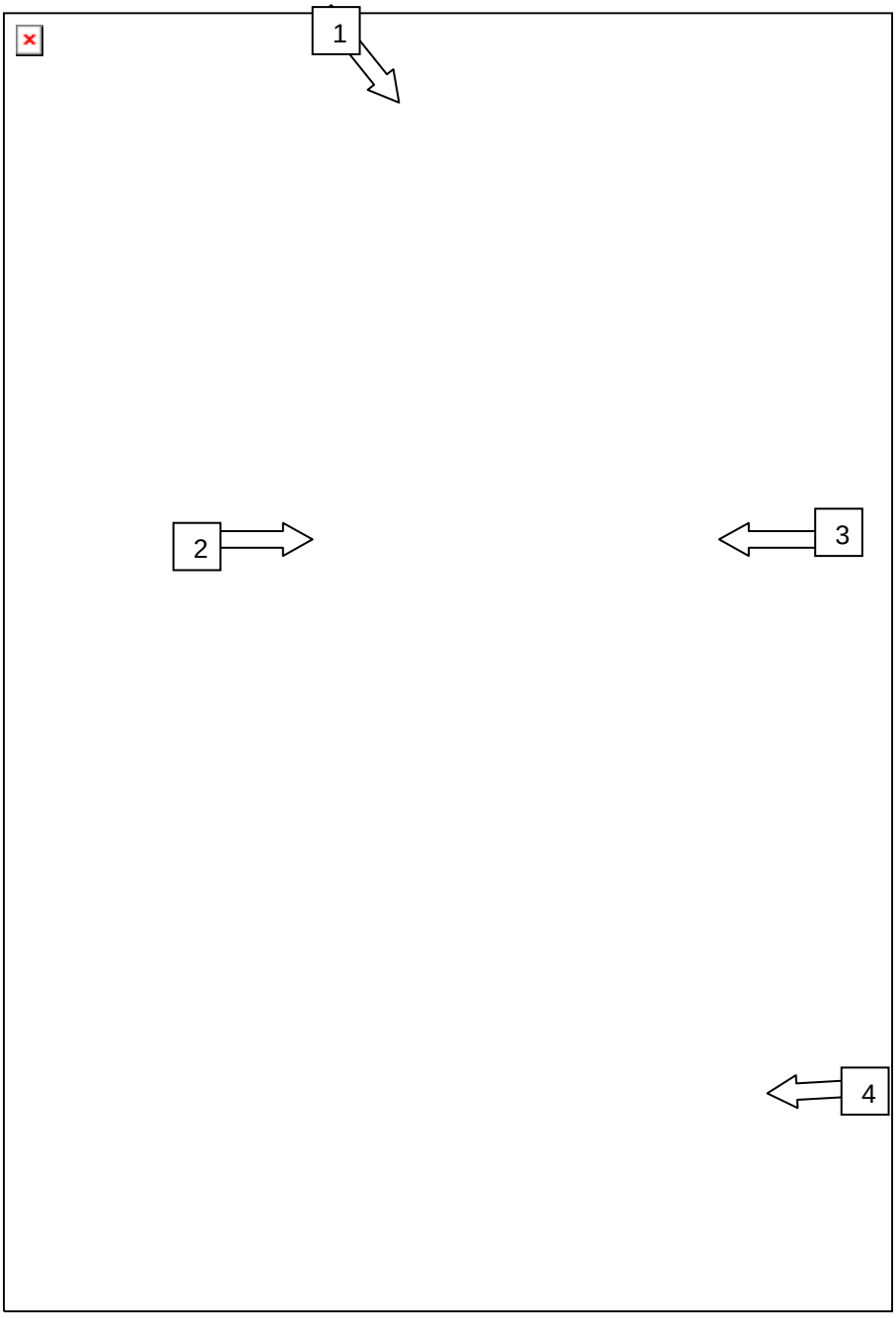
Principal components of the Legacy® Neo™ charger models



Ref.	Function
1	Access door
2	Control panel
3	AC input cable mount
4	Cover retaining nut
5	Wall mounting keyholes
6	Battery cables

EXTERIOR FLOOR CABINET APPEARANCE

Principal components of the Legacy® Neo™ charger models



Ref.	Function
1	Door
2	Control panel
3	Door lock
4	Battery cables

OPERATING INSTRUCTIONS

The *Legacy®* Neo™ series of chargers are compatible with batteries of 12, 24, 36, or 48 volts (depending on the version supplied).

Battery capacity and state of charge is determined automatically by the microprocessor. Three charging profiles are available (Ionic, VRLA, or Cold Storage) based on the battery design or application. Furthermore, desulphation and equalization are integrated into the charge cycle.

CONTROL PANEL

REF	FUNCTION
1	Red 'Charging' light See "Indicator Lights" for definition
2	Green 'Charging completed' light (battery charged). See "Indicator Lights" for definition
3	Equalize Button - Start equalization
4	Start/Stop Button – Alternately starts and stops the charger

PUSHBUTTON
The pushbutton has the following functions:

Button	Function
<START/STOP>	Turns the charger on or off. When pressed with the <EQUALIZE> button, initiates a manual equalization cycle without the main charge cycle.
<EQUALIZE>	Starts an equalize cycle at the end of charge.

INDICATOR LIGHTS

Light Pattern	Condition	Action
Red & green flashing	Start of the charge	None. See "Charging"
Red permanently lit & green unlit	Normal status during charging	Wait until charging is complete, indicated by the green light coming on and the red light flashing
Red permanently lit & green flashing	Fault	Charger fault, see table "Charger Fault Indications"
Red flashing & green permanently lit	Charging terminated	See table "Charge Termination Indications"
Red unlit & green flashing	Thermal interrupt (ambient temperature too high, no ventilation) or battery voltage too high or too low	Check battery voltage. Charge is stopped. Check the charger's installation and operating conditions.
Red & green permanently lit	Profile configuration error	Check the switches configuration
Red and green unlit	No mains supply	Check the power supply voltage
	Defective power supply fuse	Check the power supply voltage against the voltage accepted by the charger and the fuse
	Battery not connected	Check that the battery and/or the battery cable is correctly connected

CHARGING THE BATTERY

Connect the battery.

The red "Charging" and green "Complete" lights flash, depending on the charging profile, as follows:

Flashing alternately - Ionic (1 red/1 green)

Flashing sequentially - VRLA (8 red/1 green)

Flashing simultaneously - Cold Storage (red and green)

After approximately 30 seconds, the red "Charging" light illuminates indicating the charge cycle has begun. If this does not happen, refer to the paragraph on "Indicator Lights".

You can stop the charge at any time by pressing the Stop/Start button.

Completion of charging

When the green "Complete" light stays on permanently, the battery is charged and ready for use.

Always push the Start/Stop button and ensure the charger is off BEFORE disconnecting the battery.

If the battery remains connected, in order to keep it charged, refresh and equalization charging operations will be initiated automatically.

Completion of charging with equalization

An equalization charge automatically initiates after every fifth charge cycle.

If desired, an equalization charge can be initiated following every charge cycle by changing the charger configuration switch 8 (SW8) to the on position. (See Page 8 "Charger Configuration Switches")

Equalization can be initiated manually by pressing the Equalize pushbutton at the end of charge.

Always push the Start/Stop button and ensure the charger is off BEFORE disconnecting the battery.

Manual equalize without the main charge

An equalization charge can be initiated manually without the charger starting its main charge cycle. To initiate an equalize charge manually:

Press the Start/Stop button to stop the charge. The two lights are unlit.

Press the Equalize button while holding the Start/Stop button down.

The red light illuminates and the equalization charge is initiated.

At the end of charge, the "Complete" light is lit. The battery is ready for use.

Always push the Start/Stop button and ensure the charger is off BEFORE disconnecting the battery.

Desulphation

Starts automatically when the battery is heavily discharged; the length of the desulphation operation is defined by the charger's microprocessor.

The charging process is started automatically at the end of the desulphation process.

Charge Termination Indications

Red LED	Green LED	Charge Termination Condition	Action
Blink 1x	**ON**	IONIC Charge Completed	Battery ready for use
Blink 2x	**ON**	Cold Storage Charge Completed	Battery ready for use
Blink 3x	**ON**	VRLA Charge Completed	Battery ready for use

CHARGER FAULTS

Should a fault condition occur, the charge cycle will be stopped, the red Charging LED will be lit and the green Complete LED will blink as detailed in the table "Charger Fault Indications".

Charger Fault Indications

Red LED	Green LED	Charge Termination Condition	Action
ON	**Blink 1x**	DC Output Fault	Charger is on, but not putting out expected current, check input voltage, AC fuses, and DC fuse
ON	**Blink 3x**	Battery does not match charger	Number of battery cells does not match charger name plate
ON	**Blink 4x**	Battery overly discharged	Inspect battery
ON	**Blink 5x**	Current rise in phase 2 or 3	Inspect battery
ON	**Blink 6x**	Charger thermal fault, occurs after 3 thermal interrupts (see table "Indicator Lights")	Check charger's installation and operating conditions, make sure air vents are not obstructed
ON	**Blink 8x**	Time limit to gassing voltage exceeded	Inspect battery

For service, contact the closest Service Center at:

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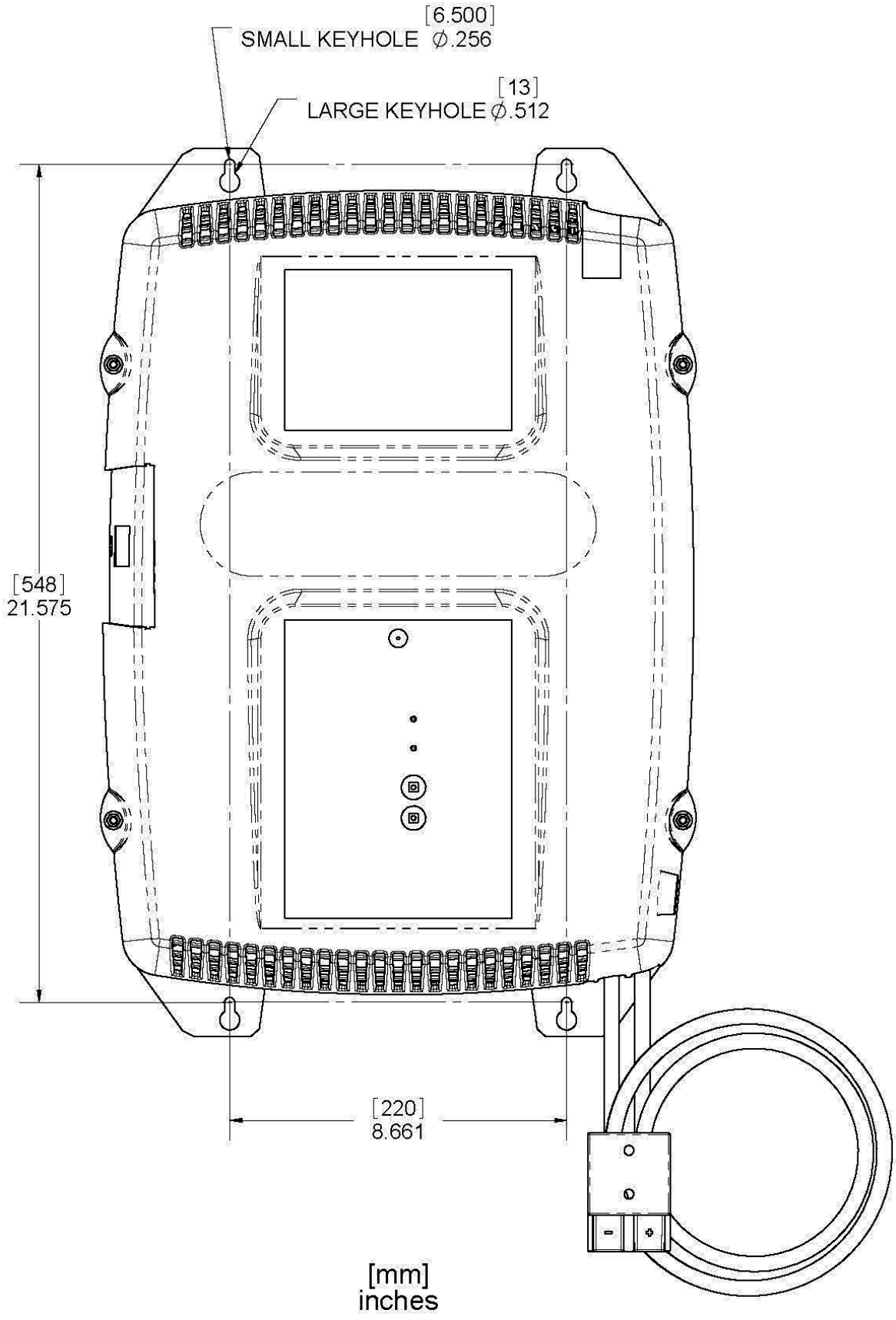
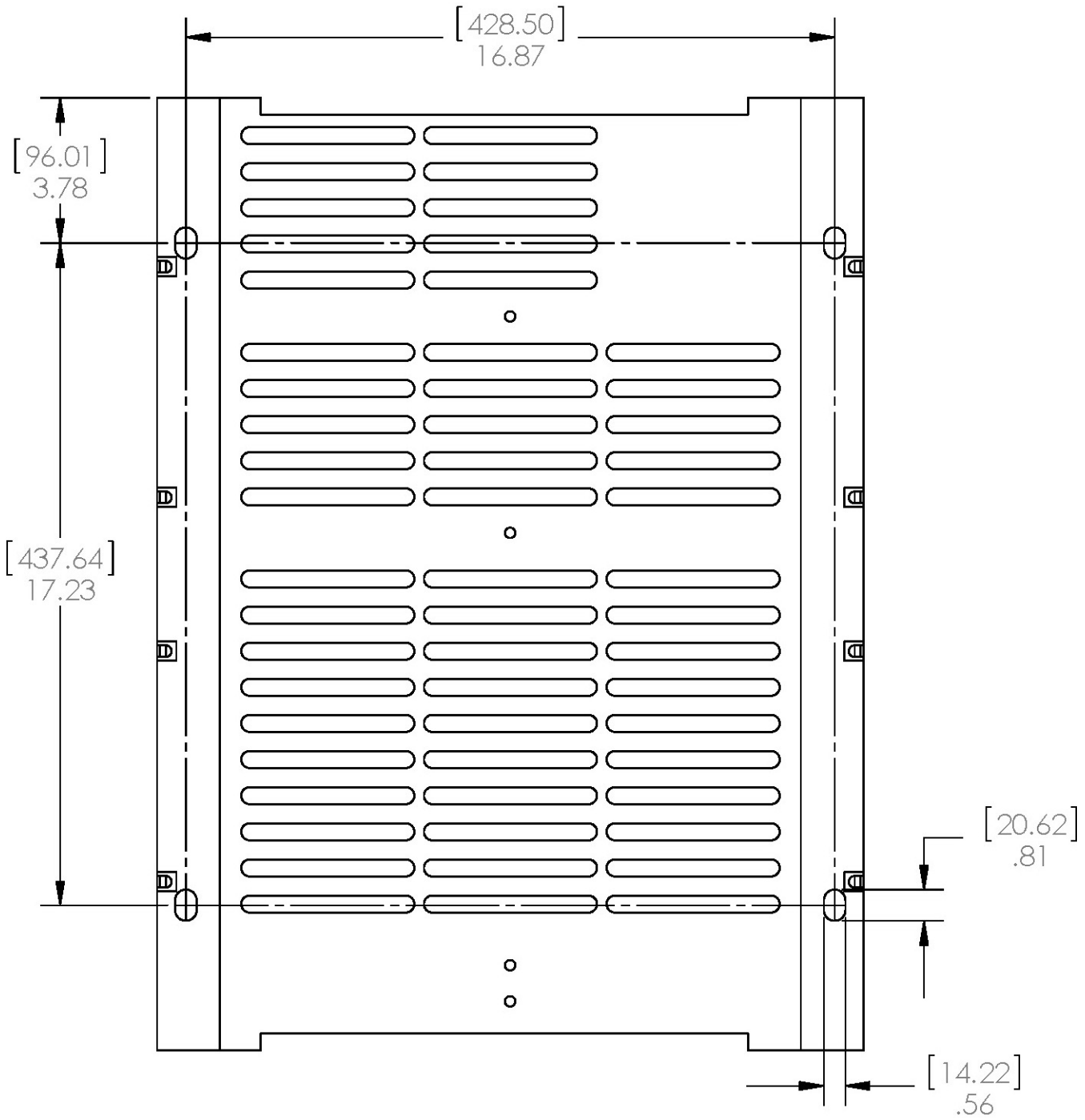
Or, visit us at: http://www.douglasbattery.com/

Wall Mounting hole dimensions



FLOOR MOUNTING HOLE DIMENSIONS



[mm]
inches

MAINTENANCE LOG

1. Modifications to Factory Settings

Date	Variable	Change	Service Technician

2. Service

Date	Description	Notes

MAINTENANCE & SERVICE

The charger requires minimal maintenance. Connections and terminals should be kept clean and tight. The unit should be periodically cleaned with an air hose to prevent any excessive dirt build up on components. Care should be taken not to bump or move any adjustments during cleaning. Make sure that both the AC lines and the battery are disconnected before cleaning. The frequency of this type of maintenance depends on the environment in which this unit is installed.

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WALL CHARGER REPLACEMENT PARTS

PART NUMBER	DESCRIPTION	LN1-W12-875Y	LN1-W18-625Y	LN1-W24-625Y	LN3-W12-875C	LN3-W12-875Y	LN3-W18-625Y	LN3-W18-750C	LN3-W18-750Y	LN3-W24-375Y	LN3-W24-450Y	LN3-W24-625Y	LN3-W24-750C	LN3-W24-750Y
019-ELLT-1	PLASTIC ENCLOSURE KIT	X	X	X	X	X	X	X	X	X	X	X	X	X
013-6LA22054	BASE/SUBASSEMBLY PANEL	X	X	X	X	X	X	X	X	X	X	X	X	X
X1060-6LA11705	LED DISPLAY CARD AND RIBBON CABLE	X	X	X	X	X	X	X	X	X	X	X	X	X
180-2770	HF LOGIQ LOGO DECAL	X	X	X	X	X	X	X	X	X	X	X	X	X
180-2771	HF LOGIQ KEYPAD DECAL	X	X	X	X	X	X	X	X	X	X	X	X	X
X014-09-160	160A DC FUSE	X	X	X	X	X	X	X	X	X	X	X	X	X
X014-09-6	6A AC FUSE				X									
X014-09-8	8A AC FUSE					X				X	X			
X014-09-10	10A AC FUSE												X	
X014-09-12	12A AC FUSE						X	X	X			X		X
X014-09-15	15A AC FUSE	X												
X014-09-20	20A AC FUSE		X	X										
X1100-12-875-Y1	CONFIGURED CHARGER SUB-ASSEMBLY	X												
X1100-18-625-Y1	CONFIGURED CHARGER SUB-ASSEMBLY		X											
X1100-24-625-Y1	CONFIGURED CHARGER SUB-ASSEMBLY			X										
X1100-12-875-C	CONFIGURED CHARGER SUB-ASSEMBLY				X									
X1100-12-875-Y	CONFIGURED CHARGER SUB-ASSEMBLY					X								
X1100-18-625-Y	CONFIGURED CHARGER SUB-ASSEMBLY						X							
X1100-18-750-C	CONFIGURED CHARGER SUB-ASSEMBLY							X						
X1100-18-750-Y	CONFIGURED CHARGER SUB-ASSEMBLY								X					
X1100-24-375-Y	CONFIGURED CHARGER SUB-ASSEMBLY									X				
X1100-24-450-Y	CONFIGURED CHARGER SUB-ASSEMBLY										X			
X1100-24-625-Y	CONFIGURED CHARGER SUB-ASSEMBLY											X		
X1100-24-750-C	CONFIGURED CHARGER SUB-ASSEMBLY												X	
X1100-24-750-Y	CONFIGURED CHARGER SUB-ASSEMBLY													X
390284	FLOOR STAND	X	X	X	X	X	X	X	X	X	X	X	X	X
390285	SHELF STAND	X	X	X	X	X	X	X	X	X	X	X	X	X

FLOOR CHARGER REPLACEMENT PARTS

PART NUMBER	DESCRIPTION	LN1-F12-875Y	LN1-F18-625Y	LN1-F24-625Y	LN3-F12-875C	LN3-F12-875Y	LN3-F18-625Y	LN3-F18-750C	LN3-F18-750Y	LN3-F24-375Y	LN3-F24-450Y	LN3-F24-625Y	LN3-F24-750C	LN3-F24-750Y
X054-HFL-1	DOOR	X	X	X	X	X	X	X	X	X	X	X	X	X
013-99-1-1	BASE	X	X	X	X	X	X	X	X	X	X	X	X	X
X052-HFL-1	SUBASSEMBLY PANEL	X	X	X	X	X	X	X	X	X	X	X	X	X
X052-99-0-6	UPRIGHT PANEL SUPPORTS	X	X	X	X	X	X	X	X	X	X	X	X	X
X057-99-0-6	RIGHT SIDE EXTERIOR PANEL	X	X	X	X	X	X	X	X	X	X	X	X	X
X057-99-0-7	LEFT SIDE EXTERIOR PANEL	X	X	X	X	X	X	X	X	X	X	X	X	X
X057-99-1-1	TOP/BACK EXTERIOR PANEL	X	X	X	X	X	X	X	X	X	X	X	X	X
X1060-6LA11705	LED DISPLAY CARD AND RIBBON CABLE	X	X	X	X	X	X	X	X	X	X	X	X	X
180-2770	HF LOGIQ LOGO DECAL	X	X	X	X	X	X	X	X	X	X	X	X	X
180-2771	HF LOGIQ KEYPAD DECAL	X	X	X	X	X	X	X	X	X	X	X	X	X
X014-09-160	160A DC FUSE	X	X	X	X	X	X	X	X	X	X	X	X	X
X014-09-6	6A AC FUSE				X									
X014-09-8	8A AC FUSE					X				X	X			
X014-09-10	10A AC FUSE												X	
X014-09-12	12A AC FUSE						X	X	X			X		X
X014-09-15	15A AC FUSE	X												
X014-09-20	20A AC FUSE		X	X										
X1100-12-875-Y1	CONFIGURED CHARGER SUB-ASSEMBLY	X												
X1100-18-625-Y1	CONFIGURED CHARGER SUB-ASSEMBLY		X											
X1100-24-625-Y1	CONFIGURED CHARGER SUB-ASSEMBLY			X										
X1100-12-875-C	CONFIGURED CHARGER SUB-ASSEMBLY				X									
X1100-12-875-Y	CONFIGURED CHARGER SUB-ASSEMBLY					X								
X1100-18-625-Y	CONFIGURED CHARGER SUB-ASSEMBLY						X							
X1100-18-750-C	CONFIGURED CHARGER SUB-ASSEMBLY							X						
X1100-18-750-Y	CONFIGURED CHARGER SUB-ASSEMBLY								X					
X1100-24-375-Y	CONFIGURED CHARGER SUB-ASSEMBLY									X				
X1100-24-450-Y	CONFIGURED CHARGER SUB-ASSEMBLY										X			
X1100-24-625-Y	CONFIGURED CHARGER SUB-ASSEMBLY											X		
X1100-24-750-C	CONFIGURED CHARGER SUB-ASSEMBLY												X	
X1100-24-750-Y	CONFIGURED CHARGER SUB-ASSEMBLY													X

OUTPUT CABLE REPLACEMENT

All Legacy® Neo™ chargers are manufactured with gray SB175 connectors as standard. Other connectors (SB, SBX, SBE, 350 size, or Euro 160 or 320) can be specified, using established line note process. Cable gauge is restricted to #2 only. Standard length of cable is eight feet. There is an option of three other approved predetermined custom lengths with a maximum length being 25 feet.

Replacement Cable Kits

Cable Gauge	Kit for SB175 Connector	Kit for SB 350 Connector
#2	X225-#2-175	X225-#2-350

Connector Housing Part Numbers

PART NUMBER	DESCRIPTION
6325	SB175 GRAY
6326	SB175 BLUE
6329	SB175 RED
6328	SB175 YELLOW
6327	SB175 ORANGE

PART NUMBER	DESCRIPTION
6320	SB350 GRAY
6321	SB350 BLUE
6322	SB350 RED
6323	SB350 YELLOW
6324	SB350 GREEN
6400	SB350 ORANGE

PART NUMBER	DESCRIPTION
6370	SBX175 GRAY
6371	SBX175 BLUE
6378	SBX175 RED
6373	SBX175 YELLOW
6387	SBX175 GREEN
6372	SBX175 ORANGE

PART NUMBER	DESCRIPTION
6340	SBX350 GRAY
6341	SBX350 BLUE
6342	SBX350 RED
6360	SBX350 YELLOW
6343	SBX350 GREEN
6359	SBX350 BLACK
6368	SBX350 ORANGE

When ordering replacement cables:

1. Determine cable size and length: L10; L13; L15; L18; L20; L25
2. Determine connector housing part number.

Example:
For a charger requiring twenty feet (20') of #2 AWG (gauge) cables and a SB350 RED connector, the two part numbers to order are:

1. X225-#2-350-L20
2. 6322

DOUGLAS BATTERY

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