

Getting Started

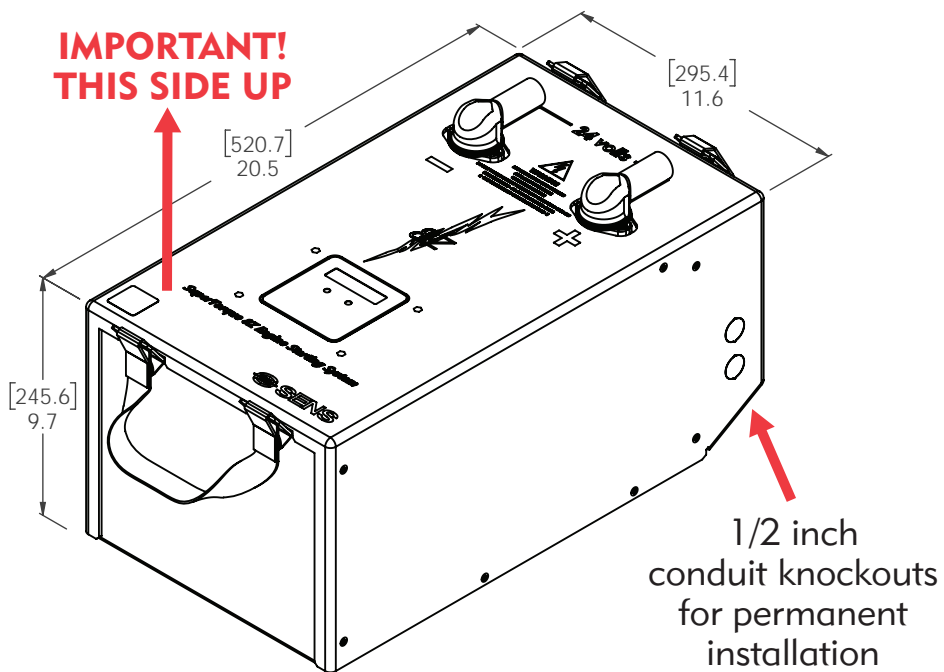
SuperTorque™ 8Z

Genset Starting System

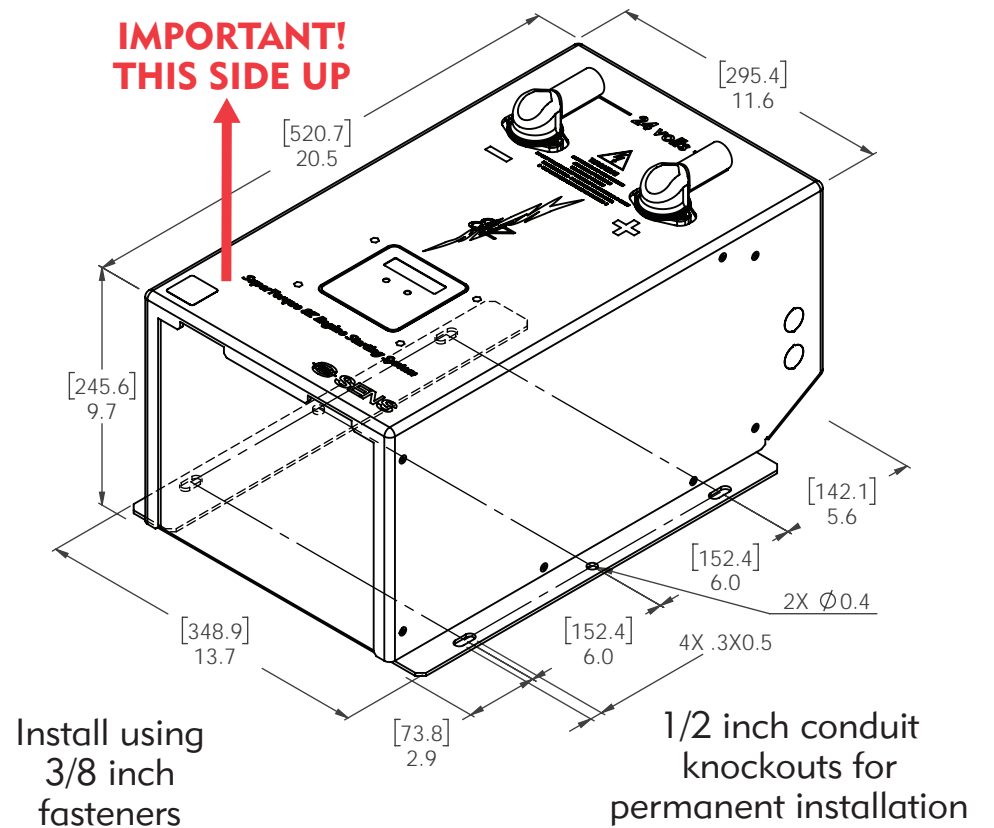
PATENTED US 9,270,140; 9,385,556; 9,413,186; 9,509,164; 9,466,995

Mounting

Battery Shelf or Battery Box



Rigid Floor Mount



Connections

Note - remove optional field cover to access connections

Connect **SENS SETUP UTILITY** using USB-C

Remove pluggable terminal block to connect **MODBUS RS-485** wires when optional display/comms PCA included (28-16AWG, tighten to 2lb-in, pin 1: +D1 (A), pin 2: -D0 (B), pin 3: COM, pin 4: Shield)

M/N: 8Z-XX-X-XX-**B**-X-X-XX
M/N: 8Z-XX-X-XX-**C**-X-X-XX

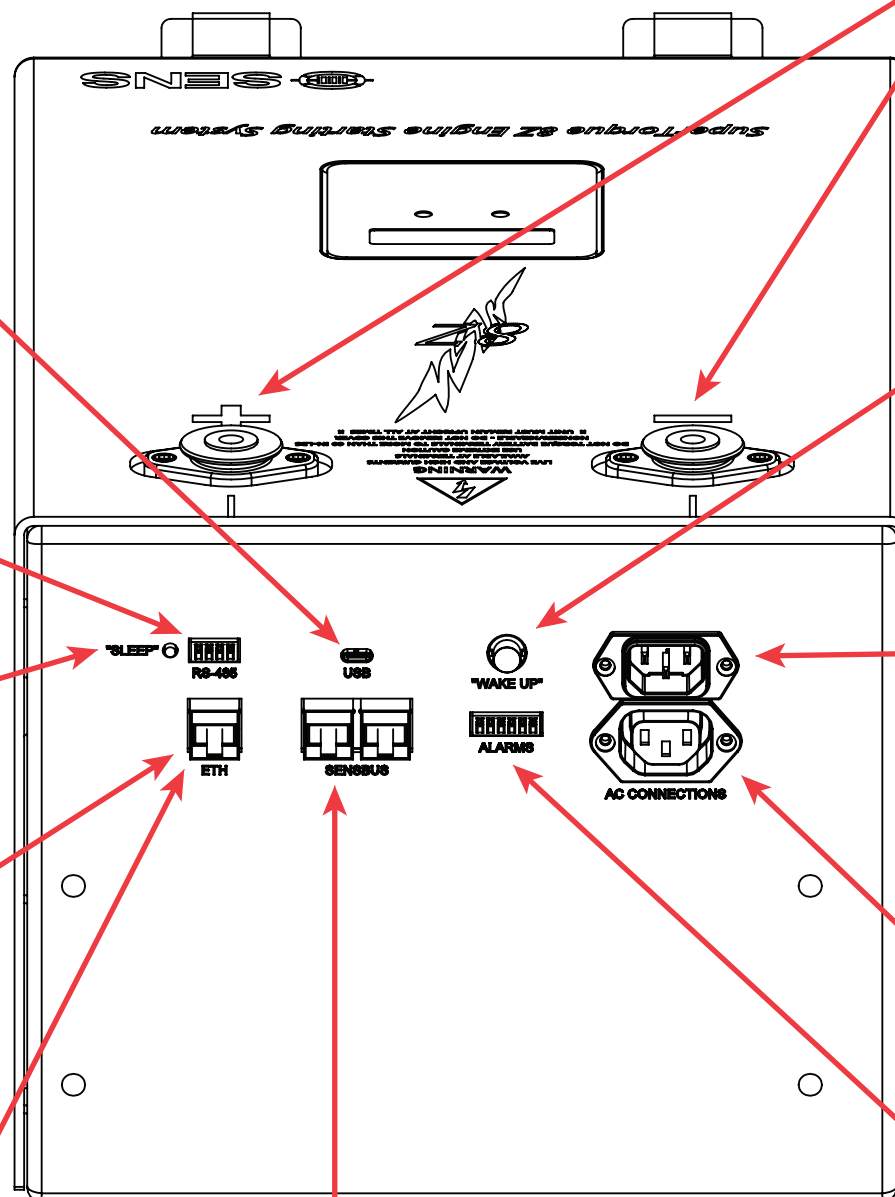
To prevent battery discharge when ac power is not connected, press **"SLEEP"** button to turn off display and communications

Connect **J1939** network cable to RJ-45 connector when optional display PCA included (pin 1: Data High, pin 2: Data Low pin 8: COM)

M/N: 8Z-XX-X-XX-**B**-X-X-XX

Connect **ETHERNET** or **MODBUS TCP/IP** network cable to RJ-45 connector when optional comms PCA included

M/N: 8Z-XX-X-XX-**C**-X-X-XX



Connect **DC** wires using ring lug and M8 fastener (13mm socket wrench, tighten to 60lb-in)

Optional - SAE battery terminal posts

CAUTION: voltage always present on battery terminals!

Press **"WAKE UP"** button to turn display and communications on when AC power is not connected

WARNING: this will cause battery discharge, connect ac power as soon as possible

Connect **AC INPUT** (100-240VAC, 50/60Hz) using IEC 320 power cord

Optional - wire AC to screw terminal adapter provided with field termination kit (18-14AWG, tighten to 3.5lb-in)

Connect **AC PASS-THROUGH** (6A max) to load sharing units or SENS-approved external devices

Remove pluggable terminal block to connect **ALARM RELAY** Form C contact wires (28-16AWG, tighten to 2lb-in)

See unit label for factory alarm assignments, user configurable with SENS Setup Utility

SENSBUS - connect load sharing units or remote accessories
(**DO NOT** connect Ethernet, J1939, TCP/IP OR RS-485 here)



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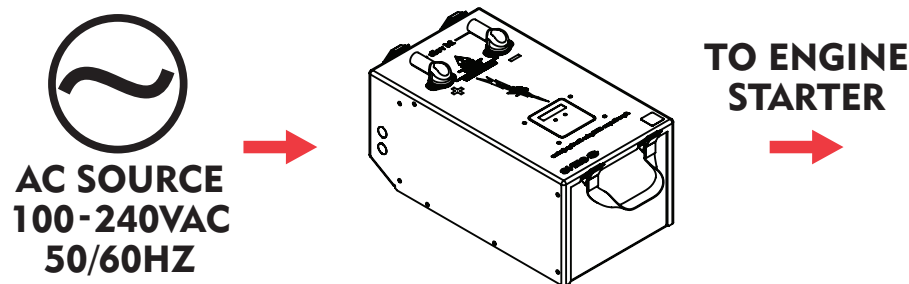
Genset Starting System

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Operation

- 1 - Connect DC wires from 8Z to engine starter / DC bus
- 2 - Connect AC power to 8Z to start charging internal battery
- 3 - Connect communications wiring (optional)
- 4 - Use keypad to configure communications settings (optional)
- 5 - Charge for 8 hours minimum prior to placing into service

Output settings factory programmed. Attempt no adjustment.



Do not leave AC disconnected. To avoid battery damage, do not drain battery below 10.5VDC (12V nominal systems) or 21.0VDC (24V nominal systems).

Storage - recharge every 6 months or when open circuit battery voltage drops below 13.5VDC (12V nominal systems) or 27.0VDC (24V nominal systems).

IMPORTANT SAFETY INSTRUCTIONS

1. **SAVE THESE INSTRUCTIONS** –This guide contains important safety and operating instructions for SuperTorque 8Z genset starting system.
2. Use of an attachment not recommended or sold by the manufacturer may result in a risk of fire, electric shock, or injury to persons.
3. This genset starting system is intended for commercial and industrial use. **ONLY TRAINED AND QUALIFIED PERSONNEL MAY INSTALL AND SERVICE THIS UNIT.**
4. Do not operate genset starting system if it has received a sharp blow, been dropped, or otherwise damaged in any way; shut off power at the branch circuit protectors and have the unit serviced or replaced by qualified personnel.
5. To reduce risk of electric shock, disconnect the branch circuit feeding the genset starting system before attempting any maintenance or cleaning. Turning off controls will not reduce this risk.
6. **WARNING – RISK OF EXPLOSIVE GASES**
 - 6.1 **WORKING IN THE VICINITY OF A NICKEL-ZINC BATTERY IS DANGEROUS. STORAGE BATTERIES GENERATE EXPLOSIVE GASES DURING NORMAL BATTERY OPERATION. FOR THIS REASON, IT IS OF UTMOST IMPORTANCE THAT YOU READ THIS DOCUMENT AND FOLLOW THE INSTRUCTIONS EACH TIME YOU USE THE GENSET STARTING SYSTEM.**
 - 6.2 Do not disassemble battery, heat above 75°C, incinerate, puncture or impact.
 - 6.3 To reduce the risk of battery explosion, follow these instructions and those published by the battery manufacturer and the manufacturer of any equipment you intend to use in the vicinity of a battery. Review cautionary markings on these products and on the engine.
7. **PERSONAL PRECAUTIONS**
 - 7.1 Someone should be within range of your voice or close enough to come to your aid when you work near a storage battery.
 - 7.2 Have plenty of fresh water and soap nearby in case battery electrolyte contacts skin, clothing, or eyes.
 - 7.3 Wear complete eye protection and clothing protection. Avoid touching eyes while working near a storage battery.
 - 7.4 If battery electrolyte contacts skin or clothing, wash immediately with soap and water. If electrolyte enters eye, immediately flood the eye with running cold water for at least 10 minutes and get medical attention immediately.
 - 7.5 **NEVER** smoke or allow a spark or flame in vicinity of battery or engine.
 - 7.6 Be extra cautious to reduce risk of dropping a metal tool onto battery. It might spark or short circuit battery or other electrical part that may cause explosion. Using insulated tools reduces this risk, but will not eliminate it.
 - 7.7 Remove personal metal items such as rings, bracelets, necklaces, and watches when working with a storage battery. A storage battery can produce a short circuit current high enough to weld a ring or the like to metal, causing a severe burn.
 - 7.8 **NEVER** charge a frozen battery.
 - 7.9 The charging circuit contains a DC output fuse for internal fault protection, but this will not protect the DC wiring from fault currents available from the battery. Consult national and local ordinances to determine if additional battery fault protection is necessary in your installation.
8. **PREPARING BATTERY FOR CHARGE**
 - 8.1 Be sure area around battery is well ventilated while battery is being charged.
 - 8.2 Ensure battery terminals are clean and properly tightened. Be careful to keep corrosion from coming in contact with eyes.
 - 8.3 Do not operate genset starting system with damaged cables. Defective cables must be replaced before operation.
 - 8.4 Verify that all cables are properly secured and connected.
9. **INSTALLATION LOCATION**
 - 9.1 Operating temperature: -10°C to 55°C
 - 9.2 Do not tip, keep genset starting system level.
 - 9.3 Do not set anything on top of genset starting system.
10. **WARRANTY AND SERVICE**
 - 10.1 Do not open genset starting system, not field servicable.
 - 10.2 Always operate within -10°C to 55°C. Do not operate outside of 0°C to 50°C for more than 10% of operating life.



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