



Repair of this equipment shall only be carried out by C.E. Niehoff & Co.

WARNING

This symbol is used to indicate presence of hazards that can cause severe personal injury, death or substantial property damage.

Contact C.E. Niehoff & Co. for:

- Sira IECEx Certificate of Conformity IECEx SIR 09.0144X
- SIRA ATEX Certificate of Conformity Sira 09ATEX1345X
- Quality Assurance Certificate of Conformity Sira 0518

The alternator incorporates flameproof joints with dimensions that are other than the relevant maximum or minimum, specified in Table 1 or IEC 60079-1. The user shall contact the original manufacturer for information on the dimensions of the flameproof joints.

The user shall refer to the manufacturer's instructions with respect to the enclosure providing a degree of ingress protection IP66.

WARNING

The alternator contains no user serviceable parts. DO NOT DISMANTLE. Failure to observe any instructions in the installation instruction may invalidate any certificate or warranty agreement.

WARNING

DO NOT DISASSEMBLE. The cover O-ring may dislodge and cause failure of the flameproof protection features. Verify that there is NOT a gap between the cover and the alternator housing. Torque the nine cover bolts (M6x1x25 6g Class 12.9. DIN 912) to 13.5 Nm/120 lb.in., which incorporate a steel zinc-plated washer (7.10x 12.00-12.12x 1.0mm thick) complete with bonded seal provided with each bolt.

1. Gland and cable and pulley/fan are specified and ordered separately and are factory-installed. Cable and gland have their own application requirements.

WARNING

Cable entry temperature may be 40° C above ambient—cable to be suitable.

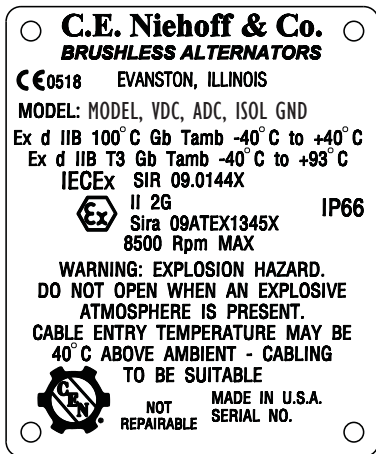


Figure 1 – Alternator Nameplate Data

Installation Instructions

WARNING

Explosion hazard. Do not open when an explosive atmosphere is present. Improper installation of alternator in an explosive environment can cause severe personal injury, death, or substantial property damage. Alternator must be installed by a qualified person trained and familiar with requirements for selection, installation, and maintenance of flameproof equipment to IEC 60079-14 and IEC 60079-17 respectively.

“Person In Authority” is defined as the employee of a company taking full responsibility for the safety, welfare, and supervision of all other employees under their control. (See Inspection and Maintenance Section referenced above.)

TABLE 1—Conductor Sizes		
Provision	Internal Earthing Bonding conductor size = CSA _{MIN}	
1	*CSA _{MAX} ≤ 16mm ² (5.5 Awg)	CSA _{MIN} ≥ CSA _{MIN}
2	16mm ² < CSA _{MAX} ≤ 35mm ² (2 Awg)	CSA _{MIN} ≥ 16mm ² (5.5 Awg)
3	CSA _{MAX} > 35mm ² (2 Awg)	CSA _{MIN} ≥ 0.5 x CSA _{MAX}
* Cross Sectional Area (CSA) of largest cable conductor = (CSA _{MAX})		
Provision	External Earthing Bonding conductor size = CSA _{MIN}	
1	CSA _{MIN} ≥ 4.0mm ² (11.5 Awg)	CSA _{MIN} = [8 Awg (8.4mm ²) INSTALLED]

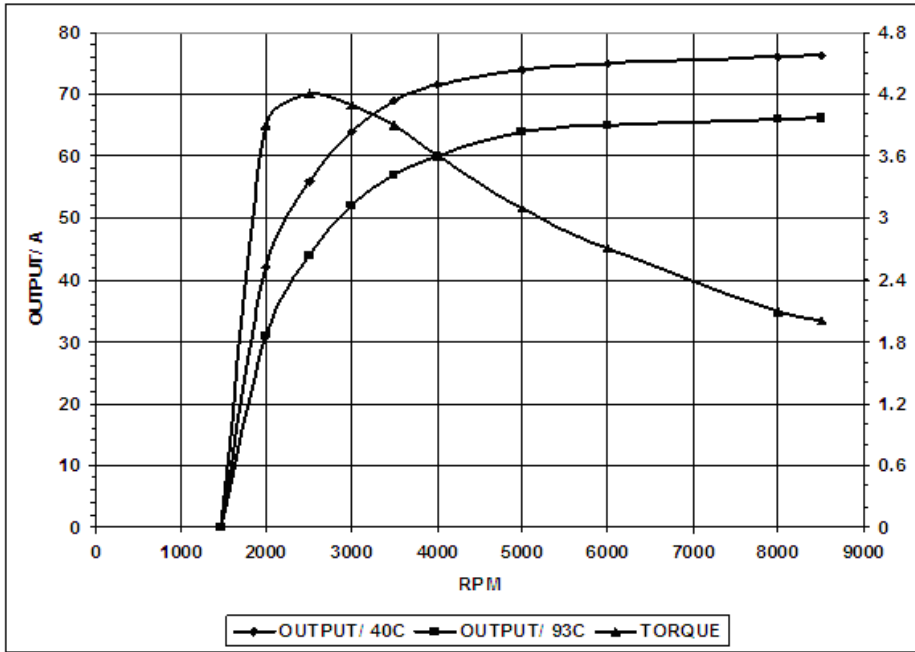
2. Mount alternator on a suitable bracket and secure with hardware per alternator drawing on page 2 of these instructions.
3. Ground bolt torque is 14.9 Nm/132 lb. in. Clean surfaces of all corrosion and apply a suitable corrosion inhibitor over ground connection for protection.
4. Secure output and ground cables within 12 inches (300mm) of gland or terminal to prevent rotation and loosening of cable at terminal.
5. Connect output cable from alternator to connections as shown in diagram on page 4.
6. Perform a final inspection on the installation.
7. Install suitable alternator drive belt.
8. Start engine. Confirm the operation of charging system meets specification.

ALTERNATOR CHARACTERISTICS FOR: C192/C193

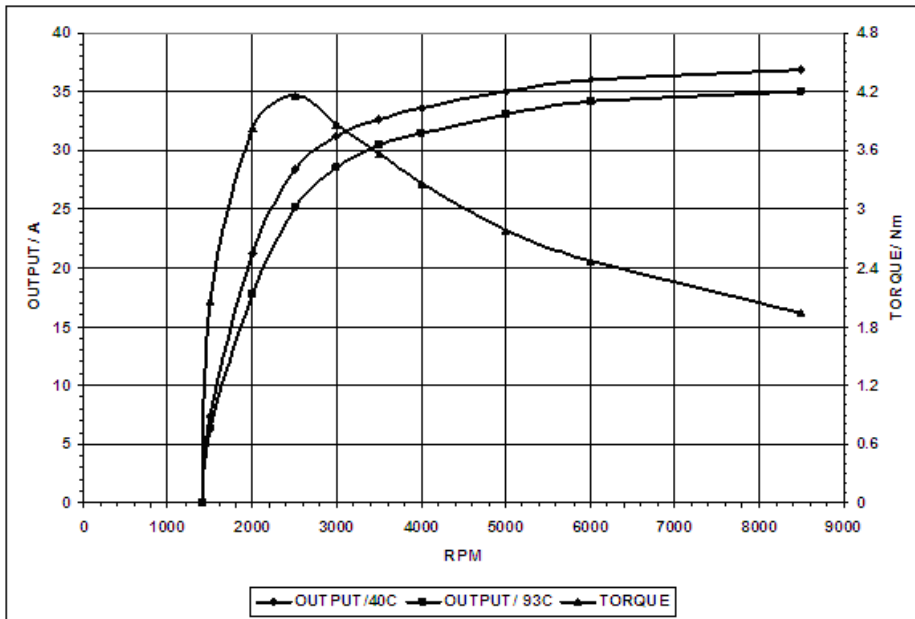
OUTPUT CURVE: OUTPUT AMPERES VERSUS ALTERNATOR SHAFT SPEED IN RPM AT 14.0 OR 28.0 VOLTS, RESPECTIVELY.

TORQUE CURVE: DRIVE TORQUE IN Nm VERSUS ALTERNATOR SHAFT SPEED IN RPM REQUIRED TO PRODUCE OUTPUT CURVE.

C192 Model



C193 Model



ALL MEASUREMENTS DEPICTED ON PERFORMANCE CURVES ARE TAKEN AT 104°F (40°C) AMBIENT TEMPERATURE (UNLESS OTHERWISE SPECIFIED) AND A STABILIZED MACHINE TEMPERATURE AT MAXIMUM OUTPUT WITH VOLTAGE CONSTANT AS SPECIFIED.

ABBREVIATIONS:

RPM REVOLUTIONS PER MINUTE

Nm NEWTON-METER

Conversion: 1 Nm = 8.85 Pound Inch (LBIN)

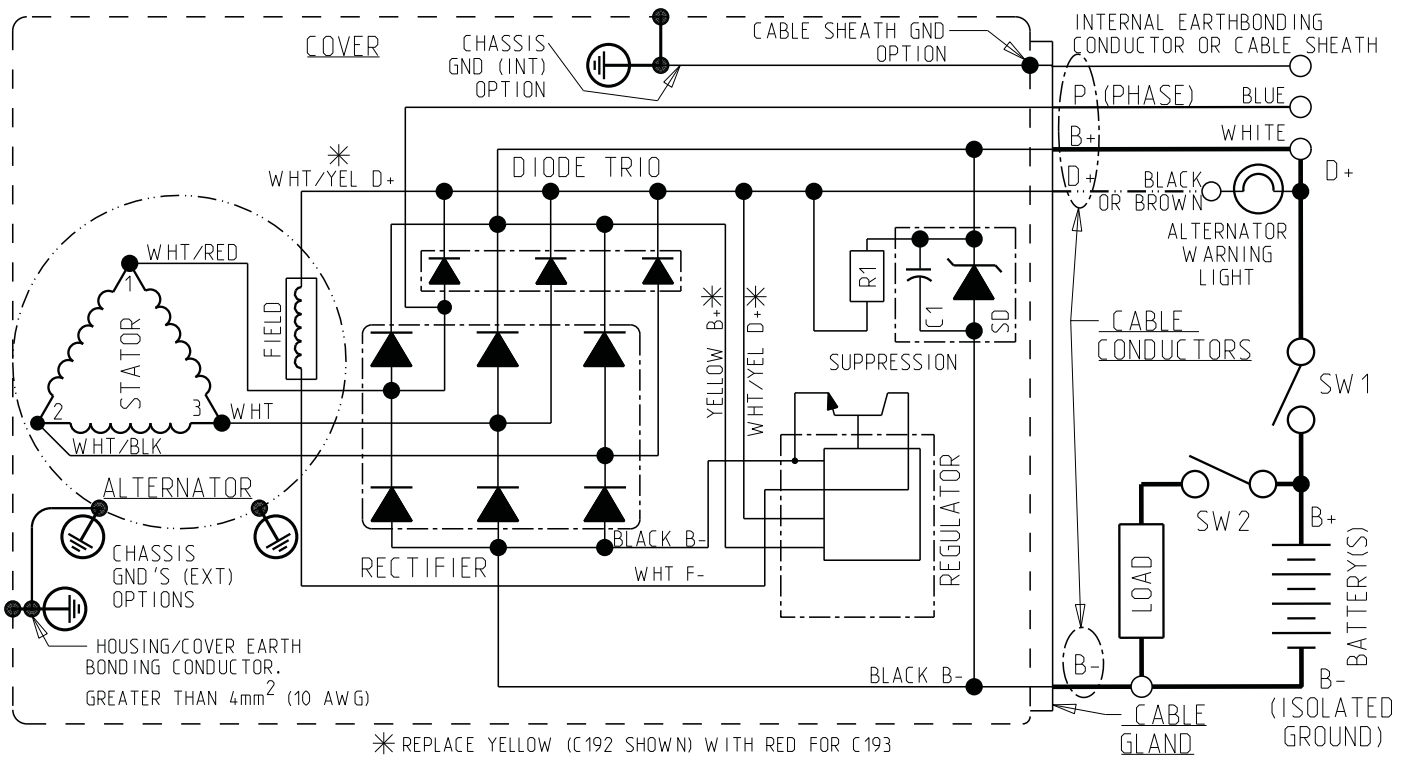


Figure 3 – Wiring Diagram

All connections shown (except where noted) should be torqued to 2.9-3.9 Nm/26-35 lb. in.

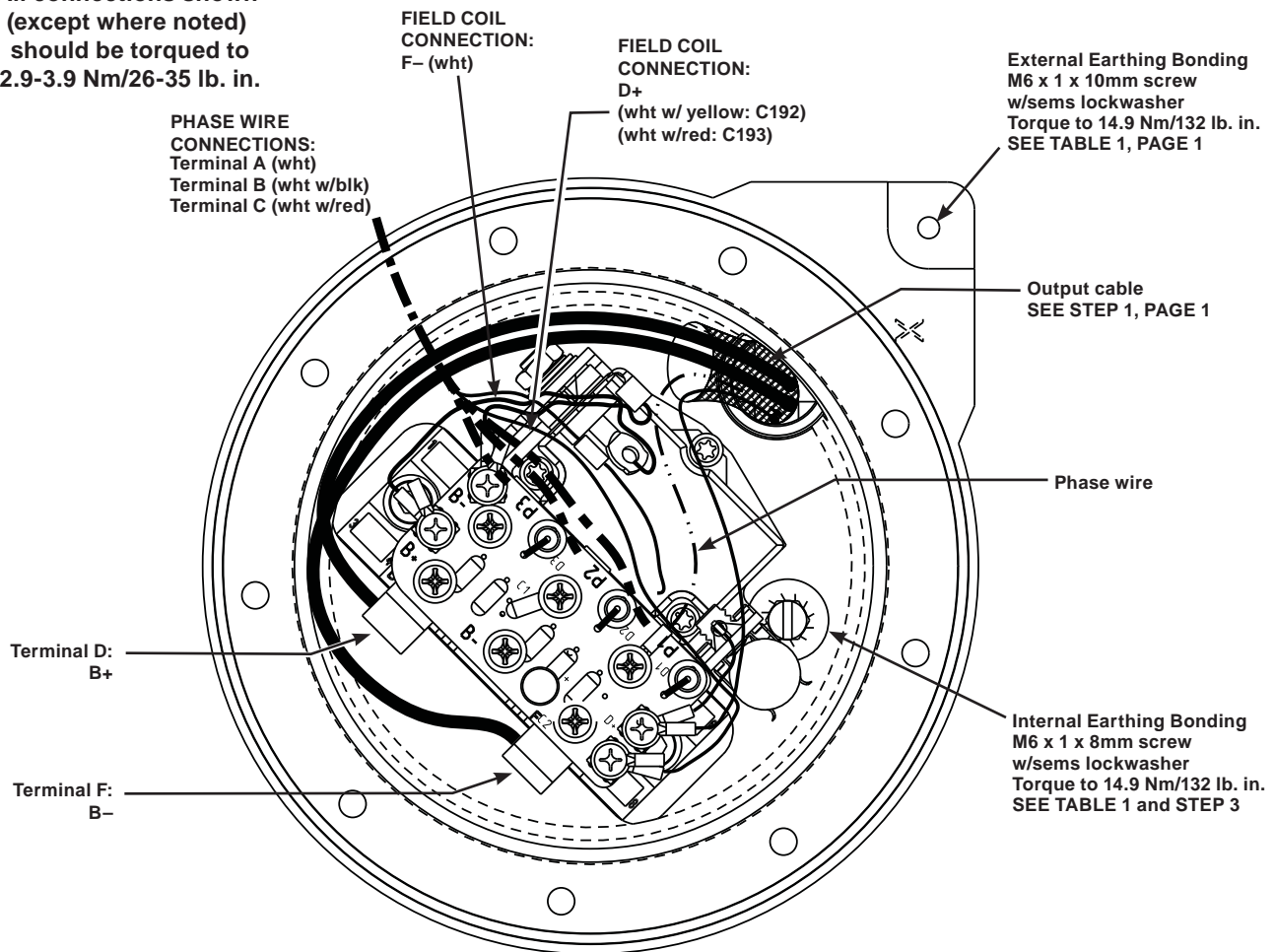


Figure 4 – Connections and Torque Values for Reference Only