



Follow instructions below to install **A2-381** Regulator:

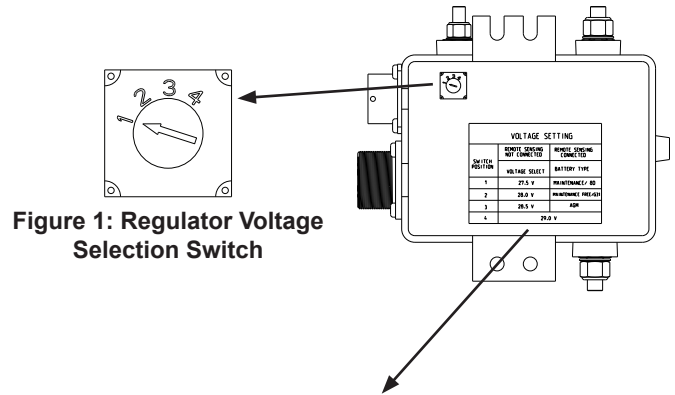
1. Before installing, turn regulator over and set to same setting as regulator being replaced or make sure setting is appropriate for type of battery used. See Figure 1 and Table 1 for voltage set point options.
2. Mount regulator on alternator and torque four M6x1x20mm mounting screws (supplied) to 8.5 Nm/75 lb. in.
3. Plug alternator-to-regulator into receptacle on regulator. See Figure 2 for receptacle location.
4. Connect regulator terminals as required by vehicle:
  - Regulator **IGN terminal (required)** must receive voltage from vehicle DC ignition source or multiplex in order to energize regulator. Torque terminal hardware to 4.5 Nm/40 lb. in. See Figure 2 for terminal identification.

**NOTICE** Voltage should be present at regulator IGN terminal when ignition is on or engine is running. No voltage should be present when ignition is off or engine is not running.

- Regulator **D+ terminal (if required)** provides DC system battery voltage to vehicle (5A maximum) for charge indicator lamp, relay, or multiplex while alternator is producing output. Torque terminal hardware to 4.5 Nm/40 lb. in. See Figure 2.
- Regulator **P/AC terminal (if required)** taps AC voltage from alternator, typically half the charge voltage (3A maximum). P/AC terminal provides alternator RPM frequency at 7.5:1 ratio for use with tachometer. Torque terminal hardware to 4.5 Nm/40 lb. in. See Figure 2.

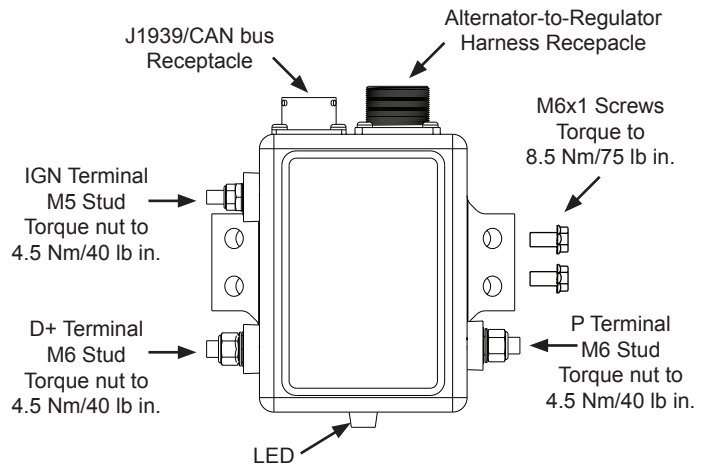
**NOTICE** If using relay for R/P/AC circuit, coil must be diode-protected and properly rated.

5. If using a J1939/temperature-voltage sense harness or, plug J1939 harness into J1939 receptacle on regulator. See Figure 2 for receptacle location. Harness sold separately<sup>1</sup>.
6. If using a multiple alternators in a parallel-operation setup, plug J1939 communication harness into J1939 receptacle connecting each regulator. See Figure 2 for receptacle location. Harness sold separately<sup>2</sup>.



**Figure 1: Regulator Voltage Selection Switch**

Position	Remote Sensing Not Connected	Remote Sensing Connected <sup>1</sup>
1	27.5 V	Maintenance (8D)
2	28.0 V	Maintenance-free (G 31)
3	28.5 V	AGM
4	29.0 V Flat	



**Figure 2. A2-381 Regulator Connections**

1. Contact CEN for battery sensor/harness options  
2. Contact CEN for parallel operation harness options