

RS11vc4 Engine Data Converter



The RS11 Engine Data Converter converts tachometer signals and analog gauge voltages from virtually any engine into CANbus digital messages (J-1939, NMEA 2000). It is configurable for either single or dual engine installations and includes a USB PC interface for initial configuration, data monitoring, and software updates. Output messages are applied to the CANbus for display by compatible devices.

The RS11 is designed for versatile interfacing to almost any type of analog engine sensor or gauge commonly used on marine or automotive engines. It has two RPM (tach) inputs, six analog (gauge) inputs and supports both 12 and 24 volt systems. The analog inputs can be assigned all to one engine or be split between two engines. Multiple RS11's can be installed on the same CANbus. The RS11 can be used with existing analog gauges or as a replacement for them. Current sources within the RS11 will power resistive sending units where gauges have been removed or new senders (without gauges) have been added.

The RS11 supports messages most commonly used by marine and automotive CANbus engines. The user must perform an initial configuration of the unit to suit the particular engine(s). This consists of selecting the specific information to be sent and entering proper calibration factors. Configuration is done through the USB interface with the included "Setup Utility" software.

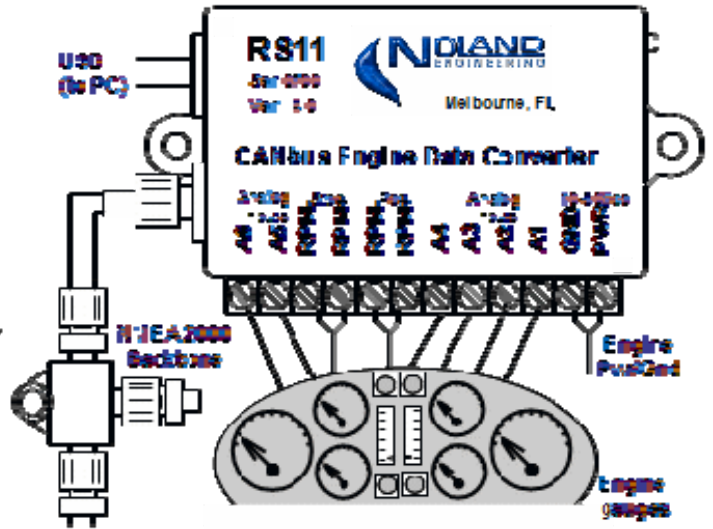
Specifications

RPM accuracy (ppr)	+/-1(200), +/-2(60), +/-8(12)
Tach input impedance	> 50K ohm
Analog input impedance	>12K ohm
Analog input accuracy	+/-2%
Power	10-30 Vdc, 100ma. max
Temperature	0-50 degC
Humidity	0-100% (non-condensing)
Certification	NMEA 2000 (Level A)
Size, weight	2.0" x 3.5" x 1.0", 4 oz.
Warranty	2 year replacement

Typical installations for a single and dual engine are shown below. For the single engine case, one RPM input is not used, and all analog inputs are available for that engine. In the dual engine case, the analog inputs must be divided between the two engines (3 per engine). Two RS11's allow up to six analog inputs for each engine. The following functions are currently available:

- Pressure** —Oil, Coolant, Transmission, Fuel, Turbo
- Temperature** —Oil, Coolant, Transmission
- Other** —Fuel Level, Trim, Volts, Amps, RPM, Eng Hrs

Calibration involves entering a 'ppr' (pulses per rev) value for each engine. Analog inputs require at least two calibration points for each channel. A PC utility is included to make setup and calibration simpler.



Engine Power/Ground is required for the RS11 to operate. It is also advantageous to remove this power from the RS11 when the engine(s) are shutoff to prevent alarms from NMEA 2000 Displays. The CANbus and USB interfaces are isolated from engine power within the RS11 to prevent "ground loops" and/or data corruption.

The RS11 includes a PC Setup/Calibration program, which utilizes the USB port. The USB Port also allows some output data monitoring and is used for field software updates.

