



This document intended only for HVAC Control Board Manufacturers
 9-25-06

Interfacing the ECM 3.0 motor

Communication Protocol

Framing	4800 baud \pm 2%, one stop bit, no parity
Signaling	Multiple slave/addressable
Error Detection	Fletcher Checksum

(Complete specification document: **a-8794721eI_r04.pdf**)

Electrical Characteristics

Data input (Rx)

Input voltage range	6.5 to 20 Vdc
OFF threshold, max.	2.0 Vdc
DC offset max.(note 1)	2.0 Vdc

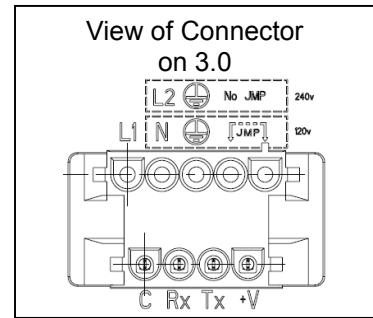
Data Output (Tx)

Output voltage max.	20 Vdc
Output current max.	30 mA

Bias supply (+V)

Bias voltage range	5 to 20 Vdc
Current required	13 mA

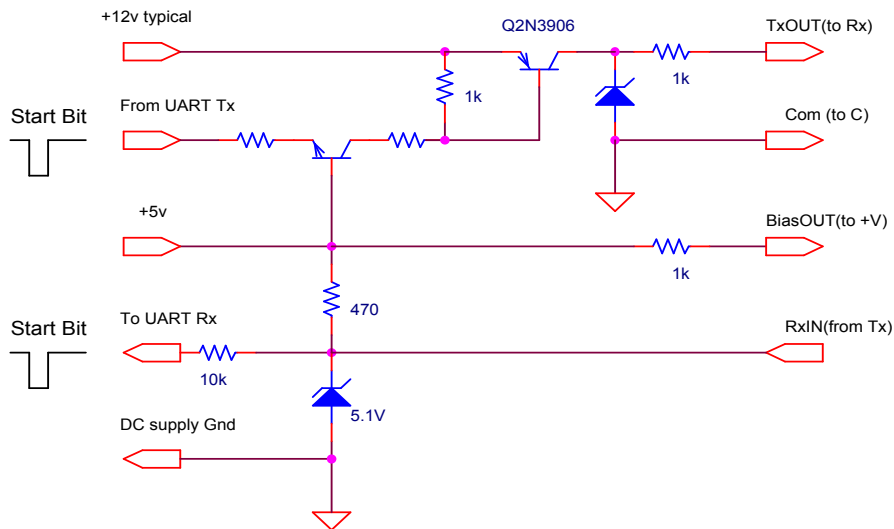
1. Rx input circuit responds to both polarities.



Common(C)

Common

Suggested Interface circuit



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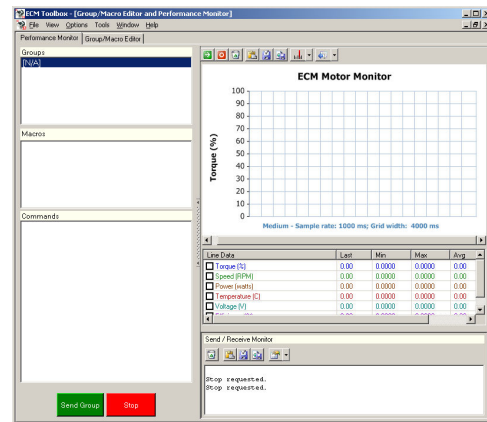
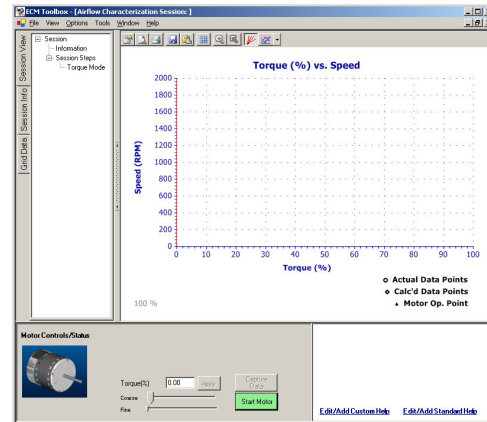
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ECM3.0 Development Tools

ECM Toolbox Application

- Provides a development environment for managing constant airflow characterization sessions.
 - Improved autofit algorithm matches motor constant airflow settings to test data.
 - Dynamic, context-sensitive help system.
 - Expanded graphing capability for speed, torque, pressure and airflow.
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- ECM3.0 Motor command center for real-time motor control.
 - Import feature creates command lists for emulating existing ECM2.3 applications.
 - Macro editor lets you set up command sequences for demos or testing.
 - Logging feature records serial traffic.
 - Graphical performance monitor displays live motor parameters.



ECM3.0 Starter Kit

- Pass-thru mode for RS232 communication link with ECM3.0.
- Multi-use programmer covers ECM2.3, X13 and 3.0 with specific cable adapters.
- Uses low voltage circuitry.



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Suggested Mating Connectors

The ECM 3.0 connector was designed to be mated to the widely available Tyco MATE-N-LOK series.

5 Pin Connector – Tyco 350809-1

4 Pin Connector – Tyco 350779-1

Socket (Tin) – For .060 - .130 Wire Insulation Diameter Range – Tyco 350536-1
For .130 - .200 Wire Insulation Diameter Range – Tyco 350537-1

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