July 16, 2012 -- Mississauga, ON, Canada

Rugged Stepper Motor Driver with CAN bus for Off-Highway and On-Highway Vehicle Applications

Axiomatic Technologies Corporation is releasing a stepper motor controller suited for the harsh environments found in off-highway and on-road vehicle applications. The Stepper Motor Driver can be integrated into a motor drive system for precise control of fuel injection.

AXIOMATIC P/N: AX100700

A flexible design allows Axiomatic to customize the control algorithms to suit specific applications. For standard users, the unit is easily configurable using the Axiomatic Electronic Assistant® service tool.

For rugged machine applications, it features the Deutsch IPD EEC-345XB enclosure and 24-pin connector. It operates with 12 or 24VDC power with surge, over and under voltage protection for battery powered devices.

The Stepper Motor Drive is designed to give the user full access to the 2A drive control chip A3979 via J1939 command messages. It allows for simple and accurate control of the levels, waveforms, timing, and phase-shifts of the current for a two phase stepper motor. Motor direction is user selectable.

The drive allows the user to set the default values for the stepper motor using the Electronic Assistant ®. It also allows the user to set the default targets and ranges for the run-time variables such as the step rate the motor is to run at, or the number of steps the motor is to take before holding. A unique feature of the drive is that not only are the run-time variables accessible through EA, but they can also be independently controlled by J1939 messages received while the unit is operational. This means that while the EA tool is used for initial setup and configuration, all the drive values can be changed as needed without it.

The drive also has two inputs that could be used as the command source for a run-time parameter, rather than a CAN message. Alternatively, the inputs could be used for feedback in a PID control, or as simple digital controls, for example to E-Stop the device. Lastly, they could independently be sent to the J1939 network as input data for another device on the CAN bus.

There is also 1 +5V reference and 1 Frequency or PWM input for inductive and active sensors.

Lastly, the drive has a single digital output, capable of sinking up to 5A, to drive a relay, brake or other load in a system. By default, the output is controlled by a CAN message received from the J1939 network, but it too could be controlled by one of the inputs instead. The output can be setup for a simple on/off response, or to blink indicating a fault has been detected by the drive.

Axiomatic designs and manufactures rugged electronic controls for the off-highway, power generation, bus, truck, as well as oil and gas equipment industries.

Contacts:
Amanda Wilkins, Marketing Manager, Axiomatic Technologies Corporation
TEL: 1-905-602-9270 x224 amanda.wilkins@axiomatic.com