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Controls Inc. has developed a new microprocessor-based control module designed for electronic engines. The new iCAN system is available in a stand-alone module (left) that can be integrated into existing panel systems, helms and dashes, or a package that incorporates a key switch and mounting brackets.

CONTROLS INC. SAYS “YES, iCAN”

New control system targets electronic engine markets; available in two models, focus is on features, flexibility

BY MIKE BREZONICK

Controls Inc., Medina, Ohio, has launched a new microprocessor-based control module designed for electronic engines operating on the SAE J1939 communications protocol. The iCAN series is engineered to provide a range of features and flexibility in a compact, cost-competitive package.

With the iCAN product, Controls has taken the basic CAN reader display/diagnostic module and added targeted input and output features designed to reduce cost, parts count and complexity.

“There are a lot of consumers in the industrial engine market that just want to start, stop and throttle their engines and be able to see how the engine is performing,” said Bob Cowen, Controls Inc. president. “Nothing complicated — just a key switch and display that will hold up to years of industrial use.”

The iCAN system is available in a stand-alone module (C3-100) that can be integrated into existing panel systems, helms and dashes, while the C3-2500 package incorporates a key switch and mounting brackets. When

combined with a key switch, the iCAN is able to deliver a complete, cost-effective engine control system, the company said.

The iCAN system includes five standard engine speed control options. The options are designed to replicate traditional digital throttles as well as J1939 speed control. A sixth option for analog speed control is available on special order. Throttle options are field selectable and provide a visual feedback to the operator when the large up and down buttons are pressed.



The new iCan system from Controls Inc. includes five standard engine speed control options and monitors all critical engine functions with full-time display of oil pressure, engine temperature, engine speed, battery voltage, fuel rate/fuel level and engine hours.

"We have found that OEMs like to replicate what they have done in the past in order to keep their engineering changes to a minimum and customer

equipment operation transparent," explained Cowen. "We offer these selections to accommodate their preferences on engine control."

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Along with throttle control, the iCAN system also monitors all critical engine functions and has full-time display of oil pressure, engine temperature, engine speed, battery voltage, fuel rate/fuel level and engine hours. Parameters can be configured for display in metric or English units. Fault code monitoring automatically displays trouble codes, occurrence counts, a concise text message and corresponding red or yellow lamps.

The large display is 1 in. high x 4 in. wide, with two rows of 16, half-inch characters. The display has automatic temperature compensation for clear viewing across the entire operating temperature range of -4° to 158°F (-20° to 70°C). Backlight intensity is also fully adjustable. An extreme temperature option, which extends the operating temperature range to -49° to 185°F (-45° to 85°C) and the storage

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temperature to -67° to 203°F (-55° to 95°C), is also available.

The iCAN module is housed in a sealed polycarbonate enclosure, while the C3-2500 package adds a powder-coated, vibration-isolated, two-piece steel case and a Deutsch 21-pin bulkhead connector for simple plug-and-play connection. Other configurations are available for OEM

or engine manufacturer specifications, Controls Inc. said.

The iCAN module has additional input/output capabilities that Cowen said "allow us to cater to the customer that needs just that 'one more thing.'" The Analog-Flex input can be configured for a fuel level or oil pressure sender. A similar Digital-Flex input is also provided, which can serve as a

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pre-alarm or alarm trip with a preset or custom message.

Four Flex-Output relays can be set to trip on a number of different conditions, in either Normally Open or Normally Closed modes. The iCAN can also maintain the engine hourmeter and battery voltage for the ECUs that lack these functions, the company said. All the Flex settings are field-configurable through the keypad/menu system. Password protection is provided to restrict the editing of sensitive values to authorized personnel.

"We began developing the iCAN product in response to customer input coupled with the company's extensive background in engine control technology," Cowen said. "Our objective for this new control was to design and build a completely sealed, self-contained engine control module aimed at the electronic engine market.

"We determined the market was looking for alternatives to J1939 CAN readers currently available. Many of those products are small, gauge-size items and some need to be mounted into other enclosures for protection against the elements. None of them seemed to offer very many options.

"Our result is a durable, simple to operate, engine control with a large, easy-to-read display. We took it to the next level by building in features and options."

While initially targeted toward Controls Inc.'s traditional market segments, which include power generation, pumps and other stationary engine applications, Cowen added, "We have ideas of other markets that may be interested in this module."

"For right now, he added, "we are just looking at how deep our market penetration can be into the industrial engine area. We have high expectations for this module and, so far, the feedback has exceeded them." **dp**



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