

DISPLAY

Combining CAN with local I/O data

The MCA 280 display by Motometer is for construction machinery, agricultural machinery, or heavy goods vehicles. The IP67/IP40-rated product delivers functions for the monitoring, visualization, operation, and control of applications via SAE J1939.

The CAN-compatible multi-functional display with a 100-mm diameter is free configurable and can be installed with up to 14 individually selectable indicator lights. The control of the device can be done over the analog and digital signals and also over the CAN network. Additional the product has two low-side switching outputs e.g. to control the relays, as well as a low-side switching output to connect an extern signal transmitter. There are also two frequency inputs integrated for e.g. revolutions signal.

All signals coming from the CAN network and the analog inputs can be indicated on the integrated freely programmable, monochrome TFT-display e.g. as bargraph, value field, or bitmaps. The MCA 280 contains a dot display. This enables monitoring of the vehicle by the operator. It also contains backlight for status announcement in different colors and up to 14 SMD LED indicators. Buzzer and three switching outputs complete the instrument.

Error identification

Besides the CAN interface, the product is equipped with three analog inputs, two frequency inputs, up to 16 digital inputs, one voltage output (buzzer output), and two digital outputs for integration in the on-board electrical system. To avoid long failure of machines, CAN errors can be displayed, so the operator exactly knows where the error is, to give the workshop in front a detailed failure description.

Whether in the brightest sunshine or darkest night, the 2,8-inch display with a resolution of 240 pixels x 320 pixels realizes high contrast images. The device is resistant to oils, hydraulic oils, grease, fuels and all standard biological fuels. This resistance and the operating voltage between 12 V and 24 V make the display suitable for construction machines, commercial vehicles, and all types of vehicles from the public service, agricultural sectors to stationary motors or working equipment. At the heart of each display, there is a 32-bit processor running the SAE J1939 software.

Another member of the display family is the MCA 430. The menu control within this product works over four illuminated, freely programmable keys. All signals coming from the CAN network and the analog inputs can be indicated on the 4,3-inch integrated TFT display. The MCA 430 multifunctional display is individually programmable. Because of the Codesys application tool, the users need no programming knowledge. It is possible to show information at the same time e.g. the real-time clock, alarm messages, or settings of machine functions. Using the tool, all available information can be displayed individually. Depending on the customers' demands, the data can be indicated as classic gauges, bar graph, text, or digital value.



Whether the default design or a customer-specific solution: The MCA 280 directly analyses the data from a motor management and displays this in a structured way, said the company (Photo: Motometer)

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