CAN 4-Ch Strain Module

The 4-Channel Strain to CAN Module supports full, half and quarter bridge strain guage configurations. The Strain Module's data and configuration conforms to the CANopen specification. The CAN interface and power are isolated from the sensors. Accurate measurements are provided by 24-bit ADCs.

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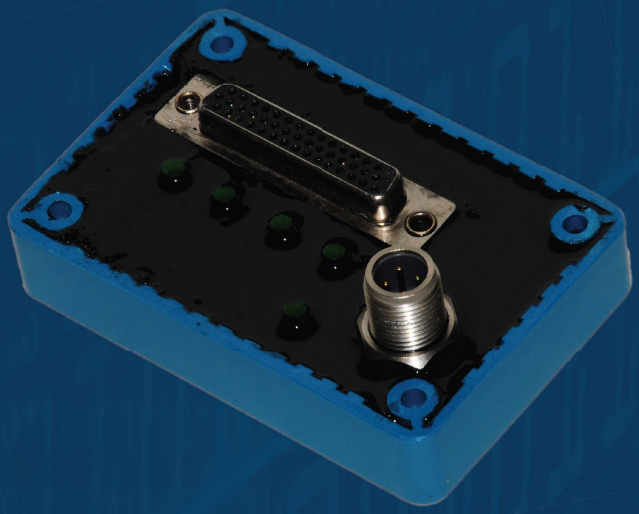

This module is designed for more complex strain data collection. For simple strain gauge configurations use the 12-Cannel Strain to CAN Module.

CAN Interface Specifications

Connector Type	■ M12 5-pin
Protocol	■ CANopen
Bit Rates	■ 20 kbps to 1 Mbps

Device configuration via CANopen data dictionary

CANopen

Measurement Specifications

Connector Type	■ 44-pin D sub
Guage Types	■ 120 or 350 Ohm[1]
Bridge Types	■ Full, Half and Quarter
Excitation Supply	■ 2.5, 3.3 and 5V
ADC quantization	■ 24-bits simultaneous sampling
Sample rate	■ up to 4 ksps (limited by CAN message rate)
Filtering	
Hardware	■ 50/60 Hz rejection filter (ADC)
Firmware	■ Sliding window average of 1, 2, 4, 8, 16 or 32 samples
Shunt Calibration	■ Internal shunt resistors
Gauge Failure Detection	■ Gauge status LED turns red CAN Status message reports open/shorted gauge

Physical Specifications

Voltage	■ 9 VDC to 36 VDC
Power Consumption	■ 850 mW
Ambient Tempature Range	■ -50 °C to 85 °C
Storage Temperature Range	■ -50 °C to 95 °C
Relative Humidity	■ 5% to 99%
Galvanic Isolation	
Power	■ 2500 VRMS Isolation Rating per UL 1577
CAN	■ 5000 VRMS for 1 minute per UL 1577

Material	■ Epoxy potting in ABS shell	
Height	■ 1.6"	4.0 cm
Width	■ 2.2"	5.6 cm
Length	■ 3.5"	8.5 cm
Weight	■ 3.9 oz	110 g
IP Rating	■ IP 67	

Ordering Information

CAN-STRAIN-120F-M	■ M12 5-pin connctors / for 120 ohm gauges
CAN-STRAIN-350F-M	■ M12 5-pin connctors / for 350 ohm gauges

Custom versions avaiable for specific gauge resistance

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* Specifications subject to enhancement