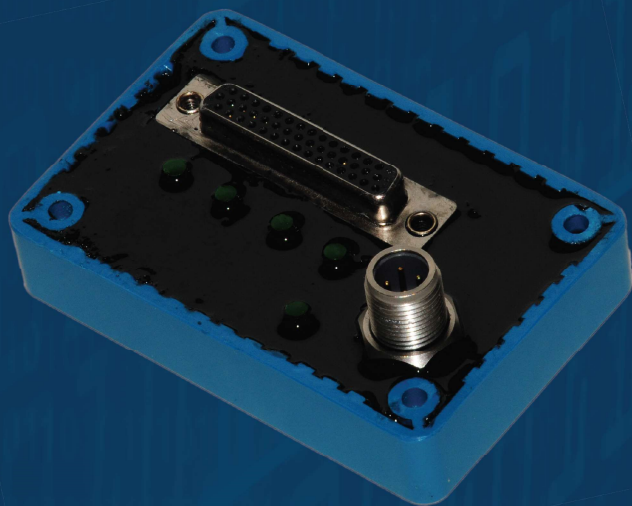# CAN 12-Ch Strain Module

The 12-Channel Strain to CAN Module supports single strain gauges in a quarter bridge configuration. 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 simple strain data collection. For more complex strain gauge configurations use the 4-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	■ 25-pin D sub
Guage Types	■ 120 or 350 Ohm[1]
Bridge Types	■ Quarter bridge only
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	■ CAN Status message reports open/shorted gauge

Physical Specifications

Voltage	■ 9 VDC to 36 VDC		Material	■ Epoxy potting in ABS shell
Power Consumption	■ 850 mW		Height	■ 1.6" 4.0 cm
Ambient Tempature Range	■ -50 °C to 85 °C		Width	■ 2.2" 5.6 cm
Storage Temperature Range	■ -50 °C to 95 °C		Length	■ 3.5" 8.5 cm
Relative Humidity	■ 5% to 99%		Weight	■ 3.9 oz 110 g
Galvanic Isolation			IP Rating	■ IP 67
Power	■ 2500 VRMS Isolation Rating per UL 1577			
CAN	■ 5000 VRMS for 1 minute per UL 1577			

Ordering Information

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

Custom versions avaiable for specific gauge resistance and number of channels

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