CAMPBELL SCIENTIFIC
WHEN MEASUREMENTS MATTER

CDM-A108

8-Channel 5 V Analog Input Module

24-Bit Resolution

Greatly increases sensor capacity

Overview

The CDM-A108 is an analog input module that allows you to easily expand your Campbell Scientific data logging system. The CDM-A108 features a 24-bit, analog-to-digital converter and a low-noise, analog front-end to provide you with superior analog measurements. This module also supports period average measurements and includes both current and voltage excitation channels.

The CDM-A108 has eight differential inputs and two excitation channels. It provides both a 12 V and a switched 12 V port for powering your peripherals and two switched 5 V ports for peripheral control.

Benefits and Features

- Ability to make simultaneous measurements
- CANbus 2.0A/2.0B capable; contact Campbell Scientific for details
- Increases the number of analog channels in a data logger system
- Supports period average measurements
- Includes both current and voltage excitation channels

Detailed Description

The CDM-A108 offers 24-bit sigma-delta Adc with 16 user programmable notch frequencies from 30,000 Hz to 2.5 Hz, including 50 and 60 Hz. Previous generations of data loggers could notch out 50 or 60 Hz.

Specifications

-NOTE-	*Additional specifications are listed in the CDM-A108 and CDM-A116 brochure.*
Power Requirements	9.6 to 32 Vdc voltage
Mounting	Standard 1-in. grid (DIN rail mounting available)
Estimated Accuracy	±(0.08% of reading + offset) -55° to +85°C

For comprehensive details, visit: www.campbellsci.com/cdm-a108

	›› ±(0.06% of reading + offset) -40° to +70°C ›› ±(0.04% of reading + offset) 0° to 40°C
Number of Channels	8 differential or 16 single-ended
Operating Temperature Range	›› -40° to +70°C (standard) ›› -55° to +85°C (extended)
Maximum Multiplexed Sample Rate	3.0 kHz (using fast [100 µs] input setting)
Maximum Burst Sample Rate	30 kHz
Input Range	±5000 mV, ±1000 mV, and ±200 mV
Period Averaging	Traditional period averaging on analog input channels
CPI	For data logger connection. Baud rate selectable from 50 kbps to 1 Mbps. (Allowable cable length varies depending on baud rate, number of nodes, cable quality, and noise environment, but can be as long as 700 m under proper conditions.)
USB	USB 2.0 full speed connection available for attaching to a PC. (Port is used to configure the module and download updates via our Device Configuration Utility.)
Warranty	One year against defects in materials and workmanship
Dimensions	20.3 x 12.7 x 5.1 cm (8 x 5 x 2 in.)
Weight	0.8 kg (1.75 lb)

Typical Current Drain

Sleep	<1 mA
Active 1 Hz Scan	2 mA (estimated) Assumes one single-ended measurement with the first notch frequency (f_{N1}) at 30 kHz
Active 20 Hz Scan	20 mA Assumes one single-ended measurement with the first notch frequency (f_{N1}) at 30 kHz

Voltage/Current Excitation Outputs

Voltage Excitation	±5 V (@ 50 mA)
Current Excitation	±2.5 mA (±5 V compliance voltage)
Number of Voltage/Current Excitation Outputs	2

General Purpose Outputs

Number of SW5V Outputs	2
SW5V Output Resistance	30 Ω
Number of SW12V Outputs	1
Typical Limit of SW12V Outputs	200 mA
Minimum Limit of SW12V Outputs	180 mA
Number of 12V Outputs	1
Typical Limit of 12V Outputs	200 mA
Minimum Limit of 12V Outputs	180 mA