

# FlexSmart™ Analog Module

(Part No: S-FS-CVIA)



## Quick Start Guide

Inside this package:

- FlexSmart Analog Module
- Detachable screw terminal connector
- Imprintable label
- This guide

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Manual Part No: MAN-S-FS-CVIA  
Doc No: 10092-E

**Note: Refer to the documentation provided with the Onset HOBO® Energy Logger and HOBOWare® Pro software for additional information on using and configuring the FlexSmart Analog Module.**

## Introduction

Thank you for purchasing an Onset FlexSmart Analog Module. With proper care, it will give you years of accurate and reliable measurements.

The FlexSmart Analog module is an easy-to-configure, flexible DC signal-conditioning module for the Onset H22-001 HOBO Energy Logger. This two-channel module can accept (and provide excitation power to) a wide range of Onset and third-party sensors/transducers with 0-20V or 0-20mA output, including devices with 4-20mA current loop interface, and sensors/transducers with 0-2.5, 0-5, and 0-10 V DC output.

The module features input protection and signal filtering, as well as delta-sigma A/D conversion and factory calibration.

The module also features extremely low-power operation, resulting in long battery life for unattended data logging applications.

## Specifications

<b>Input Channels</b>	Two, single-ended
<b>Field Wiring</b>	Two- or three-wire via screw terminals on detachable connector, 16-24 AWG Replacement detachable connectors: Part of spares kit, Onset part no: A-FS-CVIA-7P-1
<b>Input Range</b>	User-configurable: 0-20 mA DC, 0-20 VDC (suitable for 2.5, 5, 10V sensors)
<b>Minimum / Maximum Input Voltage</b>	0 / 24 VDC
<b>Minimum / Maximum Input Current</b>	0 / 24 mADC
<b>Minimum Current Source Impedance</b>	> 20 K $\Omega$
<b>Accuracy</b>	+/- 0.25% of FSR from 50mV to FSV
<b>ADC Resolution</b>	12 bits
<b>Power Requirements</b>	+3.3V @ 3mA active, 6 $\mu$ A sleep
<b>Sensor/Transducer Excitation Power</b>	12 VDC @ 200mA max.
<b>CE</b>	The CE Marking identifies this product as complying with all relevant directives in the European Union (EU).

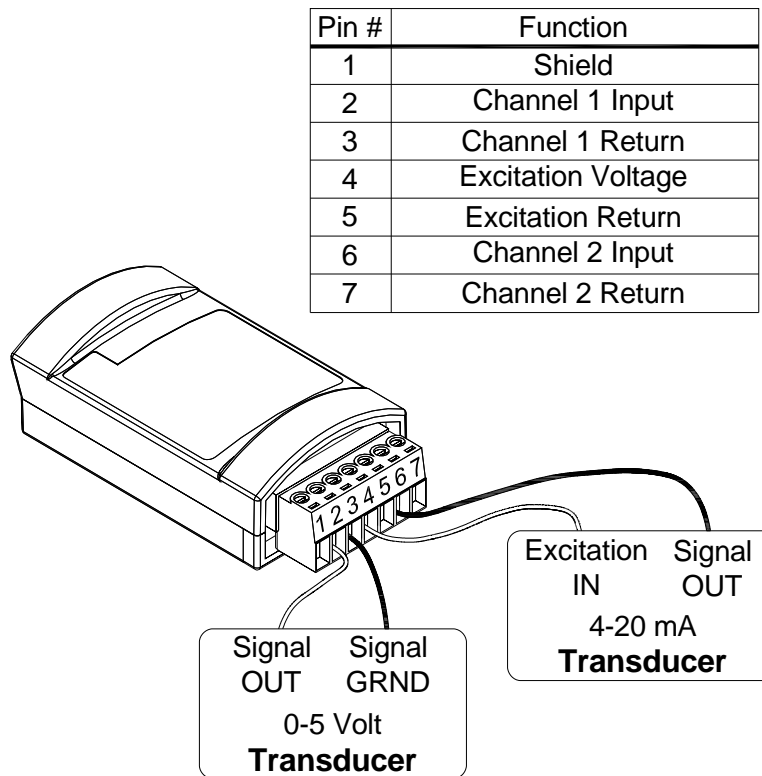
## Module Connections

Sensors/transducers are connected to the module via a seven-pin Phoenix-style detachable screw terminal connector. Once the sensors/transducers are connected, the module can then be configured using HOBOWare Pro software (with the module installed on the HOBO Energy Logger).

The diagram below illustrates *typical* connections for a transducer with DC voltage output (requiring no excitation) and a transducer with DC current output (requiring excitation). For module connection instructions specific to sensors/transducers purchased from Onset, refer to the documentation provided with each sensor/transducer.

### NOTES:

- Each channel of the module is individually configurable. Collected data can be scaled to produce meaningful engineering units that are consistent with the properties being measured.
- The module is a single-ended device. Pins 3 and 7 are connected to signal ground and to each other.



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