

# 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

|                                    |                                                                                                                                                                |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Channels                     | Two, single-ended                                                                                                                                              |
| Field Wiring                       | 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 |
| Input Range                        | User-configurable: 0-20 mA DC, 0-20 VDC (suitable for 2.5, 5, 10V sensors)                                                                                     |
| Minimum / Maximum Input Voltage    | 0 / 24 VDC                                                                                                                                                     |
| Minimum / Maximum Input Current    | 0 / 24 mADC                                                                                                                                                    |
| Minimum Current Source Impedance   | > 20 K $\Omega$                                                                                                                                                |
| Accuracy                           | +/- 0.25% of FSR from 50mV to FSV                                                                                                                              |
| ADC Resolution                     | 12 bits                                                                                                                                                        |
| Power Requirements                 | +3.3V @ 3mA active, 6 $\mu$ A sleep                                                                                                                            |
| Sensor/Transducer Excitation Power | 12 VDC @ 200mA max.                                                                                                                                            |
| CE                                 | The CE Marking identifies this product as complying with all relevant directives in the European Union (EU).                                                   |

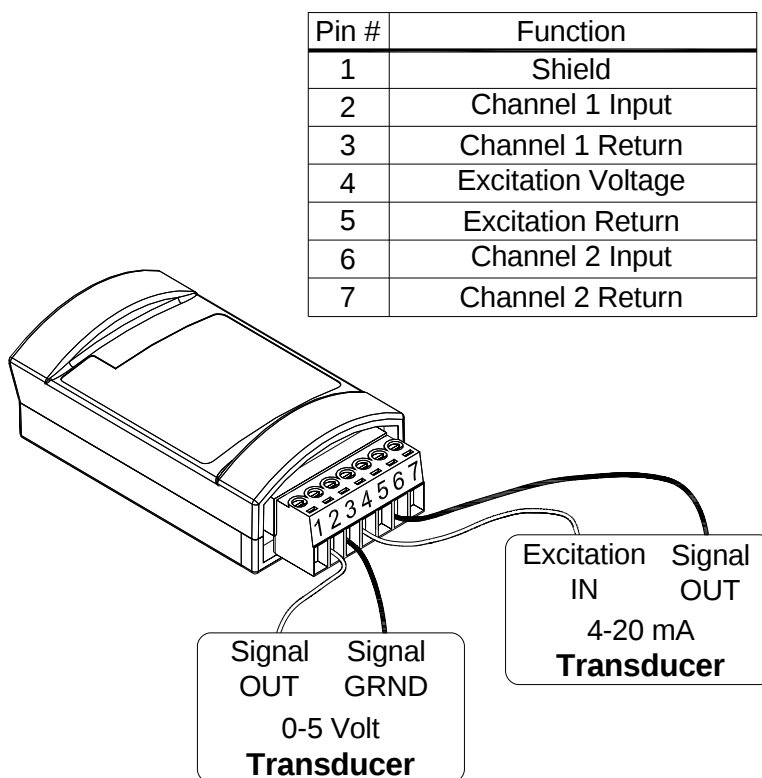
## Module Connections

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 HOBOWare 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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