



SDM-SIO2R

Two-Channel Serial I/O Module with Relays



Overview

The SDM-SIO2R is a digital sensor expansion module that expands the serial I/O interface via Synchronous Device for Measurement (SDM) communications on a data logger. The serial I/O functionality is identical to the [SDM-SIO1A One-Channel Serial I/O Module](#) and the [SDM-SIO4A Four-Channel](#)

[Serial I/O Module](#), except it has two channels. The SDM-SIO2R also has terminals to connect sensor power and sensor heater power, which are controllable via the [SDMGeneric](#) instruction in CRBasic.

Benefits and Features

- › Hot swappable in the field
- › Modular design
- › Expandable as needed
- › Removable terminals
- › Power control ability for each individual sensor

Detailed Description

The SDM-SIO2R features a connector bus system that connects multiple SDM-SIO2R modules on a DIN rail without having to wire each individual unit. C1, C2, C3, 12V, V+, and G are all bussed between multiple units, making it easy to expand

sensor count. Up to eight units can be bussed together with up to 15 sensors. This is the maximum number of SDM addresses available.

Specifications

Function	Expands the serial I/O interface via Synchronous Device for Measurement (SDM) communications on a data logger	Supported Data Rates	300, 1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200 bits/s
Number of Channels	2	Supported Modes of Operation	› RS-485 (half and full duplex)

	<ul style="list-style-type: none"> › Hardware CTS/RTS flow control is supported in RS-232 mode. The handshaking lines can also be used as general purpose I/O lines. › RS-232 (full duplex and receive only) › RS-422 (full duplex)
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Supported Data Formats	8, seven-bit data size*; none, odd or even parity; one or two stops bits
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*In seven-bit mode with no parity, the user must ensure that the characters received by the SDM-SIO2R have a delay of at least one bit period between them. This does not affect any other configuration and does not affect transmissions out of the SDM-SIO2R.

Auto Baud Rate Detection	Not supported
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PakBus Communications	Use of the serial port for general PakBus communications is not currently supported.
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Operating Voltage	<ul style="list-style-type: none"> › 12 V (nominal) › Power supply +12 V connection › 9 V (minimum)
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	› 30 V (maximum)
Operating Temperature	-40° to +70°C
Standard Humidity Range	0 to 95% (non-condensing)
Dimensions	133.35 x 76.2 x 19.05 mm (5.25 x 3 x 0.75 in.)
Weight	108.5 g (3.8 oz)

Buffer Sizes

-NOTE- Both transmit and receive buffers are fill and discard type. That is, after the buffers become full, no new information is accepted. All further data is discarded until space is made when the data logger requests data from the SDM-SIO2R.

Transmit Buffer Size	767 bytes (buffer from the data logger to the sensor)
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Receive Buffer Size	6143 bytes (buffer from the sensor to the data logger)
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Current Consumption

Standby Current (12V & V+ ON)	<ul style="list-style-type: none"> › 13.23 mA (maximum) › 13.22 mA (nominal)
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Standby Current (12V & V+ OFF)	<ul style="list-style-type: none"> › 63.22 mA (nominal) › 64.71 mA (maximum)
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For comprehensive details, visit: www.campbellsci.com/sdm-sio2r 

