

ioLogik R2140

NEW

RS-485 Remote I/O with 8 Analog Inputs and 2 Analog Outputs



Features

- 8-channel analog input for mV, voltage, current signal with wire-off detection (at 4 to 20 mA)
- 2-channel analog output for voltage, current actuator control
- 16-bit resolution analog input, 12-bit resolution analog output
- Easy-to-use, quick programming lib for VB, VC++, BCB
- NIST-Traceability calibration for analog I/O channels
- Easy firmware upgrade over RS-485



Specifications

Serial

Interface: RS-485 (2-wire): Data+, Data-, GND
Serial Line Protection: 15 KV ESD for all signals

Serial Communication Parameters

Parity: None
Data bits: 8
Stop bits: 1
Flow control: None
Speed: 9600 to 115200 bps
Protocol: Modbus/RTU
Built-in RTC: Yes

Power Requirements

Power input: 24 VDC nominal, 12 to 48 VDC
Power consumption: 195 mA @ 24V DC (typ.)
Field power: 24 VDC nominal, up to 36 VDC

Mechanical Specifications

Wiring: I/O cable max. 14 AWG

Environmental

Operating temperature: -10 to 60°C (14 to 140°F), 5 to 95%RH
Storage temperature: -40 to 85°C (-40 to 185°F), 5 to 95%RH
Shock: IEC60068-2-27
Freefall: IEC60068-2-32
Vibration: IEC60068-2-6

Analog Input

Input: 8
Resolution: 16-bit

Input range: +/-150 mV, +/-500 mV, +/-5 V, +/-10 V, 0 to 20 mA, 4 to 20 mA

Data format: 16-bit integer

Accuracy: +/- 0.1%, FSR @ 25°C, +/- 0.3%, FSR @ 0, 60°C

Sampling rate: 10 samples/sec (voltage), 6 samples/sec (current)

Built-in resistor for current input: 125 Ohm

Optical isolation: 3K VDC

Overvoltage: Can withstand continuous overvoltage (protection range -10V to 10V)

Analog Output

Outputs: 2

Resolution: 12-bit

Output range: 0 to 10V, 4 to 20 mA

Drive voltage: 15 VDC for current output

Accuracy: +/- 0.1%, FSR @ 25°C, +/- 0.3%, FSR @ 0, 60°C (current)

CMR @ 50/60 Hz: 95 dB min.

Zero drift: +/- 9 µV/°C

Span drift: +/- 25 ppm/°C

Load resistor: < 250 Ohm

Agency Approvals

EMI: FCC Part 15, CISPR (EN55022) Class A

EMS: IEC61000-4-2 (ESD), level 2/3, IEC61000-4-3 (RS), level 2, IEC61000-4-4 (EFT), level 2, IEC61000-4-5 (Surge), level 3, IEC61000-4-6 (CS), level 2, IEC61000-4-8 (PM), level 1, IEC61000-4-11 (Dip)

Safety: UL 508

Warranty: 2 years

Pin Assignment

Power / RS-485

Pin	1	2	3	4	5	6
Signal	V+	V-	FG	D+	D-	SG

I/O (left to right)

Pin	1	2	3	4	5	6	7	8	9	10	11	12
Signal	Vin0+	Vin0-	Vin1+	Vin1-	Vin2+	Vin2-	Vin3+	Vin3-	Vin4+	Vin4-	Vin5+	Vin5-
Pin	13	14	15	16	17	18	19	20	21	22	23	24
Signal	Vin6+	Vin6-	Vin7+	Vin7-	Vout0+	Vout0-	Iout0+	Iout0-	Vout1+	Vout1-	Iout1+	Iout1-

Ordering Information

ioLogik R2140: RS-485 remote I/O server with 8 analog inputs and 2 analog outputs

LDP1602: LCD display module with 16 x 2 text and 5 buttons

Wiring Example

