

ioLogik R2140

RS-485 Remote I/O Server with 8 Analog Inputs, 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, min 12 VDC, max 48 VDC

Power Consumption: 195 mA @ 24 VDC (typ.)

DO 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 @ -10, 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 @ -10, 60°C (current) CMR @ 50/60 Hz: 95 dB min.

Zero Drift: +/- 9 μ V/°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 and RS-485

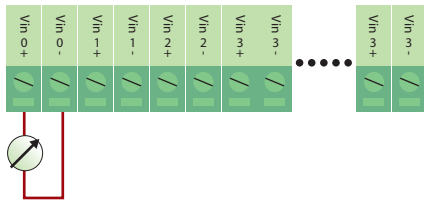
Pin	1	2	3	4	5	6
Signal	V+	V-	FG	D+	D-	SG

I/O (left to right)

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

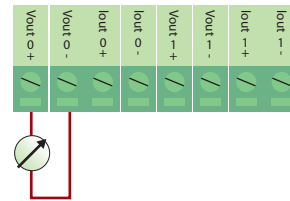
Wiring Example

Analog Input



(1) Digital Input Example

Analog Output



(2) Digital Output

Ordering Information

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

LDP1602: LCD module with 16 x 2 text and 5 button

