ioLogik E2240

Active Ethernet I/O Server with 8 Analog Inputs, 2 Analog Outputs

Features

- Actively transfer I/O data in real-time over Ethernet
- Easy-to-use Click&Go™ Logic for local output control and messaging
- 8-channel analog input for mV, voltage, current signal with wire-off detection (at 4-20mA)
- 2-channel analog output for voltage, current actuator control
- Connects up to 10 hosts
- SNMP to I/O mapping that works with Network Management System
- Quick programming library for VB, VC, BCB
- NIST-traceable calibration

Introduction

Linking Analog Inputs and Outputs to TCP/IP Ethernet Networks

The ioLogik E2240 is designed for system integrators to acquire and control remote sensors and actuators remotely over TCP/IP and Ethernet networks. Types of sensors and actuators include pH, conductivity, temperature, humidity, pressure, flow, actuator, and valves. The ioLogik E2240 supports Ethernet and can run multiple protocols, such as Modbus/TCP, SNMP, HTTP, TCP, UDP at 100 Mbps for high speed data acquisition. Data can be distributed to up to 10 host computers.

Independent Configuration for Multi-Functional AI and AO Channels

Each analog input can be independently configured by software to voltage or current mode. The analog input channels support various signals ranging from +/-150 mV to +/-10V at 16-bit resolution.The analog output channels support 0 to 10V and 4 to 20 mA @ 12-bit resolution.

Specifications

LAN

Ethernet: 10/100 Mbps, RJ45

Protection: 1.5 KV magnetic isolation

Protocols: Modbus/TCP, TCP/IP, UDP, DHCP, Bootp, SNMP(MIB for I/O and Network), HTTP, SNTP

Active I/O Messages: Yes

Security: IP-filtering

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: 1200 to 115200 bps

Protocol: Modbus/RTU

Built-in RTC: Yes

Power Requirements

Power Input: 24 VDC nominal, min. 12VDC, Max. 48VDC

Power Consumption: 282 mA @ 24V DC (typ.)

DO Power: 24 VDC nominal, up to 36 VDC

Mechanical Specifications

Wiring: I/O cable max. 14 AWG

Environment

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

Specifications

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 (2's complement)

Accuracy: +/- 0.1%, FSR @ 25°C, +/- 0.3%, FSR @ -10, 60°C

Sampling Rate (All Channels): 10 samples/sec (voltage)
6 samples/sec (current)

Input Impedance: 900k Ohm

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

Data Format: 16-bit integer (2's complement)

Accuracy: +/- 0.1%, FSR @ 25°C, +/- 0.3%, FSR @ -10, 60°C

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

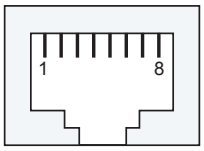
EMS: IEC61000-4-2 (ESD), Level 2/3, IEC61000-4-3 (RS), Level 2, IEC61000-4-4 (EFT), Level 2, IEC61000-4-5 (Surge), Level 3, IEC61000-4-6 (CS), Level 2, IEC61000-4-8 (PM), Level 1, IEC61000-4-11 (Dip)

Safety: UL 508

Warranty: 2 years

Pin Assignment

Ethernet



Pin	Signals
1	Tx+
2	Tx-
3	Rx+
6	Rx-

Power and RS-485

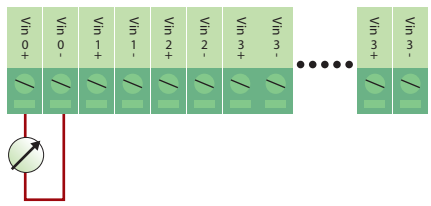
Pin	1	2	3	4	5	6
Signal	V+	V-	FG	D+	D-	SG

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-

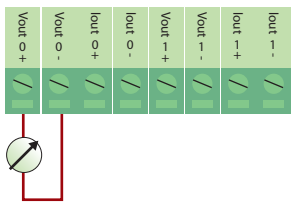
Wiring Example

Analog Input



(1) Digital Input

Analog Output



(2) Digital Output

Ordering Information

ioLogik E2240: Active Ethernet I/O server with 8 analog inputs and 2 analog outputs

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