

# ioLogik E1500 Series

## Rugged remote I/O



- > Compliant with EN 50121-3-2, EN 50121-4, and essential sections of EN 50155
- > Wide operating temperature: -40 to 85°C (-40 to 185°F)
- > Channel-to-Channel isolation (DI only)
- > Robust and compact design for harsh environments
- > Active communication with patented Active OPC Server
- > User-defined Modbus/TCP addressing
- > Friendly configuration via web browser



## Introduction

The ioLogik E1500 series is designed to withstand the severe vibrations experienced in rolling stock and wayside applications. These products come with a threaded M12 Ethernet port to ensure wired connectivity, a spring-type terminal block for vibration-resistant cabling, and a convenient DIN rail mounting assembly. Carefully engineered DI channel-to-channel isolation helps maintain stable data

communications by providing protection against cross-line power surges and crosstalk. In addition, this remote I/O product is compliant with EN 50121-3-2, EN 50121-4 and essential sections of the EN 50155 standard (covering operating temperature, power input voltage, electrical surges, ESD, and vibration), all of which are fundamental for electronic equipment used on or around railway vehicles.

## ioLogik E1510-T Specifications

### Inputs and Outputs

**Digital Inputs:** 12 channels (channel-to-channel isolation)

**Isolation:** 3K VDC or 2K Vrms

### Digital Input

**Sensor Type:** Wet Contact (NPN or PNP), Dry Contact

**I/O Mode:** DI or Event Counter

### Dry Contact:

- On: short to GND
- Off: open

### Wet Contact (DI to GND):

- On: 0 to 3 VDC
- Off: 10 to 30 VDC

**Counter Frequency:** 250 Hz, power off storage

**Digital Filtering Time Interval:** Software selectable (minimum: 1 millisecond)

### Power Requirements

**Power Consumption:** 163 mA @ 24 VDC

## ioLogik E1512-T Specifications

### Inputs and Outputs

**Digital Inputs:** 4 channels (channel-to-channel isolation)

**Configurable DIOs:** 4 channels

**Isolation:** 3K VDC or 2K Vrms

### Digital Input

**Sensor Type:** Wet Contact (NPN or PNP), Dry Contact

**I/O Mode:** DI or Event Counter

### Dry Contact:

- On: short to GND
- Off: open

### Wet Contact (DI to GND):

- On: 0 to 3 VDC
- Off: 10 to 30 VDC

**Common Type:** 2 points per COM (Configurable DIOs)

**Counter Frequency:** 250 Hz, power off storage

**Digital Filtering Time Interval:** Software selectable (minimum: 1 millisecond)

### Power Requirements

**Power Consumption:** 149 mA @ 24 VDC

## : Common Specifications

### LAN

**Ethernet:** 1 10/100 Mbps switch port, M12

**Protection:** 1.5 KV magnetic isolation

**Protocols:** Modbus/TCP, TCP/IP, UDP, DHCP, Bootp, HTTP

### Power Requirements

**Power Input:** 24 VDC nominal, 12 to 48 VDC

*Note: Compliant with EN 50155 at 24 VDC*

### Physical Characteristics

**Wiring:** I/O cable max. 14 AWG

**Dimensions:** 144 x 124 x 30 mm (5.67 x 4.88 x 1.18 in)

**Weight:** 825 g

**Mounting:** DIN rail (standard), wall (with optional kit)

### Environmental Limits

**Operating Temperature:** -40 to 85°C (-40 to 185°F)

**Storage Temperature:** -40 to 85°C (-40 to 185°F)

**Ambient Relative Humidity:** 5 to 95% (non-condensing)

**Conformal Coating:** Applies only to -CT models

**Altitude:** Up to 2000 m

*Note: Please contact Moxa if you require products guaranteed to function properly at higher altitudes.*

### Standards and Certifications

**Safety:** UL 508

**EMI:** EN 61000-3-2, EN 61000-3-3, EN 61000-6-4, FCC Part 15 Subpart B Class A

**EMS:** EN 55024, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-8, EN 61000-4-11, EN 61000-6-2

**Shock:** IEC 60068-2-27

**Freefall:** IEC 60068-2-32

**Vibration:** IEC 60068-2-6

**Rail Traffic:** EN 50155, EN 50121-3-2, EN 50121-4

**Green Product:** RoHS, CRoHS, WEEE

*Note: Please check Moxa's website for the most up-to-date certification status.*

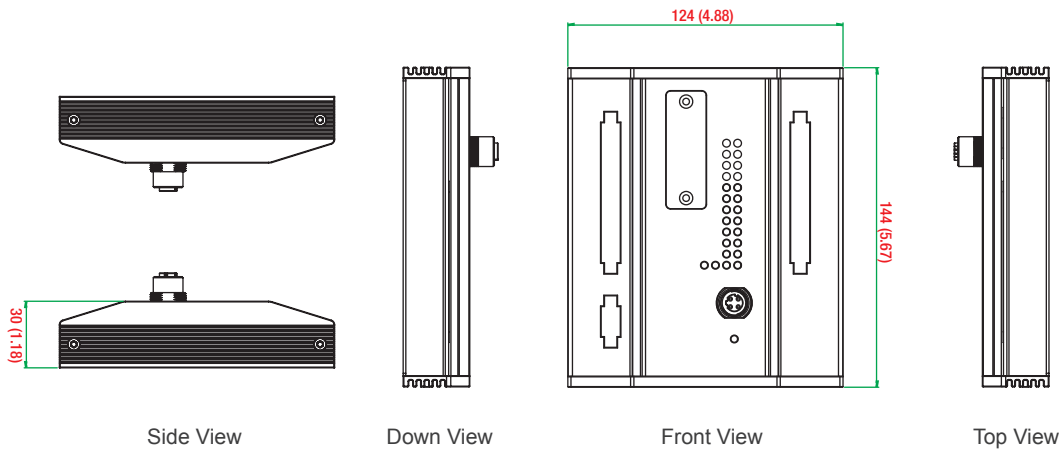
### Warranty

**Warranty Period:** 5 years

**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

## Dimensions

Unit: mm (inch)



## : Ordering Information

### Available Models

**ioLogik E1510-M12-T:** Ethernet remote I/O, M12 connector, 12 DIs, -40 to 85°C operating temperature

**ioLogik E1512-M12-T:** Ethernet remote I/O, M12 connector, 4 DIs, 4 DIOs, -40 to 85°C operating temperature

**ioLogik E1510-M12-CT-T:** Ethernet remote I/O, M12 connector, 12 DIs, coating, -40 to 85°C operating temperature

**ioLogik E1512-M12-CT-T:** Ethernet remote I/O, M12 connector, 4 DIs, 4 DIOs, coating, -40 to 85°C operating temperature

### Package Checklist

- ioLogik E1500 remote I/O product
- Documentation and software CD
- Quick installation guide (printed)