

IES-0830

8 FE Unmanaged Switch -40 to 75, DIN-rail, IEC61850

Overview

LevelOne IES-0830 Industry Ethernet Switch provides 8 ports of 10/100Base-TX Ethernet to enable high speed network at mission-critical environment. This device is designed to be mounted on an industry standard DIN-rail, plus the clearly visible status LEDs provide simple monitoring of port link activity.

Redundancy

This redundant power system is designed to meet the challenge of power failure to ensure reliability and constant availability. Single power design works fine in non-critical network applications, but it falls short drastically for network applications in transportation, automate production or banking.

High Reliability

All components are built to withstand harsh environment applications without compromise where humidity, temperature variation and even shock vibration are concerns, including Electric & Utility, Critical Infrastructure, Transportation and Surveillance Security. This device operates under -40 to 75 Celsius (-40 to 167 Fahrenheit) temperature.

Plug & Play

This unmanaged Industrial Ethernet Switch is designed for the demanding industrial environments at businesses in need of instant connectivity with no setup or configure required, truly plug and play.

Traffic Control Application

This device is certified by NEMA (National Manufacturers Association) TS2 Environmental requirements for the Traffic Control Equipment that withstand extreme temperatures, operating voltage and humidity fluctuation, vibration and shock commonly experienced in severe outdoor environments.

Substation & Railway Applications

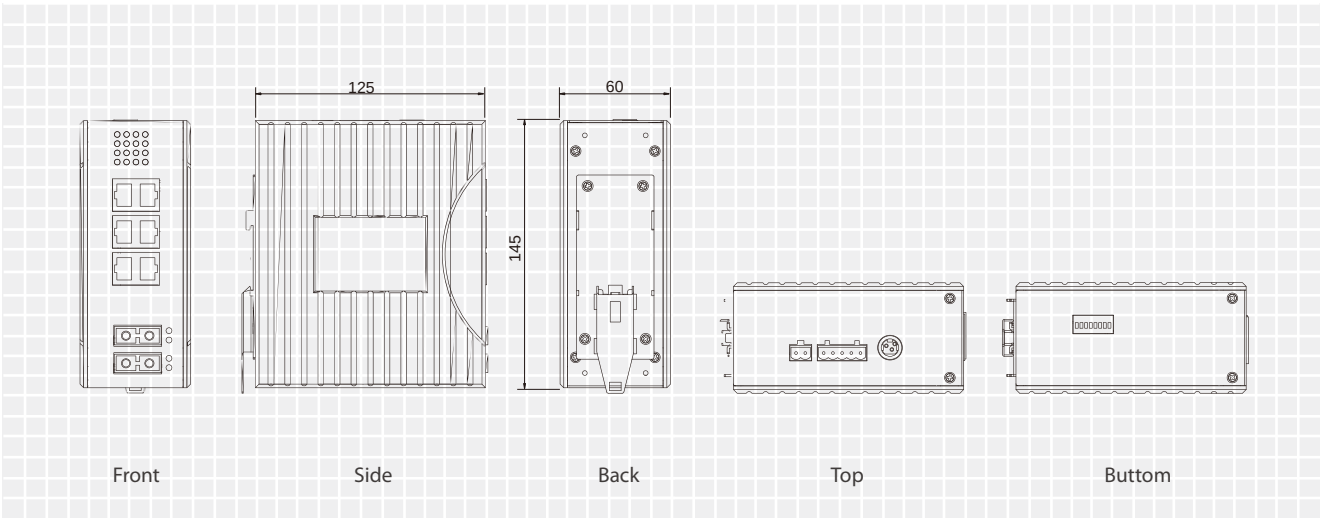
This device is complied with IEC 61850-3 / IEEE 1613 for the power substations and EN 50121-4 for the railway applications. IEC 61850-3 is an international standard for electrical substation systems. The standard enables integration of all control, measurement, monitoring and protection functions within a substation.

Features

- Provides flexibility of 8 10/100BASE-TX ports
- Supports 10/100Mbps-Full/Half-duplex, Auto-Negotiation, Auto-MDI/MDIX
- Redundant power inputs(12-48VDC) with Terminal Block and DC Jack(12VDC)
- Alarms for power and port link failure by relay output
- Supports DIP switch configuration for link down alarm
- -40°C to 75°C (-40°F to 167°F) operating temperature range, tested for functional operation @ -40°C to 85°C (-40°F to 185°F)
- Provides DIN-rail or panel mounting
- Complies with NEMA TS2 Environmental requirements for Traffic control equipment
- Complies with IEC61000-6-2 EMC Generic standard immunity for Industrial environment
- Complies with IEC61850-3 and IEEE1613 Environmental requirements for power substation automation systems
- Complies with EN50121-4 environmental requirement for Railway application

Diagrams

Unit: mm



Specifications

Technology	
Standards	▪ IEEE802.3 10BASE-T, IEEE802.3u 100BASE-TX/FX, IEEE802.3x
Forward and Filtering Rate	▪ 14,880pps for 10Mbps ▪ 148,810pps for 100Mbps
Packet Buffer Memory	▪ 448K bits
Processing Type	▪ Store-and-Forward ▪ Half-duplex back-pressure and IEEE802.3x full-duplex flow control
Address Table Size	▪ 2048 MAC addresses

Power	
Input	▪ Input Voltage: 12VDC (DC Jack); 12 to 48VDC (Terminal Block)
Power Consumption	▪ 6W Max. 12VDC @ 0.5A, 24VDC @ 0.25A, 48VDC @ 0.125A
Reverse Polarity Protection	▪ Present

Mechanical	
Casing	▪ Aluminum case
Dimensions	▪ 60mm (W) x 125mm (D) x 145mm (H) (2.36" (W) x 4.92" (D) x 5.7" (H))
Weight	▪ 1Kg (2.2lbs.)
Installation	▪ DIN-Rail, Panel Mounting

Interface	
LED Indicators	▪ Per Unit: Power Status: Power 1, 2, 3 (Green), Fault (Red) ▪ Per Port: 10/100TX, 100FX: Link/Activity (Green) 10/100TX: 100 (Green)
Alarm Contact	▪ One relay output with current 1A @ 24VDC

Environment	
Operating Temperature	▪ -40°C to 75°C (-40°F to 167°F) Tested @ -40°C to 85°C (-40°F to 185°F)
Storage Temperature	▪ -40°C to 85°C (-40°F to 185°F)
Ambient Relative Humidity	▪ 5% to 95% (non-condensing)
MTBF	▪ 46.55 years

Regulatory Approvals	
ISO	▪ Manufactured in an ISO9001 facility
Safety	▪ UL508 (Pending)
EMI	▪ FCC Part 15, Class A ▪ EN61000-6-4 - EN55022 - EN61000-3-2 - EN61000-3-3
EMS	▪ EN61000-6-2 - EN61000-4-2 (ESD Standards) Contact: + / - 8KV; Criteria B Air: + / - 15KV; Criteria B - EN61000-4-3 (Radiated FRI Standards) 35V/m, 80 to 3G; 80% AM Criteria A - EN61000-4-4 (Burst Standards) Signal Ports: + / - 4KV D.C. Power Ports: + / - 4KV; Criteria B A.C. Power Ports: + / - 4KV; Criteria B - EN61000-4-5 (Surge Standards) Signal Ports: + / - 2KV; Line-to-Line; Criteria B D.C. Power Ports: + / - 4KV; Line-to-Earth; Criteria B - EN61000-4-6 (Induced RFI Standards) Signal Ports: 10V @ 0.15 - 80MHz; Criteria A D.C. Power Ports: 10V @ 0.15 - 80MHz; Criteria A A.C. Power Ports: 10V @ 0.15 - 80MHz; Criteria A Earth Ground Ports: 10V @ 0.15 - 80MHz; Criteria A - EN61000-4-8 (Magnetic Field Standards) 1000A/m @ 50, 60Hz; Criteria A - IEC61000-4-10 (Oscillatory wave magnetic field test) 100kHz and 1MHz: 30A/m - IEC 61000-4-16 (Power frequency immunity test) 50Hz: 300V - IEC 61000-4-18 (oscillatory wave immunity test): 100 kHz, 2.5kV CM and 2.5kV DM 1MHz , 2.5kV CM and 2.5kV DM - IEEE1613: power frequency withstand voltage: 2KV, Insulation resistance >550 MOhm RJ45 Port 500V, Insulation resistance >550 MOhm Impulse voltage: 5Kv, Insulation resistance >550 MOhm IEC 60870-2-1: AC/DC power supply voltage variations
Environmental Test Compliance	▪ IEC60068-2-6 (Vibration Resistance) 5G @ 150Hz; Criterion 3 (Operation/Storage/Transport) ▪ IEC60068-2-27 (Shock) 25G @ 11ms (Half-Sine Shock Pulse; Operation) 50G @ 11ms (Half-Sine Shock Pulse; Storage/Transport) ▪ IEC60068-2-32 (Free Fall) 1M (3.281ft.)

Order Information

IES-0830 – 8 FE Unmanaged Switch -40 to 75, DIN-rail, IEC61850

Package Contents

IES-0830
Quick Installation Guide