



IES-0831

6 FE + 2 MM SC Unmanaged Switch -40 to 75, DIN-rail, IEC61850

Quick Installation Guide

v1.00 - 1206

Overview

LevelOne IES-0831 Industry Ethernet Switch provides 8 ports of 10/100Base-TX Ethernet plus 2 ports of 100Base-FX SC MM fiber 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.

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.

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.

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.

IES-0831

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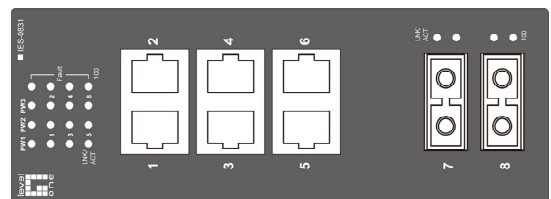
Features

- Complies with IEC61850-3 and IEEE1613 environmental requirements for power substation automation systems.
- Complies with EN50121-4 environmental requirements for railway applications.
- Meets NEMA TS1 & TS2 environmental requirements for traffic control equipment.
- Meets EN61000-6-2 & EN61000-6-4 EMC Generic Standard Immunity for industrial environment.
- Supports IEEE802.3/802.3u/802.3x. Auto-negotiation: 10/100Mbps, Full/Half-duplex, Auto-Negotiation, Auto MDI/MDIX.
- 100Base-FX: Multi/Single mode SC or ST type, 100Base-BX: WDM Single mode SC type.
- Supports 2048 MAC addresses. Provides 448K bits buffer memory.
- DIP switch configuration for link monitor alarm.
- Alarms for power and port link failure by relay output 1A @ 24VDC.
- Power Supplies: Redundant 12-48VDC Terminal Block power inputs and 12VDC DC JACK with 100-240VAC external power supply.
- Operating voltage and Max. current consumption: 0.5A @ 12VDC, 0.25A @ 24VDC, 0.125A @ 48VDC. Power consumption: 6W Max.
- 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).
- Supports DIN-Rail or Panel Mounting installation.

Package Contents

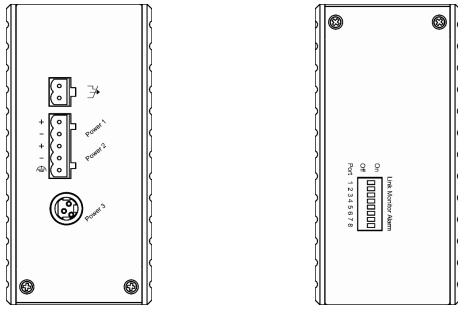
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LED Status



LED	Status	Description
PW 1,2,3 (Green)	Steady	Power On
	Off	Power Off
Fault		
FAULT	Steady	<ul style="list-style-type: none"> Redundant power is failed or not being used Port failure (When Port Fault Alarm is enabled)
	Off	<ul style="list-style-type: none"> Redundant power is active Port failure is not occurred Port Fault Alarm is disabled
10/100Base-TX or 100Base-FX/BX		
LNK/ACT	Steady	Network connection is established
	Flashing	Transmitting or Receiving data
100	Steady	Connection at 100Mbps speed
	Off	Connection at 10Mbps speed

Power Input

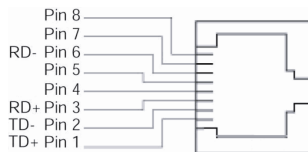


Terminal Block	PW1	+	10 – 48VDC
		-	Power Ground
	PW2	+	10 – 48VDC
		-	Power Ground
	PW3		12VDC (DC Jack)
		Earth Ground	
	Relay Output	1A @ 24VDC	
1. The relay contact closes if Power1 or Power2 falls 2. The relay contact closes if Power3 is failed but Power1 and Power2 are both on			

Note: DC Terminal Block Power Inputs: There are two pairs of power inputs can be used to power up this switch. Redundant power supplies function is supported.

10/100Base-TX Connector

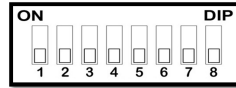
The following lists the pin-out of 10/100Base-TX ports.



Pin	Standard Port	Uplink Port
1	Output Transmit Data +	Input Receive Data +
2	Output Transmit Data -	Input Receive Data -
3	Input Receive Data +	Output Transmit Data +
4	NC	NC
5	NC	NC
6	Input Receive Data -	Output Transmit Data -
7	NC	NC
8	NC	NC

DIP Switch

This DIP Switch features the Port Fault Detection; once enabled, it sends fault signal (relay opens) when the port link is broken

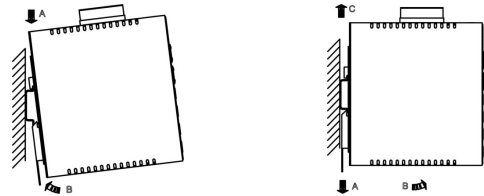


On: Enable Port Fault Detection

Off: Disable Port Fault Detection

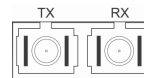
Note: Pin No. maps to Port No & extra Pin has no function

DIN Rail Mount



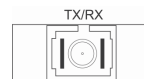
- Assembly: Place the switch on the DIN rail from above using the slot. Push the front of the switch toward the mounting surface until it audibly snaps into place
- Start-up: Connect the supply voltage to start up the switch via the terminal block (or DC JACK)
- Dismantling: Pull out the lower edge and then remove the switch from the DIN rail.

100Base-FX Connection



The Tx (transmit) port of device I is connected to the Rx (receive) port of device II, and the Rx (receive) port of device I to the Tx (transmit) port of device II.

WDM 100Base-BX Connection



Only one optical fiber is required to transmit and receive data