



IES-1820

16 x 802.3at + 2GE SFP Combo Unmanaged Switch -40 to 75C

Quick Installation Guide

v1.00 - 1206

Overview

LevelOne IES-1820 Industry Ethernet Switch provides 16 PoE ports 10/100Base plus 2 port Gigabit Combo SFP to enable high speed network at mission-critical environment. With the 1U height rack-mountable size, this switch can be easily installed in the cabinet, plus the clearly visible status LEDs provide simple monitoring of port link activity. Moreover, the SFP slots support pluggable modules that enabling you to choose from a variety of transceivers.

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.

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.

Power over Ethernet

This switch is Power Sourcing Equipment (PSE), and it is fully complied with IEEE 802.3at PoE standard at maximum 30W power budget per port. It helps to save infrastructure wiring costs dramatically by eliminating electric wiring and less UPS needed. Also, it is compatible with IEEE802.3af standard PD devices.

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Features

- Meets NEMA TS1 & TS2 Environmental requirements: temperature, shock, and vibration for traffic control equipment.
- Meets EN61000-6-2 & EN61000-6-4 EMC Generic Standard Immunity for industrial environment.
- Supports IEEE802.3at Power over Ethernet (PoE) Power Sourcing Equipment (PSE).
- 1000Mbps-Full-duplex, 10/100Mbps-Full/Half-duplex, Auto-Negotiation, Auto-MDI/MDIX.
- Supports 4096 MAC addresses. Provides 2.25M bits buffer memory.
- Alarms for power failure by relay output.
- Power Supplies: Redundant 47-57VDC Terminal Block power inputs.
- Operating voltage and Max. current consumption: 9A @ 55VDC. Power consumption: 495W 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 Rack Mounting installation.

Package Contents

- IES-1820
- Quick Installation Guide
- CD User Manual

LED Status



LED	Status	Description
PW 1,2	Steady	Power On
	Off	Power Off
Fault	Steady	Redundancy Power is failed
	Off	Redundancy Power is activated
10/100Base-TX		
LNK/ACT	Steady	Network connection is established
	Flashing	Transmitting or Receiving data
10/100	Steady	Connection speed at 100Mbps
	Off	Connection speed at 10Mbps
PoE	Steady	Power Device (PD) is connected
	Off	Power Device (PD) is disconnected
Gigabit Ethernet		
LNK/ACT	Steady	Network connection is established
	Flashing	Transmitting or Receiving data
TX	Steady	Copper Ethernet is connected
	Off	Copper Ethernet is disconnected
SFP	Steady	SFP Fibre is connected
	Off	SFP Fibre is disconnected

Power Input



Terminal Block	PWR1	+	47 to 57VDC
		-	Power Ground
	PWR2	+	47 to 57VDC
		-	Power Ground
	⊕	Earth Ground	
	⚡	Relay Output	1A @ 24VDC

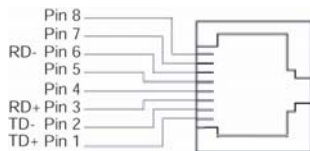
1. The relay contact opens if Power1 or Power2 falls
 2. The relay contact opens if the Port Link is broken (When Link Down Detection is enabled)

Note:

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 (PoE) ports.



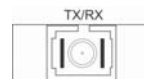
Pin	PoE Port (1 to 4)	Standard Port (5)
1	Output Transmit Data +	Input Receive Data +
2	Output Transmit Data -	Input Receive Data -
3	Input Receive Data +	Output Transmit Data +
4	Positive (VCC+)	NC
5	Positive (VCC+)	NC
6	Input Receive Data -	Output Transmit Data -
7	Negative (VCC-)	NC
8	Negative (VCC-)	NC

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