**DIVISION 27 21 29**

**IFS 8 PORT FAST ETHERNET SWITCH WITH 4 POE PORTS**

**ES2001-4P-4T**

**ENGINEERING SPECIFICATIONS**

# PART 1 - GENERAL

**1.01** SUMMARY

1. **Eight** 10/100Mbps TP Port with four PoE-AF Fast Ethernet Switch

**1.02 SECTION INCLUDES**

1. IFS **ES2001-4P-4T** 8-Port Fast Ethernet Switch with 4 PoE Ports– Standalone

**1.03 REFERENCES**

1. Federal Communications Commission (FCC)
2. European Union Compliance (CE)

**1.04 SYSTEM DESCRIPTION**

1. Performance Requirements: Provide 8 10/100Base-TX copper ports with 4 IEEE 802.3af Power over Ethernet Injector
2. The system shall utilize EIA568, category 5/5e, 4-pair cables for 10Base-T or 100Base-TX to transfer Ethernet data and 48V DC power simultaneously.

**1.05 SUBMITTALS**

1. Manufacturer’s Installation and Operating Manual: Printed installation and operating information for the unmanaged PoE Switch.
2. Warranty: Manufacturer’s Printed Warranty.

**1.06 DELIVERY, STORAGE AND HANDLING**

1. Store in original packaging in a climate controlled environment.
2. Storage Temperature not to exceed: -20˚ C to +70˚ C

**1.07 PROJECT/SITE CONDITIONS**

1. Temperature Requirements: Products shall operate in an environment with an ambient temperature range of 0˚ C to +50˚ C with the assistance of fan-forced cooling.
2. Humidity Requirements: Products shall operate in an environment with relative humidity of 5% to 95% (non-condensing).

**1.08 WARRANTY**

1. Standard UTC Fire & Security Inc. Comprehensive Warranty: UTC Fire & Security warrants the product to be free of factory defects under manufacture’s 3 Years Warranty.

# PART 2 - PRODUCTS

**2.01 MANUFACTURER**

1. Acceptable Manufacturer:
2. IFS Brand

UTC Fire & Security, Inc.

8985 Town Center Parkway

Bradenton, FL 34202-5129

1. Phone 1-855-286-8889
2. Email: presales@interlogix.com
3. Substitutions: Not Permitted

**2.02 MANUFACTURED UNITS**

1. Model Number Descriptions: Reference Table A: Product Number Descriptions

**2.03 GENERAL SPECIFICATIONS**

1. The unmanaged PoE Switch shall be an ES2001-4P-4T model.
2. The switch features 8 fixed 10/100TX electrical ports
3. The switch shall support the Ethernet data IEEE 802.3 protocol using Auto-negotiating and Auto-MDI/MDI-X features.
4. The switch shall provide power, link / act status and PoE In-use status indicating LED’s for monitoring proper system operation.
5. The switch shall be a 1U (one U, 1.75 inches) 10-inch equipment.
6. The switch shall be connected with EIA568A/B Cat 5/5e UTP/STP cable system for its RJ-45 interface ports.
7. The ES2001-4P-4T shall comply with IEEE 802.3af Power over Ethernet:
8. The ES2001-4P-4T shall support IEEE 802.3af Power over Ethernet detection and 48VDC power injection at port#1 to port#4.
9. The ES2001-4P-4T is also the power injectors which transmit DC Voltage to the Cat5/5e cable and transfer data and power simultaneously to remote PD (Powered Device) equipments.
10. The ES2001-4P-4T shall Auto-detect of PoE IEEE 802.3af equipment; protect devices from being damaged by incorrect installation.
11. The ES2001-4P-4T shall support total distance up to 100 meters on PoE ports.

**2.04 DATA SPECIFICATIONS**

1. Data Interface: Ethernet IEEE802.3/3u
2. Data Rate: 10/100 Mbps
3. Data Inputs: 8
4. Operation Mode: Simplex or Duplex

**2.05 STATUS INDICATORS**

1. System

|  |  |  |  |
| --- | --- | --- | --- |
| 1. | PWR | Green | The switch unit is power on |

B. 10/100Base-TX Interfaces

|  |  |  |  |
| --- | --- | --- | --- |
| 1. | LNK/  ACT | Green | Lights to indicate the link through that port is successfully established. |
| 2. | PoE In-Use | Amber | Blink to indicate that the switch is actively sending or receiving data over that port.  Lights to indicate the port is providing 48VDC in-line power.  Off to indicate the connected device is not a PoE Powered |

**2.06 CONNECTORS**

1. Power: Universal AC socket
2. Data: RJ-45

**2.07 ELECTRICAL SPECIFICATIONS**

1. Power Characteristics of ES2001-4P-4T:
2. Voltage Input:100~240V AC / 50-60Hz
3. Current: 1.2A max.
4. Power Consumption: Maximum 65Watts with PoE full load
5. PoE Output Power of ES2001-4P-4T:
6. PoE output budget: 55Watts
7. IEEE 802.3af class 3 (15.4W)

**2.08 MECHANICAL SPECIFICATIONS**

1. Surface Mount Dimensions: 8.5” x 5.3” x 1.69” (217mm x 135mm x 43mm)
2. Finish: Module shall be constructed of a metal enclosure with a powder coat.
3. Weight: <2.20 lbs./1kg

**2.09 ENVIRONMENTAL SPECIFICATIONS**

1. MTBF: > 50,000 Hours
2. Operating Temp: 0˚ C to +50˚ C
3. Storage Temp: -20˚ C to +70˚ C
4. Relative Humidity: 20% to 95% (non-condensing).

**2.10 REGULATORY AGENCIES/APPROVALS AND LISTINGS**

1. Federal Communications Commission (FCC) Part 15, Class A
2. European Union Compliance (CE) with following standard:
3. EN 55022:2006, Class A
4. EN61000-3-2:2006
5. EN61000-3-3+A2:2005
6. EN 55024+A2:2003

**2.11 ACCESSORIES**

1. AC Power cord
2. Rubber feet

**PART 3 - EXECUTION**

**3.01 PREPARATION**

1. Standalone Module (Surface Mount)
2. Shall be mounted on a properly prepared surface adequate for the size and weight of module.
3. The placement of the unit shall allow provision for cable installation and maintenance as indicated on the approved detail drawings and in compliance with the installation manual.

**3.02 INSTALLATION**

1. General: Locate fiber optic modules as indicated on the approved detail drawings and install module in compliance with the UTC Fire & Security User’s manual.

**3.03 TESTING**

1. Testing the 10/100TX Fast Ethernet Copper Link.
2. Verify that the data leads and UTP ports are properly connected.
3. Make sure that power is applied to the PoE switch.
4. Successful data link operation should be confirmed at this point by communicating with other equipment.
5. Testing the 10/100TX PoE Copper output capability.

**3.04 CLEANING**

1. Follow all instructions for proper use of solvents and adhesives used for termination and splicing.
2. At completion of the installation, dispose of all UTP cable scraps properly.

# MANUFACTURED UNITS REFERENCE TABLES

Table A: Product Number Descriptions

|  |  |  |
| --- | --- | --- |
| **IFS PART NO.** | **DESCRIPTION** | **MAX. DISTANCE\*** |
| **ES2001-4P-4T** | 8 PORT FAST ETHERNET SWITCH WITH 4 POE PORTS | 300 feet (100M) electrical |

## END OF SECTION