interlogix
A UTC Fire & Security Company

IFS SP-PoE Splitter User Manual

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Overview

The IFS SP-PoE is an IEEE 802.3af Power over Ethernet device that splits the 48 VDC power input over an Ethernet cable into separate 5 V and 12 VDC power outputs. See Figure 1 below.

Figure 1: SP-PoE splitter

Package contents

Your SP-PoE Splitter carton should contain the following items:

- The Power over Ethernet Splitter x 1
- User Manual x 1
- 15 cm UTP straight network cable x 1
- DC Plug cable x 2

If any item is missing or damaged, please consult the dealer from whom you purchased your SP-PoE Splitter module.

Introduction

The IFS SP-PoE is an IEEE 802.3af Power over Ethernet splitter that divides the PoE power and data input into tow separate outputs in either 12 VDC or 5 VDC. The SP-PoE works with IEEE 802.3af power source equipment (PSE). This frees device deployment from restrictions due to power outlet locations, eliminates the costs for additional AC wiring and reduces the installation time.

When the PSE inserts DC voltage into the CAT 5 cable, it allows the cable between the PSE and SP-PoE to transfer data and power simultaneously. The maximum distance between the PSE and SP-PoE is 100 m.

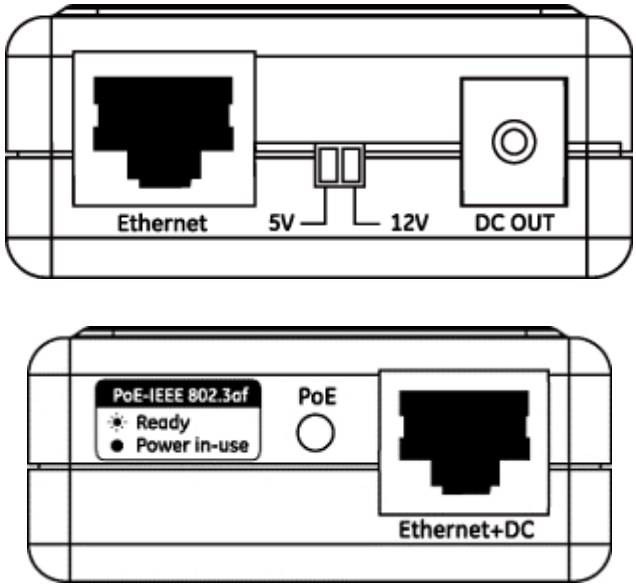
Product Features

- Complies with the IEEE 802.3 Fast Ethernet standard
- 1 x 100 Mbps copper port
- Plug and Play Installation

Product Overview

Figure 1 shows the left and right side panels of the SP-PoE Splitter.

Figure 2: Left and right side panels of the SP-PoE



LED Indicators

LED	Color	Function
PoE ready / in-use	Green	Lights to indicate the port is providing 48 VDC in-line power.

Product Specifications

IFS Model	SP-PoE
Interface	

Ethernet + DC Copper Port	1 x 10/100Base-TX with IEEE 802.3af PoE PD for data + DC in RJ-45 connector
Ethernet Copper Port	1 x 10/100Base-TX for data out RJ-45 connector
Power over Ethernet	
PoE Standard	IEEE 802.3af Power over Ethernet / PD
PoE Input Pin Assignment	1/2(+), 3/6(-) End-Span or 4/5(+), 7/8(-) Mid-Span
PoE Input Voltage	48 VDC (Range 44 to 56 VDV)
Hardware Specification	
Data Rate	10/100 Mbps (vary on Ethernet device attached)
Throughput (Packet per second)	148810 pps@64 Bytes
DIP Switch	5 VDC / 12 VDC output voltage
Output DC Connector	DC Jack 5.5 x 2.5 mm receptacle in the central post
Output Power	12 W max
Number of Devices that can be powered	1
Ethernet Cable	TIA/EIA-568, Category 5/5e cable
Installation	Standalone or Wall mountable
Material	Plastic
Standards Conformance	
Standard Compliance	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 10/100Base-TX Fast Ethernet IEEE 802.3af Power over Ethernet PD

Physical Specifications

Dimensions (W × D × H):

2.87” x 2.17” x 0.94” / 73 x 55 x 24 mm

Weight:

0.22 lbs / 50 g

Environmental Specifications

Operating:

Temperature: 0°C to 50°C

Relative Humidity: 5% to 90% (non-condensing)

Storage:

Temperature: -20°C to 70°C

Relative Humidity: 5% to 90% (non-condensing)

Electrical Specification

Output Voltage:

DIP switch 5 V: 5 VDC, 2.0 A max

DIP switch 12 V: 12 VDC, 1.0 A max

Note: This product is intended to be supplied by a UL Listed Direct Plug-In Power Unit marked "Class 2" or "LPS" and output rated 48 VDC, 3 Amp minimum.

Hardware installation

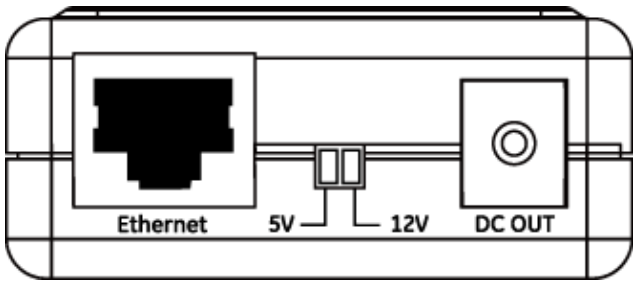
Before Installation

If a power socket is unavailable for the AC-DC adaptor of the network devices, the SP-PoE provides DC power for the Ethernet device conveniently and easily.

The SP-PoE separates the power out and provides two kinds of DC power output through its DIP switch and its voltage and current shown as below:

- 5 VDC / 2A
- 12 VDC / 1A

Figure 2: 5 V / 12 VDC out DIP switch



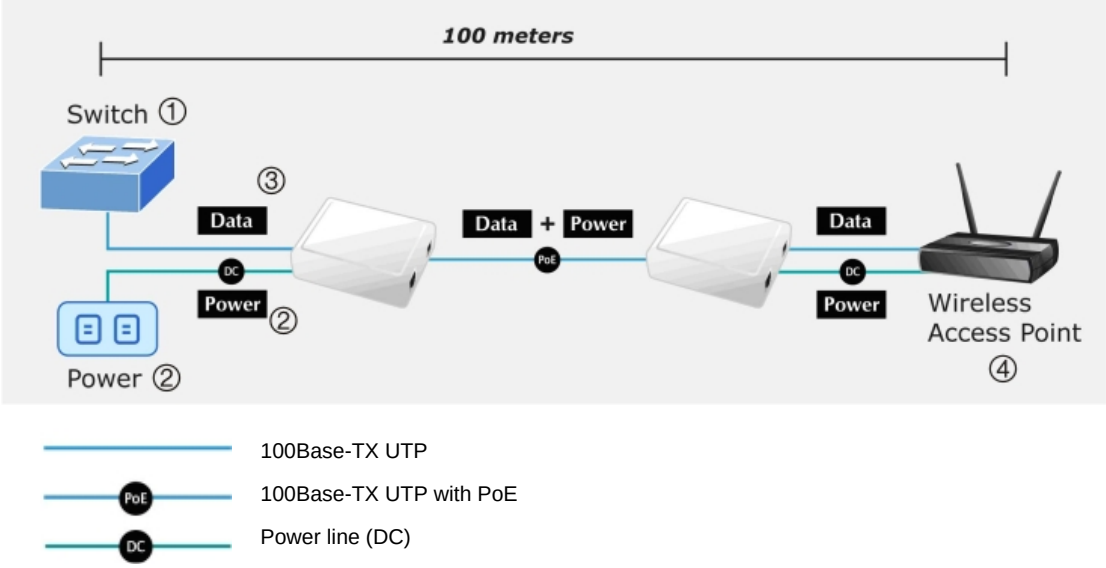
The default value is set on 5 V. MS-POE and SP-PoE units can be installed in pairs. However, the use of a third-party device is allowed if the device complies with IEEE 802.3af standard.

Installation

To connect the hardware, do the following:

1. Connect a standard network cable from "Ethernet+DC" of MS-POE to Ethernet+DC" of SP-PoE. The POE LED of SP-PoE/MS-POE will start to flash continuously.

Figure 3 MS-PoE/SP-PoE application



1. Switch
2. Power
3. Data
4. Wireless access point

Note: The SP-PoE only accepts IEEE 802.3af equipment. Other in-line power devices may cause the SP-PoE to malfunction.

2. Connect the UTP cable in the package from "Ethernet" of SP-PoE to the RJ-45 port of the remote device.
3. Connect the correct DC plug from "DC OUT" of SP-PoE to the remote device.

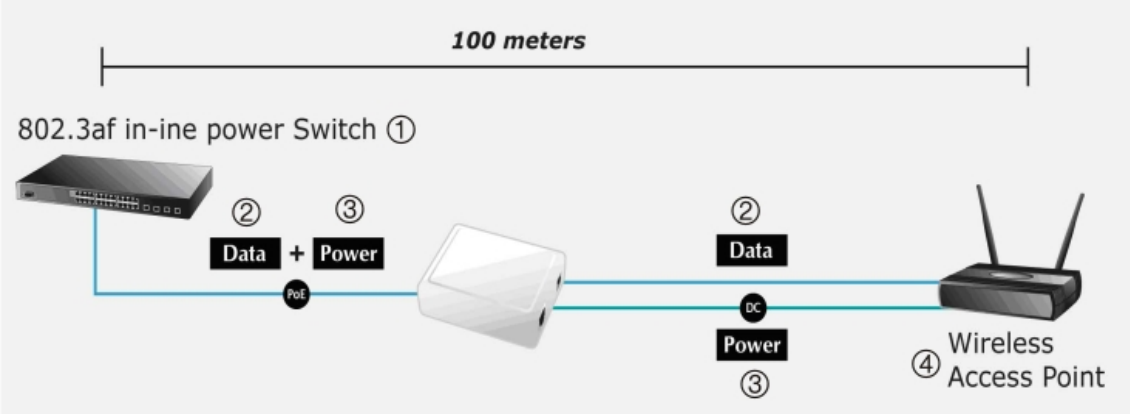
Caution: Please ensure the output voltage is correct for remote device. Otherwise it will damage your remote device.

4. Power on the remote device and the LED indicator on SP-PoE will remains on.

Connect with other 802.3af devices

The SP-PoE also provides an alternative way to connect to non IEEE 802.3af devices and to connect with an IEEE 802.3af in-line power device like a Power over Ethernet Switch. See the figure below.

Figure 4: PSE/SP-PoE application



100Base-TX UTP

PoE 100Base-TX UTP with PoE

DC Power line (DC)

1. 802.3af in-line power switch
2. Data
3. Power
4. Wireless access point

Trademarks and patents

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Other trade names used in this document may be trademarks or registered trademarks of the manufacturers or vendors of the respective products.

FCC compliance

Class B: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

There is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Certification N4131

Manufacturer

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Authorized EU manufacturing representative:
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European Union directives

2004/108/EC (EMC Directive): Hereby, UTC Fire & Security declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2004/108/EC.

2002/96/EC (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info.

Contact information

For contact information see our Web site: www.interlogix.com.