Product Specifications

IEEE 802.3af/at/bt Power over Ethernet Tester

POE-TESTER+

Version 1.0

Change History:

Revision	Date	Author	Change List
Version 1.0	2020/10/7	Angeline	Initial release

Author	Angeline	**Editor:**	Angeline
Reviewed by:	Kent Kang	**Approved by:**	Kent Kang

1. PRODUCT DESCRIPTION

Quick and Easy Test on RJ45 Outlet for Power over Ethernet Existence in a Second

PLANET POE-TESTER+ is an new generation easy-to-use PoE diagnostic adapter for network installers, system integrator, company MIS and even home users to quickly identify the existence of Power over Ethernet on applications network. It is designed to detect if the IEEE 802.3af/at/bt PoE voltage runs over the UTP cable and identify the type of PSE (Power Source Equipment) for troubleshooting.

Plug and Show LED Indicators

Simply connect the POE-TESTER+ to the PSE or the RJ45 outlet and the LED will light up when it detects the PoE voltage via the UTP cable and identifies the PSE to be mid-span, end-span, 802.3af PoE mode, 802.3at PoE+ mode or even the latest 4-pair 802.3bt PoE++ mode in a second.

Identify PoE PSE Modes and Standards

The POE-TESTER+ provides two color LEDs for quick and easy PSE mode identification. A Power over Ethernet system comprises a **PSE (Power Sourcing Equipment)** and a **PD (Powered Device)**. The PSE is a device that will provide power in a PoE setup. There are three types of PSE, Mode A, Mode B and 4-pair mode. The PSE may be a **Mode A, end-span PoE switch or a Mode B, mid-span PoE injector or a 4-pair mode PSE that is end-span plus mid-span**.

PoE PSE Modes	UTP Power Pin Assignment	PSE Devices
Mode A / End-span	Pins 1,2,3 and 6	PoE Switch PoE Media Converter PoE Extender
Mode B / Mid-span	Pins 4,5,7 and 8	PoE Single-port Injector PoE Multi-port Injector Hub
4-pair PSE	All pins	802.3bt/PoH PoE Switch 802.3bt/PoH Media Converter 802.3bt/PoH PoE Extender 802.3bt/PoH PoE Injector 802.3bt/PoH PoE Injector Hub

The PD is a PoE-enabled terminal by PSE and thus consumes energy, such as IP network cameras, VoIP phones and wireless access points and more.

PoE Installation Troubleshooting

Although PDs that implement only Mode A with end-span or Mode B with mid-span are disallowed by the IEEE 802.3af/at standard, there are still some of the PDs that are designed to work with only one of the modes. Thus, it will cause the PoE PSE and PD not to be compatible with each other in the applications. For example, an end-span designed PoE switch cannot power on the remote mid-span only wireless access point. But most of the time, the installers would not exactly know what the remote PSE devices are. PLANET POE-TESTER+ checks your UTP cable for power and identifies its source, mid-span, end-span or mid-span + end-span. Make sure at the end of UTP cable there is existence of PoE, and then the next step is to check if the PD is compatible with the PSE, or it is a malfunctioned PD.

2. PRODUCT FEATURES

- Quickly tests RJ45 outlet for Power over Ethernet existence
- Two LEDs indicate the PoE standards and types of PSE (power source equipment)
  - 802.3af PoE
  - 802.3at PoE+
  - End-span PoE switch
  - Mid-span PoE injector / injector hub
  - 4-pair, end-span + mid-span 802.3bt PoE++ switch / injector
- Compliant with IEEE 802.3bt/at/af PoE standard
- Compact size, Plug and Play design

3. PRODUCT SPECIFICATIONS

3.1 MAIN COMPONENTS

N/A

3.2 FUNCTION SPECIFICATIONS

Product	POE-TESTER+
Hardware Specifications	
Interface	1 x RJ45 TP connectors ■ PoE Power Input (PD)
LED indicators	■ Left Amber - 802.3at PoE+ End-span / Pins 1,2,3 and 6 - The PoE standard is detected as 802.3at PoE+ and voltage is detected on pair 1,2,3,6 ■ Left Green - 802.3af PoE End-span / Pins 1,2,3 and 6 - The PoE standard is detected as 802.3af PoE and voltage is detected on pair 1,2,3,6 ■ Right Amber - 802.3at PoE+ Mid-span / Pins 4, 5,7 and 8 - The PoE standard is detected as 802.3at PoE+ and voltage is detected on pair 4,5,7,8 ■ Right Green - 802.3af PoE Mid-span / Pin 4,5,7 and 8 - The PoE standard is detected as 802.3af PoE and voltage is detected on pair 4,5,7,8 ■ Both Amber - 4-pair 802.3bt PoE++ or 4-pair 802.3at PoE+ - The PoE standard is detected as IEEE 802.3bt PoE++ or PoH and voltage is detected on all pairs ■ Both Green - 4-pair 802.3af PoE or non-standard force mode PoE - The PoE standard is detected as IEEE 802.3af PoE or non-standard PoE and voltage is detected on all pairs
Power input	IEEE 802.3af PoE compliant with DC voltage within 37~57V IEEE 802.3at PoE+ and IEEE 802.3bt PoE++ compliant with DC voltage within 42~57V
Dimensions (W x D x H)	23 x 70.1 x 22 mm
Weight	24g
Environments	

Operating	Temperature: 0~50 degrees C Relative Humidity: 5~95% (non-condensing)
Storage	Temperature: -10 ~ 60 degrees C Relative Humidity: 5 ~ 95% (non-condensing)
Standards Compliance	
Standards Compliance	IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus IEEE 802.3bt Power over Ethernet Plus Plus
Emission	CE Compliance

3.3 PHYSICAL SPECIFICATIONS:

Dimensions:

23 x 70.1 x 22mm (W x D x H)

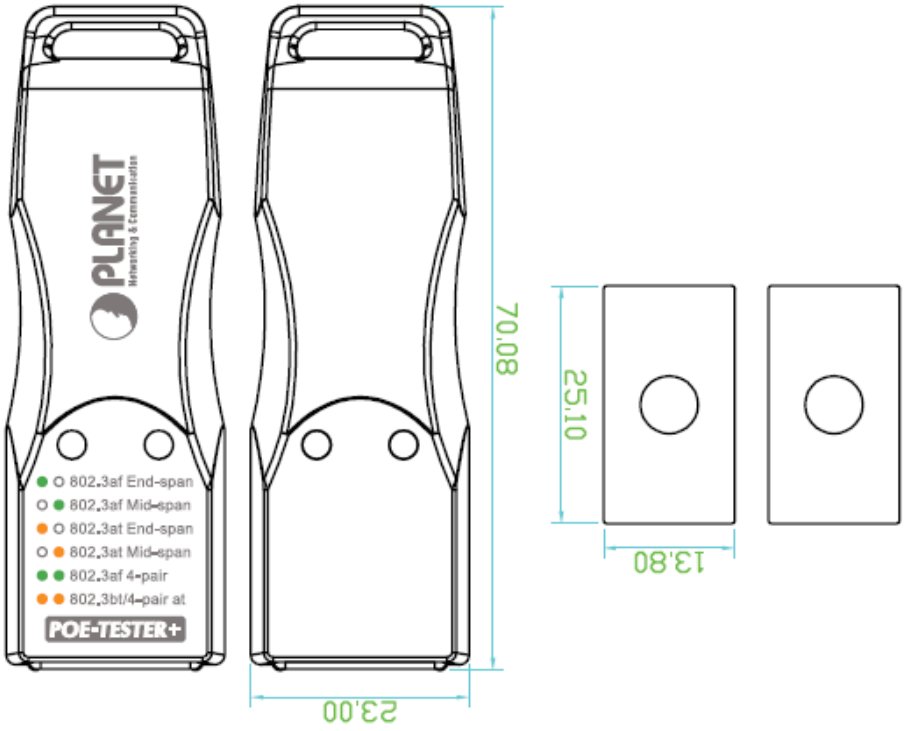
Weight:

24g

LED Definition:

PoE PSE Modes	LED Color	Function
802.3at / PoE+ End-span	Left **Amber**	The PoE voltage is detected on **pair 1,2,3,6**
802.3af PoE End-span	Left Green	The PoE voltage is detected on **pair 1,2,3,6**
802.3at PoE+ Mid-span	Right **Amber**	The PoE voltage is detected on **pair 4,5,7,8**
802.3af PoE Mid-span	Right Green	The PoE voltage is detected on **pair 4,5,7,8**
4-pair 802.3bt PoE++ or 4-pair 802.3at PoE+	Both **Amber**	The PoE voltage is detected on **all pairs**
4-pair 802.3af PoE or non-standard force mode PoE	Both Green	The PoE voltage is detected on **all pairs**

Diagram:



3.4 ENVIRONMENTAL SPECIFICATIONS

Operating:

Temperature: 0~50 degrees C

Relative Humidity: 5% ~ 95% (non-condensing)

Storage:

Temperature: -10 ~ 60 degrees C

Relative Humidity: 5% ~ 95% (non-condensing)

3.5 ELECTRICAL SPECIFICATIONS

Power Requirements:

IEEE 802.3af PoE compliant with DC voltage within 37~57V

IEEE 802.3at PoE+ and IEEE 802.3bt PoE++ compliant with DC voltage within 42~57V

3.6 REGULATORY COMPLIANCE

FCC Part 15 Class A, CE

3.7 RELIABILITY

MTBF > 50,000Hrs

3.8 BASIC PACKAGING

☑ **The POE-TESTER+** x1

3.9 PACKING INFORMATION

Dimensions (W x D x H):	106 x 136 x 23mm
Weight:	52g
Carton Dimensions (W x D x H)	392 x 268 x 230mm
Quantity	50 pcs in one carton

APPENDIX:

- Package design