SPECIFICATION FOR APPROVAL

CUSTOMER : _____

PRODUCT NAME : 30W High-power Passive PoE Splitter

PRODUCT MODEL : PD4820 / PD4820G

BRAND : TST（OEM/ODM）

DATE : 2024 / 06 / 26

DRAWING			CUSTOMER APPROVE
DESIGNED	CHECKED	APPROVED	
VANNE	YOUTRONG	Mark	
DATE	2024 / 06 / 26		Please return the visa after confirmation, thank you!

Shenzhen Tstone Technology Co. ,Ltd
Mobile: 13640991523
http: www.tstpoe.com
Add：Room 903, Building B-14C, First Industrial Zone, Baihua Community, Guangming Street, Guangming District, Shenzhen, China

PRODUCT: 30W High-power Passive PoE Splitter

MODEL: PD4820 / PD4820G

What Is PoE

POE (Power Over Ethernet) refers to the technology that can transmit data signals for some IP-based terminals (such as IP phones, wireless LAN access point APs, IP cameras, etc.) without any changes to the existing Ethernet Cat.5 cabling infrastructure, and can also provide DC power supply for such devices.

A complete POE system consists of two parts: Power Sourcing Equipment (PSE) and Powered Device (PD). The PSE device is the device that powers the Ethernet client device and is also the manager of the entire POE (Power-over-Ethernet) process. The PD device is the PSE load that receives the power supply, that is, the client device of the POE system. Based on the IEEE 802.3af/at standard, the two establish information about the connection status, device type, power consumption level and other aspects of the PD of the power receiving device, and use this as the basis for PSE to supply power to the PD through Ethernet.

The Principle of POE

The standard Category 5 cable has four twisted pairs, but only two pairs are used in l0M BASE-T and 100M BASE-T. IEEE80 2.3af/at allows two uses: (1) When the idle pin is used for power supply, pins 4 and 5 are connected as the positive pole, and pins 7 and 8 are connected as the negative pole. (2) Pin 1 and pin 2 are connected as the positive pole, and pin 3 and 6 are connected as the negative pole.

The Advantages of POE

1. Save labor and material costs. Compared with the traditional wiring method of weak current engineering, POE only needs to install a network cable to make the IP equipment work normally. In many cases, POE is more advantageous in the places where it is difficult to deploy AC power. As the number of network devices in the system increases, the use of POE eliminates the need for local power supply for the equipment, which will greatly reduce deployment costs and simplify their manageability.

2. Easy to install and manage. Customers can autonomously and securely mix PoE devices and legacy devices within the system, and can coexist with existing Ethernet cables. PoE devices are compatible with the management system of existing network devices and can share the management platform with existing network devices.

3. Good security. The Power Sourcing Equipment （PSE） in a PoE system will only supply power to the Powered Device （PD） that needs to be powered. Only when the Device that needs to be powered is connected and the protocol is successfully identified, the power supply equipment will have a voltage output and supply power to the powered device, thus eliminating the risk of leakage and short circuit on the line.

Product Introduction

PD4820G is a 30W high-power gigabit non-standard POE Splitter, also known as Passive PoE Splitter, which belongs to Passive POE products and can only work in Passive POE systems.

POE products can be divided into two categories according to their standards: international standard POE and non-standard POE, that is, Active POE products and Passive POE products. POE products with h

andshake identification protocol function and in line with IEEE802.3af/at/bt international standard protocol are called Active POE products. Conversely, POE products that do not have handshake identification protocol functions and do not conform to IEEE802.3af/at/bt international standard protocols are called Passive POE products.

PD4820G is a Passive POE signal receiving device, also known as non-standard PD device or Passive PD device. It is used in the Passive POE system, which is responsible for receiving the Passive POE signal and processing the Passive POE signal, and separating the DC current signal and network signal for IP equipment. It plays the role of a bridge, connecting Passive PSE equipment and IP equipment, so that IP equipment can work normally in the Passive POE system and be managed by the Passive POE system management platform.

30W High Power Passive POE Splitter is a series of products, the series contains two models:

PD4820: 30W High Power 100 Mbit Passive POE Splitter

PD4820G: 30W High Power Gigabit Passive POE Splitter

Product Description

The PD4820G has a POE input port, a data output port, and a DC output port. The POE input port is responsible for connecting the Passive PSE device and receiving the Passive POE signal issued by the Passive PSE device. The data port is responsible for connecting the data interface of the IP device and transmitting data to the IP device. DC output port can output DC12V MAX2.5A / DC9V MAX3.0A / DC5V MAX4.0A three optional voltage, to supply power to IP devices.

The case of PD4820G is made of environmentally friendly ABS plastic. Its tail line length is 21CM, which is convenient for easy docking with various IPC devices. The default DC connector is 5.5*2.1mm male head, and other specifications can also be customized, such as 5.5*2.5mm/4.0*1.7mm/3.5*1.35mm. RJ45 crystal head is 8-pin pure copper crystal head of high quality, data transmission smooth without stagnation.

PD4820G is a non-standard POE Splitter, which does not conform to IEEE802.3af/at POE protocol and does not have handshake recognition function. Therefore, PD4820G can only connect to the non-standa

rd PSE device, accept the non-standard POE signal of forced power supply, and separate the non-standard POE signal to the DC current signal and network signal. It can accept Passive POE signal input with wide voltage DC12-56V, and output three optional voltages DC12V MAX2.5A/DC9V MAX3.0A/DC5V MAX4.0A. Support power supply pin RJ45+RJ78-. Its transmission rate can reach 1000M, and compatible with 10M/100M/1000M adaptive transmission. It has an effective transmission distance of 30-100 meters, depending on the voltage of the input POE signal, the transmission distance is different, and it supports 24 hours of uninterrupted work.

PD4820G is a Passive POE separator, the motherboard adopts high-speed and low noise design scheme. The main board circuit is designed to protect against lightning, short circuit, overload and high temperature, and the EMC parameters can meet the requirements of IEC 61000-4-2/3/4/5/6 standard. The products have obtained CE, FC, Rohs and other certifications, and sell well in more than 100 countries and regions around the world.

Product Features

- Support all Passive POE signal input
- Input: Passive PoE wide voltage DC12-56V
- Output: DC12V MAX2.5A or DC9V MAX3.0A / DC5V MAX4.0A Optional
- 10M/100M/1000M adaptive transmission speed
- Only Power Pin RJ45+ RJ78- is supported
- Small size, less space, easy to install
- 4KV surge protection
- With overheat protection, overvoltage protection, overload protection, short circuit protection
- The conversion efficiency is over 90%
- EMC complies with IEC 61000-4-2/3/4/5/6 standards
- Environmentally friendly ABS plastic shell

Specifications

Items	Specifications	
Product Name	30W High-power Passive POE Splitter	
Product Model	PD4820	PD4820G
PoE Standard	/	
Input Voltage	Passive POE: DC12-56V	
Output	DC12V MAX2.5A or DC9V MAX3.0A / DC5V MAX4.0A Optional (Other Voltage can be customized)	
Conversion Efficiency	≧90%	
PoE Pin	Only RJ45+ RJ78- is supported	
Conversion Mode	/	
Data Rate	10M/100M Adaptive	10M/100M/1000M Adaptive
Transmission Distance	30-100 meters (depending on the voltage of passive poe)	
Surge Protection	4KV	
Circuit Protection	Short-circuit Protection Overcurrent Protection Overvoltage Protection Overheating Protection	
LED Indicator	1* Output Power Indicator 1* POE Indicators	
Interface	1* POE Input Port (RJ45 femal) 1* Data Output Interface （RJ45 male） 1* DC Interface (5.5*2.1mm male)	
Material	ABS plastic material	
Color	Matte black	
Accessories	/	
EMC	IEC 61000-4-2/3/4/5/6	
Temperature	-20～60℃ For Operating -30～80℃ For Storage	
Humidity	RH95% MAX (Non-condensation)	

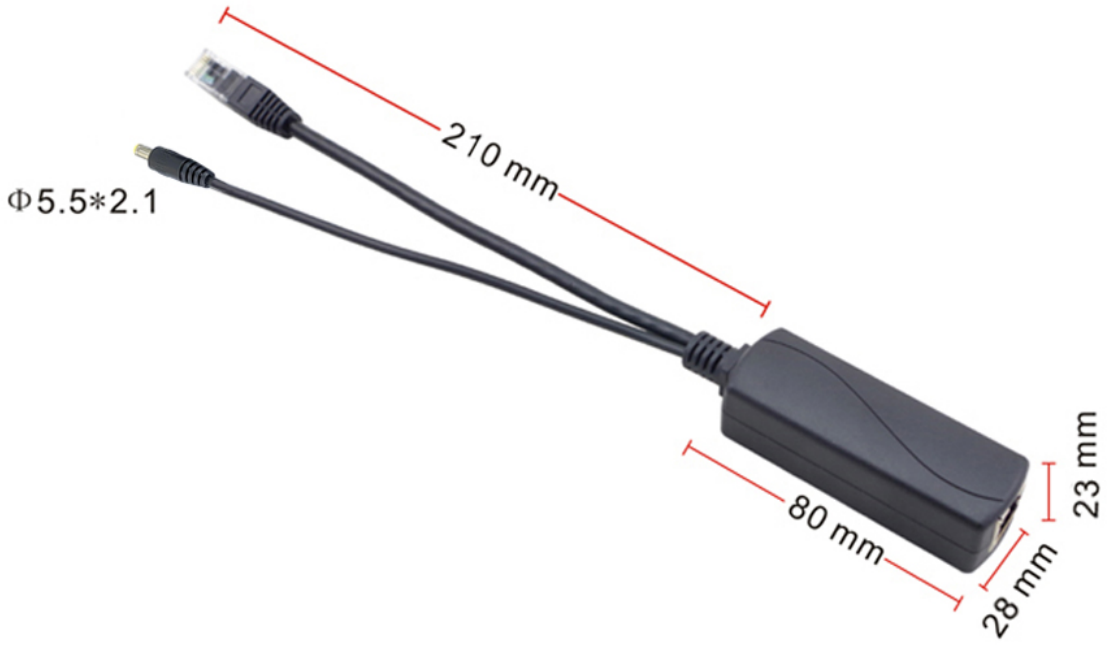
Weight	N.W: 48g G.W: 58g
Dimension	Product Dimension: 89mm*31mm*26mm + 210mm (tail cable) Packing Dimension: 185mm*46mm*31mm
Package	White Carton or Plastic Bag

Product Applications

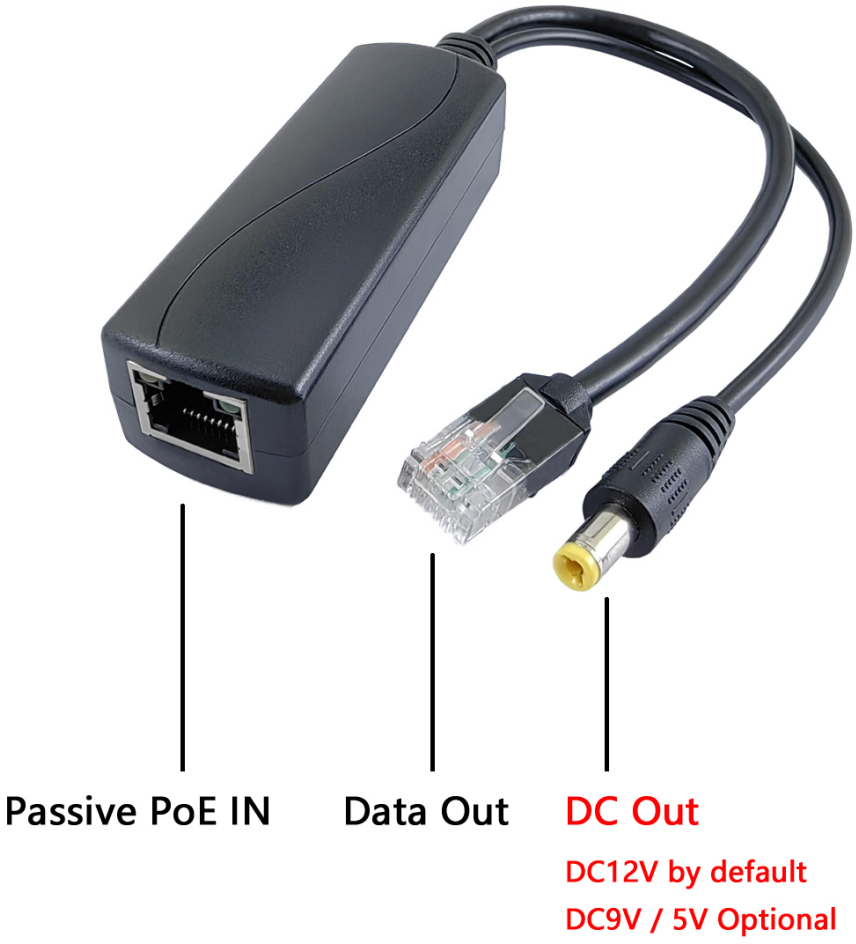
PD4820G is a high-power passive POE separator, specially designed for passive PSE equipment, such as passive POE power supply, passive POE combiner, passive POE switch, passive POE midspan, etc. PD4820G can accept all 12-56V passive POE signals provided by passive PSE equipment, and process these signals to separate DC12V current signals and network signals, and supply IP equipment for use. Therefore, PD4820G is only suitable for passive POE systems and cannot work in standard POE systems.

PD4820G is widely used in CCTV, building intercom, access control system, lighting, wireless coverage and other industries. The product has been put into the market for many years, and has performed well in the field of passive POE applications, which has been widely favored and praised by customers around the world.

Dimensions



Interface Definition



Application topology

Application Scenarios

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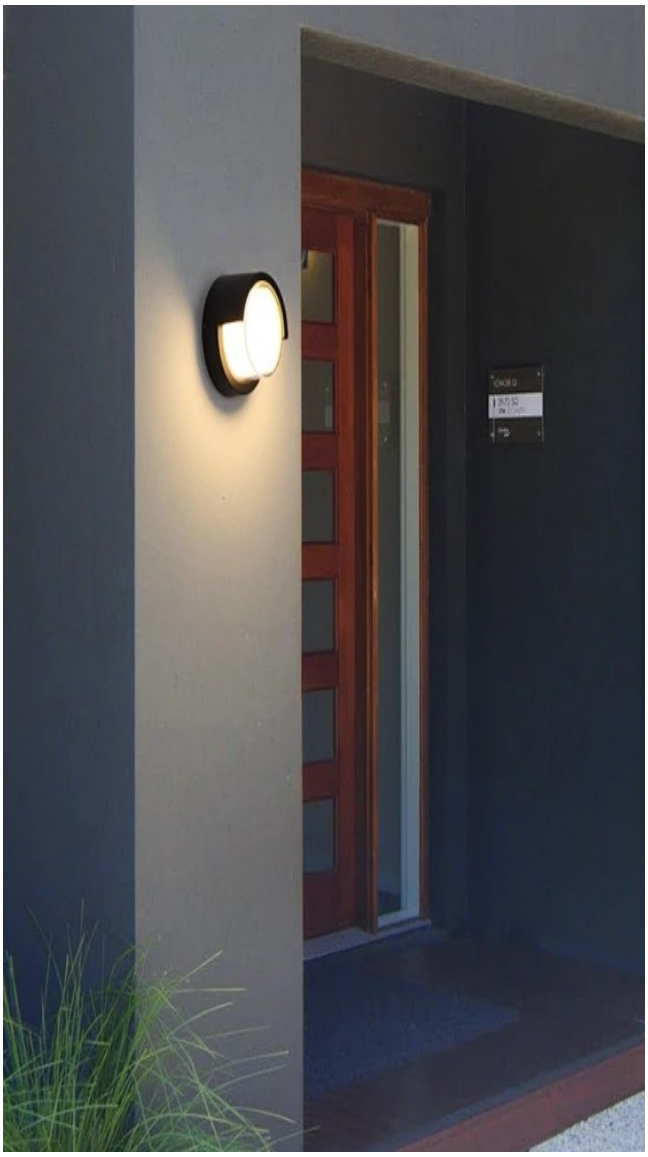
<tr><td rowspan="2">  </td><td>  </td></tr>
<tr><td>CCTV</td></tr>
<tr><td>Lamp</td><td>  </td></tr>
<tr><td></td><td>Building Intercom</td></tr>
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Product Detail

	
	
	

Product Package

Package 1
White Carton
Package Size: 185*46*31mm (L*W*H)

Package 2
Plastic Bag
Package Size: 25*7*24mm (L*W*H)

Package List	
Items	**Quantity**
PD4820G	1
Operation Manual	1