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Altronix Pace1KL12S Ethernet Media Adaptors Power Splitters Installation Guide

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Contents

Models Include:

Pace1KL12S
– Single Pair Ethernet Media Adaptor
– IEEE 802.3cg Ethernet, 10Base-T1L SPE over UTP
– 12VDC Power Output

Pace1KL24S
– Single Pair Ethernet Media Adaptor
– IEEE 802.3cg Ethernet, 10Base-T1L SPE over UTP
– 24VDC Power Output

Installation Guide

CE

Rev. 040224

Altronix®
More than just power.™

Installing Company: _____ Service Rep. Name: _____

Address: _____ Phone #: _____

Overview:

Altronix Pace1KL12S and Pace1KL24S are SPE (Single Pair Ethernet) media adaptors/splitters that enable connecting 10Base-T1L, IEE802.3cg compliant devices such as Security/Industrial/BMS/Elevators/HVAC Controllers and sensors, etc. to an Ethernet network. When used in conjunction with Pace1KR, the units provide T1L data & 12V or 24V power separately to power the remote device, thus eliminating the need for local power. Long distance headend to remote-end device cabling can be achieved to over 1km (1,000m, 3,280 ft.).

In addition to new SPE (UTP) Ethernet network installations, upgrading of legacy networks, i.e. LONworks, RS485, 4-20ma Control Loops, etc. can be achieved by using the existing two wire cabling, thus saving rip-out & reinstallation costs.

Operationally, the Pace1KR passes network data & POE power from the POE switch via UTP up to 1km (1,000m, 3,280 ft.) to the Pace1KL12S or Pace1KL24S, which then passes the T1L data to the device and separately provides 12V or 24V power to the device.

Features:

Agency Listings:
• CE European Conformity.
Input:
• Powered by Pace1KR.
SPE (Single Pair Ethernet) Connection:
• Wire type: twisted pair (2-wire, UTP or
shielded, 16/2 AWG or higher).
• Speed: 10Mbps
• Distance: > 1km (1,000m, 3,280 ft.).
Power Output:
• Pace1KL12S and Pace1KL24S: 20W.
• Available power depends on distance & wire gauge.
See Altronix online voltage drop calculator & allow for 10V cable drop
LED Indicators:
• **Red LED:** Output power ON.

Environmental:
• Operating and storage temperature:
– 40ºC to 75ºC (– 40ºF to 167ºF).
• Relative humidity:
20 to 85%, non-condensing.
Applications:
• Provide SPE (single pair Ethernet) over UTP (twisted pair) or 16/2 AWG or higher wire up to 1km (1,000m, 3,280 ft.).
• Upgrade LONworks, RS485, 4-20mA control loops to Ethernet over existing wire pair.
• Extends Network link distance in an industrial environment and provides 12VDC or 24VDC to power compatible devices.
• Building Automation, Surveillance & Security, BMS & HVAC, Elevators.
• Utilize twisted pair for new installations or retrofit of IP devices over existing twisted pair cabling.
Mechanical:
• Dimensions (W x L x H approx.): 3.8" x 2.5" x 1" (96.52mm x 63.5mm x 25.4mm).

Installation Instructions:

Wiring methods shall be in accordance with the National Electrical Code/NFPA 70/ANSI, and with all local codes and authorities having jurisdiction. Wiring should be UL Listed and/or Recognized wire suitable for the application. Pace1KL12S and Pace1KL24S are not intended to be connected to outside plant leads and should be installed indoors within the protected premises. They are intended for indoor use only.

1. Secure Pace1KL12S or Pace1KL24S to the desired mounting surface with a proper fastening device utilizing the unit's mounting hole (Fig. 1a, pg. 3). Unit should be mounted in proximity to T1L device.

2. Connect twisted pair (2-wire, UTP or shielded) or 16/2 AWG or higher wire from Pace1KR Receiver to [T1L Data Input +, –] terminal of Pace1KL12S or Pace1KL24S (Fig. 1, 2, pg. 3).

3. Connect UTP (twisted pair) or 16/2 AWG or higher wire from T1L device's UTP Data Input to Pace1KL12S or Pace1KL24S connector marked [T1L Data Output +, –] (Fig. 1, 2, pg. 3).

4. Connect Power Input of T1L device to connector marked [12VDC Output +, –] on Pace1KL12S or [24VDC Output +, –] on Pace1KL24S (Fig. 1, 2, pg. 3).

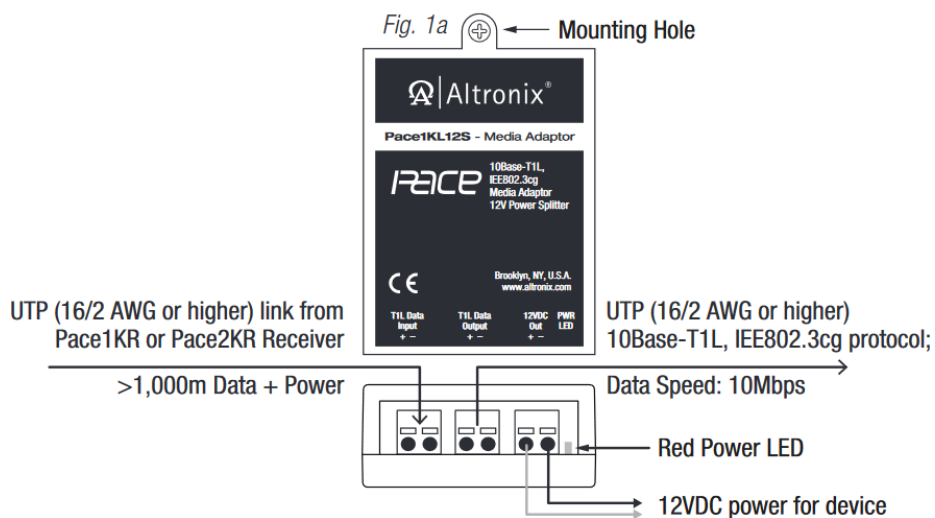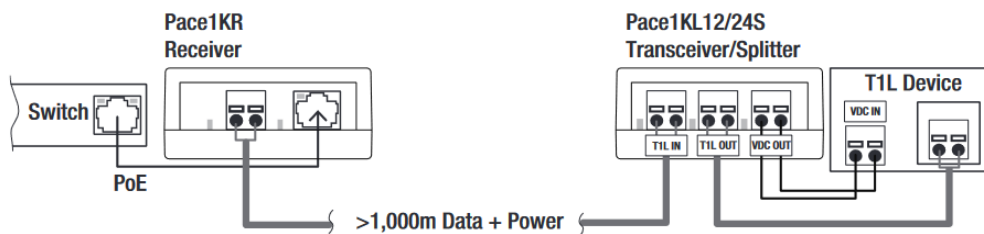Fig. 1 – **Pace1KL12S. Pace1KL24S is similar with 24VDC power output**

Fig. 1a ← Mounting Hole

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Pace1KL12S - Media Adaptor

PACE 10Base-T1L,
IEE802.3cg
Media Adaptor
12V Power Splitter

CE   Brooklyn, NY, U.S.A.
www.altronix.com

T1L Data Input +, –   T1L Data Output +, –   12VDC Out +, –   PWR LED

UTP (16/2 AWG or higher) link from Pace1KR or Pace2KR Receiver
→ >1,000m Data + Power

UTP (16/2 AWG or higher) 10Base-T1L, IEE802.3cg protocol;
Data Speed: 10Mbps
Red Power LED
12VDC power for device

Typical Application:

Fig. 2

Technical Specifications:

Parameter	Description
Connections	UTP (2-wire) screw terminals for 10Base-T1L, IEEE 802.3cg compliant device connection.
Input power requirements	Pace1KR. 2W.
Indicators	**Red Power LED:** Output power ON
Environmental Conditions	**Operating Ambient Temperature:** − 40ºC to 75ºC (− 40ºF to 167ºF). **Storage Temperature:** − 40ºC to 75ºC (− 40ºF to 167ºF). **Relative Humidity:** 20 to 85%, non-condensing. **Operating Altitude:** − 304.8 to 2,000m.
Regulatory Compliance	CE European Conformity.
Weights (approx.)	Product: 0.22 lb. (0.1 kg) ǀ Shipping: 0.4 lb. (0.18 kg)

Maximum Length of Cable Type vs. Total Power Consumption

Wire type	Total Power Consumption	Max. Data Distance	Max. Power Distance
18 AWG (2-wire/UTP)	7.5W	1,000m (3,280 ft.)	1,996m (6,548 ft.)
	15W	1,000m (3,280 ft.)	998m (3,274 ft.)
	25W	1,000m (3,280 ft.)	269m (882 ft.)
16 AWG (2-wire/UTP)	7.5W	1,000m (3,280 ft.)	3,169m (10,396 ft.)
	15W	1,000m (3,280 ft.)	1,584m (5,196 ft.)
	25W	1,000m (3,280 ft.)	427m (1,400 ft.)

Altronix is not responsible for any typographical errors.

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website: **www.altronix.com** | e-mail: **info@altronix.com** | Lifetime Warranty
IIPace1KL12S and Pace1KL24S D02X

Documents / Resources

Altronix Pace1KL12S Ethernet Media Adaptors Power Splitters [pdf] Installation Guide
Pace1KL12S Ethernet Media Adaptors Power Splitters, Pace1KL12S, Ethernet Media Adaptors Power Splitters, Media Adaptors Power Splitters, Adaptors Power Splitters, Power Splitters, Splitters

References

- **User Manual**