



Long Distance Ethernet Solution

Pace1KL Series

Single Pair Ethernet Media Adapters

IEEE 802.3cg Ethernet, 10Base-T1L SPE over UTP

Models Include:

Pace1KL

- Powered by PoE midspan or endspan

Pace1KLDC

- Powered via 12/24VDC or 12V/24VAC power source

Installation Guide



Rev. 080425



More than just power.™

Installing Company: _____ Service Rep. Name: _____

Address: _____ Phone #: _____

Overview:

Altronix Pace1KL Series are SPE (Single Pair Ethernet) media converter/adapters that enable connecting 10Base-T1L, IEEE802.3cg compliant devices such as Security/Industrial/BMS/Elevators/HVAC Controllers and sensors, etc. to an Ethernet network. 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, BACNET, 4-20mA Control Loops, etc. can be achieved by using the existing two wire cabling, thus saving rip-out & reinstallation costs.

Operationally, the Pace1KL is connected to a POE midspan/endspan switch at the headend. Pace1KLDC is powered via 12/24VDC or 12/24VAC power source. They both pass network data (10BaseT) via single pair up to 1km (1,000m, 3,280 ft.) to the remote T1L device.

Features:

Agency Listings:

- CE European Conformity.

Input:

- **Pace1KL:** Powered by PoE midspan or endspan.
- **Pace1KLDC:** Powered by 12/24VDC or 12V/24VAC power source

SPE (Single Pair Ethernet) Connection:

- Wire type: twisted pair (2-wire, UTP, 16/2 AWG).
- Speed: 10Mbps
- Distance: 1km (1,000m, 3,280 ft.).
- Polarity independent.

Ethernet Connection:

- Connectivity: RJ45, auto-crossover.
- Wire type: 4-pair CAT5e or higher.
- Distance: up to 100m from midspan.
- Speed: 10/BaseT, half/full duplex, auto negotiation.

LED Indicators:

- **Green Link LED (next to Ethernet link):**
Indicates Data transmission.
- **Yellow and Green LED (RJ45 jack):**
IP Link status, 10/Base-T/active.

Applications:

- Upgrade LONworks, RS485, BACNET, 4-20mA control loops to Ethernet over existing wire pair.
- Industrial infrastructure control and remote sensor over extended 1000m distances.
- Building Automation, Surveillance & Security, BMS & HVAC, Elevators.
- Utilize twisted pair for new installations or retrofit of IP devices over existing twisted pair cabling.

Environmental:

- Operating and storage temperature:
– 40°C to 75°C (– 40°F to 167°F).
- Relative humidity:
20 to 85%, non-condensing.

Mechanical:

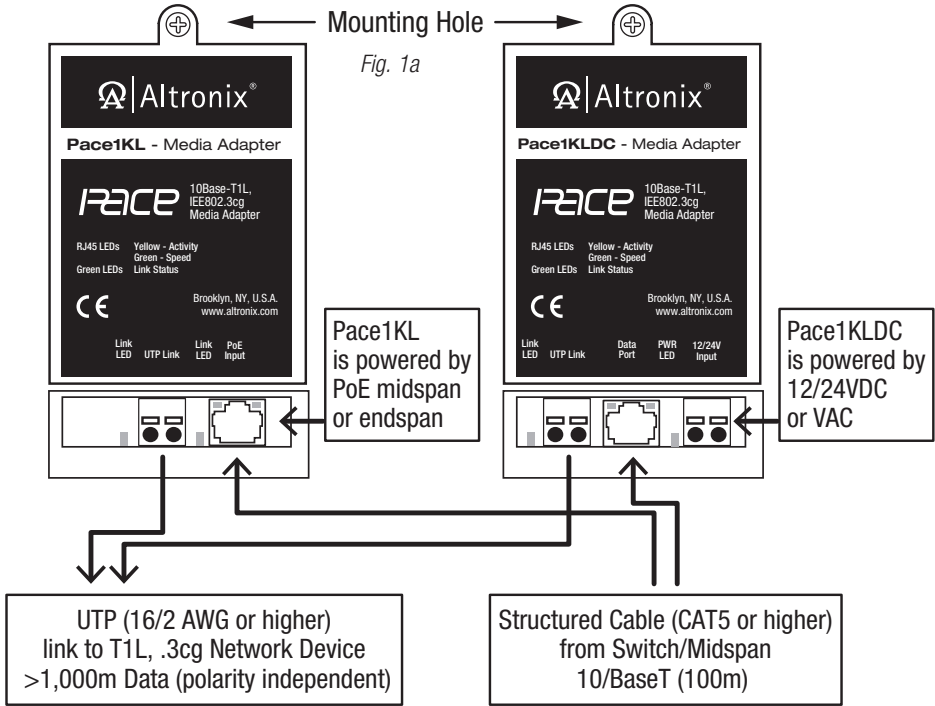
- Dimensions (W x L x H approx.):
3.8" x 2.5" x 1" (96.52mm x 63.5mm x 25.4mm).

Installation Instructions:

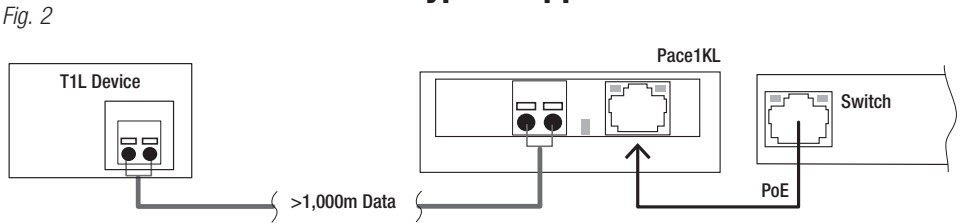
Wiring methods shall be in accordance with the National Electrical Code/NFPA 70/ANSI, and with all local codes and authorities having jurisdiction. Wiring should be UL Listed and/or Recognized wire suitable for the application. Pace1KL and Pace1KLDC are not intended to be connected to outside plant leads and should be installed indoors within the protected premises. They are intended for indoor use only.

1. Secure Pace1KL/Pace1KLDC 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 ethernet switch/network.
2. Connect structured cable from ethernet midspan or endspan device to RJ45 jack marked [PoE Input] (*Fig. 1, 2, 3, pg. 3*).
3. Connect UTP to connector marked [UTP Link] (*Fig. 1, 2, 3, pg. 3*).
4. **Pace1KLDC Only:** Connect 12-24 VDC or VAC power source to connector marked [12/24VDC Input] (*Fig. 1, 3, pg. 3*).

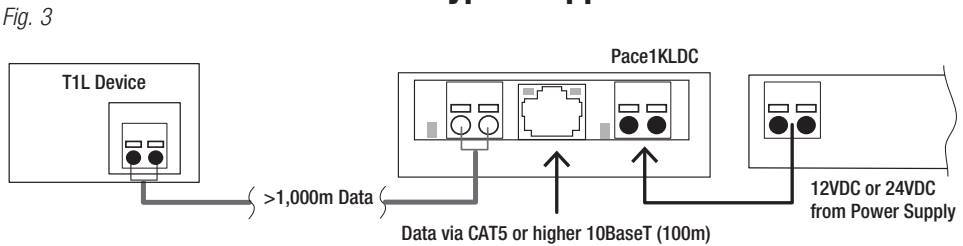
Fig. 1



Pace1KL Typical Application:



Pace1KLDC Typical Application:



Technical Specifications:

Parameter	Description
Connections	RJ45 for CAT5/6 or higher ethernet link. UTP (2-wire) screw terminals for 10Base-T1L, IEEE 802.3cg compliant device connection (polarity independent).
Input power requirements	Pace1KL: Midspan or switch port connected. Pace1KLDC: 12/24VDC or 12V/24VAC. 2W power
Indicators	Yellow (RJ45 connector): On - Link, Off - No Link, Blinking - Activity. Green (RJ45 connector): On - 10Base-T. Green Link LEDs: Link active. Red Power LED (Pace1KLDC): 12/24VDC or 12V/24VAC.
Environmental Conditions	Operating Ambient Temperature: – 40°C to 75°C (– 40°F to 167°F). Storage Temperature: – 40°C to 75°C (– 40°F to 167°F). 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) Shipping: 0.4 lb. (0.18 kg)

Altronix is not responsible for any typographical errors.

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II Pace1KL Series H01Y

