



Long Distance Ethernet Solution

Pace3KL

- Three Port Single Pair Ethernet Media Adapter/Switch
- IEEE 802.3cg Ethernet, 10Base-T1L SPE over UTP

Installation Guide



More than just power.™

Rev. 040424

Installing Company: _____ Service Rep. Name: _____

Address: _____ Phone #: _____

Overview:

Altronix Pace3KL is a SPE (Single Pair Ethernet) 3-port T1L Media Adapter/Switch that enables connecting up to three (3) 10Base-T1L, IEE802.3cg compliant devices such as Security/Industrial/BMS/Elevators/HVAC Controllers and sensors, etc. to an Ethernet network. Long distance headend switch to remote-end device cabling can be achieved to over 1km (1,000m, 3,280 ft.). The Pace3KL can be used in a typical star configuration or as a multi-point dropoff node configuration.

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 Pace3KL is connected to a PoE midspan/endspan switch at the headend and can be powered by the PoE port or 12/24VDC power supply. Pace3KL passes network data from the switch via UTP up to 1km (1,000m, 3,280 ft.) to the remote T1L devices.

Features:

Agency Listings:

- UL/cUL Listed for Audio/Video, Information and Communication Technology Equipment (UL 62368-1).
- CE European Conformity.

Input:

- Can be powered either by
 - PoE midspan or endspan or
 - 12/24VDC power supply (1.25W; 105mA @12VDC, 51mA @ 24VDC).

If both power sources are used, external 12/24VDC power supply will be preferred to optimize power usage.

SPE (Single Pair Ethernet) Connection:

- Three (3) 10Base-T1L ports.
- Wire type: twisted pair (2-wire, UTP, 16/2 AWG or higher).
- Speed: 10Mbps
- Distance: 1km (1,000m, 3,280 ft.).

Ethernet Connection:

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

LED Indicators:

- **Yellow and Green LED (RJ45 jack):**
IP Link status, 10/100Base-T/active.

Environmental:

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

Applications:

- Upgrade LONworks, RS485, 4-20mA control loops to Ethernet over existing wire pair.
- Industrial infrastructure control and remote sensor over extended 1,000m distances.
- 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.):
3.5" x 3.5" x 1" (88.9mm x 88.9mm 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.

Pace3KL is not intended to be connected to outside plant leads and should be installed indoors within the protected premises. It is intended for indoor use only.

Unit should not be mounted above 2 meters if attached by itself on an open wall.

1. Secure Pace3KL 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.

Unit should not be mounted above 2 meters if attached by itself on an open wall.

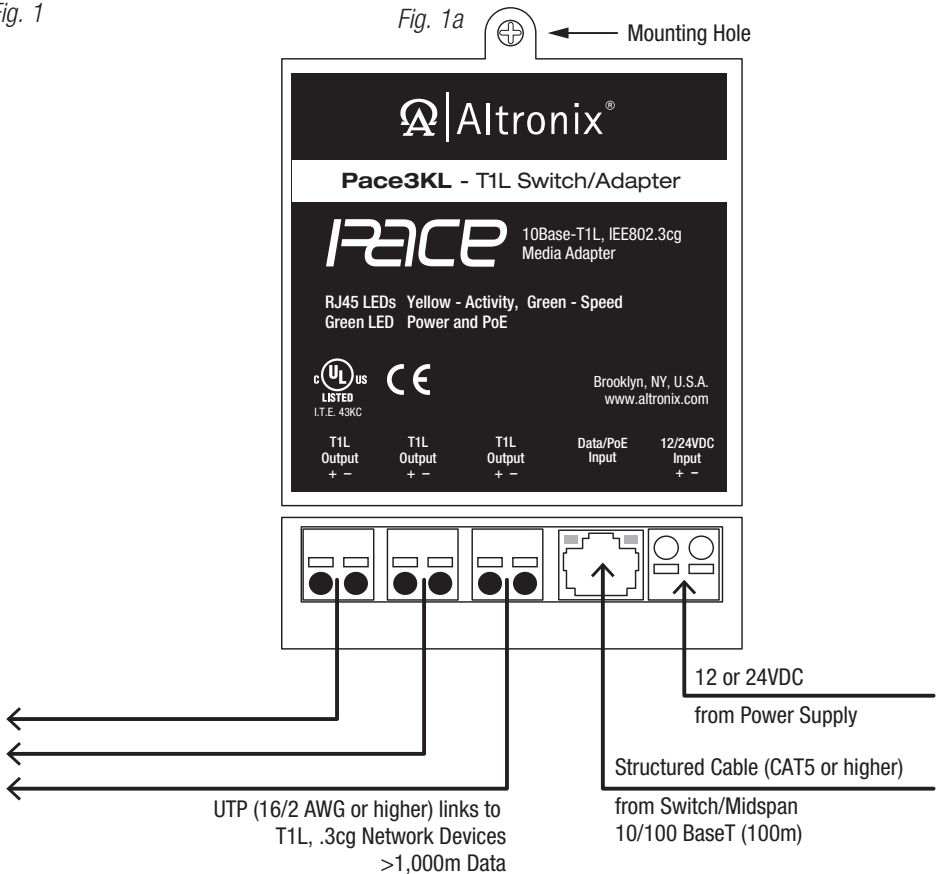
2. Connect structured cable from ethernet midspan or endspan device to RJ45 jack marked [PoE Input] (Fig. 1, pg. 3, Fig. 2, pg. 4).

3. Connect 12/24VDC power supply to connector marked [12/24VDC Input +, -], carefully observing polarity.

4. Connect UTP to connectors marked [T1L Output] (Fig. 1, pg. 3, Fig. 2, pg. 4).

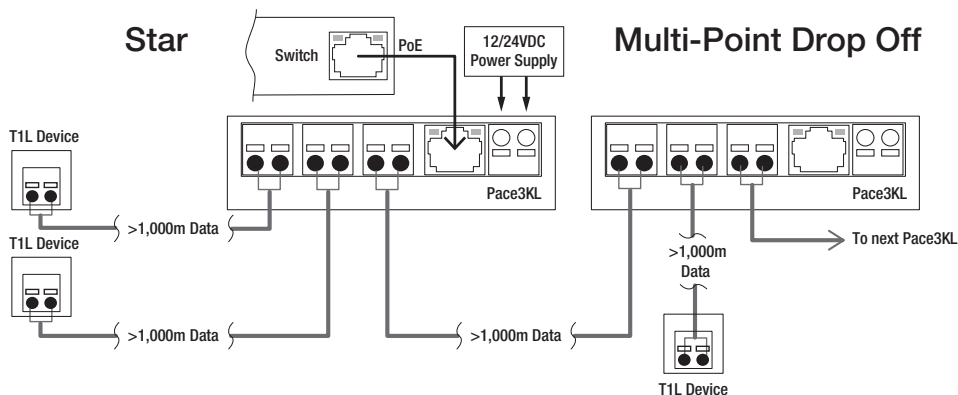
Fig. 1

Fig. 1a



Typical Application:

Fig. 2



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 devices connection.
Input power requirements	Midspan or switch port connected. 12/24VDC power supply (1.25W; 105mA @12VDC, 51mA @ 24VDC).
Indicators	Yellow (RJ45 connector): On - Link, Off - No Link, Blinking - Activity. Green (RJ45 connector): On - 100Base-TX, Off - 10Base-T.
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	UL/cUL Listed for Audio/Video, Information and Communication Technology Equipment (UL 62368-1). 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.

140 58th Street, Brooklyn, New York 11220 USA | phone: 718-567-8181 | fax: 718-567-9056
 website: www.altronix.com | e-mail: info@altronix.com | Lifetime Warranty
 IIPace3KL E15Z



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