



Pace4KL

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

Installation Guide



Overview:

Altronix Pace4KL is a SPE (Single Pair Ethernet) 4-port T1L Media Adapter/Switch that enables connecting up to four (4) 10Base-T1L, IEEE802.3cg 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.). Pace4KL can be used in a typical star configuration. Up to four (4) Pace4KL can be daisy-chained to further expand the network.

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, Pace4KL is connected to a switch at the headend and is powered by the 12/24VDC power supply. Pace4KL 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:

- 12VDC/300mA or 24VDC/200mA power supply.

SPE (Single Pair Ethernet) Connection:

- Four (4) 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.
- Link LED for each T1L port.

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 T1L IP devices over existing twisted pair cabling.

Mechanical:

- Dimensions (W x H x D approx.):
5.5" x 3.6" x 1.125"
(139.7mm x 91.4mm x 28.6mm).

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.

Pace4KL is 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. Mount Pace4KL in the desired location/enclosure (mounting hardware is included).
Unit should be mounted in proximity to ethernet switch/network.
2. Connect structured cable from ethernet midspan or endspan device to either RJ45 jack marked [Uplink 1] or [Uplink 2] (*Fig. 1, pg. 2*).
3. Connect 12/24V power supply to connector marked [- 12/24V Input +], observing polarity.
4. Connect UTP to connectors marked [Port1] through [Port4] (*Fig. 1, pg. 2*), observing polarity.

Fig. 1

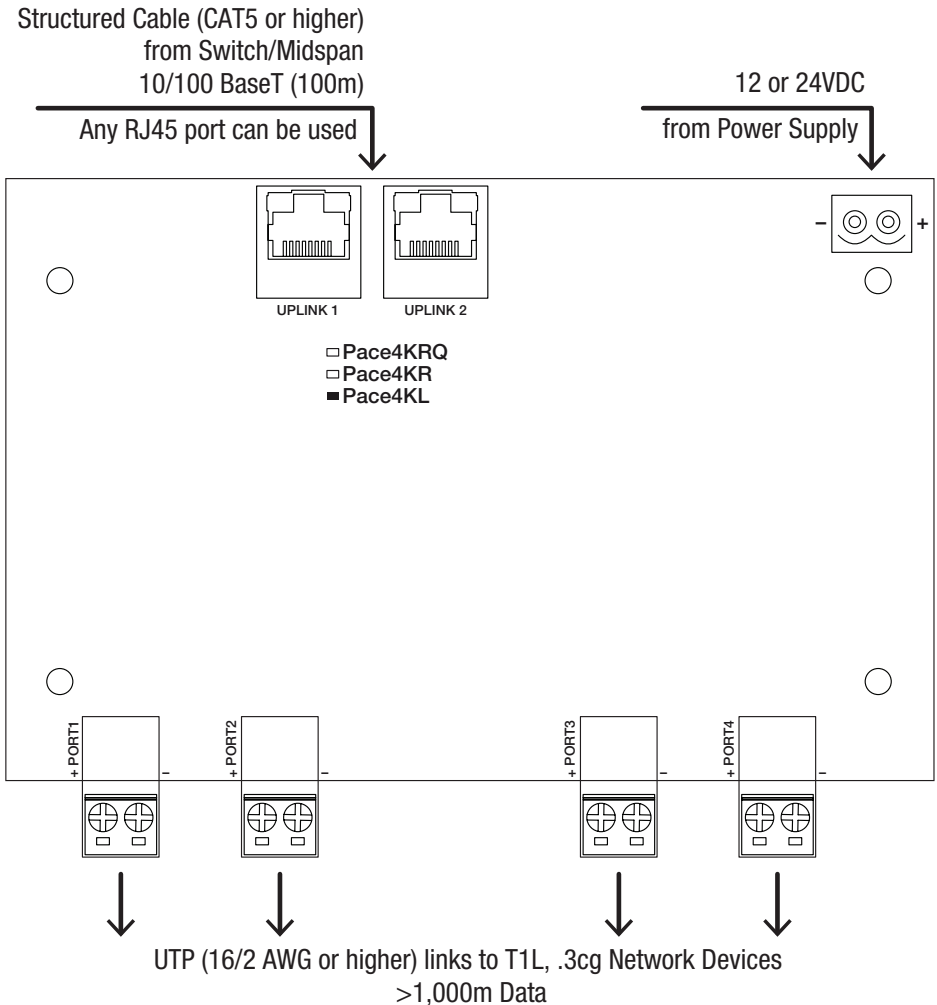
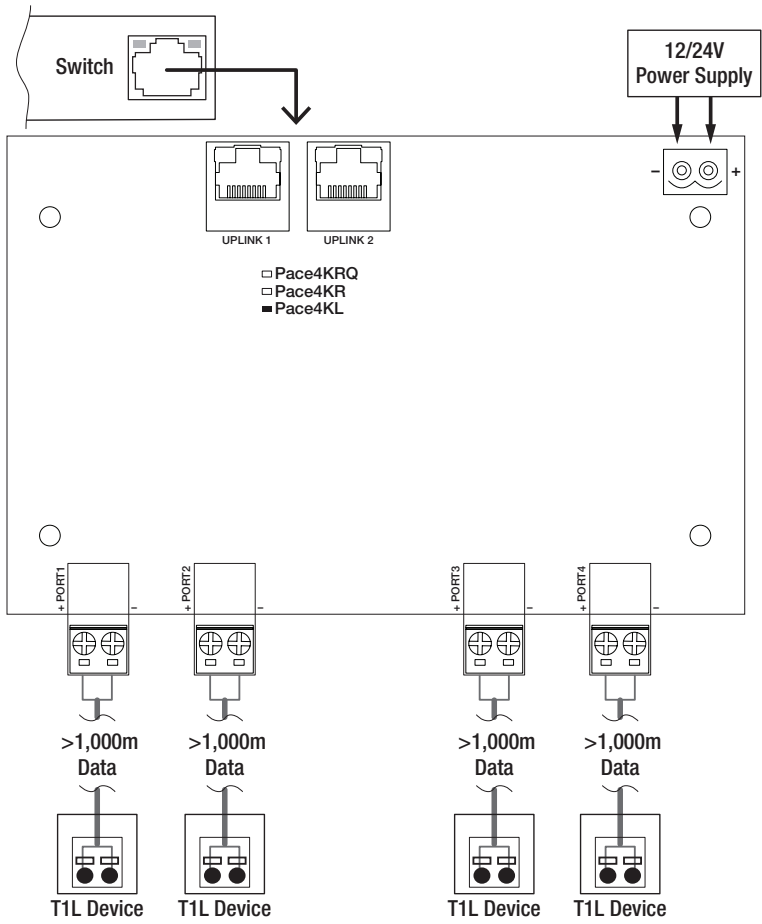


Fig. 2

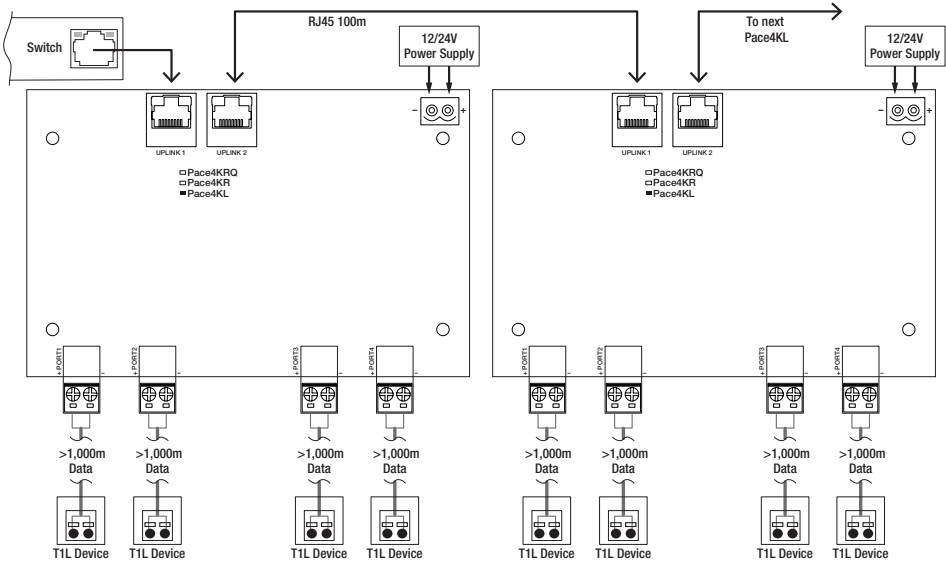
Typical Application:



Daisy-Chaining Pace4KL:

Two Uplink ports on Pace4KL allow for seamless expansion of the system without sacrificing any of data ports. Connect 4-pair CAT5e or higher cable (up to 100m) between [Uplink] terminals of up to four (4) Pace4KL adapters for up to sixteen ports.

Fig. 3



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	12/24VDC power supply (2.5W; 210mA @ 12V, 105mA @ 24V).
Indicators	Yellow (RJ45 connector): On - Link, Off - No Link, Blinking - Activity. Green (RJ45 connector): On - 100Base-TX, Off - 10Base-T. Link LED for each T1L port
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: 0.4 lb. (0.18 kg) Shipping: 0.75 lb. (0.34 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
IIPace4KL Rev. 071824 D21Z

