



# Altronix NetWay1 Single Port PoE Injector for Standard NetWork Infrastructure Installation Guide

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## NetWay1 Single Port PoE Injector for Standard Network Infrastructure Installation Guide

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### Overview:

Altronix NetWay1 and NetWay1X are single port PoE/PoE+ injectors that provide power and pass data (e.g. video) for PoE/PoE+ compliant devices. Devices may be located up to 100m from NetWay1/NetWay1X. To extend data distance for an additional 100m use NetWayXT/NetWayXTX repeater modules.

### Features:

**Agency Listings:****NetWay1:**

• UL:	
UL294*	Access Control Systems
UL294B	Power over Ethernet (PoE) for Access Control
• UL/cUL:	
UL 60950-1	Information Technology Equipment.
• cUL:	
<b>CSA Standard C22.2 No.205-M1983</b>	Signal Equipment • <b>CE</b> European Conformity.
<b>NetWay1X:</b>	
• UL/cUL:	
<b>UL 60950-1</b>	Information Technology Equipment. • <b>CE</b> European Conformity.

**Input:**

- **NetWay1:** 24VAC @ 1.2A or 24VDC @ 1.2A.
- **NetWay1X:** 24VAC @ 1.5A or 24VDC @ 1.5A.

**PoE/PoE+:**

- **NetWay1:** IEEE 802.3af (15W) compliant.
- **NetWay1X:** IEEE 802.3at (30W) and IEEE 802.3af (15W) compliant.

**Features:**

- Port status LED.
- PoE manual shutdown (For UL 60950-1 application only)  
(see Technical Specifications table pg. 4).
- Auto detection and protection of legacy non-PoE cameras/devices.
- Data rate: 10/100 BASE-T compliant.
- Compact insulated housing.

**Dimensions (W x L x H approx.):****NetWay1:**

2.5" x 3.8" x 1" (63.5mm x 96.5mm x 25.4mm).

**NetWay1X:**

3.5" x 3.5" x 1" (88.9mm x 88.9mm x 25.4mm).

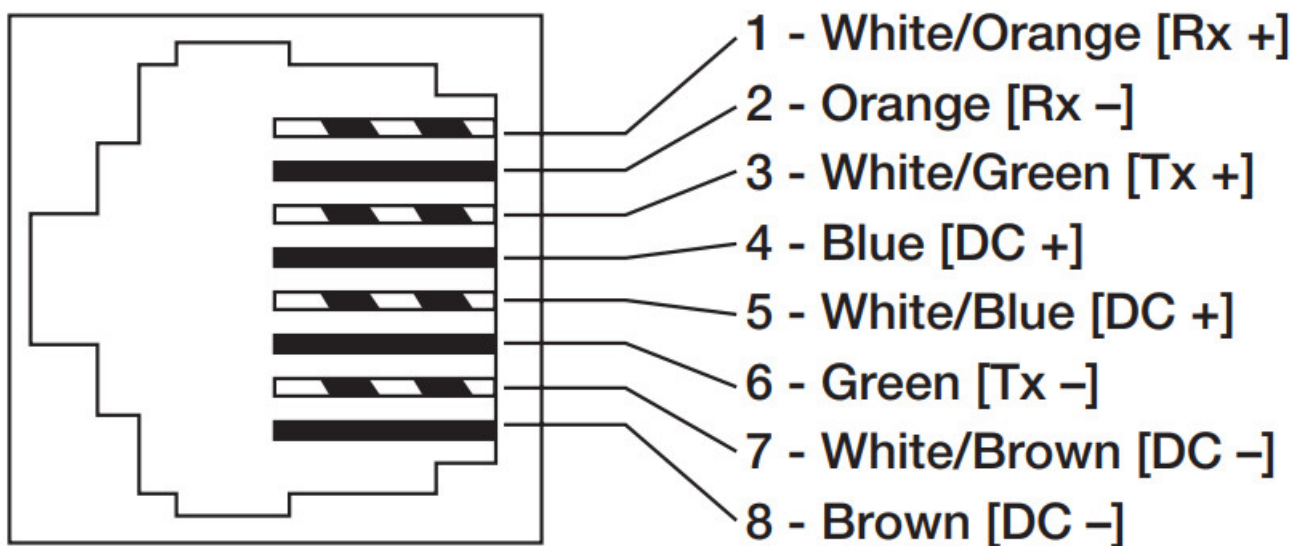
**\* ANSI/UL 294 7th Ed. Access Control Performance Levels:**

Destructive Attack – I; Endurance – N/A; Line Security – I; Stand-by Power – II.

Compliance with IEEE 802.3 (at or af) specifications was not verified as part of these requirements. Equipment is intended to comply with the following sections of the National Electrical Code, ANSI/NFPA 70:Article 725.121. Not suitable for connection to outside wiring. Article 800 in the National Electrical Code, NFPA 70. Category 5e cabling is the minimum performance category recommended. The performance category utilized should match the transmission speed required at the installation site. The minimum conductor gauge permitted to connect between the PSE or power injector and the PD shall be 26AWG (0.13 mm<sup>2</sup>) for patch cords; 24AWG (0.21 mm<sup>2</sup>) for horizontal or riser cable. Products that utilize power over communications cable are typically connected through standard eight-pin RJ45 connectors. This power sourcing equipment (PSE) uses Mode B for power/data transfer. Please see the connector configuration diagram (see below).

The maximum power class supported by the PSE is 802.3af class levels 1-3.

**CAT-5 Structured Cable Wiring Color Codes and PIN Configuration**



**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.

The unit is intended to be used with a UL Listed Class 2 or LPS (limited power supply). NetWay1/NetWay1X is not intended to be connected to outside plant leads and should be installed indoors within the protected premises. NetWay1/NetWay1X is intended for indoor use only.

1. Mount NetWay1/NetWay1X in the desired location utilizing the mounting hole (Figs. 1a and 2a, pg. 2). Use a proper fastener and/or wall anchor when securing NetWay1/NetWay1X with a screw through its mounting hole to the wall.

2. Connect 24VAC/24VDC to terminals marked [24VAC/VDC Input] (Figs. 1b and 2b, pg. 2). Use 22AWG-16AWG wire for this connection. Input power should be a UL Listed Access Control power-limited power supply (for UL294 applications) or Class 2 rated transformer/power supply (for UL60950-1 applications).

3. Connect the structured cable from port marked [IN] on NetWay1/NetWay1X to the corresponding input of a UL Listed ethernet switch or video server (Figs. 1b, 2b, pg. 2).

4. Connect the structured cable from the port marked [OUT] on the NetWay1/NetWay1X to the PoE device (Figs. 1b, 2b, pg. 2).

All interconnected devices must be UL Listed.

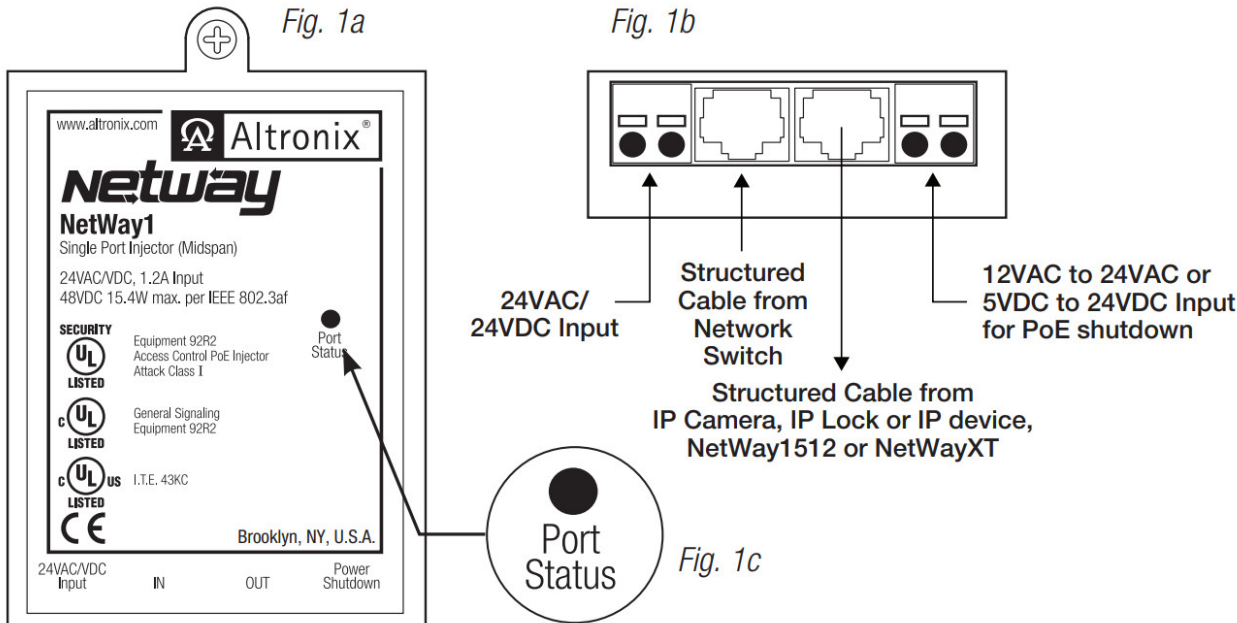
5. Port status LED will illuminate indicating normal operation (Figs. 1c, 2b, pg. 2).

6. To initiate PoE shutdown connect 12VAC to 24VAC or 5VDC to 24VDC to the input terminals marked [PoE Shutdown] on the NetWay1/NetWay1X (Figs. 1b, 2b, pg. 2). The PoE output voltage may be shut down by manually applying voltage in the rated range (PoE Shutdown Voltage Range in Specifications). Upon applying

voltage the output will drop to zero volts. Removal of voltage from the shutdown terminals or applying zero volts to the shutdown terminals will allow the PoE output to operate normally to supply power to PoE-compliant devices.  
Note: Return to normal operation from shutdown can take about 4 seconds. Although there is no output voltage to power PoE devices during the shutdown, data signals may still be present on the data pair lines of the CAT5e cable.

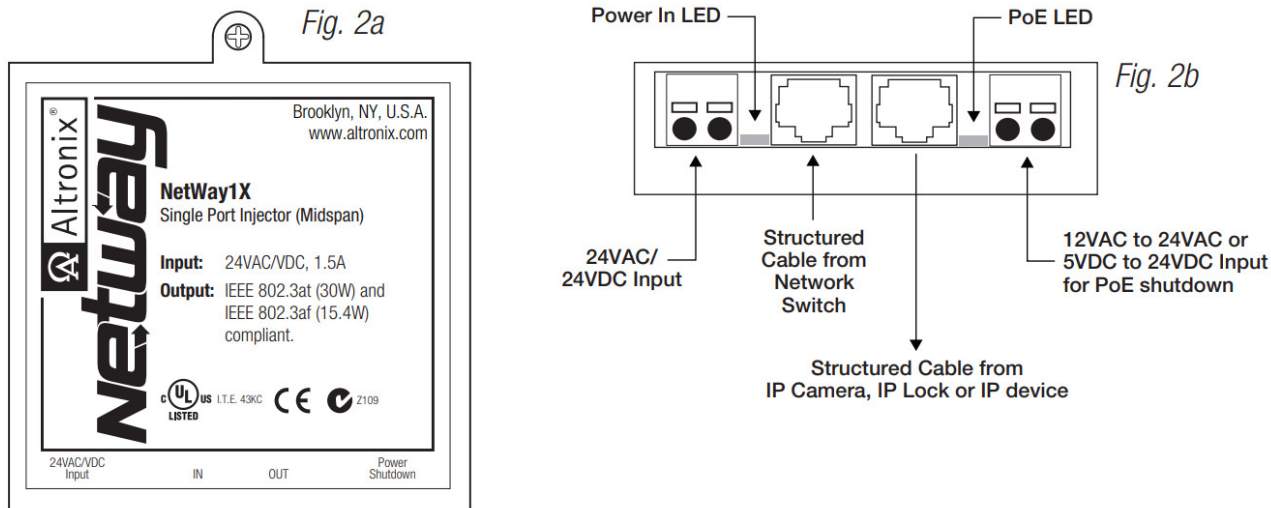
**NetWay1:**

Fig. 1






**NetWay1X:**




Fig. 2



**NetWay1 Port Status and LED Flash Codes**

Port Status	Flash Code	Flash Pattern
Non-Powered Device On < RPORT < 2000	OFF	LED OFF
Port Open RPORT > 1 MO	OFF	LED OFF
Port On 25k0	ON	LED ON
Low Signature Resistance 3000 < RPORT < 15k0	1 Flash	
High SignAture Resistance 33K 0 < FIPOrt < 500k0	2 Flashes	
Port Overload Fault	5 Flashes	

## NetWay1 Port Status and LED Flash Codes

Port Status	Flash Code	Flash Pattern
The Port is not powered or disconnected	OFF	LED OFF
Port is connected to a valid PD and powered	ON	LED ON
Overcurrent fault during port power-on	2 Flashes	LED ON  (once)  LED ON
Invalid low or high discovery signature resistance	5 Flashes	

## Typical Applications (NetWay1 and NetWay1X):

Fig. 3

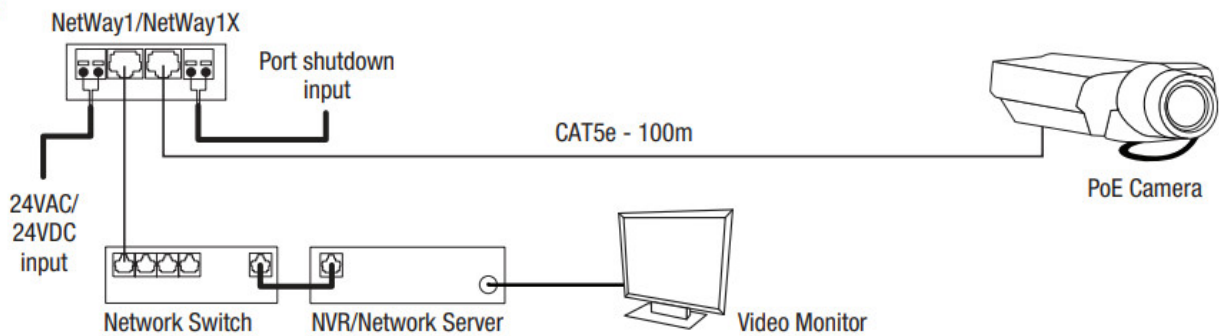


Fig. 4

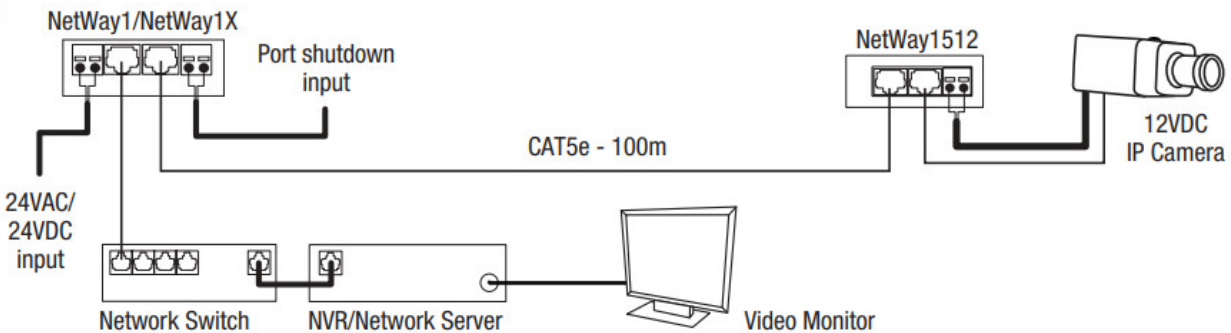


Fig. 5

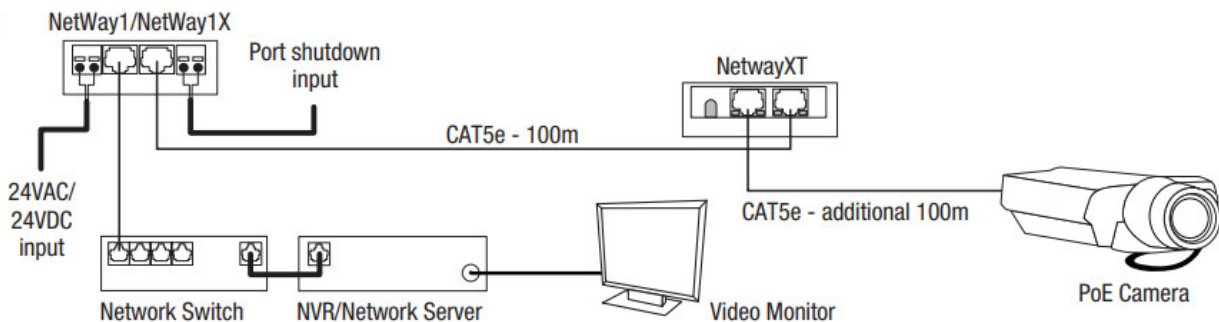
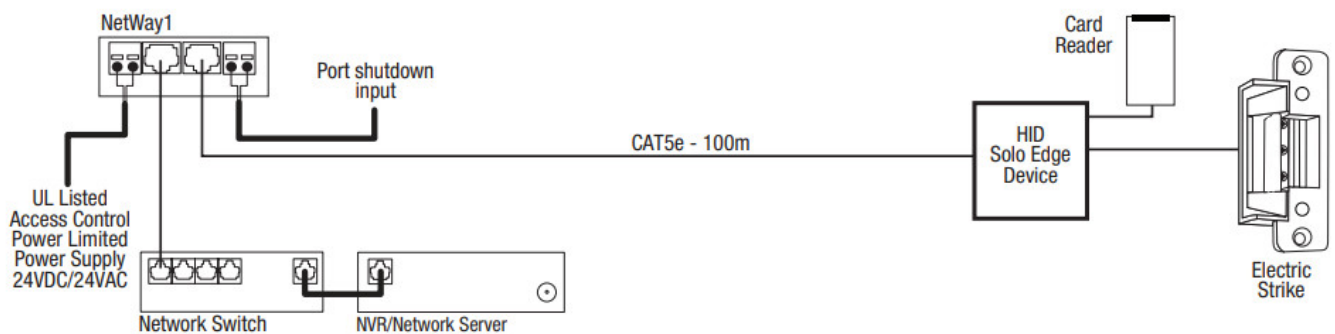


Fig. 6 - Typical UL294 application (NetWay1 only):




## Maintenance:

The unit should be tested at least once a year for the proper operation as follows:  
While the NetWay1/NetWay1X is powered and the output is connected to a suitable UL Listed PoE device, it should be tested for PoE shutdown operation (For UL 60950-1 application only).  
For UL294 applications, the NetWay1 is to be tested as part of a complete Access Control System and in accordance with listed Access Control Devices.

## Troubleshooting:

Refer to NetWay1/NetWay1X Port Status and LED Flash Codes, pgs. 2 and 3.

Parameter	Description
No. of Ports	One (1)
Input power requirements	NetWayl: 24VAC @ 1.2A or 24VDC @ 1.2A. NetWay1X: 24VAC @ 1.5A or 24VDC @ 1.5A.
Indicators	Port Status LED, Power In LED (NetWay1X only).
PoE Shutdown Voltage and Current Range	5VDC to 24VDC or 12VAC to 24VAC Maximum current: 2mA for 5VDC Maximum current for higher voltages: 10mA Class 2 Power-Limited.
Environmental Conditions	Operating Ambient Temperature: NetWayl : UL60950-1: 0°C to 40°C (32°F to 104°F). UL294: 0°C to 49°C (32°F to 120.2°F). NetWayl X: 48VDC, 30W: 0°C to 45°C (32°F to 113°F). 24VAC, 30W: 0°C to 37°C (32°F to 98.6°F). Relative humidity: 85%, +/- 5%. Storage Temperature: — 20°C to 70°C (— 4°F to 158°F). Operating Altitude: — 304.8 to 3,048m.
Regulatory Compliance	 UL/cUL Listed for Information Technology Equipment (UL 60950-1). UL Listed for Access Control Systems (UL294 – NetWayl only). Power over Ethernet (PoE) for Access Control (UL294B – NetWayl only). cUL Listed – GSA Standard C22.2 No.205-M1983, Signal Equipment (NetWayl only). CE European Conformity.
Weights (approx.)	NetWayl: Product: 0.2 lb. (0.09 kg)   Shipping: 0.25 lb. (0.11 kg) NetWay1X: Product: 0.25 lb. (0.11 kg)   Shipping: 0.3 lb. (0.14 kg)

Altronix is not responsible for any typographical errors.

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NetWay1 / NetWay1X Rev. 051619

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