



4-Port PoE+ Hardened Switches

Installation Manual

NetWay4EWP

- Includes Fiber Optic SFP 1G Link, 4-port PoE+ switch and power supply
- NEMA4/4X, IP66 rated Outdoor enclosure

NetWay4EWPX

- Includes Fiber Optic SFP 1G Link, 4-port PoE+ switch and power supply
- NEMA4/4X, IP66 rated Outdoor enclosure
- Accommodates up to four (4) 12VDC/4AH batteries

NetWay4EX

- Includes Fiber Optic SFP 1G Link, 4-port PoE+ switch and power supply
- NEMA1 rated Indoor enclosure

NetWay4EWPN

- Includes Fiber Optic SFP 1G Link and 4-port PoE+ switch (uses external power supply)
- NEMA4/4X, IP66 rated Outdoor enclosure

NetWay4EPL

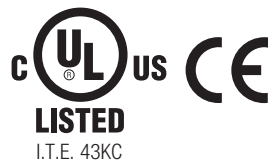
- Includes Fiber Optic SFP 1G Link, 4-port PoE+ switch and power supply
- Backplane version

(Not currently evaluated by UL)

NetWay4EB

- Fiber Optic SFP 1G Link and 4-port PoE+ switch, board only

(Not currently evaluated by UL)



Overview:

Altronix NetWay Indoor/Outdoor PoE+ Hardened Switches provide a 1Gb SFP port and four (4) PoE+ (30W) ports or up to two (2) Hi-PoE (60W) ports, passing data and power to PoE/PoE+ compliant devices. Cameras/edge devices may be located up to 100m from the unit. Features also include an integral battery charger for applications requiring backup and embedded LINQ Technology to monitor, control and report power and diagnostics from anywhere.

Features:

Input:

- 115VAC, 60 Hz, 2.5A or 230VAC, 50/60 Hz, 1.3A.
NetWay4EB/NetWay4EWP: 48-55V UL Listed ITE power supply (up to 120W)

Power Output:

- Four (4) ports PoE+ (30W) or up to two (2) Hi-PoE (60W) ports.
- IEEE 802.3at (30W) and IEEE 802.3af (15W) compliant.
- 120W total power.
- Integral surge protection.

Fiber Port:

- One (1) Gigabit SFP port.
- Use with SFP module 1000Base-X (1Gb), compliant to Class 1 laser product (not included).

Ethernet:

- Connectivity: RJ45, auto-crossover.
- Wire type: 4-pair Cat-5 or better structured cable.
- Distance: up to 100m.
- Speed: 10/100Mbps, half/full duplex, auto negotiation.

Battery Backup:

- Built-in charger for sealed lead acid or gel type batteries.
- Automatic switch over to stand-by battery when AC fails.

LEDs:

- LED1: PoE active on Spare. LED2: PoE active on Signal.

Environmental:

- Operating Ambient Temperature: *refer to Environmental Conditions on page 4.*
- Storage Temperature: -40°C to 85°C (-40°F to 185°F).

Agency Listings:

- UL/CUL Listed for Information Technology Equipment (UL 60950-1), Information Technology Equipment to be installed Outdoors (UL 60950-22).
- CE approved.

Applications:

- Provides PoE / PoE+ / Hi-PoE for cameras/devices.

LINQ Technology:

- Remote network management allows for camera/device reset and monitoring.
- Provides local and/or remote access to critical information via LAN/WAN.
- Email and SNMP trap message notifications report real-time diagnostics.
- Event log tracks history.

Mechanical:

NetWay4EWP/NetWay4EWP

- NEMA4/4X, IP66 Rated enclosure for outdoor use.
- Dimensions (H x W x D approx.):
13.31" x 11.31" x 5.59" (338.1mm x 287.3mm x 142mm)

NetWay4EWPX

- NEMA4/4X, IP66 Rated enclosure for outdoor use.
- Accommodates four (4) 12VDC/4AH batteries (48V of backup).
- Dimensions (H x W x D approx.):
17.375" x 12" x 6.5" (441.3mm x 304.8mm x 165.1mm)

NetWay4EX

- Dimensions (H x W x D approx.):
13.5" x 13" x 3.25" (342.9mm x 330.2mm x 82.55mm)

NetWay4EPL

- Dimensions (H x W x D approx.):
10.75" x 8.875" x 2.375" (273.05mm x 225.42mm x 60.32mm)

NetWay4EB

- Dimensions (L x W x D approx.):
6.25" x 4.5" x 0.625" (158.75mm x 114.3mm x 15.875mm)

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. All units should be installed by a trained service personnel.

NetWay4EWP/4EWP/4EWPX Enclosure Mounting and Installation:

1. Remove backplane from enclosure prior to drilling enclosure (do not discard hardware).
Note: Take care to assure that hardware will not interfere with components of the circuit board.
2. Mark and drill desired inlets on the enclosure to facilitate wiring. Maximum NEMA type 4X rated fittings to be used is 1/2", follow manufacturer's specifications for the appropriate size opening.

Note: Inlets for conduit fittings should only be made on the bottom of the enclosure. UL Listed NEMA type 4X rated conduit connector/hubs shall be used for the appropriate size inlets.

3. Clean out the inside of enclosure before remounting circuit board.
4. Mounting NEMA4/4X rated enclosure:

Wall mount: Mount unit in desired location. Mark and drill holes to line up with the top and bottom holes of the enclosure flange. Secure enclosure with appropriate fasteners (e. g. screws and anchors; bolts and locking nuts, etc.) which are compatible with mounting surface and are of sufficient length/construction to ensure a secure mount (*Fig. 3, pg. 8*).

Pole Mount: Refer to *Fig. 4 - 9, pg. 8* - **Note:** All inlets for conduit fittings should be on the bottom of the enclosure.

5. Mount backplane in enclosure with hardware.
6. To facilitate wire entry utilize weather tight NEMA rated connectors (*supplied*), bushings and cable.

NetWay4EX Enclosure Mounting and Installation:

1. Mount unit in the desired location. Mark and predrill holes in the wall to line up with the top two keyholes in the enclosure. Install two (2) upper fasteners and screws in the wall with the screw heads protruding. Place the enclosure's upper keyholes over the two (2) upper screws; level and secure. Mark the position of the lower two (2) holes. Remove the enclosure. Drill the lower holes and install two fasteners. Place the enclosure's upper keyholes over the two (2) upper screws. Install the two (2) lower screws and make sure to tighten all screws (*Enclosure Dimensions, pg. 9-12*). Secure enclosure to earth ground.

NetWay4EB/4EPL Mounting and Installation:

1. Mount board/backplane in the desired location/enclosure with hardware supplied.
2. **NetWay4EB:** Connect 56VDC/120W max power source to terminal marked [+ and -].

Installation:

1. **For NetWay4EWP, NetWay4EWPX, NetWay4EX and NetWay4EPL:**

Before powering unit, set input voltage selection switch to proper Input Voltage position (*Fig. 1a, pg. 6*) (Units are factory set for 115VAC).

2. Secure cabinet to earth ground. Connect AC power to overcurrent protective device circuit breaker (20A @ 115VAC, 60Hz, 16A @ 230VAC, 50/60Hz) to the terminals marked [L, N] on power supply board (*Fig. 1, pg. 6*).

Use 14AWG or larger for all power connections (Battery, DC output, AC input). Connect ground lug \oplus to earth or green branch wire (12AWG min.).

Note: For NetWay4EWPN use external 48-55V UL Listed ITE power supply, carefully observing correct polarity (*Fig. 2, pg. 7*).

Keep power-limited wiring separate from non power-limited wiring by utilizing separate knockouts/inlets. Minimum 0.25" spacing must be provided.

CAUTION: Do not touch exposed metal parts. Shut branch circuit power before installing or servicing equipment.

There are no user serviceable parts inside. Refer installation and servicing to qualified service personnel.

3. Port Configurations:

Jumper Position	Jumper	Output Power	Ports
30W	P2	30W	1 and 2
30W	P4	30W	3 and 4
60W	P2	60W	Port 2 only
60W	P4	60W	Port 4 only

For 60W (*Fig. 1b, pg. 6*).

4. Connect structured cables from port marked [Ports 1 to Ports 4] on NetWay unit to PoE compliant camera/edge devices (*Fig. 1, pg. 6*).

Note: All interconnected devices must be UL Listed.

5. Insert SFP module into port marked [SFP] then connect cable to the SFP module on NetWay to the corresponding input of an SFP switch (*Fig. 1, pg. 6*).
6. **Battery Backup** (if desired): Connect four (4) 12VDC batteries wired in series to terminals marked [+ BAT -] (*Fig. 1, pg. 6*), carefully observing polarity.

When the use of stand-by batteries is desired, they must be lead acid or gel type.

Note: When batteries are not used, a loss of AC will result in the loss of output voltage.

7. Please ensure that the cover is secured with:
key lock and screws for **NetWay4EX**, security bolt for **NetWay4EWP/NetWay4EWPN**, screw lock down for **NetWay4EWPX**.

Technical Specifications:

Parameter	Description
Number of Ports	Four (4) - IEEE 802.3af (15W) and IEEE 802.3at (30W) compliant or two (2) Hi-PoE (60W). One (1) - Gigabit SFP Port.
Input power requirements	115VAC, 60Hz, 2.5A or 230VAC, 50/60Hz, 1.3A. NetWay4EB/NetWay4EWPN : 48-55V UL Listed ITE power supply
Environmental Conditions	Operating Ambient Temperature: NetWay4EWP/NetWay4EWPX : 60W : -40°C to 75°C (-40°F to 167°F); 75W : -40°C to 70°C (-40°F to 158°F); 100W : -40°C to 55°C (-40°F to 131°F), 120W : -40°C to 45°C (-40°F to 113°F). NetWay4EX : 120W : -40°C to 50°C (-40°F to 122°F) NetWay4EB/NetWay4EWPN : 120W : -40°C to 75°C (-40°F to 167°F) Relative Humidity: 85%, +/- 5% Storage Temperature: -40°C to 85°C (-40°F to 185°F). Operating Altitude: -304.8 to 2,000m (-1,000 to 6,561.679 ft.).
Weights (approx.)	NetWay4EWP: 10.32 lbs. (4.68kg), Shipping: 11.7 lbs. (5.3kg) NetWay4EWPN: 7.7 lbs. (3.49kg), Shipping: 10.0 lbs. (4.54kg) NetWay4EWPX: 21.5 lbs. (9.75 kg), Shipping: 23.0 lbs. (10.43kg) NetWay4EX: 6.65 lbs. (3.02 kg), Shipping: 7.55 lbs. (3.42kg) NetWay4EPL: 2.6 lbs. (1.18 kg), Shipping: 4.0 lbs. (1.81kg) NetWay4EB: 0.25 lbs. (0.11 kg), Shipping: 0.75 lbs. (0.34kg)

Factory Default Settings

- IP Address: 192.168.168.168
 - User Name: admin
 - Password: admin
1. Set the static IP address for the laptop to be used for programming to the same network IP address as the Netway4E. (the default address of the Netway4E is 192.168.168.168, E.I. 192.168.168.200).
 2. Connect one end of the network cable to the network jack on the Netway4E and the other to the network connection of the laptop.
 3. Open a browser on the computer and enter “192.168.168.168” into the address bar. A dialog box Authentication Required will appear requesting both user name and password enter the default values here. Click on the button labeled Log In.
 4. The status page of the Netway4E will appear. Click on the tab labeled Network Settings. This will open the Network Setting screen. In this screen the MAC Address of the Netway4E module will be found along with the Network Settings, Trap Receiver Settings, SNMP Port Settings, and Email Settings.

Network Settings:

In the IP Address Method field select the method that the IP Address for the Netway4E will be obtained “Static” or “DHCP” then follow the appropriate steps.

Static:

- A. IP Address: Enter the IP address assigned to the Netway4E by the network administrator.
- B. Subnet Mask: Enter the Subnet of the network.
- C. Gateway: Enter the TCP/IP gateway of the network access point (router) being used. (gateway configuration is required to properly receive emails from the device)
- D. HTTP Port: Enter the HTTP port number assigned to the Netway4E module by the network administrator to allow remote access and monitoring.
The default inbound port setting is 80. HTTP is not encrypted and unsecure. Even though HTTP can be used for remote access it is recommended primarily for use with LAN connections.

- E. HTTP Port: Enter the HTTPS port number assigned to the Netway4E module by the network administrator to allow remote access and monitoring. The default inbound port setting is 443. Being encrypted and more secure HTTPS is highly recommended for remote access.
- F. Click the button labeled Submit Network Settings a dialog box will display “New network settings will take effect after the server is rebooted”. Click OK.

DHCP:

- A. After selecting DHCP in the IP Address Method field click the button labeled Submit Network Settings a dialog box will display “New network settings will take effect after the server is rebooted”. Click OK. Next, click on the button labeled Reboot Server. After rebooting the Netway4E will be set in the DHCP mode. The IP address will be assigned by the router when the Netway4EWP is connected to the network. It is recommended to have the assigned IP Address reserved to ensure continued access. (see the network administrator)
- B. Subnet Mask: When operating in DHCP the router will assign the subnet mask values.
- C. Gateway: Enter the TCP/IP gateway of the network access point (router) being used.
- D. HTTP Port: Enter the HTTP port number assigned to the Netway4E module by the network administrator to allow remote access and monitoring. The default inbound port setting is 80. HTTP is not encrypted and unsecure. Even though HTTP can be used for remote access it is recommended primarily for use with LAN connections.
- E. HTTPS Port: Enter the HTTPS port number assigned to the Netway4E module by the network administrator to allow remote access and monitoring. The default inbound port setting is 443. Being encrypted and more secure HTTPS is highly recommended for remote access.
- F. Click the button labeled Submit Network Settings a dialog box will display “New network settings will take effect after the server is rebooted”. Click OK.

Trap Receiver Settings:

- A. Enter up to five SNMP trap receiver IP addresses. When accessing the Netway4E remotely check with the network administrator for proper configuration.
- B. Click the button labeled Submit Trap Receiver IP Settings a dialog box will display “New Trap Receiver IP settings will take effect after the server is rebooted”. Click OK.

SNMP Port Settings:

SNMP uses the default port 161 for general SNMP messages and port 162 for SNMP trap messages. In the event these port need to be changed enter the new port numbers assigned by the network administrator.

Heart Beat Timer:

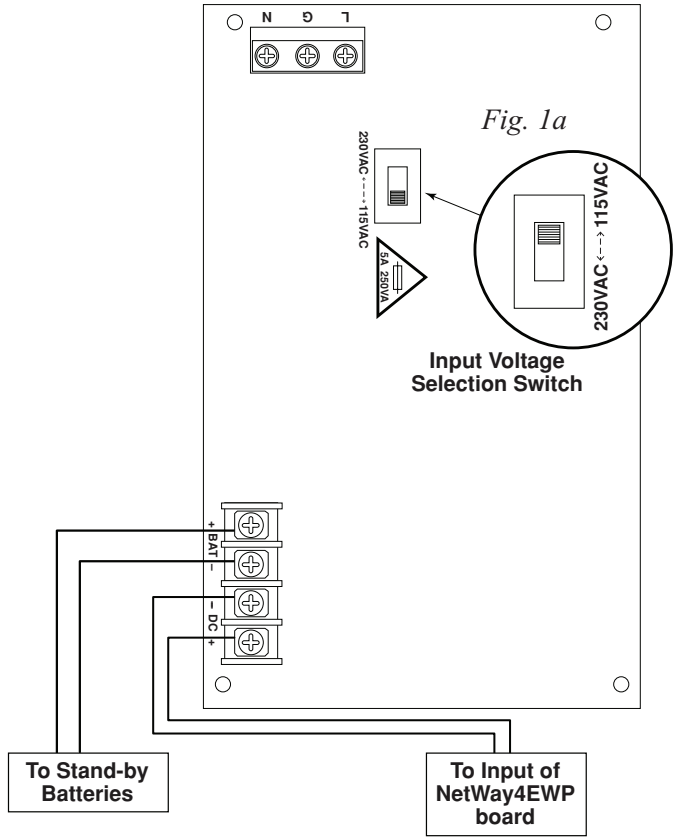
The heart beat timer will send a trap message indicating that the Netway4E is still connected and communicating.

Setting the Heart Beat Timer:

1. Click the button labeled Heartbeat Timer Setting.
2. Select the desired time between heartbeat messaging in the Days, Hours, Minutes and Seconds in corresponding fields.
3. Click the button labeled Submit to save setting.

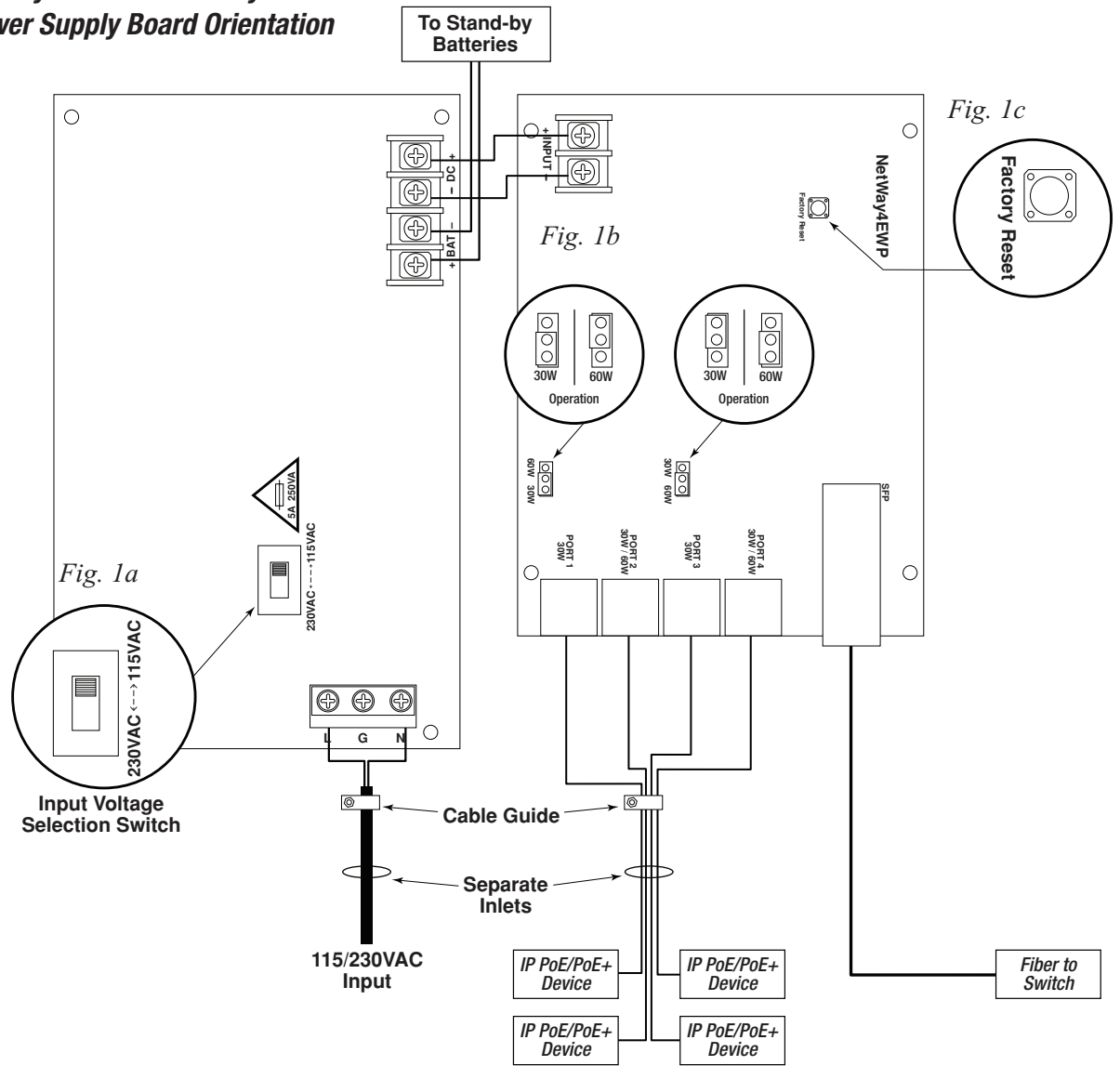
Fig. 1

NetWay4EX - Power Supply Board Orientation



Typical Applications:

NetWay4EWP and NetWay4EWPX Power Supply Board Orientation



Typical Applications:

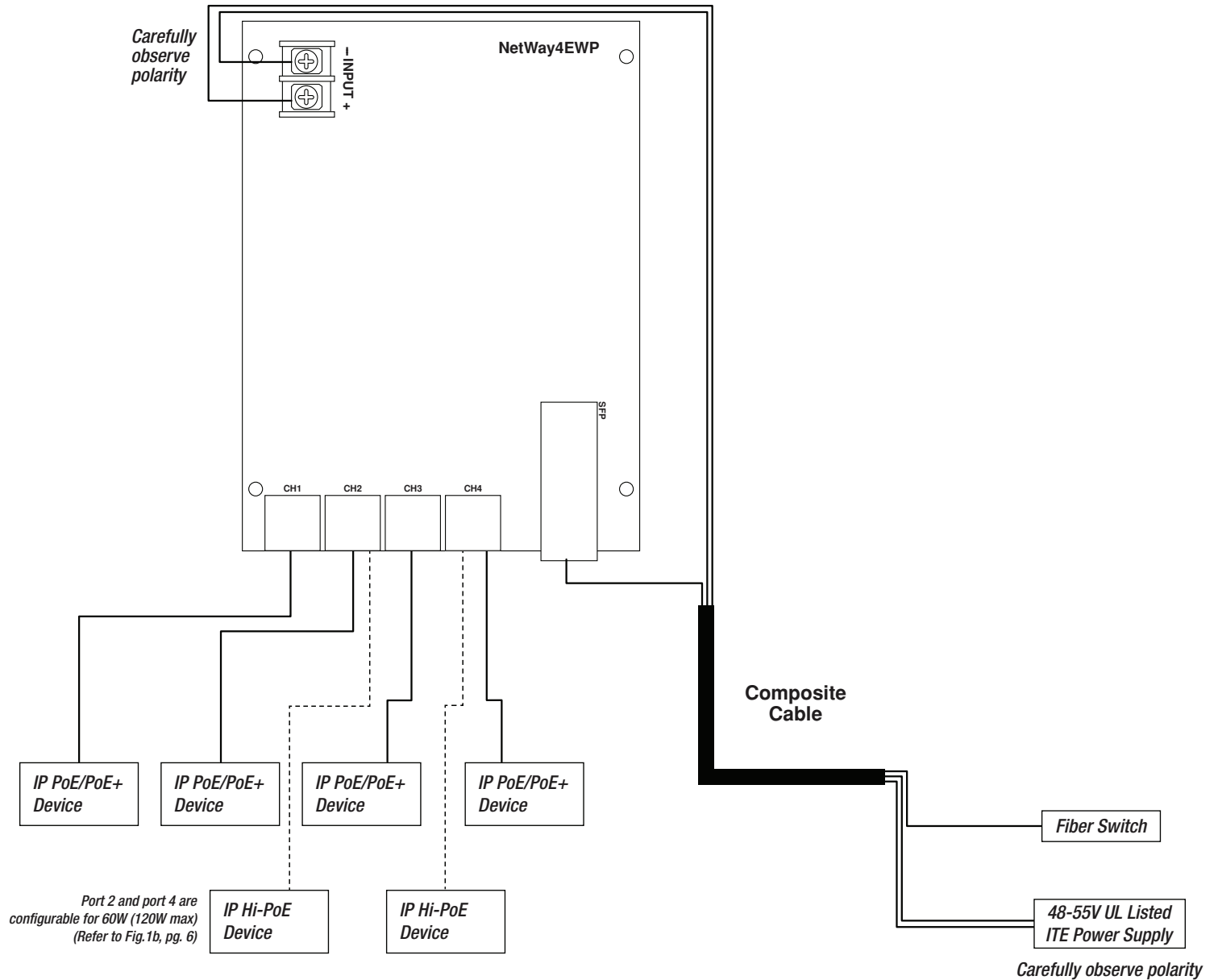
Fig. 2

NetWay4EWPN – Typical Application with Composite Cable

Power Distance Chart

Power Requirements	Power Cabling	Maximum Distance (ft./m)
15W	12/2	11,162' / 3403m
30W	12/2	5,581' / 1702m
45W	12/2	3,767' / 1,148m
60W	12/2	2,739' / 835m
75W	12/2	2,249' / 686m
90W	12/2	1,872' / 571m
105W	12/2	1,607' / 490m
120W	12/2	1,408' / 429m
15W	16/2	4,415' / 1,346m
30W	16/2	2,207' / 673m
45W	16/2	1,490' / 454m
60W	16/2	1,083' / 330m
75W	16/2	889' / 271m
90W	16/2 <td 740' / 226m	
105W	16/2	635' / 194m
120W	16/2	557' / 170m

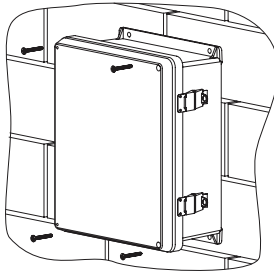
Estimated distances based on starting voltage of 56VDC and accounts for a 10 volt drop. All distances are per IEEE 802.3at standard for device power requirements of minimum 44VDC and leave an approximate 2 volts for safety and flexibility.



Wall Mount Installation

1. Mark and predrill holes in the wall to line up with the top two (2) keyholes in the enclosure.
2. Place unit at desired location and secure with mounting screws (*not included*).

Fig. 3



Pole Mounting Using Optional Pole Mount Kit PMK1 (*not included*):

This installation should be made by qualified service personnel. This product contains no serviceable parts. PMK1 is intended for use with Altronix outdoor rated power supplies or accessories housed in WP1, WP2, WP3 and WP4 enclosures. Brackets are designed for use with the Wormgear Quick Release Straps (2 included).

1. Thread one (1) wormgear quick release strap through the slots on the back of a mounting bracket (*Fig. 4, pg. 8*).
2. Once the desired height of the top Pole Mount bracket is achieved, tighten the straps down by sliding open end of the strap through the locking mechanism on the strap, then tighten the screw with flat head screwdriver or 5/16" hex socket driver (*Fig. 5, pg. 8*).

Fig. 4

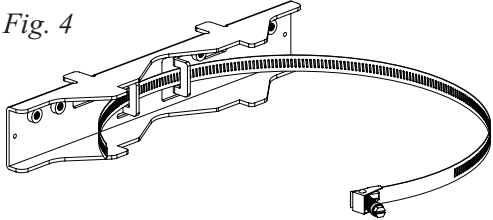


Fig. 5

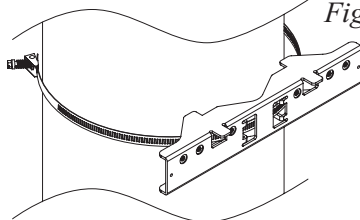


Fig. 6

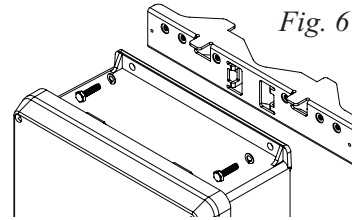
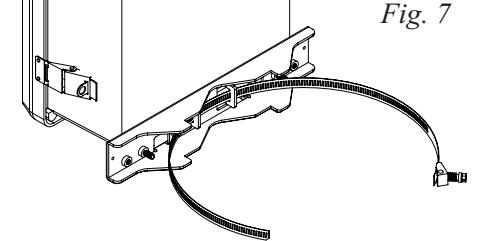


Fig. 7



3. Attach the bottom bracket to the enclosure by inserting bolts through the flange of the enclosure and into the bracket, tightening bolts with a 7/16" hex socket (*Fig. 6, pg. 8*).
4. Thread the second wormgear quick release strap through the slots on the back of the bottom mounting bracket (*Fig. 7, pg. 8*).
5. Mount enclosure onto the top bracket by inserting bolts through flange of the enclosure and into the bracket, tightening bolts with a 7/16" hex socket (*Figs. 8 and 9, pg. 8*).
6. Tighten the straps of the bottom bracket down by sliding the open end of the strap through the locking mechanism on the strap, then tighten screw with flat head screwdriver or 5/16" hex socket driver (*Figs. 8 and 9, pg. 8*).
7. Clip excess straps.

Fig. 8: 2" to 8"
(50.8mm to 203.2mm)
diameter round pole

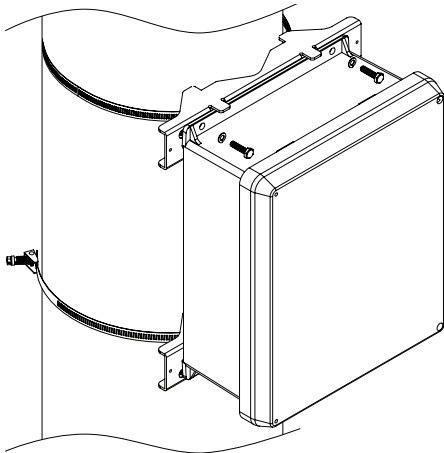
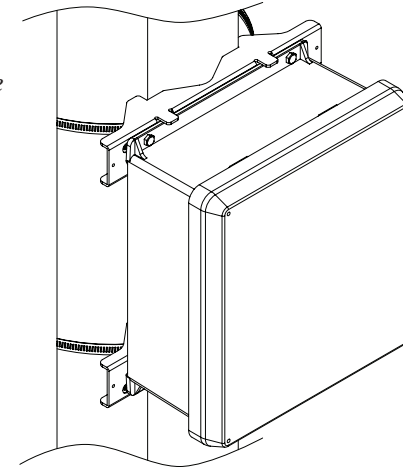
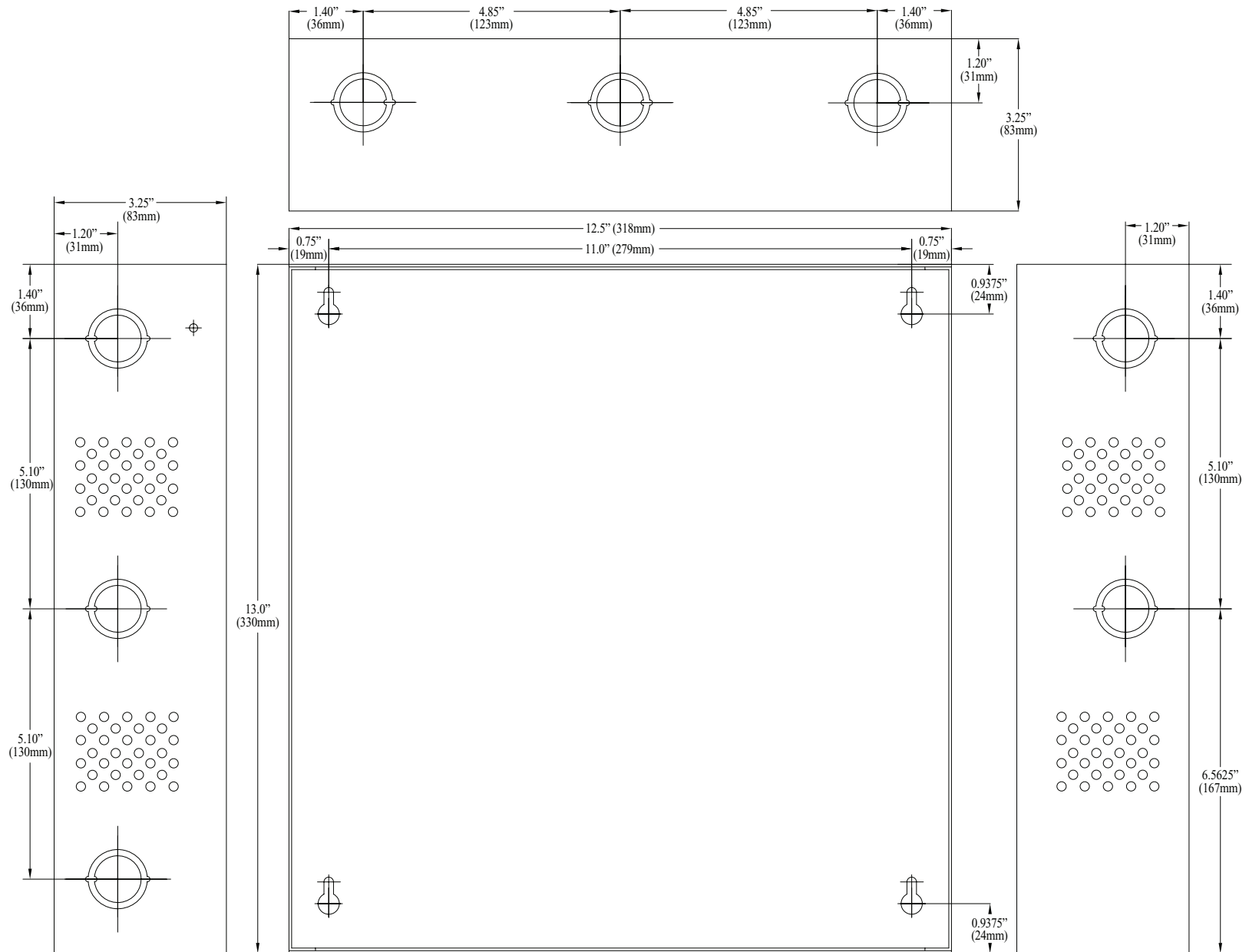


Fig. 9: 5" (127mm) square pole



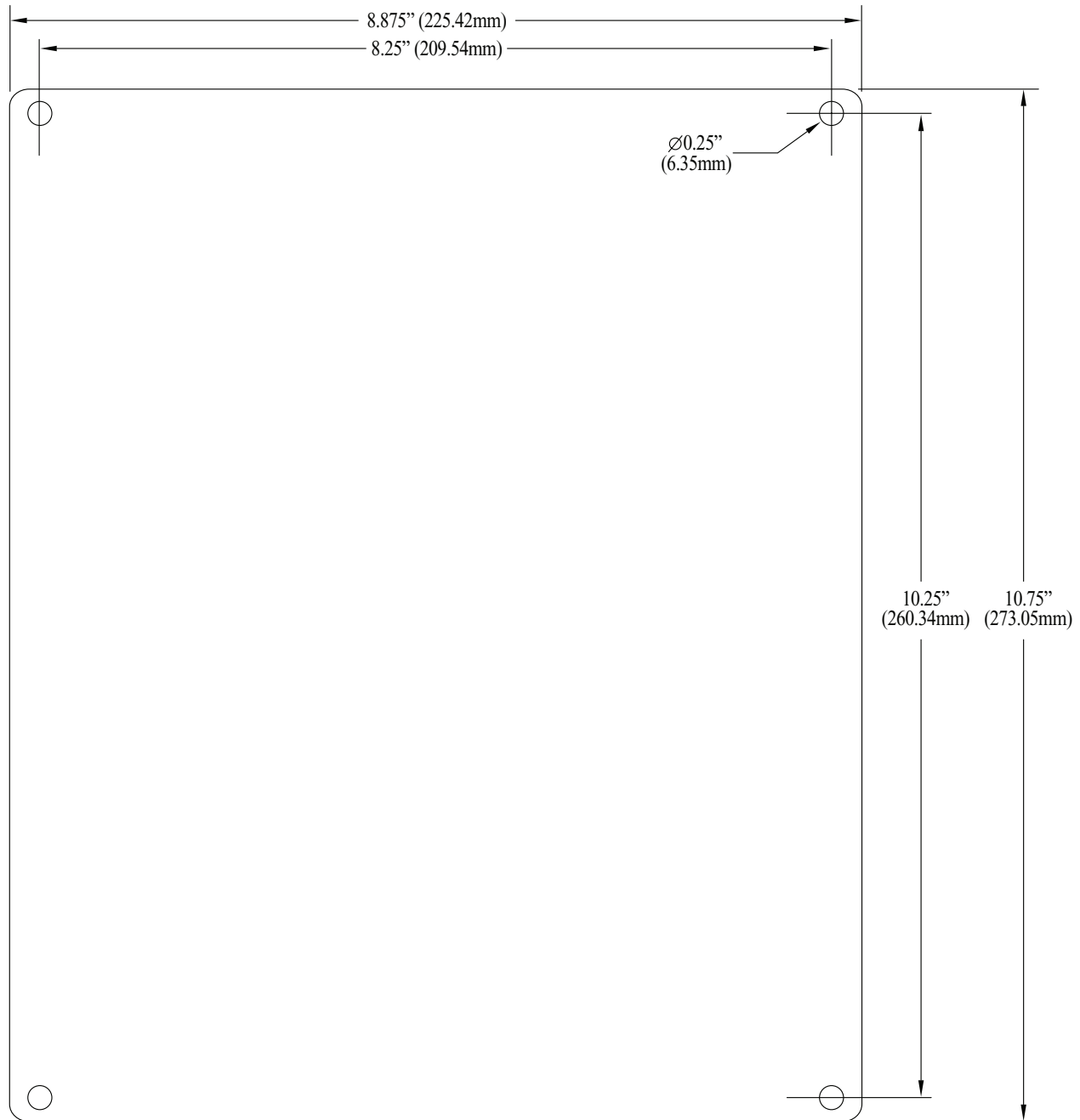
NetWay4EX - Mechanical Drawing and Dimensions (H x W x D approx.):

13.5" x 13" x 3.25" (342.9mm x 330.2mm x 82.55mm)



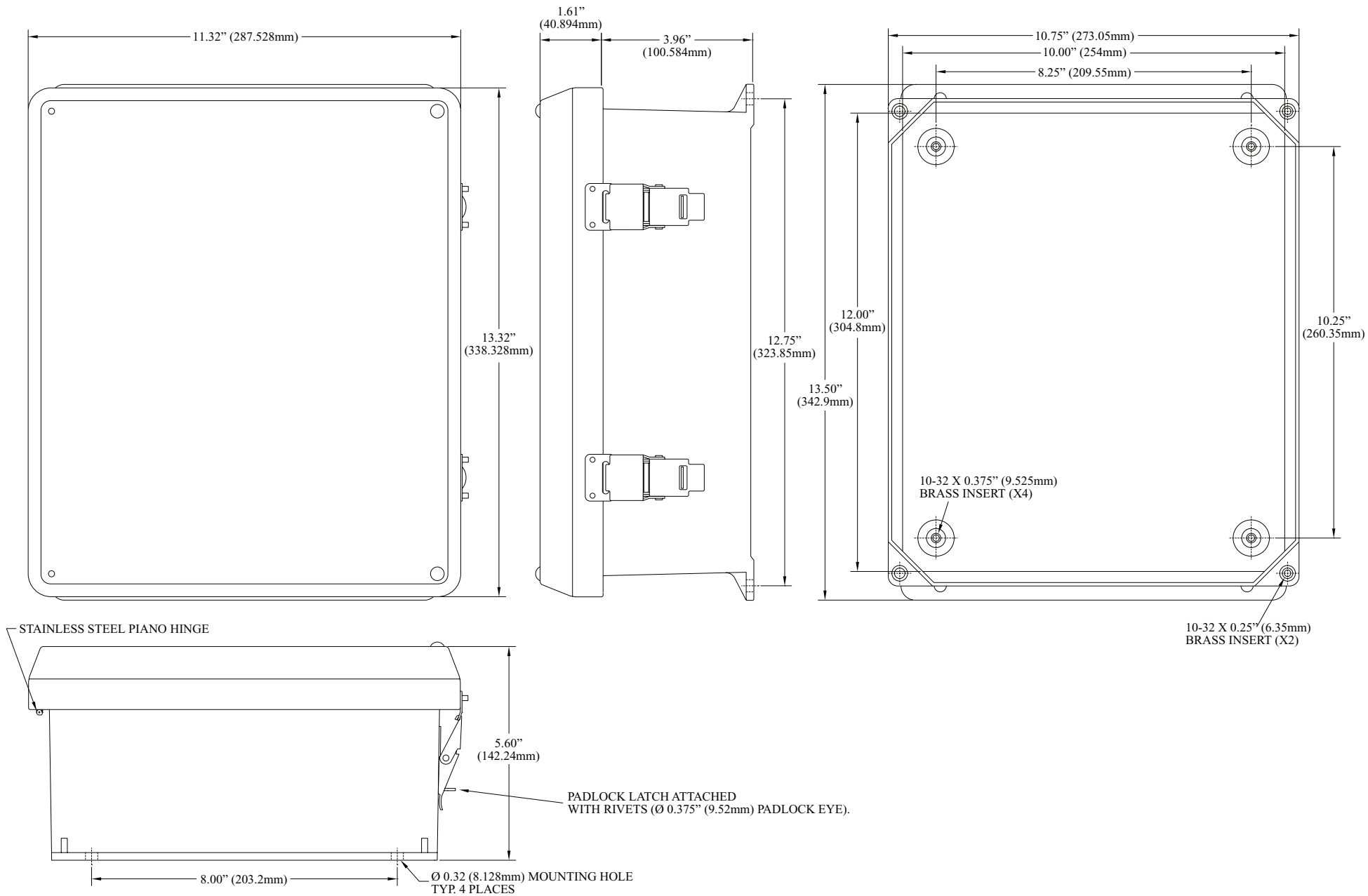
NetWay4EPL - Mechanical Drawing and Dimensions (H x W x D approx.):

10.75" x 8.875" x 2.375" (273.05mm x 225.42mm x 60.32mm)



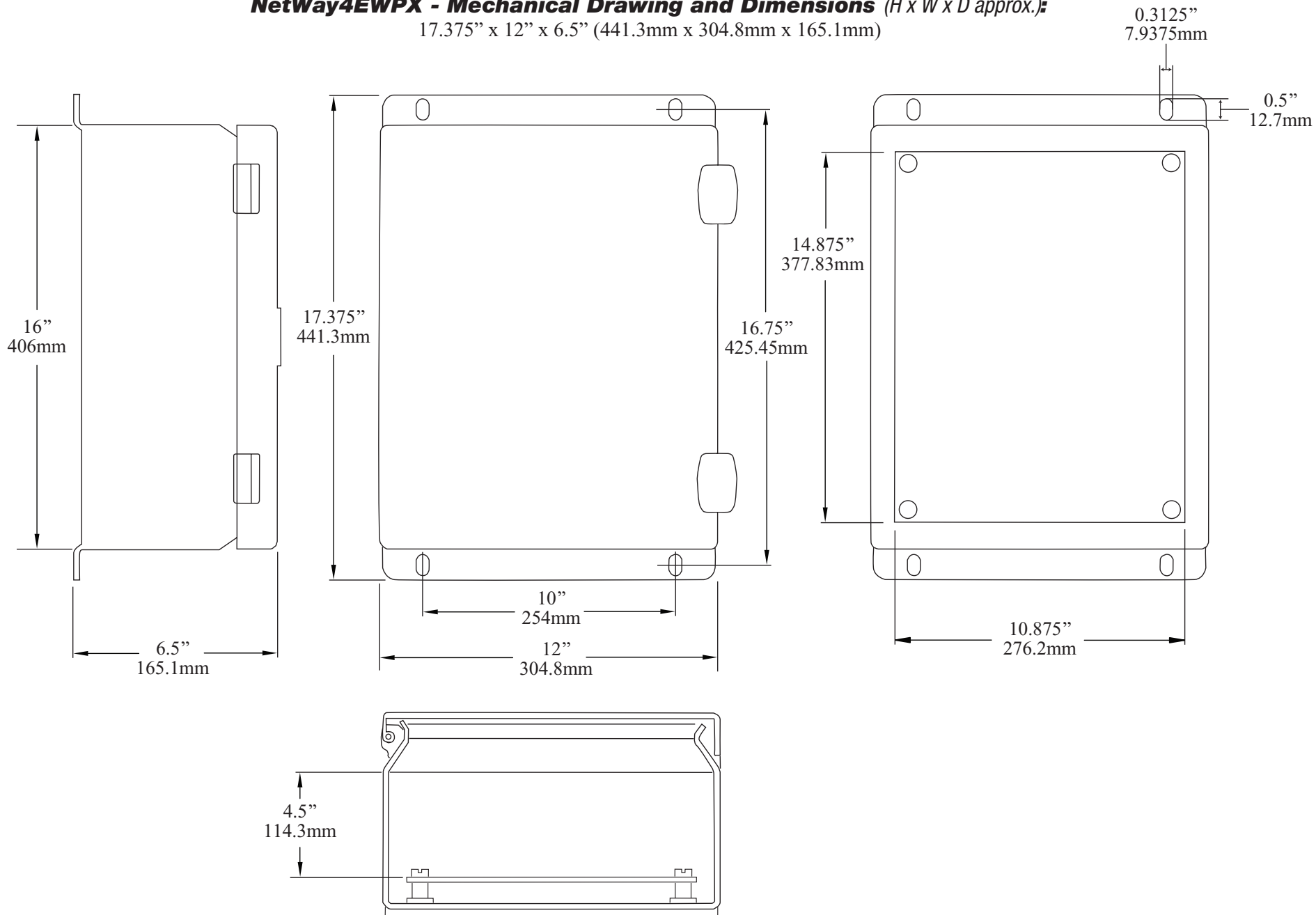
NetWay4EWP / NetWay4EWPN - Mechanical Drawing and Dimensions (H x W x D approx.):

13.31" x 11.31" x 5.59" (338.1mm x 287.3mm x 142mm)



NetWay4EWPX - Mechanical Drawing and Dimensions (H x W x D approx.):

17.375" x 12" x 6.5" (441.3mm x 304.8mm x 165.1mm)



Altronix is not responsible for any typographical errors.

140 58th Street, Brooklyn, New York 11220 USA, 718-567-8181, fax: 718-567-9056
 website: www.altronix.com, e-mail: info@altronix.com. Lifetime Warranty, Made in U.S.A.
 IINetWay4EWP / NetWay4EWPN / NetWay4EWPX / NetWay4EX / NetWay4EPL / NetWay4EB
www.altronix.com

L12P

- 12 -



NetWay4EWP / 4EWPN / 4EWPX / 4EX / 4EPL / 4EB