Netway SPECTRUM

Fiber Solution

Embedded LINQ TECHNOLOGY

Please be sure to visit altronix.com for latest firmware and installation instructions

NetWay4EBT3 Series

4-port Hardened 360W 802.3bt 4PPoE Switches

Models Include:

NetWay4EBTWP3

- 4-port Hardened 802.3bt 4PPoE Switch and Power Supply/Charger
- NEMA4/4X, IP66 rated Outdoor enclosure.

NetWay4EBTWPX3

- 4-port Hardened 802.3bt 4PPoE Switch and Power Supply/Charger
- NEMA4/4X, IP66 rated Outdoor enclosure.
- Accommodates up to four (4) 12VDC/4AH batteries.

NetWay4EBTX3

- 4-port Hardened 802.3bt 4PPoE Switch and Power Supply/Charger
- NEMA1 rated Indoor enclosure.

NetWay4EBTPL3

- 4-port Hardened 802.3bt 4PPoE Switch and Power Supply/Charger
- Backplane version.

Installation Guide

CE

Altronix®

DOC#: NetWay4EBT3 Rev. 020924

More than just power.™

Installing Company: _____ Service Rep. Name: _____

Address: _____ Phone #: _____

Overview:

Altronix NetWay4EBT3 Series Hardened 802.3bt 4PPoE Switches are equipped with one (1) 1Gb SFP port and four (4) POE IEEE802.3af/3at/3bt PoE ports rated at 90W each, with a 360W total power. Embedded LINQ Technology enables monitoring, control, and reporting from anywhere over the network.

For unmanaged switches, refer to NetWay4E1BT3 Series.

Features:

Agency Listings:

- CE European Conformity.

Input:

- 115VAC, 60Hz, 3.5A or 230VAC, 50/60Hz, 2A.

Power Output:

- Four (4) 10/100/1000 Mbps Ethernet ports rated at 90W each (360W total power).
- IEEE 802.3af, 802.3at, 802.3bt compliant.

SFP Ports:

- One (1) Gigabit SFP port.

Ethernet Ports:

- Four (4) 10/100/1000 Mbps ports.
- Connectivity: RJ45, auto-crossover.
- Wire type: 4-pair CAT5e or higher structured cable.
- Speed: 10/100/1000 Mbps, half/full duplex, auto negotiation.

Battery Backup

- 48VDC charging circuit charges sealed lead acid* or gel type* batteries.
- Automatic switch over to stand-by battery when AC fails.

Indicators (LED):

- Individual PoE On LEDs for each port.
- Individual IP Link status, 10/100 Base-T/active LEDs for each port.
- ALOS LED indicates fiber connection for SFP port.
- Heartbeat LED indicates proper operation of the unit.

VLAN:

- Multiple management VLAN assignment.
- 802.1Q Tagged VLAN.
- Up to 10 VLAN groups. ID Range 2-4095.

LINQ Technology:

- Remote network management allows for camera/device reset and diagnostic monitoring.
- Provides local and/or remote access to critical information via LAN/WAN.
- Email and Windows Dashboard Alert notifications report real-time events.
- Event log tracks history.

Mechanical:

NetWay4EBTPL3:

- Dimensions (H x W x D approx.): 10.75" x 8.875" x 2.375" (273.1mm x 225.4mm x 60.3mm).

NetWay4EBTWPX3:

- NEMA4/4X, IP66 Rated enclosure for outdoor use.
- Accommodates sealed lead acid or gel type 12VDC batteries.
- Dimensions (H x W x D approx.): 17.53" x 15.3" x 6.67" (445.3mm x 388.6mm x 169.4mm).

NetWay4EBTWP3:

- 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).

NetWay4EBTX3:

- NEMA1 Rated enclosure for indoor use
- Dimensions (H x W x D approx.): 13.5" x 13" x 3.25" (342.9mm x 330.2mm x 83mm).

***CAUTION:** When using lead acid or gel type batteries, enclosure must be properly ventilated.

Battery operational temperature should be derated 10-15ºC lower than manufacture's rated high temperature.

Recommended Altronix SFP Modules:

Altronix P1MM, P1SM10, P1AB2K and P1GCE are hot-pluggable SFP fiber transceiver modules and are readily usable with all Altronix Spectrum fiber optic equipment for 1Gb transmission rates.

P1MM For use with Multi-Mode Fiber for distances up to 550m.
P1SM10 For use with Single-Mode Fiber for distances up to 10km.
P1AB2K For use with Single Strand Single-Mode Fiber for distances up to 2km.
P1GCE For use with CAT5e or better for distances up to 100m.

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.

Mounting Instructions:

NetWay4EBTPL3:

1. Mount backplane in the desired location/enclosure with hardware supplied.

NetWay4EBTWP3/NetWay4EBTWPX3:

1. Remove backplane from enclosure prior to drilling. Do not discard hardware.
   Note: Make sure 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 are 0.5". Follow manufacturer's specifications for the appropriate size opening.
   Note: Inlets for conduit fittings should only be made on the bottom of the enclosure.
   To facilitate wire entry utilize weather-tight NEMA rated connectors *(supplied)*, bushings, and cable.
3. Clean out the inside of enclosure before remounting circuit boards/backplane.
4. Mounting NEMA4/4X rated enclosure *(Enclosure Dimensions, pg. 9, 10)*:
   Wall mount: Mount unit in desired location. Mark and drill holes to line up with the top and bottom hole of the enclosure flange. Secure enclosure with appropriate fasteners (e. g. screws and anchors; bolts and locking nuts, etc.) that are compatible with mounting surface and are of sufficient length/construction to ensure a secure mount *(Fig. 4, pg. 8)*.
   Pole Mount: *Refer to Fig. 5 - 9 pg. 8.*
5. Mount backplane in enclosure with hardware.

NetWay4EBTX3:

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. 11).* Secure enclosure to earth ground.

Power Connection:

1. Secure cabinet to earth ground. Connect AC power from 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. 5)*. Use 14AWG or larger for all power connections (Battery, DC output, AC input).
   Connect ground lug ⏚ to earth or green branch wire (12AWG min.).
   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.

Input/Data Connections:

1. Connect structured cables from port marked [Port 1] to [Port 4] on NetWay unit to PoE compliant cameras/edge devices *(Fig. 1, pg. 5)*.
2. Insert SFP module into port marked [SFP], then connect cable to the SFP module on NetWay4EBTB to the corresponding input of an SFP switch *(Fig. 1, pg. 5)*.

Battery Backup (if desired):

1. Connect four (4) 12V batteries or two (2) 24V batteres wired in series to terminals marked [BAT – BAT +] *(Fig. 1, pg. 5)*, carefully observing polarity. When use of stand-by batteries is desired, they must be lead acid or gel type. If batteries are housed in a weather-proof enclosure (NetWay4EBTWP3, NetWay4EBTWPX3), it must be properly ventilated. Use Altronix Vent2 kit.
   Note: When batteries are not used, a loss of AC will result in the loss of output voltage.
   For outdoor battery backup, battery enclosure must have sufficient ventilation. Use Altronix Vent2 kit. Battery operational temperature should be derated 10-15ºC lower than manufacture's rated high temperature.

Security:

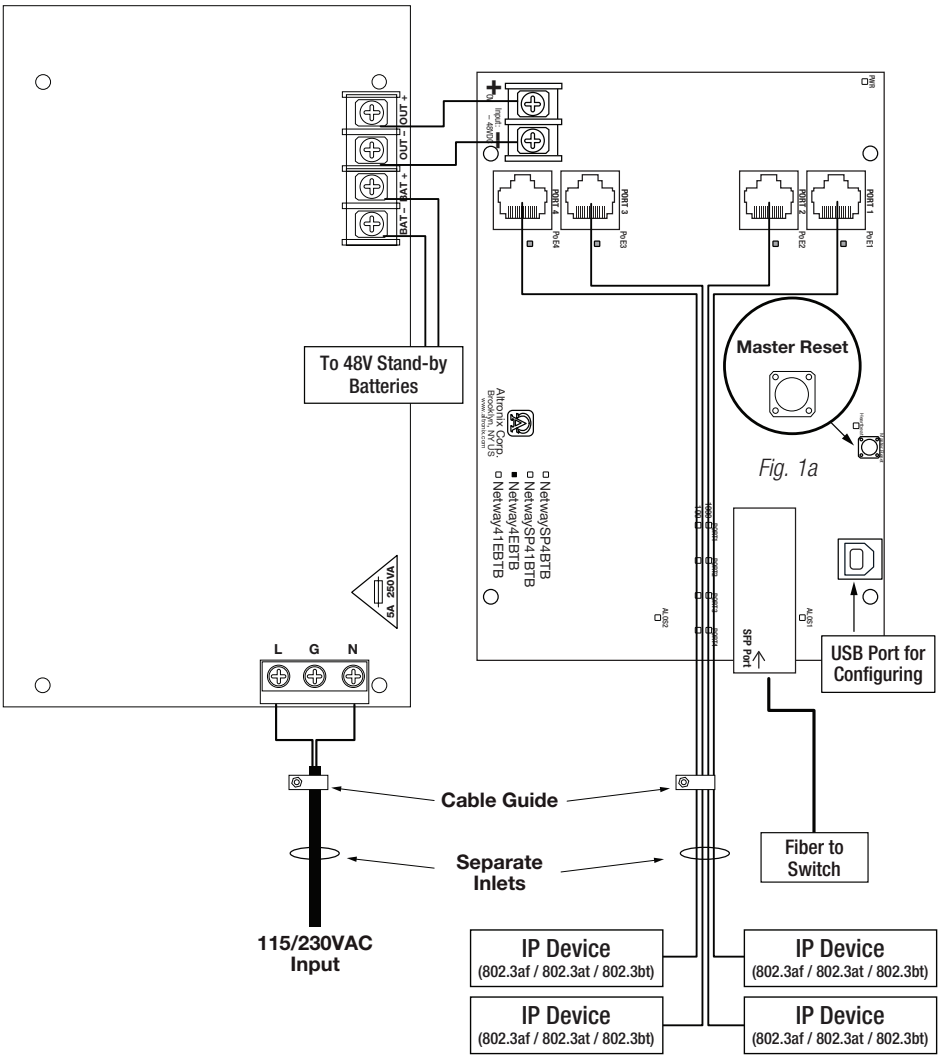
Please ensure that the cover is secured with:
Key lock and screws for **NetWay4EBTX3**, latches and optional Altronix Lock1WP **NetWay4EBTWP(X)3**

Technical Specifications:

Parameter	Description		
Number of Ports	Four (4) 10/100/1000 Mbps Ethernet ports rated at 90W each. IEEE 802.3af, 802.3at, 802.3bt compliant. One (1) Gigabit SFP Port.		
Input Power Requirements	115VAC, 60Hz, 3.5A or 230VAC, 50/60Hz, 2A.		
Environmental Conditions	Operating Ambient Temperature: **360W:** – 30ºC to 70ºC (– 22ºF to 158ºF) **240W:** – 30ºC to 75ºC (– 22ºF to 167ºF) Storage Temperature: – 30ºC to 85ºC (– 22ºF to 185ºF) Relative Humidity: 85%, +/– 5% Operating Altitude: – 304.8 to 2,000m		
Weights (approx.)	**Model**	**Product Weight**	**Shipping Weight**
	NetWay4EBTWP3	10.5 lb. (4.76 kg)	11.9 lb. (5.4 kg)
	NetWay4EBTWPX3	15 lb. (6.8 kg)	17.5 lb. (7.9kg)
	NetWay4EBTX3	6.65 lb. (3.02 kg)	7.55 lb. (3.42kg)
	NetWay4EBTPL3	2.6 lb. (1.18 kg)	4.0 lb. (1.81kg)

Typical Applications:

Fig. 1



VLans

VLans (Virtual Local Area Networks) are a subnetwork that allow for the grouping together of devices for improved network traffic as well as providing higher security by allowing greater control over which devices have access to each other. It is important to plan how you will setup your devices for each vLan.

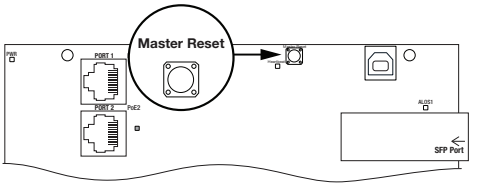
Configuring vLan on the Altronix Netway4EBT3 Series Switch:

1. Ensure Laptop or PC being used to program the vLan settings is on a port that will be assigned to your first vLan configuration. By default the management portion of the software is assigned to vLan-1, **CAUTION:** Changing VID=1, the industry standard VLAN HOST address to any other VID address should be done with caution and performed only locally, since the change will drop the original HOST connection. Local access then facilitates a physical reconnection to respective port.
   Note: Only this vLan network allows access to IP management.
2. In Network Section click on VLan Tab.
3. Click Add vLan.
4. Enter a name for the vLan.
5. Enter a vLan ID, i.e. 10, 20, etc. Ensure this vLan ID is associated with a vLan setup on the main switch and that your Laptop or PC being used for programming is on this same ID.
   Note: vLan ID could be any value 2-4094.
6. Assign vLan QOS (Quality of Service) priority. 0 = Lowest and 7 = Highest
7. Pick a Trunk port (Tagged Ports). Trunk ports are typically the main connection for network traffic for each group. They are usually connected to a network switch, WAPs, etc.
8. Pick the Access port(s) (Untagged Ports) associated with the vLan. Access Ports are typically used for Cameras, etc. If programming locally, ensure your laptop or PC is connected to one of these ports.
9. Save Configuration.
10. Repeat steps 2 - 9 to add another vLan.
    If unit is accidently programmed incorrectly and you cannot get into the Netway4EBT3 series programming, physically moving ports of your PC connected to the main switch to a correct port (when being programmed remotely), or, as a last resort, completing a factory reset locally and reprogramming the unit.
11. **Advanced Port Settings:**
    Unknown VID Packet Forwarding Configuration:
    On ingress unknown VID, Foward to a fixed set of ports. By default no forwarding is set.
    Configuration on Ingress Untagged Traffic:
    Trunk Port action for ingress UNTAGGED packets. By default do not drop packets.
    Keep Tag on Egress:
    Select if you want ACCESS Port to keep the vLan tag when sending egress packets.
    By default tags are stripped.
    Preferred VLAN Forwarding:
    For ACCESS Ports that belong to more than one VLan. Select preferred vLan to forward UNTAGGED ingress packets. By default preferred vLan is the last vLan created.

Factory Reset Option:

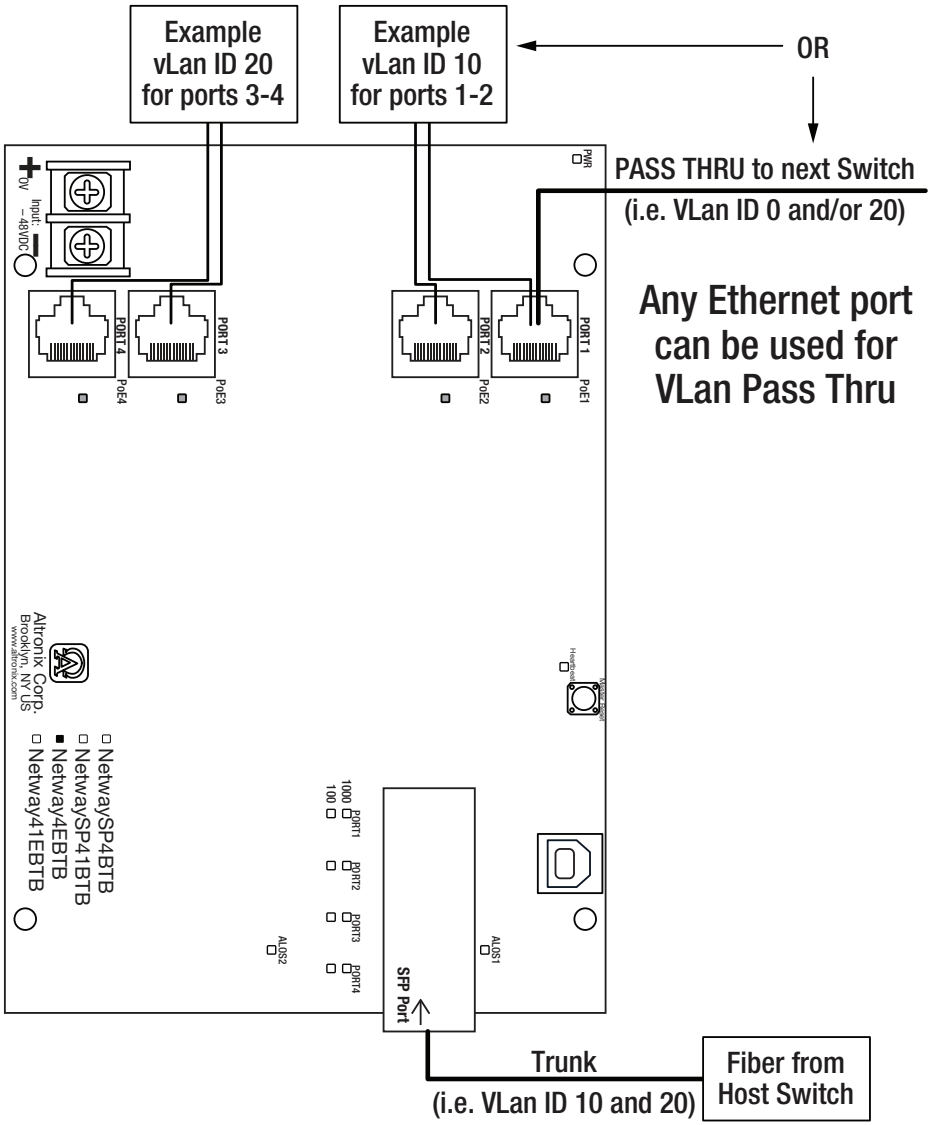
1. Power the unit down. Allow approximately 30 seconds for the unit to power down completely.
2. Depress **Master Reset** button on Netway4EBTB while reapplying power to the unit *(Fig. 1a, pg. 5, Fig. 2 pg. 6)*.
   Continue holding the button until the LEDs on board go through the start up cycle, then release the button.
3. The unit returns to the original factory settings.

Fig. 4



Typical VLan Setup:

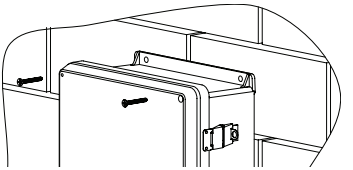
Fig. 3



Wall Mount Installation:

1- Place unit at desired location and secure with mounting screws *(not included) (Fig. 4, pg. 8).*

Fig. 4



Pole Mounting Using Optional Pole Mount Kit **PMK1** (NetWay4EBTWP3) **or PMK2** (NetWay4EBTWPX3)**:**

This installation should be made by qualified service personnel. This product contains no serviceable parts. PMK1 and PMK2 outdoor pole mount kits are designed to simplify the installation of Altronix outdoor rated power supplies and accessories housed in models WP2, WP3 and WP4 NEMA rated enclosures. PMK1 and PMK2 can be mounted on 2" to 8" (50.8mm to 203.2mm) diameter round or 5" (127mm) square poles. Brackets are designed for use with the Wormgear Quick Release Straps (two included).

1. Thread one (1) wormgear quick release strap through the slots on the back of a mounting bracket *(Fig. 5, 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. 6, pg. 8 and Fig. 8, pg. 8).*

Fig. 6

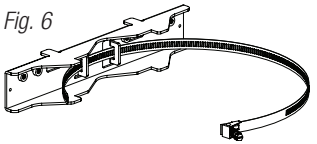


Fig. 6

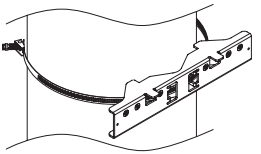
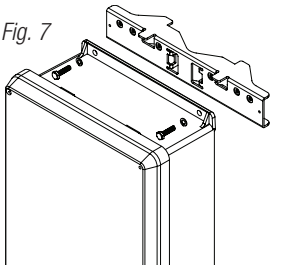


Fig. 7



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. 7, pg. 8).*
4. Thread the second wormgear quick release strap through the slots on the back of the bottom mounting bracket *(Fig. 8, 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 *(Fig. 6, 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 *(Fig. 6, pg. 8).*
7. Clip excess straps.

Fig. 8

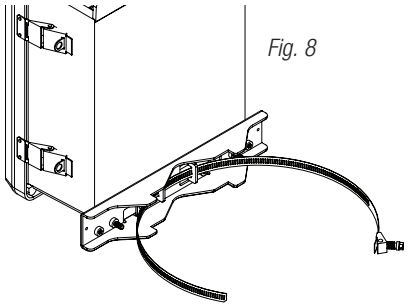


Fig. 9
2" to 8"(50.8mm to 203.2mm) diameter round pole

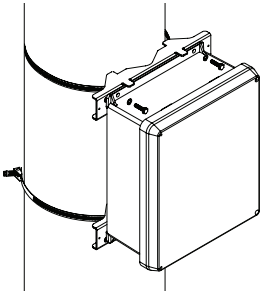
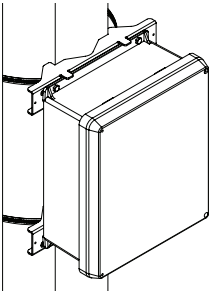


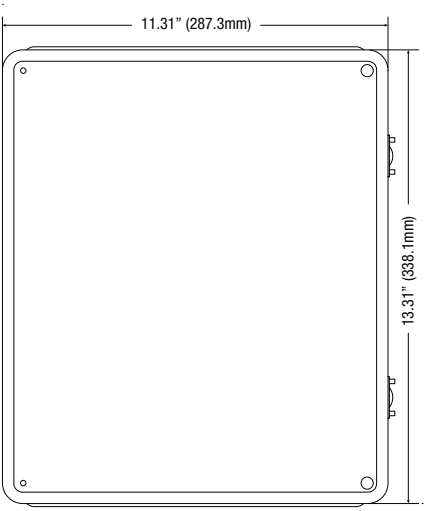
Fig. 9a
5" (127mm) square pole



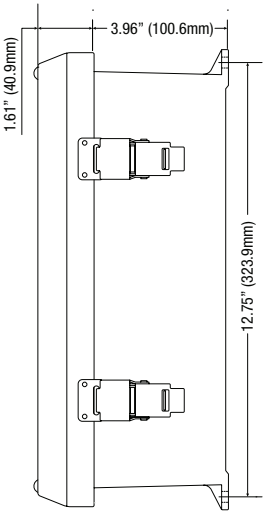
NetWay4EBTWP3
Mechanical Drawing and Dimensions (H x W x D approx.):

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

FRONT VIEW



RIGHT SIDE VIEW



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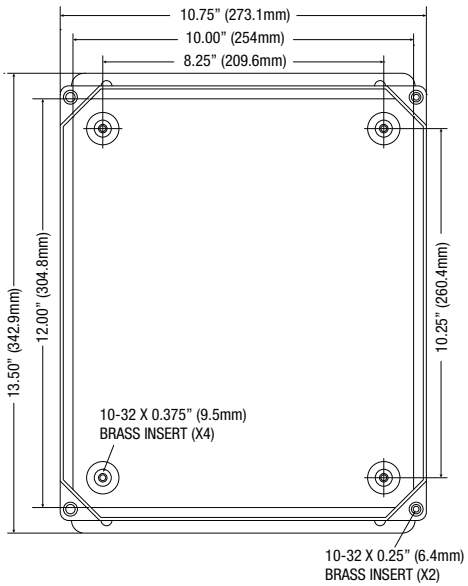
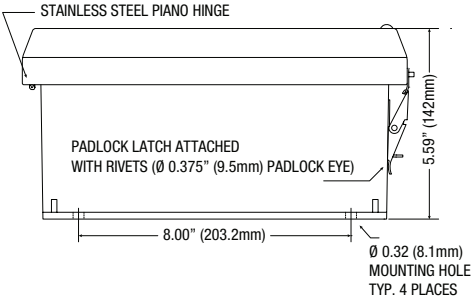


END VIEW



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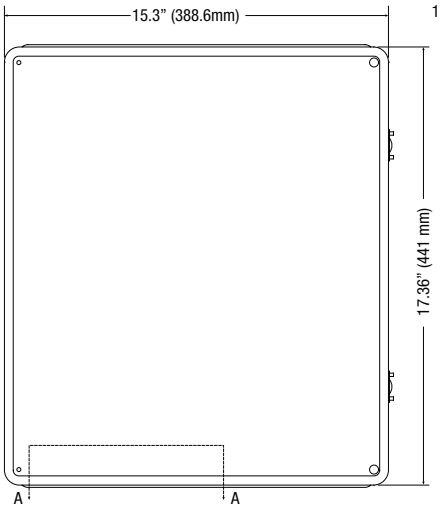
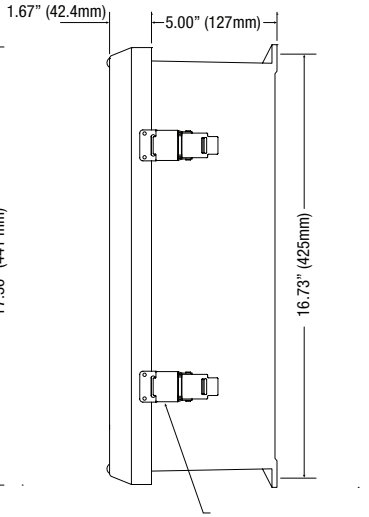


RIGHT SIDE VIEW



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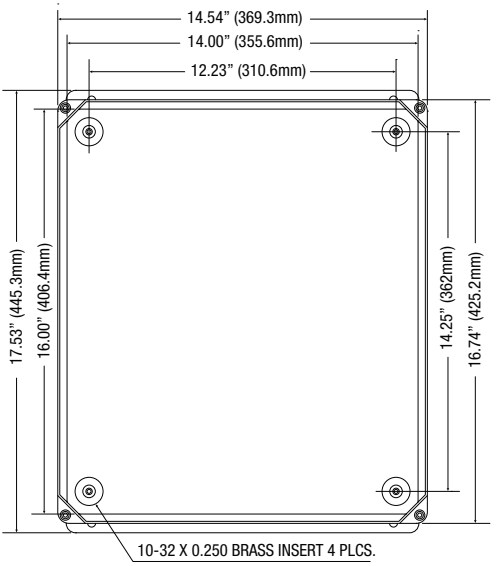
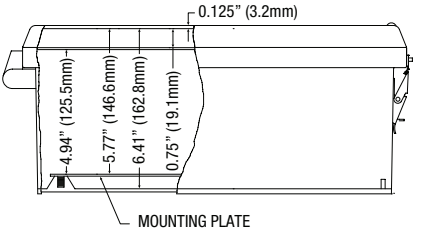


SECTION A-A



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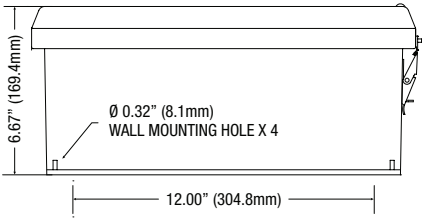

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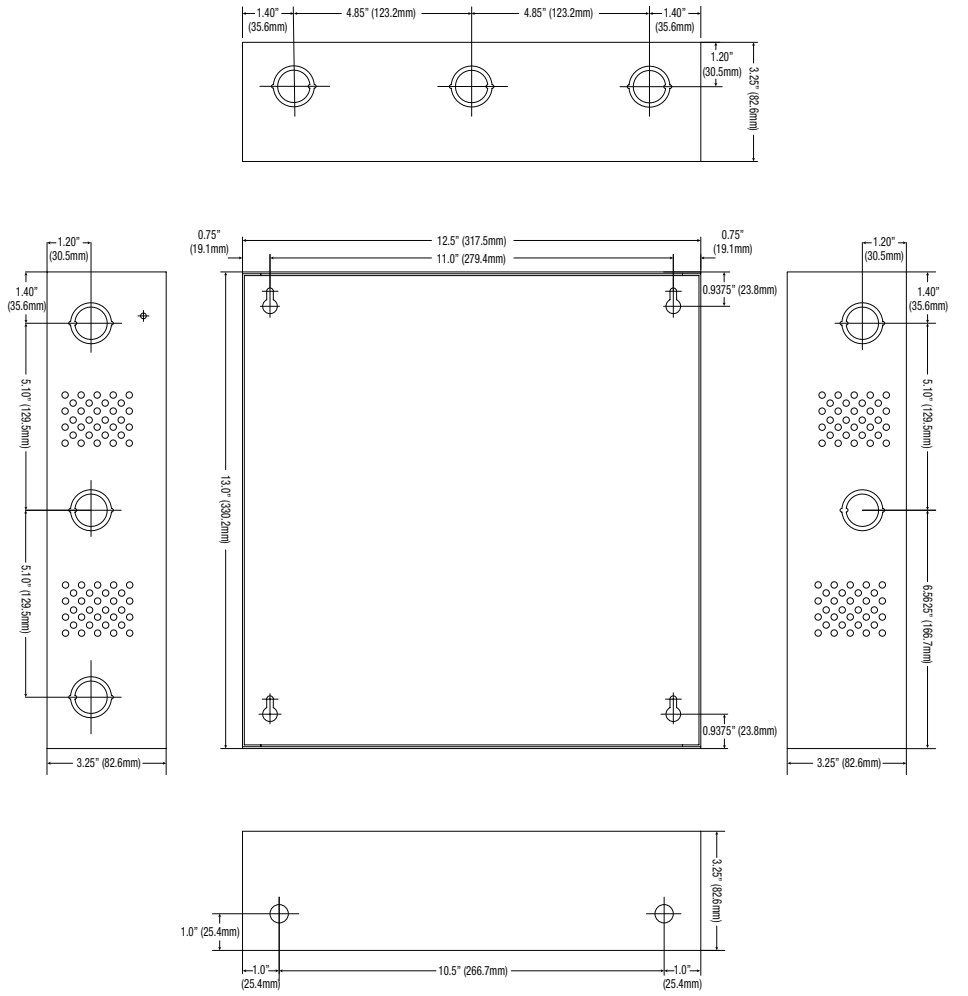
Mechanical Drawing and Dimensions (H x W x D approx.):

13.5” x 13” x 3.25” (342.9mm x 330.2mm x 82.6mm)



NetWay4EBTPL3
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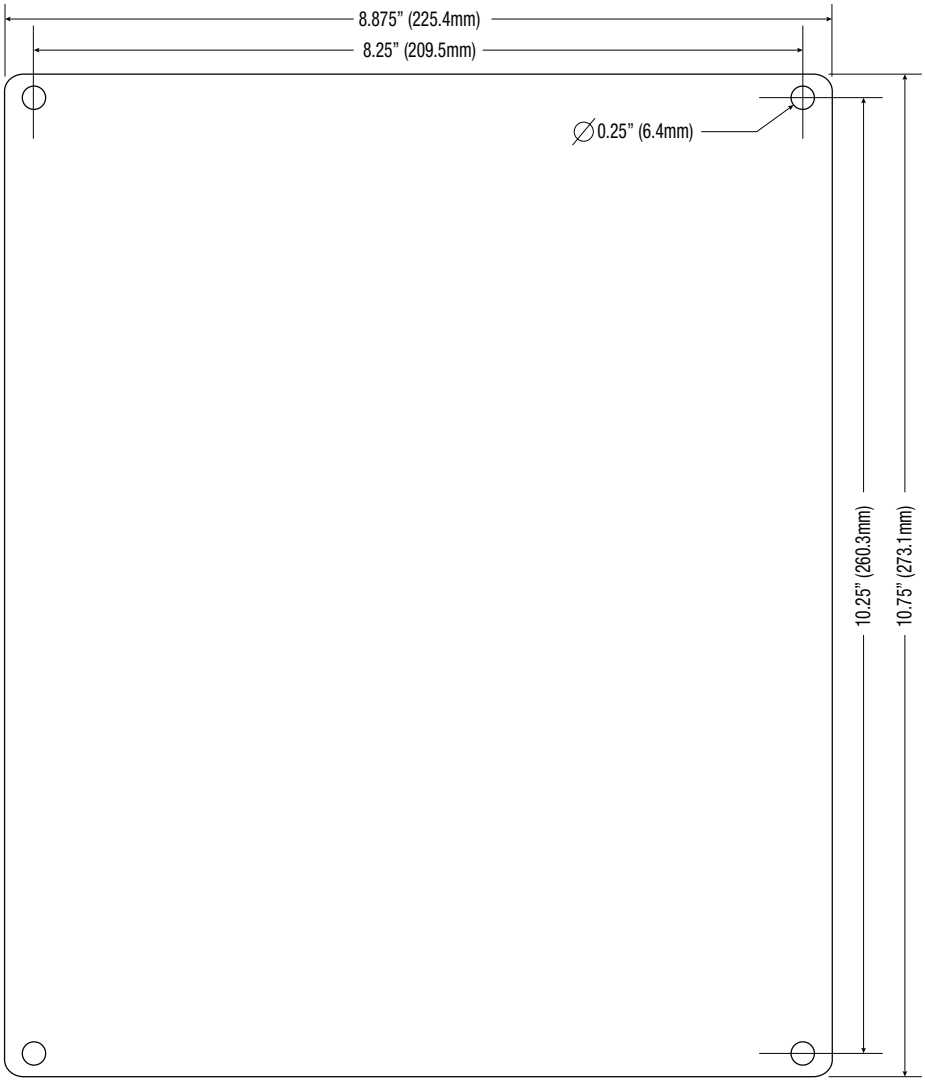
10.75" x 8.875" x 2.375" (273.1mm x 225.4mm x 60.3mm)