Netway SPECTRUM

Fiber Solution

Embedded LINQ TECHNOLOGY

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

NetWaySP83 Series

8-Port Ethernet over Fiber
360W PoE+ Hardened Switches

Models Include:

NetWaySP8WP3
- Dual Fiber Optic SFP 1G Link, 8-port PoE+ switch and power supply.
- 115VAC/230VAC input
- NEMA4/4X, IP66 rated Outdoor enclosure.

NetWaySP8WP37
- Dual Fiber Optic SFP 1G Link, 8-port PoE+ switch and power supply.
- 277VAC input
- NEMA4/4X, IP66 rated Outdoor enclosure.

NetWaySP8WPX3
- Dual Fiber Optic SFP 1G Link, 8-port PoE+ switch and power supply.
- 115VAC/230VAC input
- NEMA4/4X, IP66 rated Outdoor enclosure.
- Includes Vent2
- Accommodates up to four (4) 12VDC/4AH batteries.

NetWaySP8WPX37
- Dual Fiber Optic SFP 1G Link, 8-port PoE+ switch and power supply.
- 277VAC input
- NEMA4/4X, IP66 rated Outdoor enclosure.
- Includes Vent2
- Accommodates up to four (4) 12VDC/4AH batteries.

NetWaySP8X3
- Dual Fiber Optic SFP 1G Link, 8-port PoE+ switch and power supply.
- 115VAC/230VAC input
- NEMA1 rated Indoor enclosure.

NetWaySP8PL3
- Dual Fiber Optic SFP 1G Link, 8-port PoE+ switch and power supply.
- 115VAC/230VAC input
- Backplane version.

Installation Guide

CE

Altronix®

DOC#: NetWaySP83 Rev. 122624

More than just power.™

Installing Company: _____ Service Rep. Name: _____

Address: _____ Phone #: _____

Overview:

Altronix NetWaySP83 Series Indoor/Outdoor Ethernet over Fiber PoE Hardened Switches provide two (2) 1Gb SFP ports and eight (8) PoE+ (30W) ports or up to two (2) 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:

Agency Listings:
- CE European Conformity.

Input:
- **POE360 (NetWaySP8WP3, NetWaySP8WPX3, NetWaySP8X3, NetWaySP8PL3):** 115VAC, 60Hz, 3.5A or 230VAC, 50/60Hz, 2A.
- **POE367 (NetWaySP8WP37, NetWaySP8WPX37):** 277VAC, 50/60Hz, 1.75A.

Power Output:
- Eight (8) ports PoE+ (30W) or up to two (2) 60W ports.
- IEEE 802.3at (30W) and IEEE 802.3af (15W) compliant.
- 360W total power.
- Integral surge protection.

Fiber Port:
- Two (2) Gigabit SFP ports.
- Use with SFP module 1000Base-X (1Gb), compliant to Class 1 laser product (not included).

Ethernet Ports:
- Six (6) 10/100 Mbps and two (2) 10/100/1000 Mbps ports.
- Connectivity: RJ45, auto-crossover.
- Wire type: 4-pair CAT5 or better structured cable.
- Distance: up to 100m.
- Speed: 10/100/1000 Mbps, half/full duplex, auto negotiation.

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

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

Environmental:
- Refer to Technical Specifications Chart on page 5 for Environmental Conditions.

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

Applications:
- Provides PoE / 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 Windows Dashboard Alert notifications report real-time diagnostics.
- Event log tracks history.

Accessories:

NetWaySP1A
- Ethernet over Fiber Media Converter/Repeater - for applications requiring an additional SFP (Fiber) port

Mechanical:

NetWaySP8WP3, NetWaySP8WP37
- 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).

NetWaySP8WPX3, NetWaySP8WPX37
- NEMA4/4X, IP66 Rated enclosure for outdoor use.
- Accommodates up to four (4) sealed lead acid or gel type 12VDC batteries.
- Dimensions (H x W x D approx.): 17.375" x 12" x 6.5" (441.3mm x 304.8mm x 165.1mm).

NetWaySP8X3
- NEMA1 rated indoor enclosure
- Dimensions (H x W x D approx.): 13.5" x 13" x 3.25" (342.9mm x 330.2mm x 83mm).

NetWaySP8PL3
- Dimensions (H x W x D approx.): 10.75" x 8.875" x 2.375" (273.1mm x 225.4mm x 60.3mm).

***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.

Enclosure/Backplane Mounting 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:

NetWaySP8PL3:

1. Mount backplane in the desired location/enclosure with hardware supplied *(Backplane Dimensions pg. 9)*.

NetWaySP8WP3/NetWaySP8WPX3/NetWaySP8WP37/ NetWaySP8WPX37:

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. 10, 11)*:
   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. 6, pg. 8)*.
   Pole Mount: *Refer to Fig. 7 - 11 pg. 8.*
5. Mount backplane in enclosure with hardware.

NetWaySP8X3:

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. 14).* Secure enclosure to earth ground.

Power Connection:

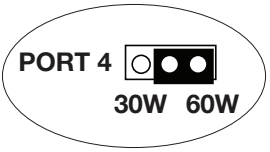
1. Secure cabinet to earth ground. Connect AC power from overcurrent protective device circuit breaker (20A @ 115VAC, 60Hz, 16A @ 230VAC, 50/60Hz) to the terminals marked [L, N] on power supply board *(Fig. 4, pg. 8)*. Use 14AWG or larger for all power connections (Battery, DC output, AC input).
   Connect 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. **Port Configurations** *(Fig. 1, pg. 3; Fig. 4a, pg. 7)*:
   Ports 4 and 6 can provide up to 60W of power. To select this option, move corresponding jumper into 60W position *(Fig. 2, pg. 3; Fig. 4b, pg. 7)*. **Total power not to exceed 360W.**

	Jumper Position	
Port	**30W**	**60W**
Port 1	Up to 30W	Up to 30W
Port 2	Up to 30W	Up to 30W
Port 3	Up to 30W	Data only
Port 4	Up to 30W	Up to 60W
Port 5	Up to 30W	Data only
Port 6	Up to 30W	Up to 60W
Port 7	Up to 30W	Up to 30W
Port 8	Up to 30W	Up to 30W

Fig. 1



2. Connect structured cables from port marked [Port 1] to [Port 8] on NetWaySP8B to PoE-compliant cameras/ edge devices *(Fig. 4, pg. 7)*.
   Note: All interconnected devices must be UL Listed.
3. Insert SFP module into port(s) marked [SFP], then connect cable to the SFP module on NetWaySP8B to the corresponding input of an SFP switch *(Fig. 4, pg. 7)*.

Battery Backup:

1. Connect four (4) 12V batteries or two (2) 24V batteres wired in series to terminals marked [BAT – BAT +] *(Fig. 1, pg. 4)*, carefully observing polarity. If batteries are housed in a weather-proof enclosure (NetWaySP8WP3, NetWaySP8WPX3), 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.

Security:

Please ensure that the cover is secured with:
Key lock and screws for **NetWaySP8X3**, latches and optional Altronix Lock1WP for **NetWaySP8WP3, NetWaySP8WP37, NetWaySP8WPX3, NetWaySP8WPX37.**

Recommended Altronix SFP Modules:

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-Mode Single Strand Fiber for distances 2km.
P1GCE - For use with CAT5e or better copper ethernet for distances up to 100m.

Technical Specifications:

Parameter	Description		
Number of Ports	Eight (8) ports PoE+ (30W) or up to two (2) 60W ports. Two (2) Gigabit SFP Ports.		
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**
	NetWaySP8WP3 NetWaySP8WP37	10.72 lb. (4.86 kg)	12.1 lb. (5.49 kg)
	NetWaySP8WPX3 NetWaySP8WP3X7	15 lb. (6.8 kg)	17.5 lb. (7.9kg)
	NetWaySP8X3	6.85 lb. (3.11 kg)	7.75 lb. (3.51 kg)
	NetWaySP8PL3	2.8 lb. (1.27 kg)	4.2 lb. (1.9 kg)

Configuring Unit for Network Connection:

Visit altronix.com for the latest firmware and installation instructions

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.

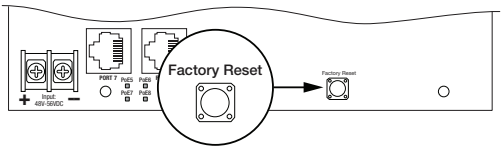
Configuring vLan on the Altronix NetwaySP8 Series Switch:

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 NetwaySP8 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:

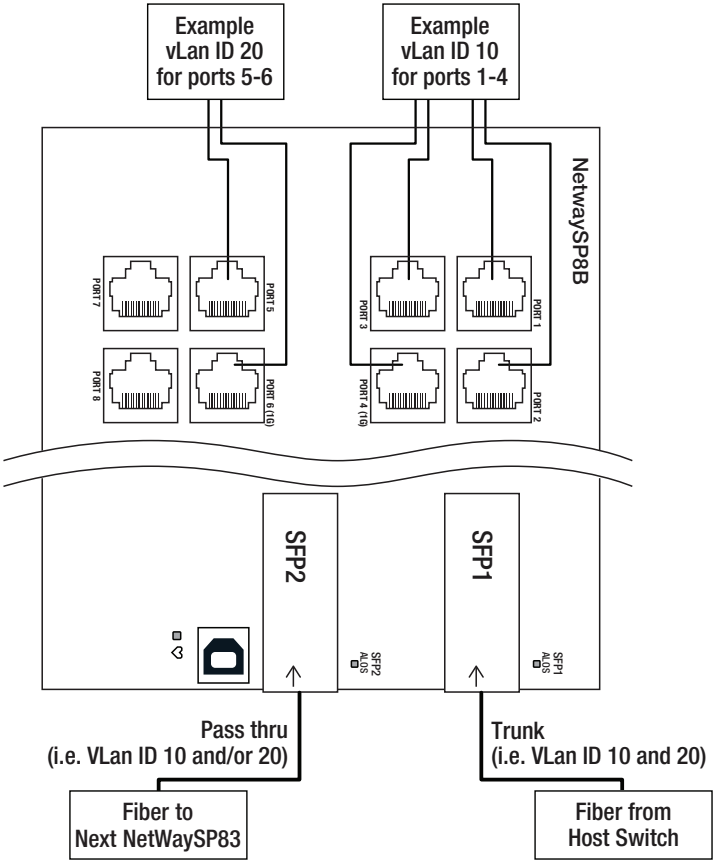
1. Power the unit down. Allow approximately 30 seconds for the unit to power down completely.
2. Depress **Factory Reset** button on NetWaySP8B while reapplying power to the unit *(Fig. 2, pg. 5; Fig. 4b, pg. 7)*.
   Continue holding the button until the LEDs on board go through the start up cycle, then release the button.
3. The unit returns to the original factory settings.

Fig. 2



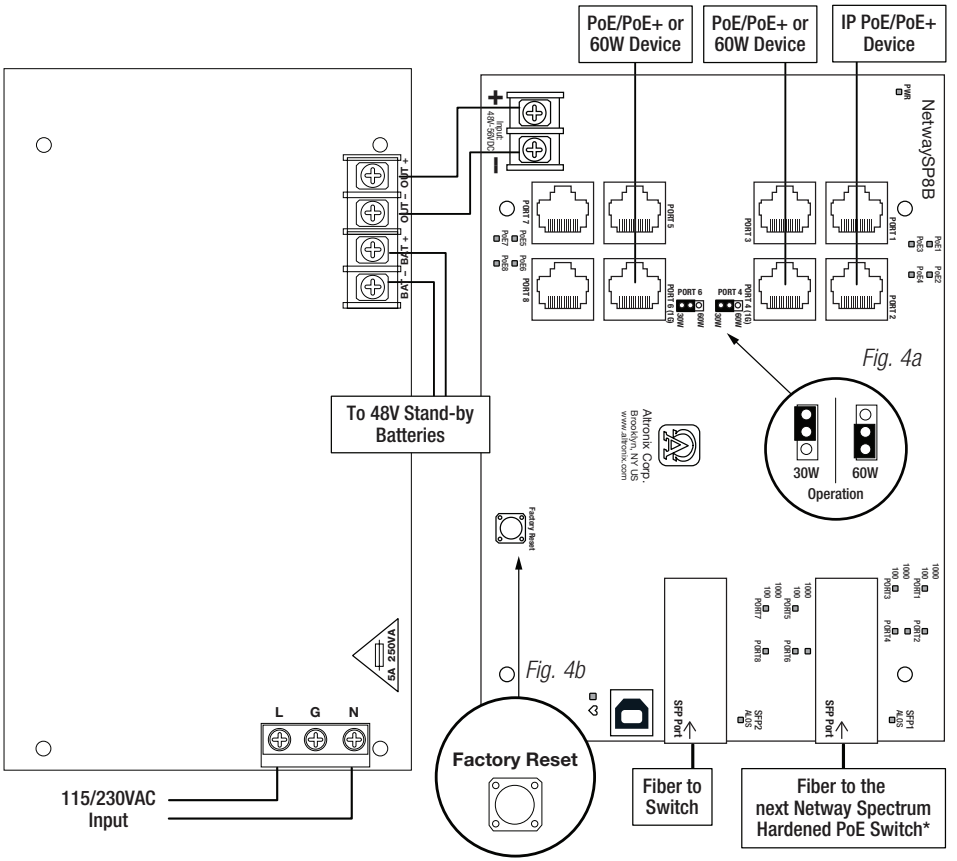
Typical VLan Setup:

Fig. 3



Typical Applications:

Fig. 4

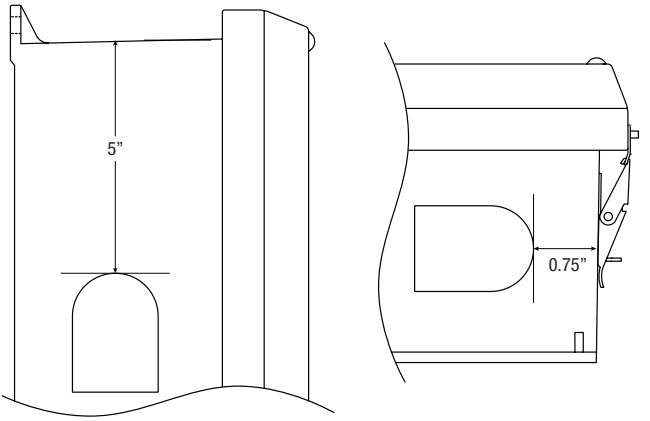


*277VAC, 50/60Hz, 1.75A for NetWaySP8WP37 and NetWaySP8WPX37

Installing Vent2 on NetWaySP8WPX3/NetWaySP8WPX37:

Fig. 5

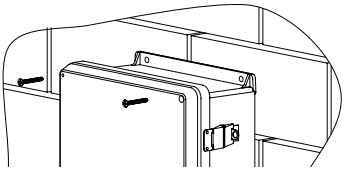
1. Using the template from the Vent2 bag, install the vents in the positions shown on *Fig. 5*.



Wall Mount Installation:

1- Place unit at desired location and secure with mounting screws *(not included) (Fig. 6, pg. 8).*

Fig. 6



Pole Mounting Using Optional Pole Mount Kit **PMK1** (NetWaySP8WP3(7)) **or PMK2** (NetWaySP8WPX3(7))**:**

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. 7, 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. 7, pg. 8 and Fig. 8, pg. 8).*

Fig. 7

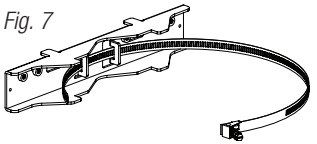


Fig. 8

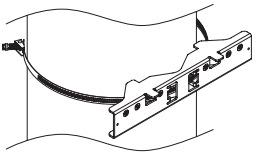
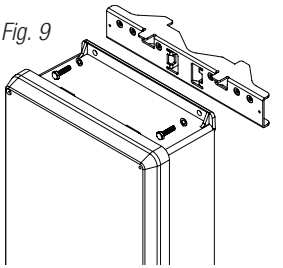


Fig. 9



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. 8, pg. 8).*
4. Thread the second wormgear quick release strap through the slots on the back of the bottom mounting bracket *(Fig. 10, 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. 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 *(Fig. 10, pg. 8).*
7. Clip excess straps.

Fig. 10

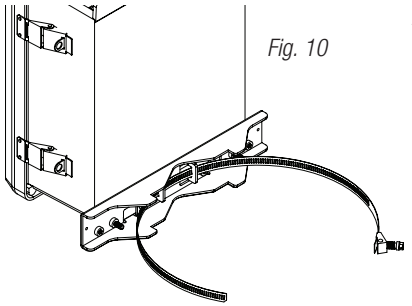


Fig. 11
2" to 8"(50.8mm to 203.2mm) diameter round pole

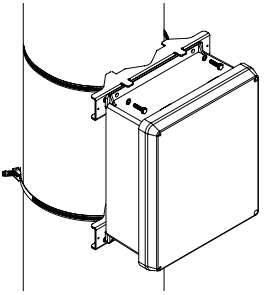
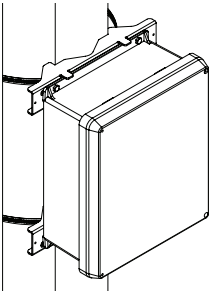
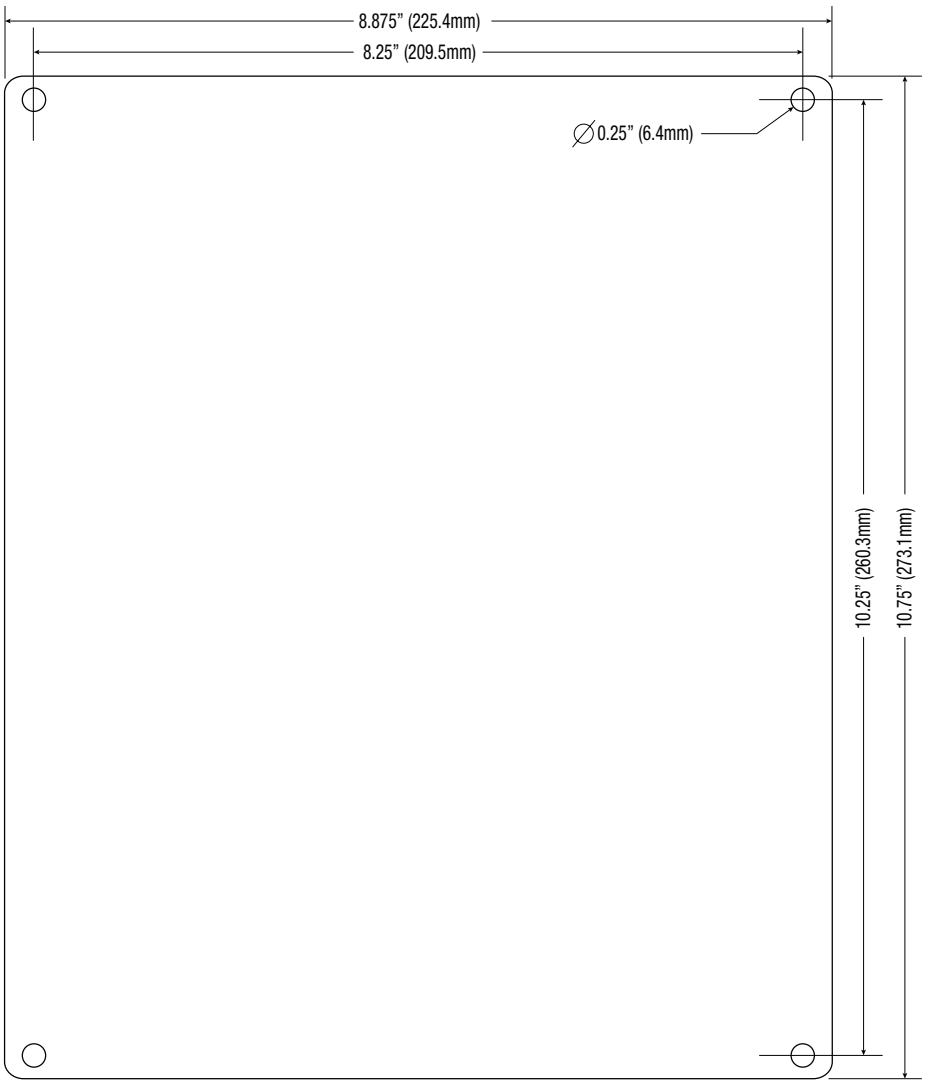


Fig. 11a
5" (127mm) square pole



NetWaySP8PL3
Mechanical Drawing and Dimensions (H x W x D approx.):

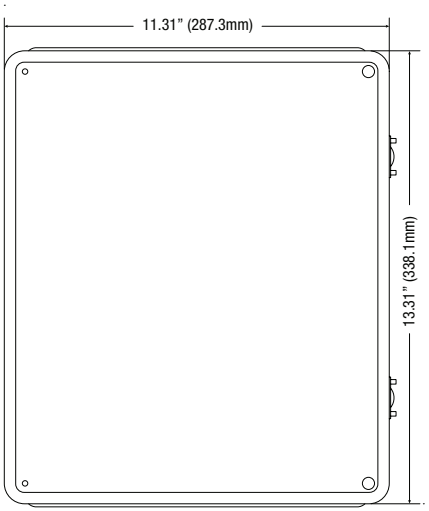
10.75” x 8.875” x 2.375” (273.1mm x 225.4mm x 60.3mm)



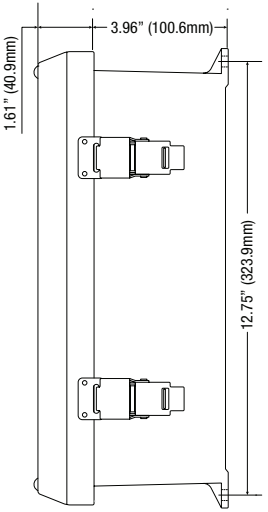
NetWaySP8WP3, NetWaySP8WP37
Mechanical Drawing and Dimensions (H x W x D approx.):

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

FRONT VIEW



RIGHT SIDE VIEW



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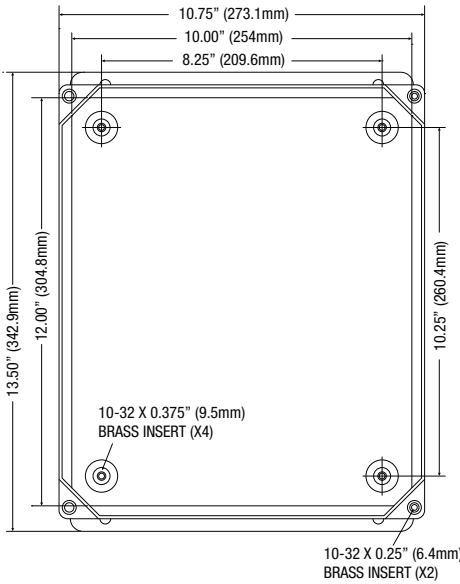

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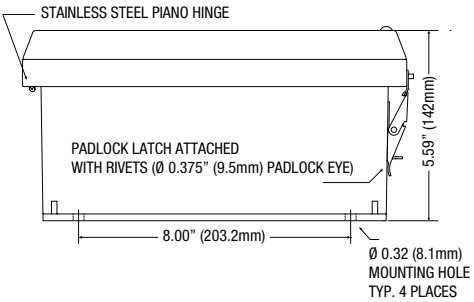
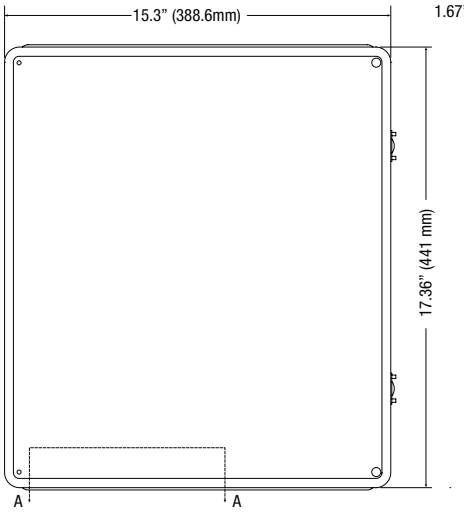


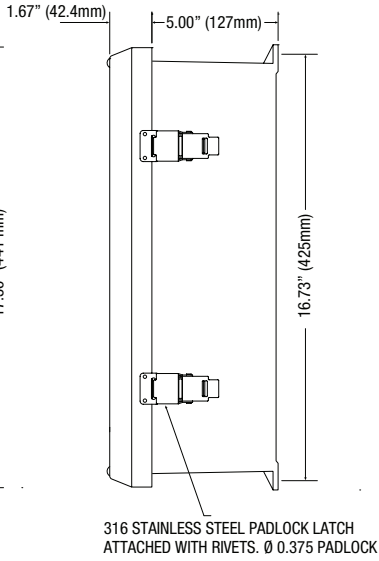
NetWaySP8WPX3, NetWaySP8WPX37
Mechanical Drawing and Dimensions (H x W x D approx.):

17.53" x 15.3" x 6.67" (445.3mm x 388.6mm x 169.4mm)

FRONT VIEW



RIGHT SIDE VIEW



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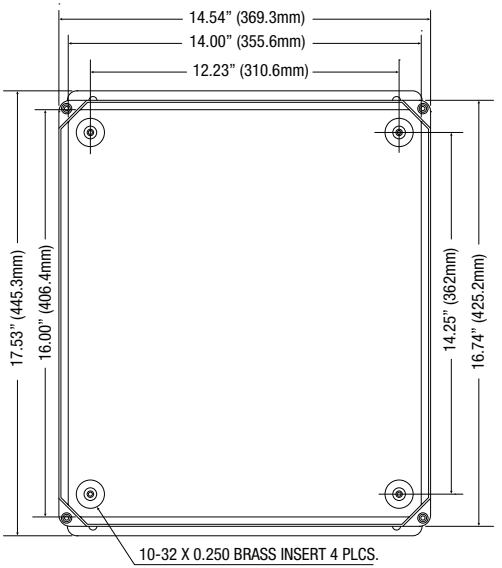
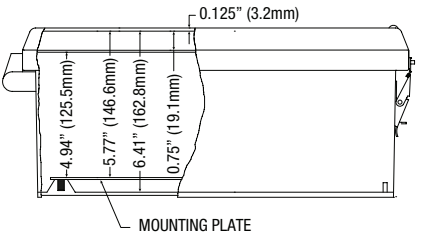
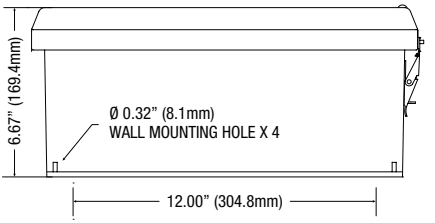
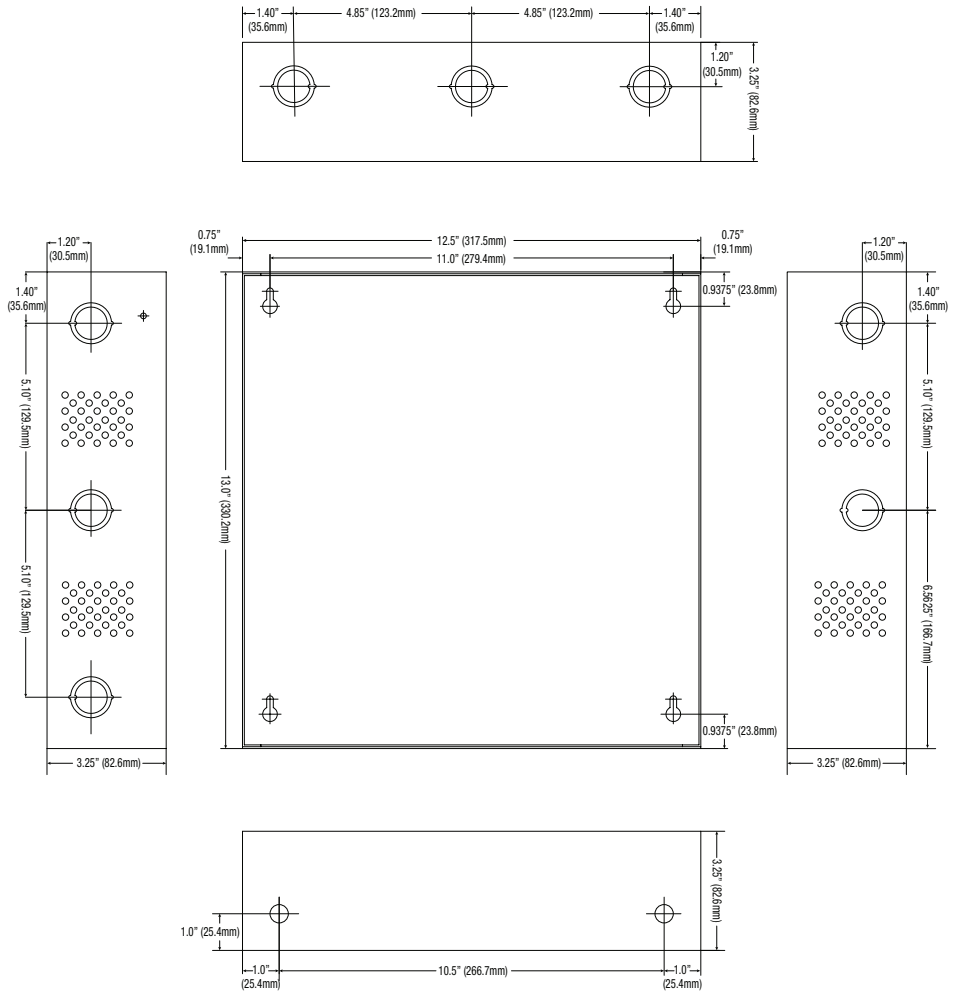


SECTION A-A



END VIEW



NetWaySP8X3
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)