NETWAY®
SPECTRUM

Fiber Solution

NetWaySP41BT3 Series
4-port Hardened 360W 802.3bt 4PPoE Switches (Layer 2)

Models Include:

NetWaySP41BTWP3
- 4-port Hardened 802.3bt 4PPoE Switch and Power Supply/Charger
- NEMA4/4X, IP66 rated Outdoor enclosure.

NetWaySP41BTWPX3
- 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.

NetWaySP41BTX3
- 4-port Hardened 802.3bt 4PPoE Switch and Power Supply/Charger
- NEMA1 rated Indoor enclosure.

NetWaySP41BTPL3
- 4-port Hardened 802.3bt 4PPoE Switch and Power Supply/Charger
- Backplane version.

Installation Guide

CE

Altronix®

More than just power.™

Installing Company: _____ Service Rep. Name: _____

Address: _____ Phone #: _____

Table of Contents:

Overview:

Altronix NetWaySP41BT3 Series Hardened 802.3bt 4PPoE Layer 2 Switches are equipped with two (2) 1Gb SFP ports and four (4) 802.3bt compliant Ethernet ports rated at 90W each, with 360W total power.
For managed switches, refer to NetWaySP4BT3 Series.

Features:

Agency Listings:
• CE European Conformity.

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

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

SFP Ports:
• Two (2) Gigabit SFP ports.

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, 10/100/1000 Base-T/active LEDs for each port.
• ALOS LED indicates fiber connection for SFP port.
• Heartbeat LED indicates proper operation of the unit.

Mechanical:
NetWaySP41BTPL3:
• Dimensions (H x W x D approx.):
  10.75" x 8.875" x 2.375
   (273.1mm x 225.4mm x 60.3mm).
NetWaySP41BTWP3:
• 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).
NetWaySP41BTWPX3:
• 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).
NetWaySP41BTX3:
• 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).

*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.

Installation:

NetWaySP41BTPL3:

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

NetWaySP41BTWP3/NetWaySP41BTWPX3:

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. 2, pg. 6)*.
   Pole Mount: *Refer to Fig. 3 - 7 pg. 6.*
5. Mount backplane in enclosure with hardware.

NetWaySP41BTX3:

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(s) marked [SFP], then connect cable to the SFP module on NetWaySP4BTB to the corresponding input of an SFP switch *(Fig. 1, pg. 5)*.

Battery Backup:

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 (NetWaySP41BTWP3, NetWaySP41BTWPX3), 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.**

Security:

Please ensure that the cover is secured with:
Key lock and screws for **NetWaySP41BTX3**, Security Bolt for **NetWaySP41BTWP3 and NetWaySP41BTWPX3.**

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. 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

	Model	Product Weight	Shipping Weight
Weights (approx.)	NetWaySP41BTWP3	10.5 lb. (4.76 kg)	11.9 lb. (5.4 kg)
	NetWaySP41BTWPX3	15 lb. (6.8 kg)	17.5 lb. (7.9kg)
	NetWaySP41X3	6.85 lb. (3.11 kg)	7.75 lb. (3.51 kg)
	NetWaySP41PL3	2.6 lb. (1.18 kg)	4.0 lb. (1.81kg)

Typical Applications:

Fig. 1
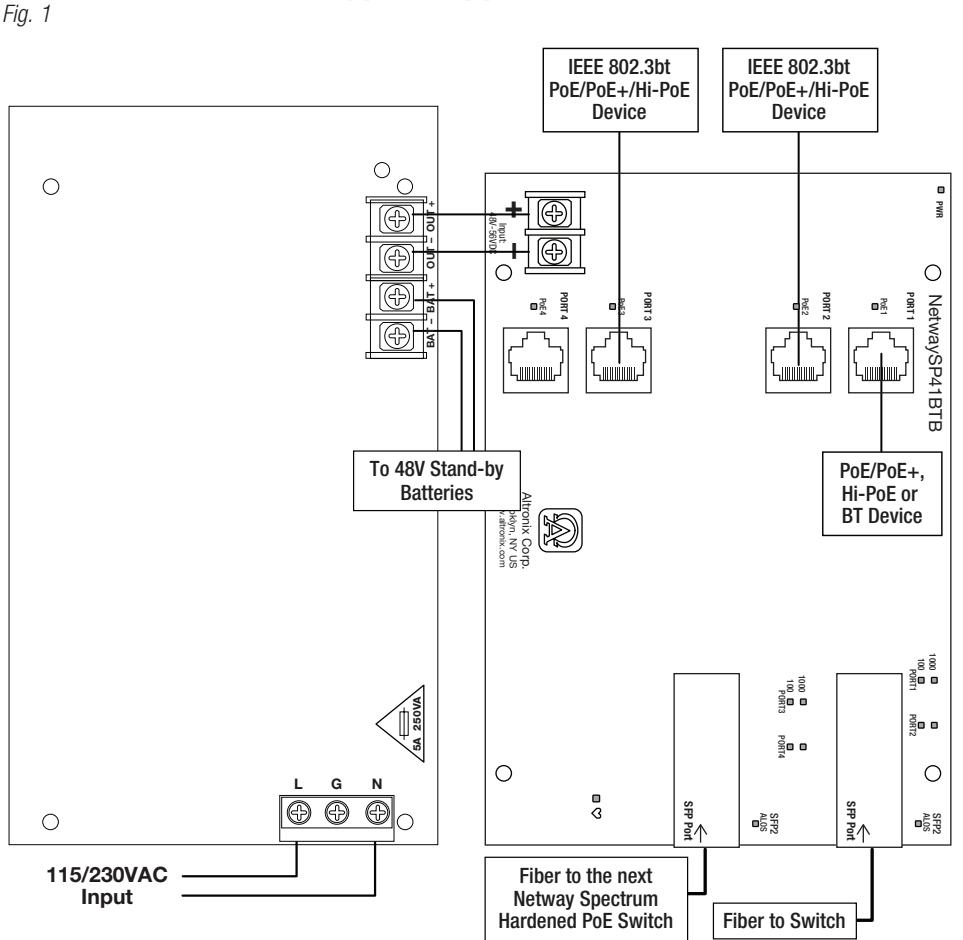
Wall Mount Installation

1. Place unit at desired location and secure with mounting screws *(not included) (Fig. 2, pg. 6)*.

Fig. 2
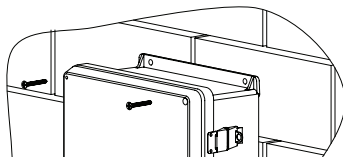
Pole Mounting Using Optional Pole Mount Kit
PMK1 (NetWaySP41BTWP3) or PMK2 (NetWaySP41BTWPX3):

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 WP1, 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. 3, pg. 6)*.
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. 3, pg. 6 and Fig. 5, pg. 6)*

Fig. 3
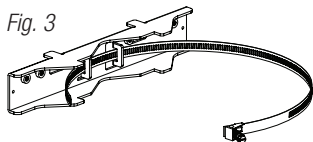
Fig. 4
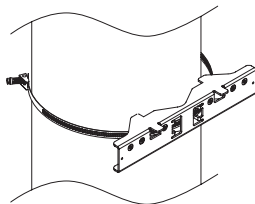
Fig. 5
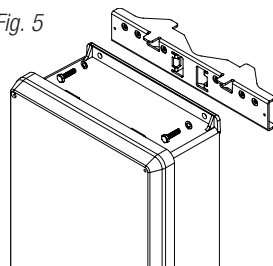
3. Attach the bottom bracket to the enclosure by inserting bolts through the flange of the enclosure and into the bracket, tightening bolts with a 7/16" hex socket *(Fig. 4, pg. 6)*.
4. Thread the second wormgear quick release strap through the slots on the back of the bottom mounting bracket *(Fig. 3, pg. 6)*.
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. 4, pg. 6)*.
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. 6)*.
7. Clip excess straps.

Fig. 6

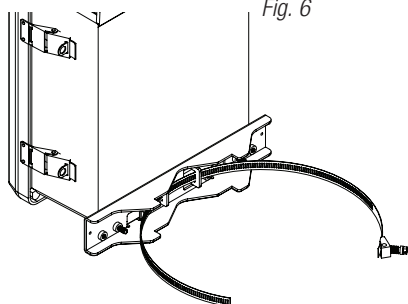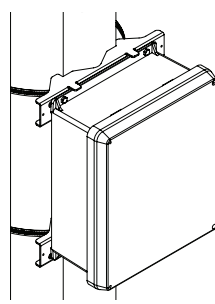Fig. 7
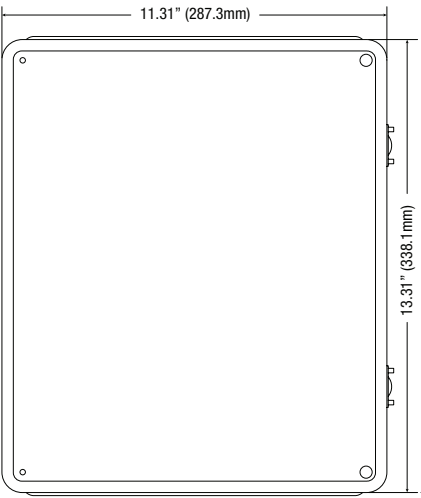2" to 8"(50.8mm to 203.2mm) diameter round pole
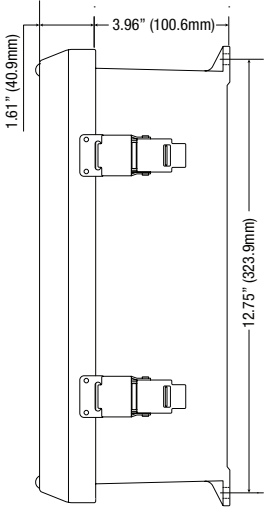
Fig. 7a
5" (127mm) square pole

Notes:

Notes:

NetWaySP41BTWP3
Mechanical Drawing and Dimensions (H x W x D approx.):
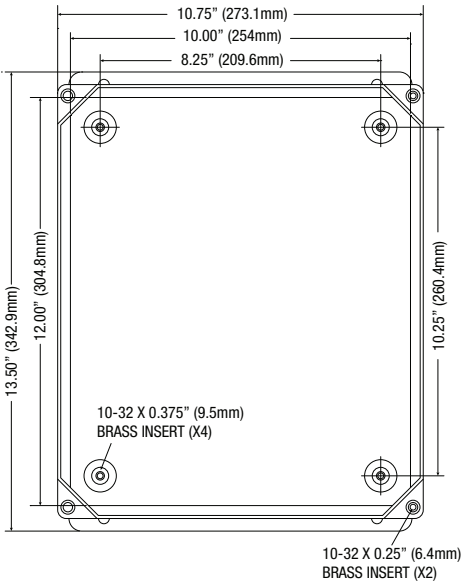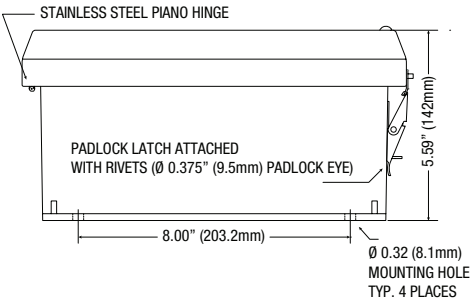13.31" x 11.31" x 5.59" (338.1mm x 287.3mm x 142mm)

FRONT VIEW

11.31" (287.3mm)

13.31" (338.1mm)

RIGHT SIDE VIEW

3.96" (100.6mm)

1.61" (40.9mm)

12.75" (323.9mm)

FRONT VIEW COVER REMOVED

10.75" (273.1mm)
10.00" (254mm)
8.25" (209.6mm)

13.50" (342.9mm)
12.00" (304.8mm)
10.25" (260.4mm)

10-32 X 0.375" (9.5mm)
BRASS INSERT (X4)

10-32 X 0.25" (6.4mm)
BRASS INSERT (X2)

END VIEW

STAINLESS STEEL PIANO HINGE

PADLOCK LATCH ATTACHED
WITH RIVETS (Ø 0.375" (9.5mm) PADLOCK EYE)

5.59" (142mm)

8.00" (203.2mm)

Ø 0.32 (8.1mm)
MOUNTING HOLE
TYP. 4 PLACES

NetWaySP41BTWPX3
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)
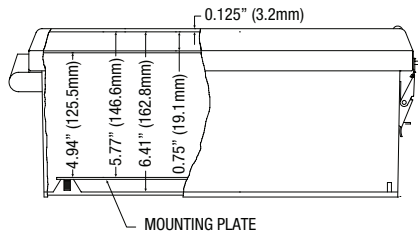
FRONT VIEW

RIGHT SIDE VIEW

15.3" (388.6mm)

17.36" (441 mm)

A — A

1.67" (42.4mm)

5.00" (127mm)

16.73" (425mm)
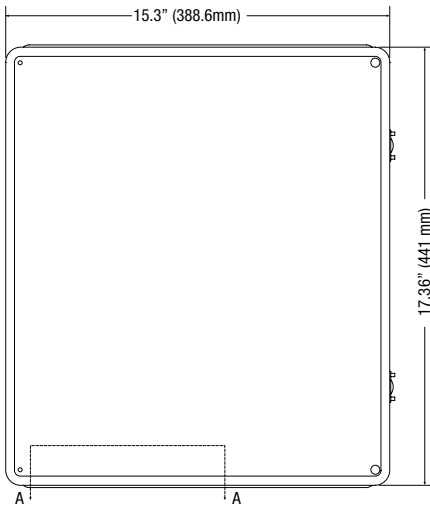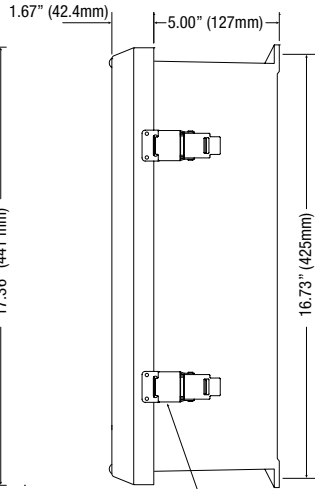
316 STAINLESS STEEL PADLOCK LATCH
ATTACHED WITH RIVETS. Ø 0.375 PADLOCK EYE

FRONT VIEW COVER REMOVED

14.54" (369.3mm)
14.00" (355.6mm)
12.23" (310.6mm)

17.53" (445.3mm)
16.00" (406.4mm)

14.25" (362mm)
16.74" (425.2mm)

10-32 X 0.250 BRASS INSERT 4 PLCS.

SECTION A-A

0.125" (3.2mm)

4.94" (125.5mm)
5.77" (146.6mm)
6.41" (162.8mm)
0.75" (19.1mm)

MOUNTING PLATE

END VIEW

6.67" (169.4mm)
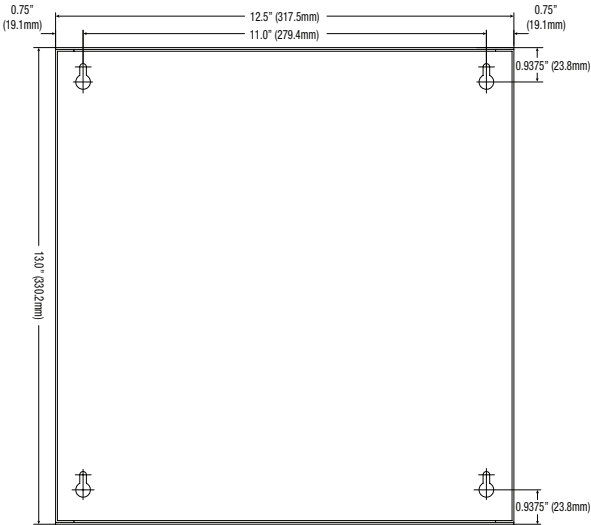
Ø 0.32" (8.1mm)
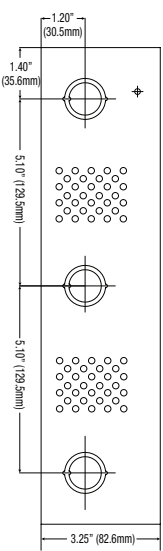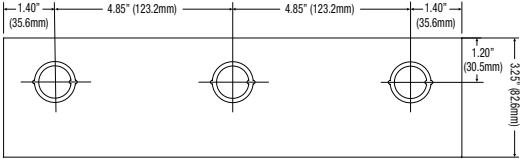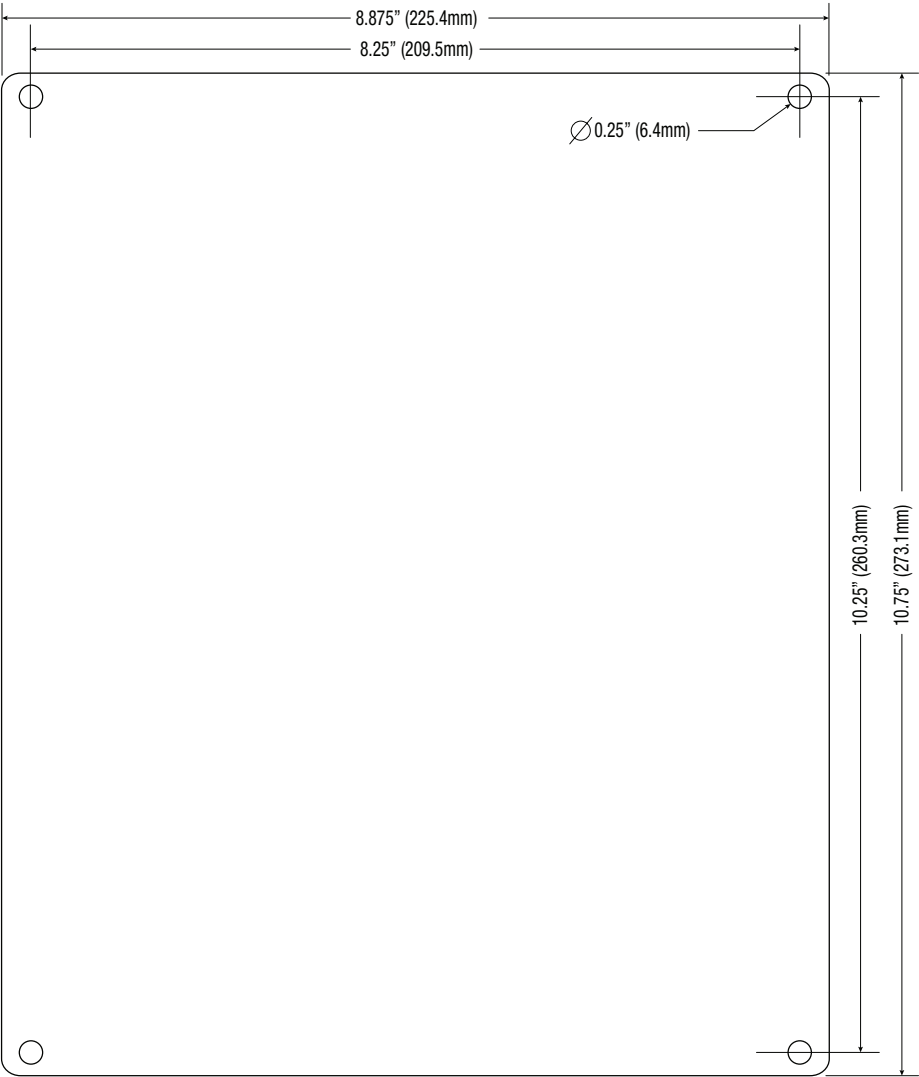WALL MOUNTING HOLE X 4

12.00" (304.8mm)
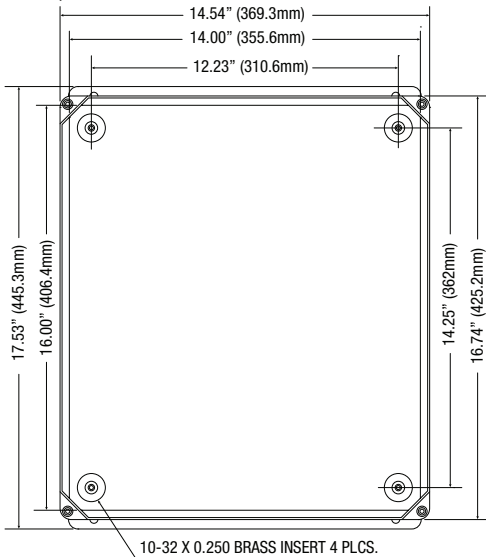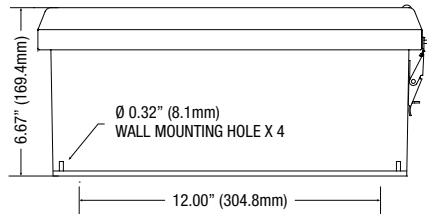
NetWaySP41BTX3
Mechanical Drawing and Dimensions (H x W x D approx.):
13.5" x 13" x 3.25" (342.9mm x 330.2mm x 82.6mm)
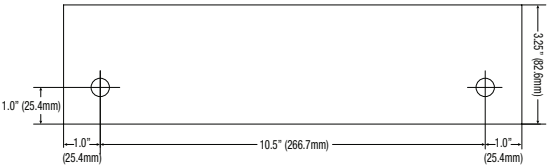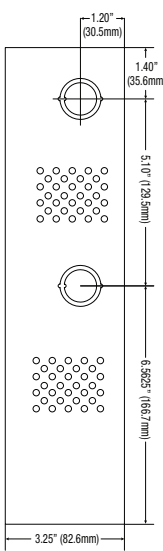
NetWaySP41BTPL3
Mechanical Drawing and Dimensions (H x W x D approx.)**:**
10.75" x 8.875" x 2.375" (273.1mm x 225.4mm x 60.3mm)

8.875" (225.4mm)

8.25" (209.5mm)

⌀ 0.25" (6.4mm)

10.25" (260.3mm)

10.75" (273.1mm)

MEMBER