



Fiber Solution

NetWaySP1BT Series

802.3bt Media Converter/Injectors

Models Include:

NetWaySP1BT

- 802.3bt Media Converter/Injector
- Modular plastic case.

NetWaySP1BTWPN

- 802.3bt Media Converter/Injector.
- NEMA4/4X rated outdoor enclosure.

NetWaySP1BTWP

- 802.3bt Media Converter/Injector with Integral Power.
- NEMA4/4X rated outdoor enclosure.

NetWaySP1BTWPX

- 802.3bt Media Converter/Injector with Integral Power.
- NEMA4/4X rated outdoor enclosure.
- Accommodates up to four (4) 12VDC/4AH batteries.

Installation Guide



More than just power.™

DOC#: NetWaySP1BT Rev. 122324

Installing Company: _____ Service Rep. Name: _____

Address: _____ Phone #: _____

Overview:

Altronix NetWaySP1BT Series 802.3bt media converter/injectors provide a single 802.3bt (4PPoE) port up to 90W and accommodate Fiber (1000Base-X/SX/LX) or structured cable to transmit data. Units can be deployed with structured cable, conventional single/multimode fiber or composite cable (fiber + copper combined). Cameras/edge devices may be located up to 100m from the unit.

Features:

Agency Listings:

- CE European Conformity.

Input:

- **NetWaySP1BT and NetWaySP1BTWPN:**
48-56VDC @ 1.9A (95W).
See pg. 4 for recommended Power Sourcing Equipment.
- **NetWaySP1BTWP and NetWaySP1BTWPX:**
115VAC, 60Hz, 2.5A or 230VAC, 50/60Hz, 1.3A

Fiber Port:

- One (1) 1Gb SFP port.
See below for recommended SFP modules.

PoE Port:

- Single port rated up to 90W max.
- IEEE 802.3af, 802.3at and 802.3bt compliant.

Data Port:

- Connectivity: RJ45, auto-crossover.
- Wire type: 4-pair CAT5e and higher.
- Speed: 10/100/1000 Mbps.
- Distance: up to 100m.

Battery Backup

(NetWaySP1BTWP and NetWaySP1BTWPX):

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

Environmental:

- *Refer to Environmental Conditions on page 5.*

LED Indicators (Refer to Fig. 1, Pg. 4):

- **Yellow and Green LEDs** (RJ45 jacks):
Yellow (left) LED: 10/100 Mbps.
Green (right) LED: 1000 Mbps.
- **Green PoE LEDs:** Indicate PoE present.
- **Green SFP (Fiber) LED:** Indicates SFP connection.

Mechanical:

NetWaySP1BT:

- Modular plastic case.
3.375" x 3.8" x 1" (85.7mm x 96.5mm x 25.4mm).

NetWaySP1BTWPN:

- NEMA4/4X, IP66 Rated enclosure for outdoor use.
- Dimensions (H x W x D approx.):
9.5" x 7.32" x 4.92"
(241.3mm x 185.9mm x 125mm)

NetWaySP1BTWP:

- 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).

NetWaySP1BTWPX:

- NEMA4/4X, IP66 Rated enclosure for outdoor use.
- Accommodates four (4) 12VDC/4AH batteries (48V of backup).
- Dimensions (H x W x D approx.):
17.53" x 15.3" x 6.67"
(445.3mm x 388.6mm x 169.4mm).

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. |

Recommended Altronix Power Sourcing Equipment (for NetWaySP1BT and NetWaySP1BTWPN):

NetWaySP4P	Ethernet to Fiber Media Converter with Integral Power Supply/Charger. Four (4) 56VDC non power-limited outputs up to 120W max. full power per port (240W total power). Four (4) 1Gb SFP ports.
NetWaySP4PX	Ethernet to Fiber Media Converter with Integral Power Supply/Charger. Four (4) 56VDC non power-limited outputs up to 120W max. full power per port (480W total power). Four (4) 1Gb SFP ports.
NetWaySP4P2	Ethernet to Fiber Media Converter with Integral Power-Limited Power Supply/Charger. Four (4) 56VDC power-limited outputs up to 60W max. full power per port (240W total power). Four (4) 1Gb SFP ports.
WayPoint562	High Current Outdoor Power Supply/Charger. 56VDC/120W output. Filtered and electronically regulated output. Short circuit and thermal overload protection.
Vertiline563	EIA 19" 1U Rack Mountable Dual Independent Power Supply/Charger. 56VDC @ 3A each output. Filtered and electronically regulated output. Short circuit and thermal overload protection.
PoE201	Power Supply/Charger Board. 56VDC/120W output. Filtered and electronically regulated output. Short circuit and thermal overload protection.

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 (NetWaySP1BT):

1. Mount NetWaySP1BT in desired location utilizing the mounting hole (*Fig. 3a, pg. 6*). Use a proper fastener and/or wall anchor when securing NetWaySP1BT with screw through its mounting hole to the surface.
Note: Earth ground can be used, if needed, for high transient or outdoor environments.
If used, insert an Earth ground wire (included with product) into the internal ground terminal until secured (a slight tug can check stability) & fasten the free end to a chassis earth ground.
If earth ground is not attached and needed, refer to Fig. 1, pg. 4 for manual placement.

Installation (NetWaySP1BTWPN, NetWaySP1BTWP, NetWaySP1BTWPX):

2. 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.
3. 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.
4. Clean out the inside of enclosure before remounting circuit boards/backplane.
5. Mounting NEMA4/4X rated enclosure (*Enclosure Dimensions, pg. 10-12*):
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. 7, pg. 9*).
Pole Mount: Refer to Fig. 8 - 12, pg. 9.
6. Mount backplane in enclosure with hardware.

Power Connection (NetWaySP1BT and NetWaySP1BTWPN):

- 1. Use external 48-55V UL Listed ITE power supply, carefully observing correct polarity (Fig. 1, pg. 4).
- 2. Use 14AWG or larger for all power connections.

Power Connection (NetWaySP1BTWP and NetWaySP1BTWPX):

Before powering unit, set input voltage selection switch to proper Input Voltage position (Fig 5a, 6a, pg. 7, 8). Units are factory set for 115VAC.

- 1. Connect AC power from overcurrent protective device circuit breaker (20A @ 115VAC, 60Hz or 16A @ 230VAC, 50/60Hz) to the terminals marked [L, N] on power supply board (Fig. 5, 6, pg. 7, 8). Connect ground lug to earth or green branch wire on backplane (12AWG min.). Use 14AWG or larger for all power connections (Battery, DC output, AC input).
- 2. **Battery Backup** (if desired): Connect four (4) 12VDC batteries wired in series to terminals marked [- BAT +] (Fig. 5, 6, pg. 7, 8), carefully observing polarity. When use of stand-by batteries is desired, they must be lead acid or gel type.

For outdoor battery backup, battery enclosure must have sufficient ventilation. Use Altronix Vent2 kit.

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

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

Please ensure that the cover is secured with latches and optional Altronix Lock1WP for NetWaySP1BTWP/NetWaySP1BTWPX/NetWaySP1BTWPN.

Input/Data Connections:

- 1. Connect structured cable from port marked [Data Port] on NetWaySP1BT to a PoE midspan/endspan (Fig. 1, pg. 4).
- 2. Connect fiber optic cable to a fiber SFP module. Connect the module to the port marked [SFP] on the NetWaySP1BT. Connect the other end of fiber cable to an SFP module of a remote device. SFP LED will illuminate indicating data connection (Fig. 1, pg. 4).
- 3. Using 4-pair CAT5e or higher cable connect PoE load device to be powered to the port marked [802.3bt Output] on NetWaySP1BT. After authentication and classification have been established, [PoE Signal] LED will illuminate indicating PoE presence.

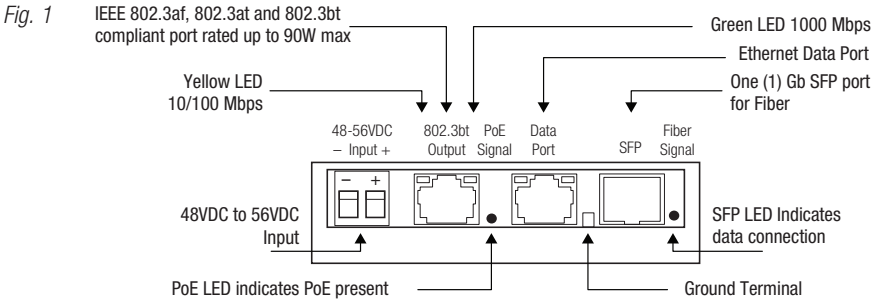
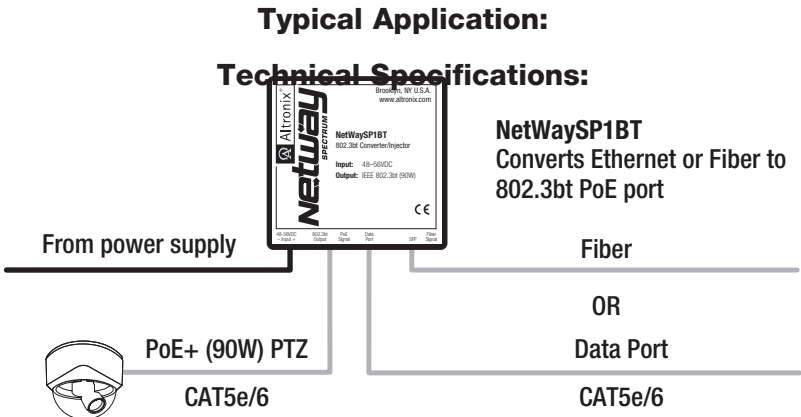


Fig. 2




Parameter	Description		
Ports	One (1) 1Gb SFP port, one (1) Data port. One (1) IEEE 802.3af, 802.3at and 802.3bt compliant output port rated up to 90W max.		
Input Power Requirements	NetWaySP1BT and NetWaySP1BTWPN: 48-56VDC @ 1.9A (95W). <i>See pg. 3 for recommended Power Sourcing Equipment.</i> NetWaySP1BTWP and NetWaySP1BTWPX: 115VAC, 60Hz, 2.5A or 230VAC, 50/60Hz, 1.3A.		
Indicators	Yellow and Green LEDs (RJ45 jacks): IP Link status, 10/100/1000 Base-T/active. PoE Green LED: Indicates PoE present. Fiber Signal Green LED: Indicates SFP connection.		
Environmental Conditions	Temperature: NetWaySP1BT: Operating (90W): – 40°C to 75°C (– 40°F to 167°F). Storage: – 40°C to 75°C (– 40°F to 167°F). NetWaySP1BTWPN, NetWaySP1BTWP and NetWaySP1BTWPX: Operating: 60W: – 40°C to 75°C (– 40°F to 167°F). 80W: – 40°C to 70°C (– 40°F to 158°F). 90W: – 40°C to 60°C (– 40°F to 140°F). Storage: – 40°C to 85°C (– 40°F to 185°F). Relative Humidity: 85% +/-5%. Operating Altitude: – 304.8 to 2,000m.		
Regulatory Compliance	 CE European Conformity.		
Weights (approx.)	Model	Product Weight	Shipping Weight
	NetWaySP1BT	0.25 lb. (0.11 kg)	0.3 lb. (0.14 kg)
	NetWaySP1BTWPN	3.7 lb. (1.68 kg)	5 lb. (2.27 kg)
	NetWaySP1BTWP	10.5 lb. (4.76 kg)	11.9 lb. (5.4 kg)
	NetWaySP1BTWPX	15 lb. (6.8 kg)	17.5 lb. (7.9kg)

Fig. 3 - NetWaySP1BT

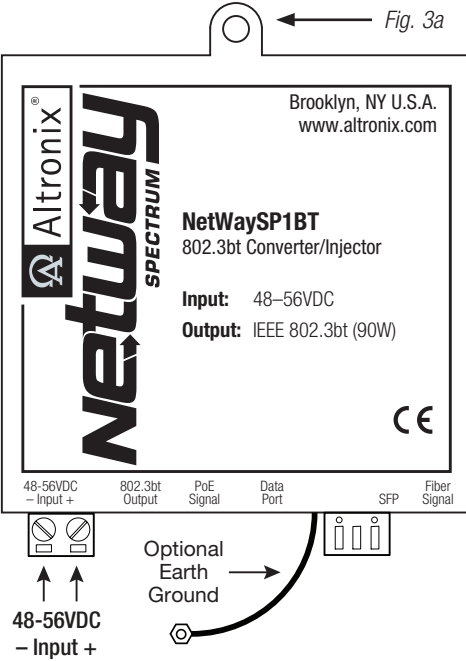


Fig. 4 - NetWaySP1BTWPN

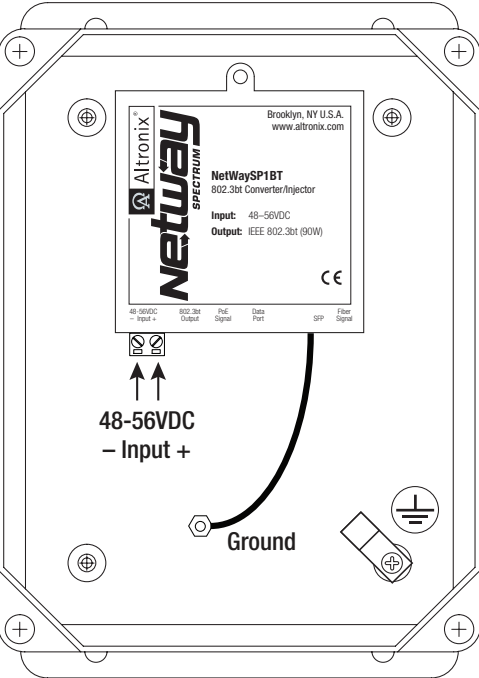


Fig. 5 - NetWaySP1BTWP

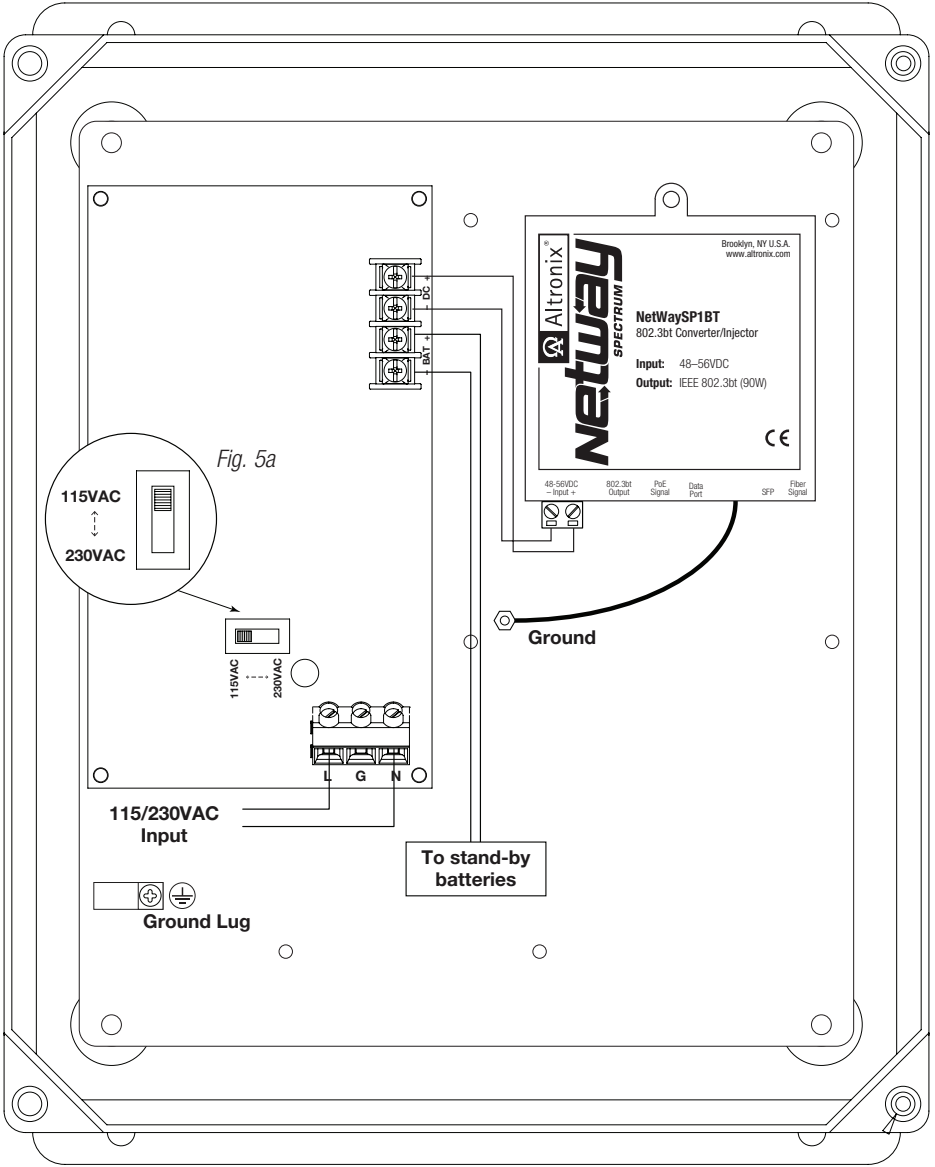
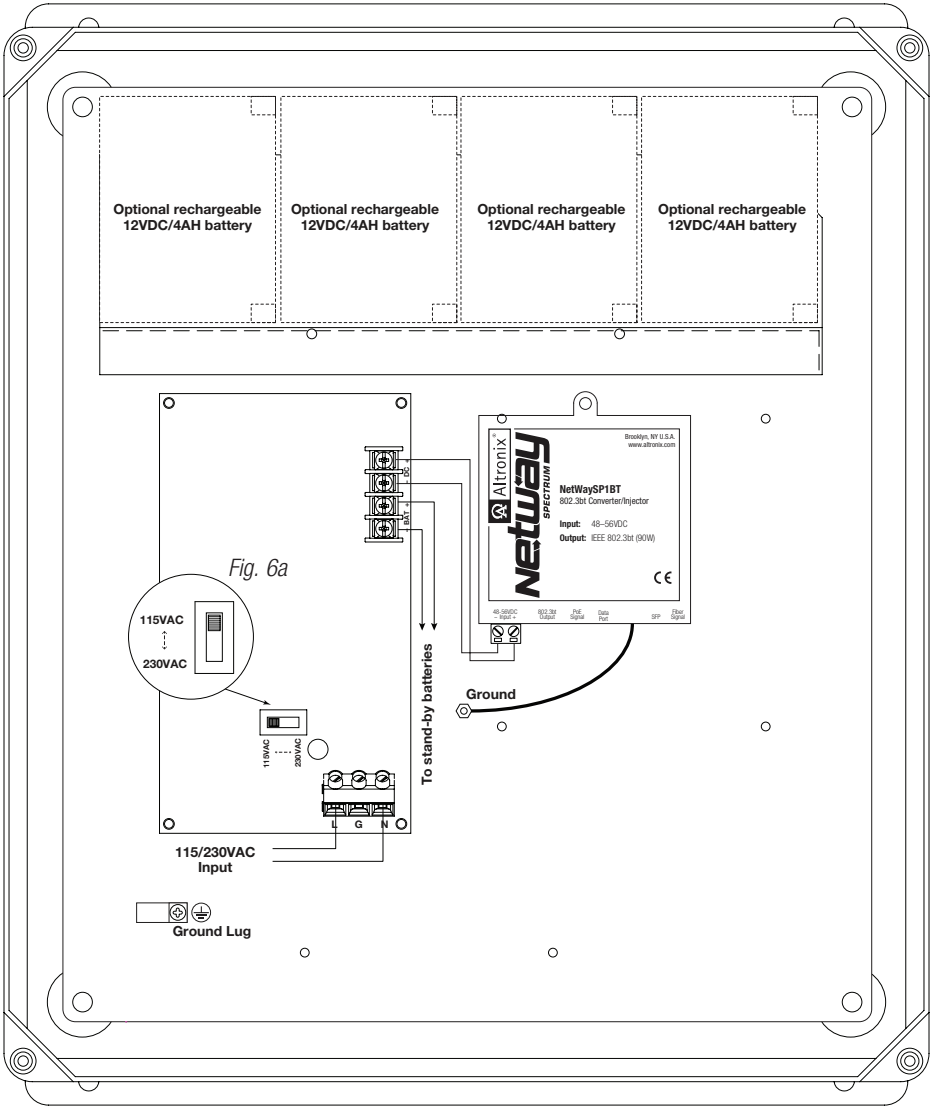


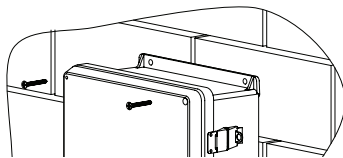
Fig. 6 - NetWaySP1BTWPX



Wall Mount Installation:

- 1- Place unit at desired location and secure with mounting screws (not included) (Fig. 7, pg. 9).

Fig. 7



Pole Mounting Using Optional Pole Mount Kit

PMK1 (NetWaySP1BTWPN, NetWaySP1BTWP) or PMK2 (NetWaySP1BTWPX):

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. 6, 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. 8, pg. 9 and Fig. 9, pg. 9).

Fig. 8

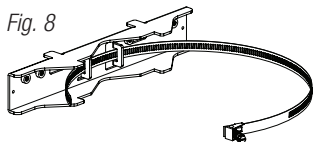


Fig. 9

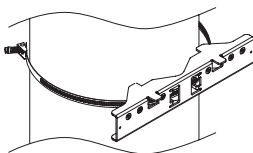
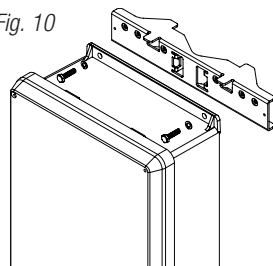


Fig. 10



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. 10, pg. 9).
4. Thread the second wormgear quick release strap through the slots on the back of the bottom mounting bracket (Fig. 11, pg. 9).
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. 9).
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. 9, pg. 9).
7. Clip excess straps.

Fig. 11

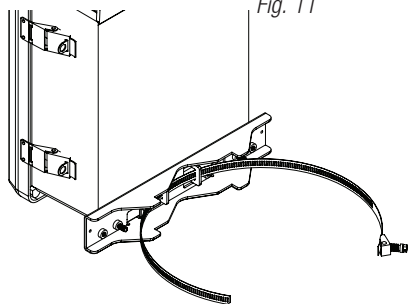


Fig. 12
2" to 8" (50.8mm to 203.2mm)
diameter round pole

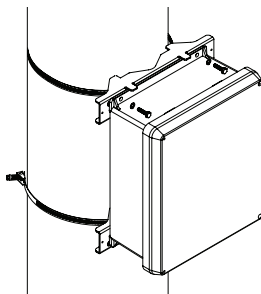
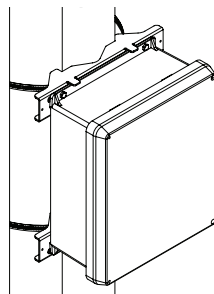
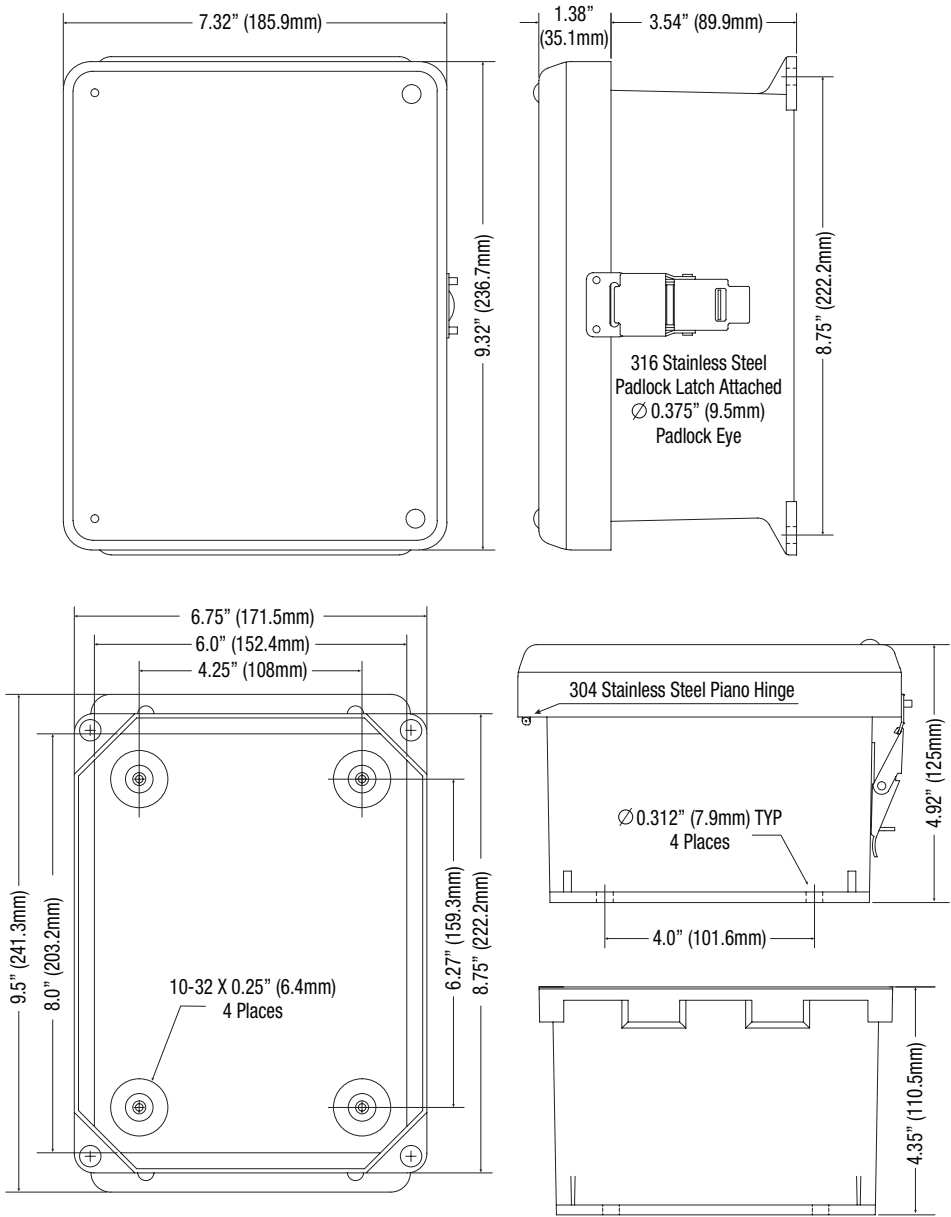


Fig. 12a
5" (127mm) square pole



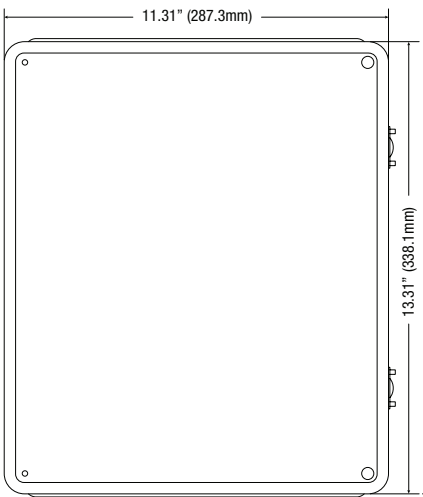
NetWaySP1BTWPN
Mechanical Drawing and Dimensions (H x W x D approx.):

9.5" x 7.32" x 4.92" (241.3mm x 185.9mm x 125mm)

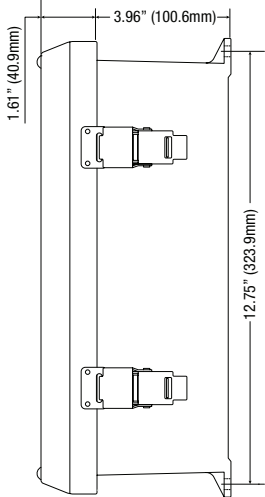


NetWaySP1BTWP
Enclosure Drawing and Dimensions (H x W x D approx.):
13.31" x 11.31" x 5.59" (338.1mm x 287.3mm x 142mm)

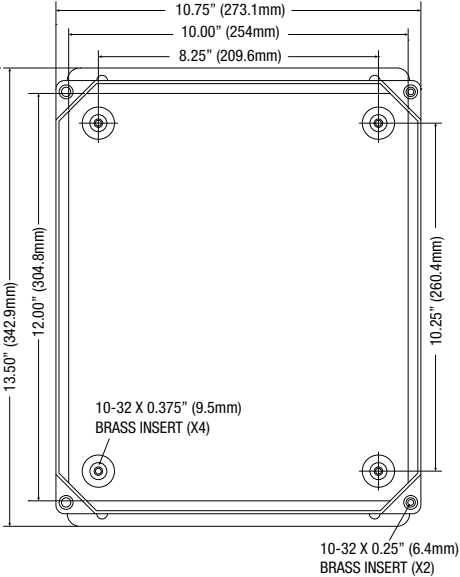
FRONT VIEW



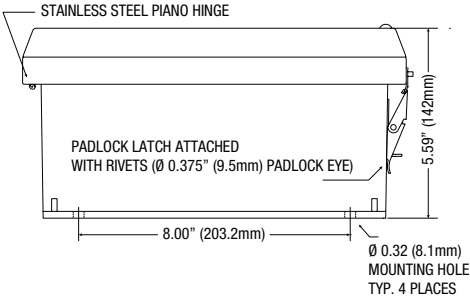
RIGHT SIDE VIEW



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END VIEW

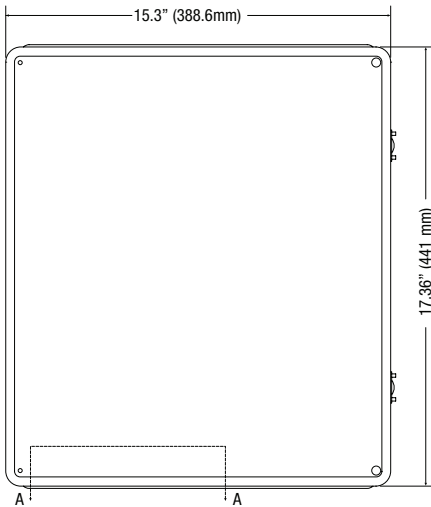


NetWaySP1BTWPX

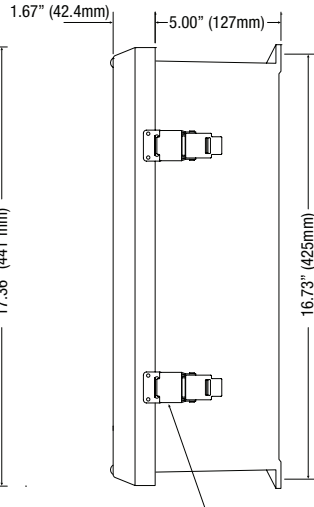
Mechanical Drawing and Dimensions (H x W x D approx.):

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

FRONT VIEW

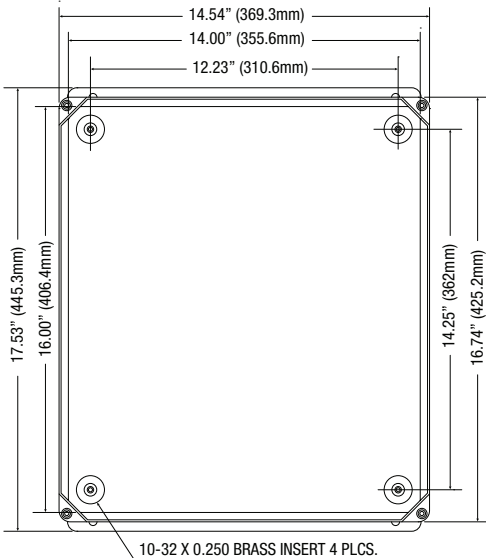


RIGHT SIDE VIEW

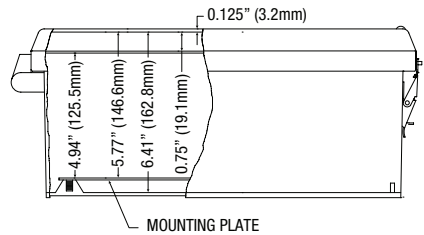


316 STAINLESS STEEL PADLOCK LATCH
ATTACHED WITH RIVETS. Ø 0.375 PADLOCK EYE

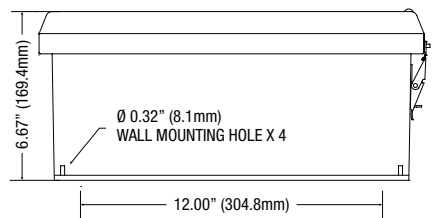
FRONT VIEW COVER REMOVED



SECTION A-A



END VIEW



Altronix is not responsible for any typographical errors.

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INetWaySP1BT Series LO1Y

