

HubWay[®]

UTP Power Injector

Installation Guide

Models Include:

HubWayEXP

- Sixteen (16) Channel UTP Power Injector



Rev. 011810



More than just power.™

Overview:

Altronix HubWayEXP UTP Power Injector supplies power combined with pass through video and data for up to 16 cameras from Altronix HubWay Active UTP Transceiver Hubs. Unit allows for video transmission of up to 16 cameras over four CAT-5 or higher structured cables from HubWay Active Transceiver Hubs. The HubWayEXP units are designed for installation at the IDF (Intermediate Distribution Frame) or MDF (Main Distribution Frame).

Specifications:

Input:

- 115VAC 60Hz, 2.5 amp or 230VAC 50Hz, 1.5 amp.

Power:

- Unit provides up to 1 amp max. per channel not to exceed a total of 16 amp maximum current.
- Individually selectable 24VAC or 28VAC power outputs with OFF position.
- Individual electronically isolated PTC outputs.
- PTCs are rated @ 1 amp per channel.
- Surge suppression.

Visual Indicators:

- Individual power LED indicators.

Features:

- Illuminated master power disconnect circuit breaker with manual reset.
- IEC 320 - 3-wire receptacle.
- Unit can be rack, wall or shelf mounted.
- 1U rack mount chassis for use in standard EIA 19" rack.

WARNING: To reduce the risk of fire or electric shock, do not expose the unit to rain or moisture. This installation should be made by qualified service personnel and should conform to all local codes.

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. Wiring should be UL Listed and/or Recognized wire suitable for the application.

1. Attach mounting brackets to HubWayEXP unit for rack or wall mount installation (*Figs. 7-8, pg. 8*). Affix rubber pads to HubWayEXP for shelf installation (*Fig. 9, pg. 8*).
2. Secure the unit in a rack, mount unit to a wall or place unit on a shelf as desired (unit should be spaced at least 3" from any video monitors).
3. Set illuminated master power disconnect circuit breaker to the (OFF) position (*Fig. 6, pg. 7*).
4. Plug the grounded AC line cord into the IEC 320 connector of the HubWayEXP. For US & Canada the plug end is a 3 prong type B plug used for standard 115VAC receptacles, as provided with unit (*Fig. 1f, pg. 4*). For non North American 230VAC applications use the appropriate 3 prong plug that matches the local standard receptacle.
5. Set voltage output selector switch of each camera channel for 24VAC or 28VAC (*Fig. 3c, pg. 4*).
6. For video transmission:
 - a. HubWayEXP interface to HubWayEX16S unit - Connect a CAT-5 cable to the RJ45 jack marked [CH 1-4, CH 5-8, CH 9-12, CH 13-16] (*Fig. 3d, pg. 4*). Connect the opposite end of this CAT-5 cable into the corresponding RJ45 jack marked [CH 1-4, CH 5-8, CH 9-12, CH 13-16] of HubWayEX16S (*Fig. 4, pg. 5*).
 - b. HubWayEXP interface to HubWayEX16 or HubWayEX32 unit - Connect a CAT-5 cable to the RJ45 jack marked [CH 1-4, CH 5-8, CH 9-12, CH 13-16] (*Fig. 3d, pg. 4*). Connect the opposite end of this CAT-5 cable into the corresponding RJ45 jack marked [CH 1-4, CH 5-8, CH 9-12, CH 13-16] of HubWayEX16 or HubWayEX32 unit (*Fig. 5, pg. 6*).
7. For data (PTZ) connections (When using fixed cameras disregard this step):
 - a. HubWayEXP interface to HubWayEX16S unit - Connect an additional CAT-5 cable to the RJ45 jack marked [DATA] on the rear of HubWayEXP (*Fig. 3e, pg. 4*). Connect the opposite end of this CAT-5 cable into any unused RJ45 jack marked [1-16] of HubWayEX16S unit (*Fig. 4, pg. 6*).
 - b. HubWayEXP interface to HubWayEX16 or HubWayEX32 unit - Connect an additional CAT-5 cable to the RJ45 jack marked [DATA] on the rear of HubWayEXP (*Fig. 3e, pg. 4*). Connect the opposite end of this CAT-5 cable into the RJ45 jack marked [DATA] of HubWayEX16 or HubWayEX32 unit (*Fig. 5, pg. 6*).
8. Connect a CAT-5 cable to the RJ45 jack marked [1] (*Fig. 3a, pg. 4*). Connect the opposite end of this CAT-5 cable into the Video Balun/Combiner to be installed at camera 1 (repeat this step for cameras 2-16).
 - For 24VAC cameras use Altronix model HubWayAv Video Balun/Combiner (*Figs. 1a, 1b, pg. 3*).
 - For 12VDC cameras use Altronix model HubWayDv Video Balun/Combiner (*Figs. 1c, 1d, pg. 3*).The total cable distance must not exceed 5000 ft. for video transmission between the HubWayEXP and HubWayEX16S, HubWayEX16 OR HubWayEX32 and each camera.
9. Set illuminated master power disconnect circuit breaker to the RESET (ON) position (*Fig. 6, pg. 7*) power LEDs (Green) of the HubWayEXP will illuminate when AC power is present (*Fig. 3b, pg. 4*) and HubWayAv or

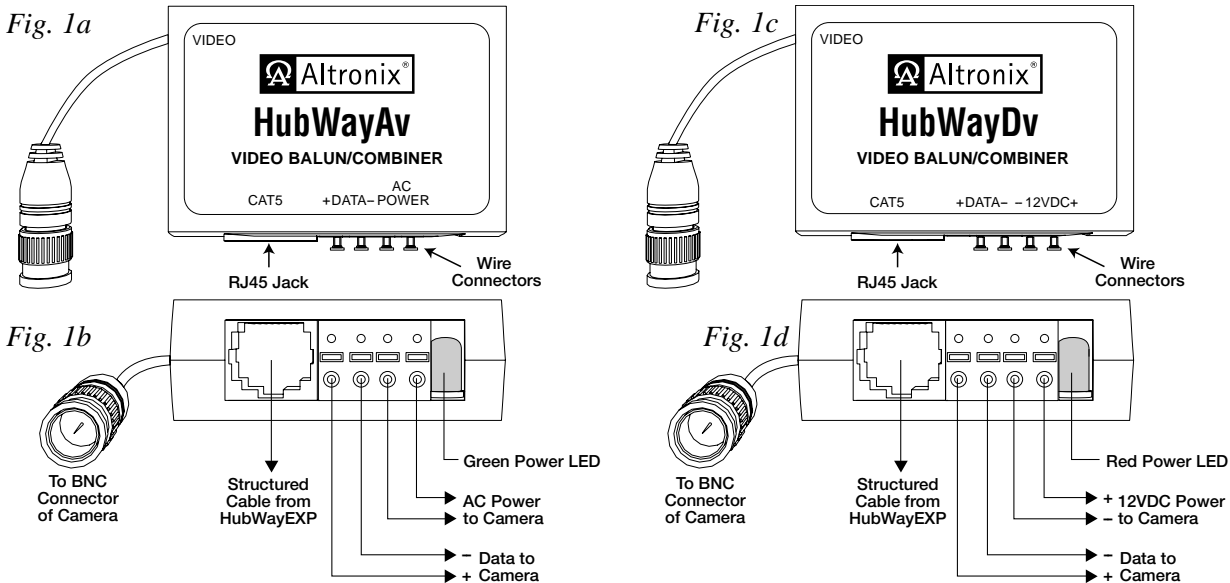
- HubWayDv Video Balun/Combiner LEDs will illuminate indicating power is present (Fig. 1b, 1d, pg. 3).
10. Measure the output voltage at each Video Balun/Combiner (Figs. 1b, 1d, pg. 3) before making connections to each camera to insure proper operation and avoid possible damage.
 11. Set illuminated master power disconnect circuit breaker to the (OFF) position (Fig. 6, pg. 7).
 12. Connect power outputs of HubWayAv or HubWayDv Video Balun/Combiners to power inputs of cameras (Figs. 1a-1d, pg. 3). Polarity must be observed.
 - HubWayAv - Terminals marked [AC POWER] (Figs. 1a, 1b, pg. 3).
 - HubWayDv - Terminals marked [- 12VDC +] (Figs. 1c, 1d, pg. 3).
 13. Connect the terminals marked [+ DATA -] of HubWayAv or HubWayDv Video Balun/Combiners to data input terminals of cameras for PTZ control (Figs. 1b-1d, pg. 3). Polarity must be observed. When using fixed cameras disregard this step.
 14. Connect the BNC connector of HubWayAv or HubWayDv Video Balun/Combiners to the BNC video outputs of cameras (Figs. 1b-1d, pg. 3).
 15. Upon completion of wiring set illuminated master power disconnect circuit breaker to the RESET (ON) position (Fig. 6, pg. 7).
 16. The power LEDs located on the front of the HubWayEXP will illuminate when AC power is present (Fig. 3b, pg. 4).

Note: If any of these LEDs are not illuminated either a voltage output selector switch is in the OFF position or the PTC is tripped for that channel.

To reset the PTC:

 1. Set the voltage output selector switch for that corresponding channel to the OFF position. Switch must remain in the OFF position for approximately 2 minutes in order for the PTC to reset.
 2. Eliminate the trouble condition (short circuit or overload).
 3. Set the voltage output selector switch for 24VAC or 28VAC (Fig. 3c, pg. 4).

Fig. 1 - HubWayAv and HubWayDv Video Balun/Combiners



HubWayAv passes AC voltage through pins 4, 5, 7, 8 and [AC Power] terminals.

HubWayDv converts AC voltage to DC voltage through pins 4, 5, 7, 8 and [- 12VDC +] terminals.

Fig. 2 - CAT5 Wiring Color Codes

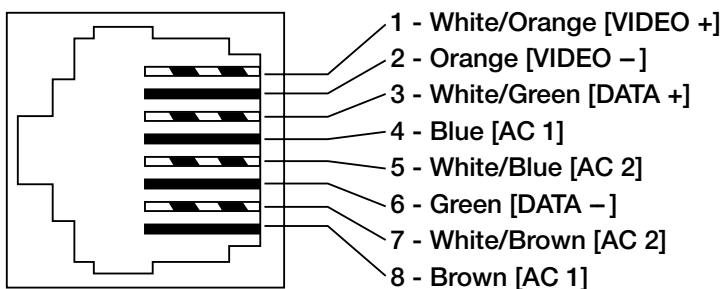


Fig. 3

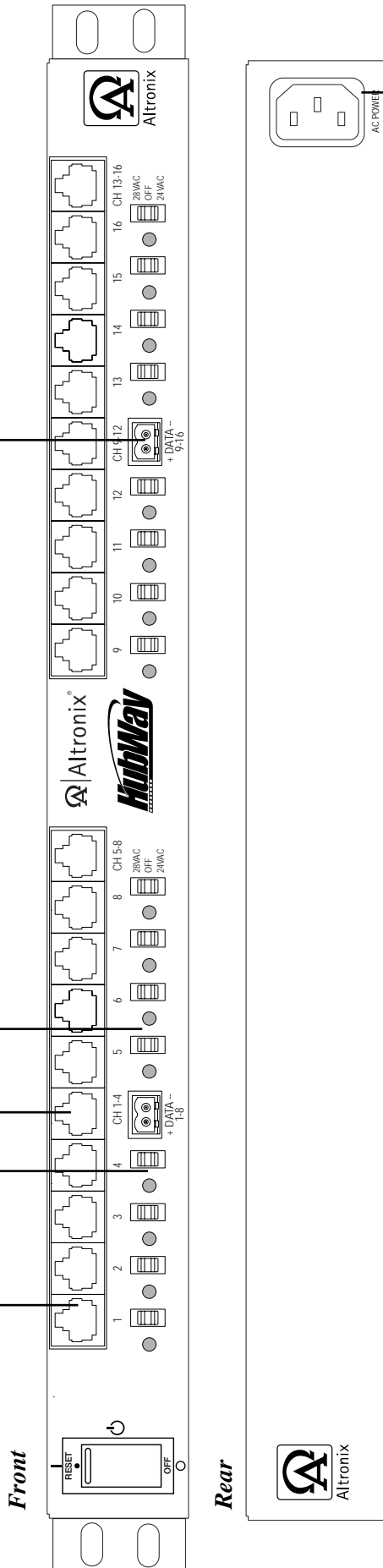
3a - Port(s) 1-16:
CAT-5 or higher structured cable to cameras 1-16.

3c - Output voltage switches: Selects 24V AC/28V AC/OFF for each output.

3b - LED(s) 1-16:
Power indicators.

3d - Video 1-4: Single CAT-5 or higher structured cable out to HubWayEX16/EX32 or HubWayEX16S enables transmission of up to four (4) video signals.

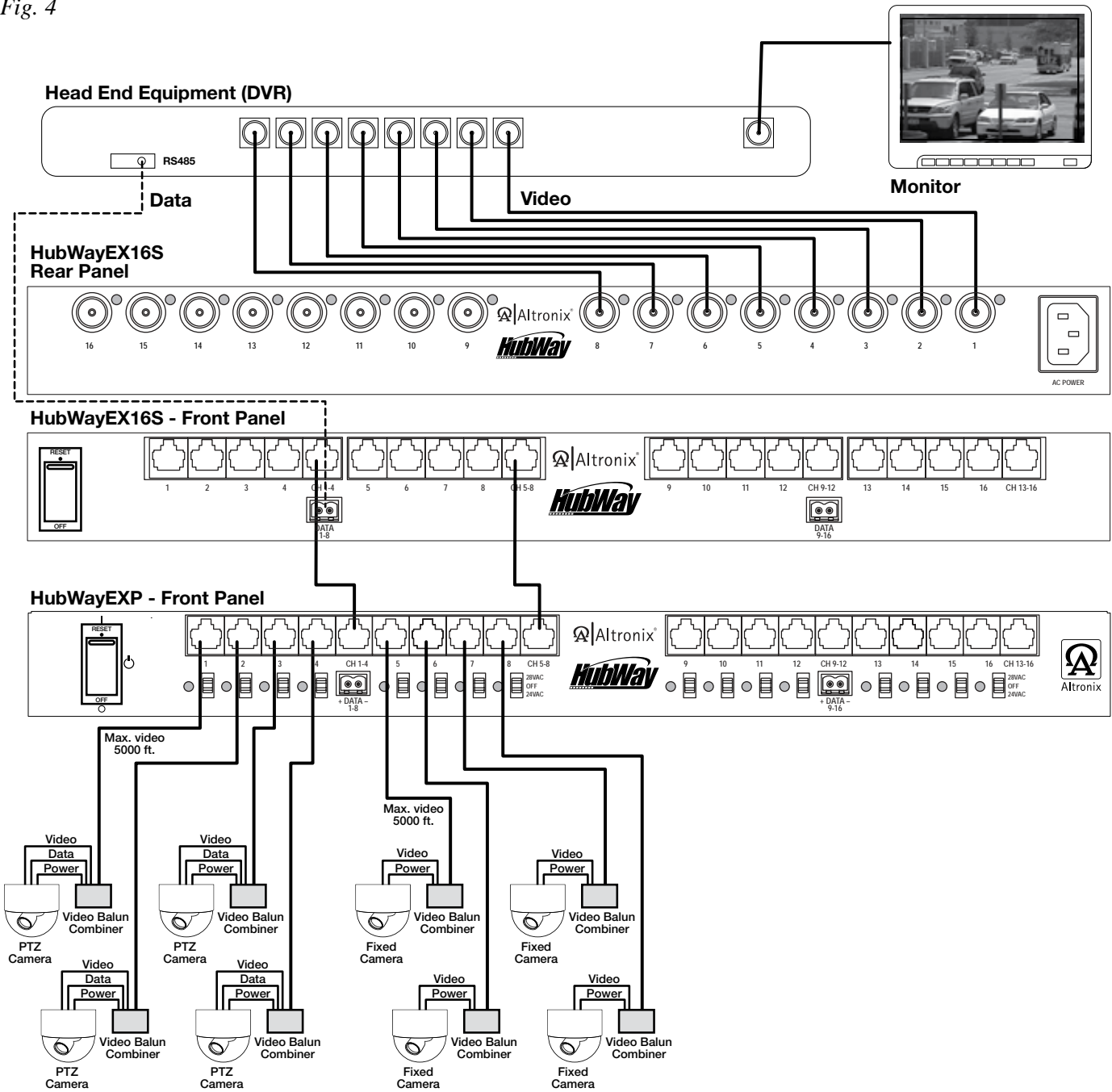
3e - Data: Removable terminal blocks for RS422/RS485 input from head end equipment (DVR) for PTZ control.



3f - IEC 320 Connector:
Grounded line cord included.

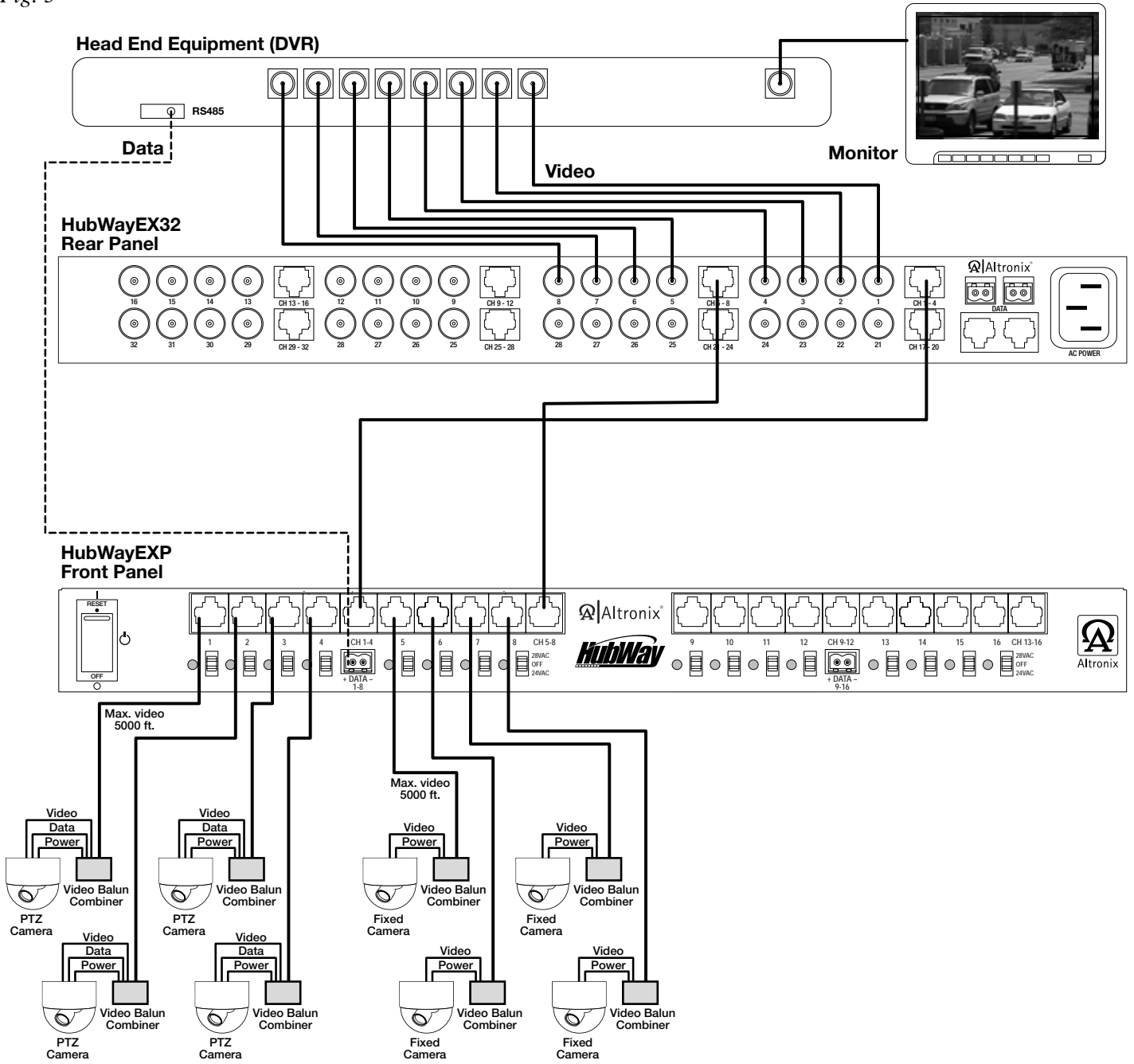
Typical Applications:

Fig. 4



Typical Applications:

Fig. 5



1U EIA 19" Rack Mount Chassis Mechanical Drawing & Dimensions:

1.625"H x 19.125"W x 8.5"D

REAR



TOP & BOTTOM



FRONT

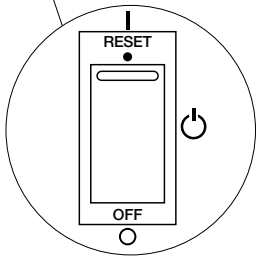
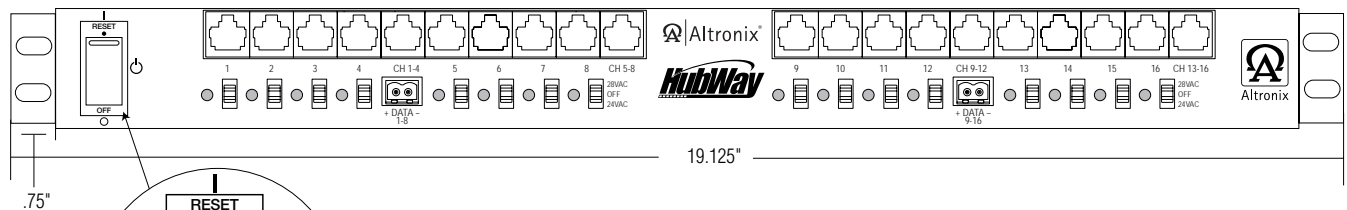


Fig. 6

Illuminated master power disconnect circuit breaker:

- OFF position Circuit breaker tripped – Switch not illuminated.
- RESET (ON) position – Switch illuminated.



The lightning flash with arrow head symbol within an equilateral triangle is intended to alert the user to the presence of an insulated "DANGEROUS VOLTAGE" within the products enclosure that may be of sufficient magnitude to constitute an electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



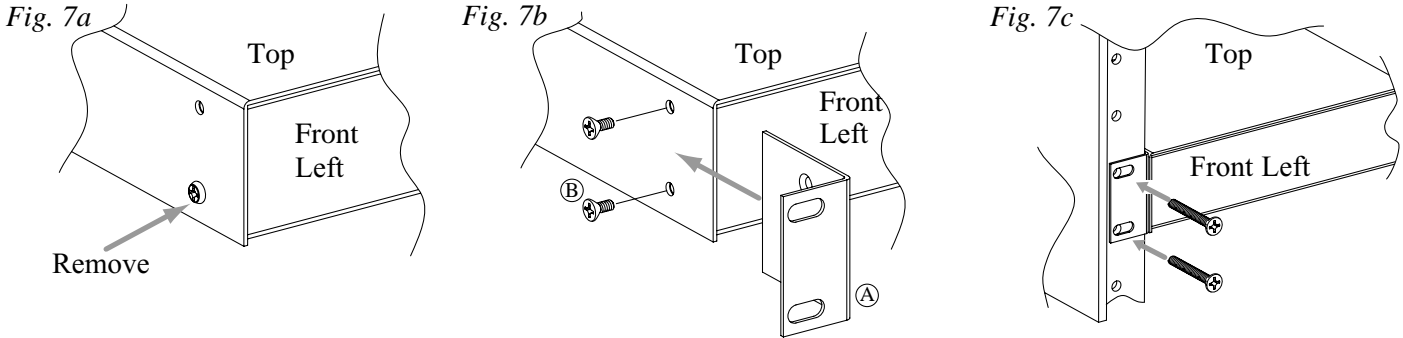
CAUTION: To reduce the risk of electric shock do not open enclosure. There are no user serviceable parts inside. Refer servicing to qualified service personnel.

Mounting Options:

Rack Mount Installation

- 1- Remove and discard factory installed screws from both sides of rack chassis (Fig. 7a).
- 2- Install mounting brackets (A) on the left and right side of rack chassis using the four (4) flat head screws (B) (included) (Fig. 7b).
- 3- Place unit into desired EIA 19" rack position and secure with mounting screws (not included) (Fig. 7c).

Fig. 7



Wall Mount Installation

- 1- Install mounting brackets (A) on the left and right side of rack chassis using four (4) flat head screws (B) (included) (Fig. 8a).
- 2- Place unit at desired location and secure with mounting screws (not included) (Fig. 8b).

Caution: It is necessary to make sure mounting screws are securely fastened to a beam when installing the unit vertically.

Fig. 8

Fig. 8a

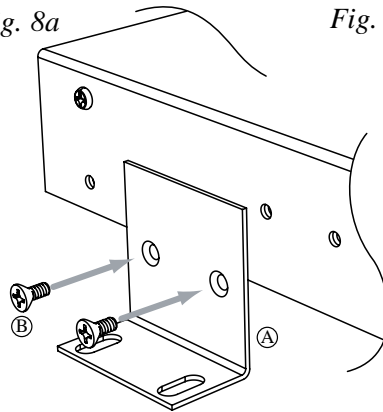
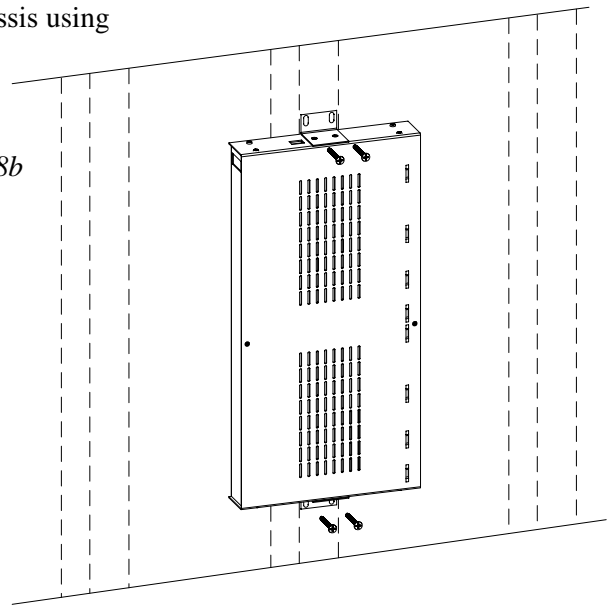


Fig. 8b

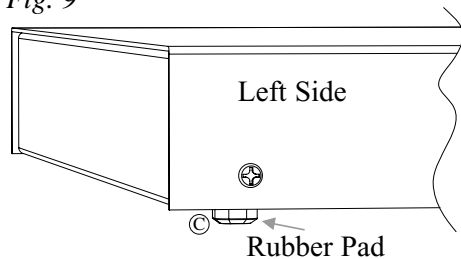


Dotted lines indicate studs behind sheetrock.

Shelf Installation

- 1- Position and affix rubber pads (C) (included) at each corner on the bottom of the unit (Fig. 9).
- 2- Place unit in desired location.

Fig. 9



Mounting Hardware (Included):

	Ⓐ Two (2) mounting brackets
	Ⓡ Six (6) flat head screws for mounting brackets.
	Ⓒ Four (4) rubber pads.

Altronix is not responsible for any typographical errors.

