

## Access & Power Integration

### T1PHK1F4S

#### 4 Door Kit with Fused Outputs

Fully assembled kit includes:

- Trove1 enclosure with TC1 Altronix/Openpath backplane
- One (1) eFlow4NB - Power Supply/Charger
- One (1) ACM4 - Fused Access Power Controller
- One (1) VR6 - Voltage Regulator
- One (1) PDS8 - Dual Input/Output Fused Power Distribution Module

### T1PHK3F8

#### 8 Door Kit with Fused Outputs

Fully assembled kit includes:

- Trove1 enclosure with TC1 Altronix/Openpath backplane
- One (1) eFlow6NB - Power Supply/Charger
- One (1) ACM8 - Fused Access Control Module

### T2PHK33F16

#### 16 Door Kit with Fused Outputs

Fully assembled kit includes:

- Trove2 enclosure with TCV2 Altronix/Openpath backplane
- Two (2) eFlow6NB - Power Supply/Chargers
- Two (2) ACM8 - Fused Access Control Modules

### T2PHK77F24

#### 24 Door Kit with Fused Outputs

Fully assembled kit includes:

- Trove2 enclosure with TCV2 Altronix/Openpath backplane
- Two (2) eFlow104NB - Power Supply/Chargers
- Three (3) ACM8 - Fused Access Control Modules

### T1PHK1F4SD

#### 4 Door Kit with PTC Outputs

Fully assembled kit includes:

- Trove1 enclosure with TC1 Altronix/Openpath backplane
- One (1) eFlow4NB - Power Supply/Charger
- One (1) ACM4CB - PTC Access Power Controller
- One (1) VR6 - Voltage Regulator
- One (1) PDS8CB - Dual Input/Output PTC Power Distribution Module

### T1PHK3F8D

#### 8 Door Kit with PTC Outputs

Fully assembled kit includes:

- Trove1 enclosure with TC1 Altronix/Openpath backplane
- One (1) eFlow6NB - Power Supply/Charger
- One (1) ACM8CB - PTC Access Control Module

### T2PHK33F16D

#### 16 Door Kit with PTC Outputs

Fully assembled kit includes:

- Trove2 enclosure with TCV2 Altronix/Openpath backplane
- Two (2) eFlow6NB - Power Supply/Chargers
- Two (2) ACM8CB - PTC Access Control Modules

### T2PHK77F24D

#### 24 Door Kit with PTC Outputs

Fully assembled kit includes:

- Trove2 enclosure with TCV2 Altronix/Openpath backplane
- Two (2) eFlow104NB - Power Supply/Chargers
- Three (3) ACM8CB - PTC Access Control Modules

All components of these Trove kits are UL Listed sub-assemblies.

Please refer to the included corresponding Sub-Assembly Installation Guides for further information.

## Installation Guide



More than just power.™

All registered trademarks are property of their respective owners.

Rev. TPHK\_080921

Installing Company: \_\_\_\_\_ Service Rep. Name: \_\_\_\_\_

Address: \_\_\_\_\_ Phone #: \_\_\_\_\_

## Overview:

Altronix Trove Openpath kits are pre-assembled and consist of Trove enclosures/backplanes with factory installed Altronix power supply/chargers and sub-assemblies. These kits also accommodate various combinations of Openpath boards for up to twenty four (24) doors in a single enclosure.

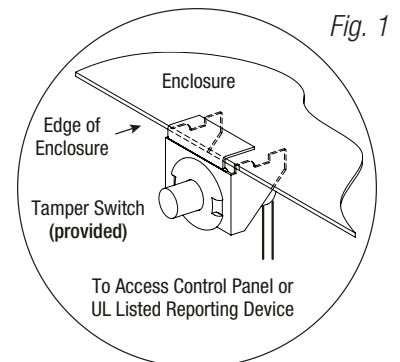
## Configuration Chart:

| Altronix<br>Model Number | Power Supply Board<br>Input Fuse Rating | Power Supply Board<br>Battery Fuse Rating | 120VAC 60Hz<br>Input Current (A) | Maximum<br>Supply<br>Current for<br>Main and<br>Aux. Outputs<br>on Power<br>Supply board,<br>ACM4(CB)/<br>ACM8(CB)<br>Access Power<br>Controllers' or<br>PDS8(CB)<br>outputs | Nominal DC<br>Output Voltage |                          | Fail-Safe/Fail-Secure or<br>Dry Form "C" Outputs | Additional Fuse or PTC<br>Protected Outputs | ACM4/ACM4CB Board<br>Input Fuse Rating | ACM4 Board Output Fuse Rating | ACM4CB Board Output PTC Rating | ACM8(CB) Board Input Fuse Rating | ACM8 Board Output Fuse Rating | ACM8CB Board Output PTC Rating | PDS8 Board Input Fuse Rating | PDS8 Board Output Fuse Rating | PDS8CB Board Input PTC Rating | PDS8 Board Output PTC Rating |
|--------------------------|-----------------------------------------|-------------------------------------------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------|--------------------------------------------------|---------------------------------------------|----------------------------------------|-------------------------------|--------------------------------|----------------------------------|-------------------------------|--------------------------------|------------------------------|-------------------------------|-------------------------------|------------------------------|
|                          |                                         |                                           |                                  |                                                                                                                                                                              | Power Supply                 |                          |                                                  |                                             |                                        |                               |                                |                                  |                               |                                |                              |                               |                               |                              |
|                          |                                         |                                           |                                  |                                                                                                                                                                              | [DC]                         | [Aux]                    |                                                  |                                             |                                        |                               |                                |                                  |                               |                                |                              |                               |                               |                              |
|                          |                                         |                                           |                                  |                                                                                                                                                                              | Output<br>Range<br>(VDC)     | Output<br>Range<br>(VDC) |                                                  |                                             |                                        |                               |                                |                                  |                               |                                |                              |                               |                               |                              |
| T1PHK1F4S                | 5A/<br>250V                             | 15A/<br>32V                               | 3.5                              | 24VDC @<br>3.7A                                                                                                                                                              | 20.17-<br>26.4               | 20.28-<br>26.4           | 4                                                | 8                                           | 10A/<br>32V                            | 3A/<br>32V                    | —                              | —                                | —                             | —                              | 10A/<br>32V                  | 3A/<br>32V                    | —                             | —                            |
| T1PHK1F4SD               |                                         |                                           |                                  |                                                                                                                                                                              |                              |                          |                                                  |                                             |                                        | —                             | 2.5A                           |                                  |                               |                                | —                            | —                             | 9A                            | 2.5A                         |
| T1PHK3F8                 |                                         |                                           | 3.5                              | 24VDC @<br>5.9A                                                                                                                                                              | 20.17-<br>26.4               | 20.28-<br>26.4           | 8                                                | —                                           | —                                      | —                             | —                              | 10A/<br>250V                     | 2.5A/<br>250V                 | —                              | —                            | —                             | —                             | —                            |
| T1PHK3F8D                |                                         |                                           |                                  |                                                                                                                                                                              |                              |                          |                                                  |                                             |                                        |                               |                                |                                  | —                             | 2.5A                           |                              |                               |                               |                              |
| T2PHK33F16               |                                         |                                           | 7.0                              | 24VDC @<br>5.9A<br>+<br>24VDC @<br>5.9A                                                                                                                                      | 20.17-<br>26.4               | 20.28-<br>26.4           | 16                                               | —                                           | —                                      | —                             | —                              |                                  | 2.5A/<br>250V                 | —                              |                              |                               |                               |                              |
| T2PHK33F16D              |                                         |                                           |                                  |                                                                                                                                                                              |                              |                          |                                                  |                                             |                                        |                               |                                |                                  | —                             | 2.5A                           |                              |                               |                               |                              |
| T2PHK77F24               | 6.3A/<br>250V                           | 15A/<br>32V                               | 9.0                              | 24VDC @<br>9.7A<br>+<br>24VDC @<br>9.7A                                                                                                                                      | 20.17-<br>26.4               | 20.28-<br>26.4           | 24                                               | —                                           | —                                      | —                             | 10A/<br>250V                   | 2.5A/<br>250V                    | —                             | —                              | —                            | —                             | —                             |                              |
| T2PHK77F24D              |                                         |                                           |                                  |                                                                                                                                                                              |                              |                          |                                                  |                                             |                                        |                               |                                | —                                | 2.5A                          |                                |                              |                               |                               |                              |

## 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. Product is intended for indoor use only.

1. Remove backplane from enclosure. Do not discard hardware.
2. Mark and predrill holes in the wall to line up with the top three keyholes in the enclosure. Install two/three upper fasteners and screws in the wall with the screw heads protruding. Place the enclosure's upper keyholes over the two/three upper screws; level and secure. Mark the position of the lower two/three holes. Remove the enclosure. Drill the lower holes and install the fasteners. Place the enclosure's upper keyholes over the upper screws. Install the lower screws and make sure to tighten all screws.
3. Mount included UL Listed tamper switch(es) (Altronix Model TS112 or equivalent) in desired location, opposite hinge. Slide the tamper switch bracket onto the edge of the enclosure approximately 2" from the right side (*Fig. 1, pg. 2*). Connect tamper switch wiring to the Access Control Panel input or the appropriate UL Listed reporting device. To activate alarm signal open the door of the enclosure.
4. Mount Openpath boards to backplane, *refer to pages 3-6*.
5. Refer to the *eFlow Power Supply/Charger Installation Guide* (eFlow4NB, eFlow6NB, eFlow104NB) and corresponding *Sub-Assembly Installation Guide* (ACM4(CB), ACM8(CB), PDS8(CB) and VR6) for further installation instructions.



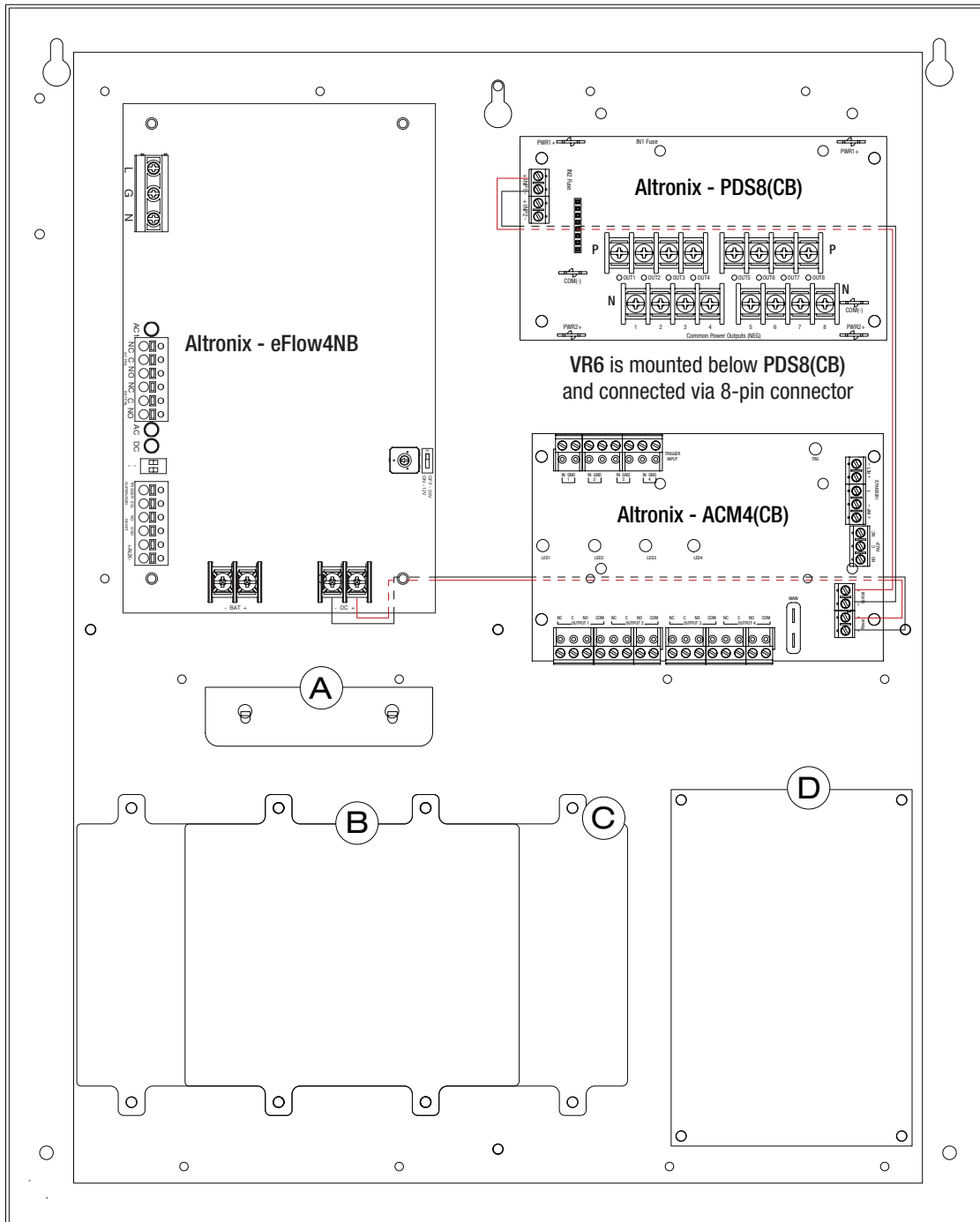
## T1PHK1F4S(D): Configuration of Openpath Boards

1. Mount appropriate Openpath boards into the correct positions by positioning pre-mounted spacers over appropriate holes on the backplane and depressing down on board to secure spacer to the backplane (*Fig. 2, pg. 3*).
2. Fasten TC1 backplane to Trove1 enclosure utilizing pan head screws (provided).

### Access Controller Position Chart for the Following Openpath Modules:

| Openpath | Mounting Position |
|----------|-------------------|
| OP-ACC   | (A)               |
| OP-EX-4E | (B)               |
| OP-EX-8E | (C)               |
| OP-16EM  | (D)               |

Fig. 2



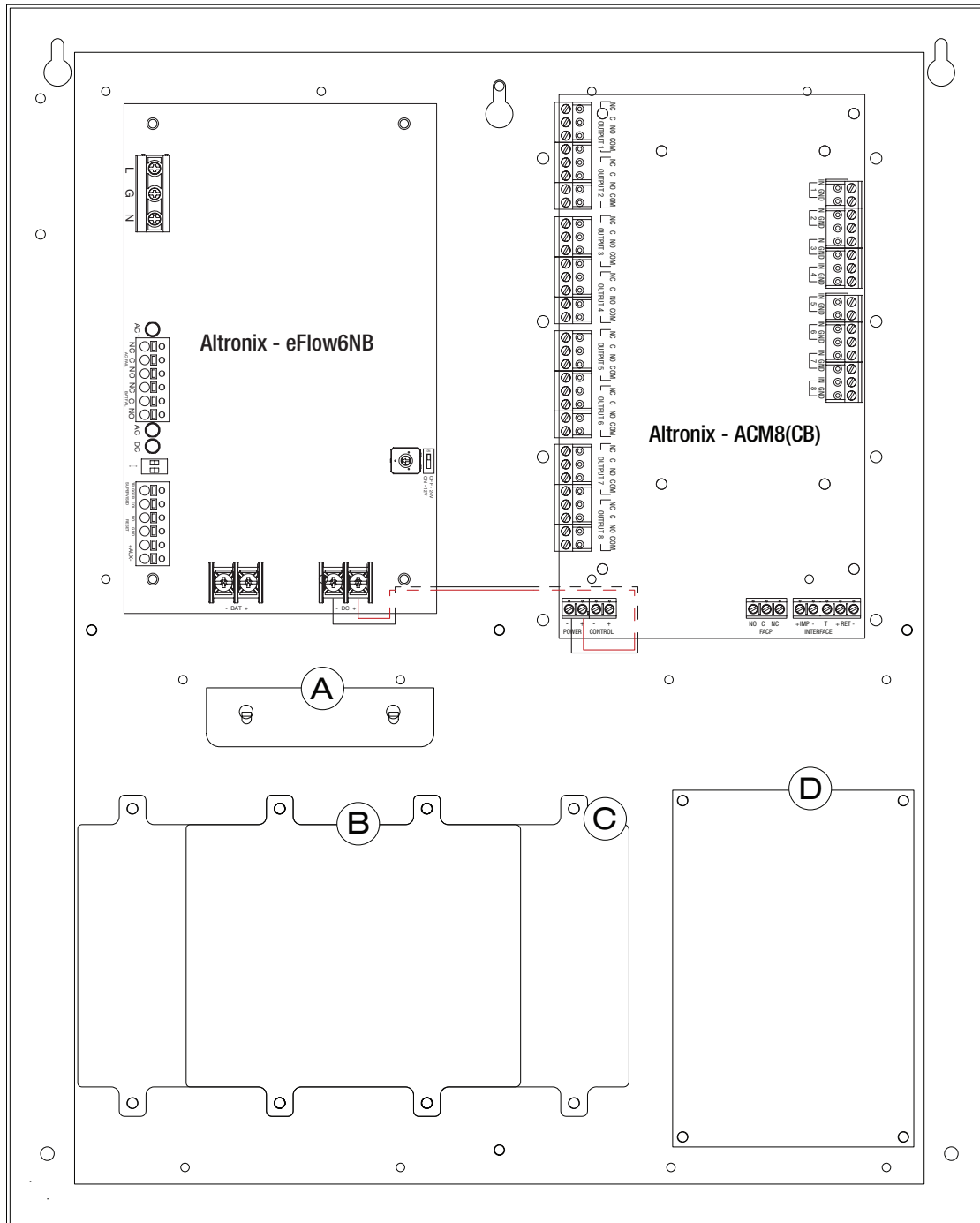
## T1PHK3F8(D): Configuration of Openpath Boards

1. Mount appropriate Openpath boards into the correct positions by positioning pre-mounted spacers over appropriate holes on the backplane and depressing down on board to secure spacer to the backplane (*Fig. 3, pg. 4*).
2. Fasten TC1 backplane to Trove1 enclosure utilizing pan head screws (provided).

### Access Controller Position Chart for the Following Openpath Modules:

| Openpath | Mounting Position |
|----------|-------------------|
| OP-ACC   | (A)               |
| OP-EX-4E | (B)               |
| OP-EX-8E | (C)               |
| OP-16EM  | (D)               |

Fig. 3



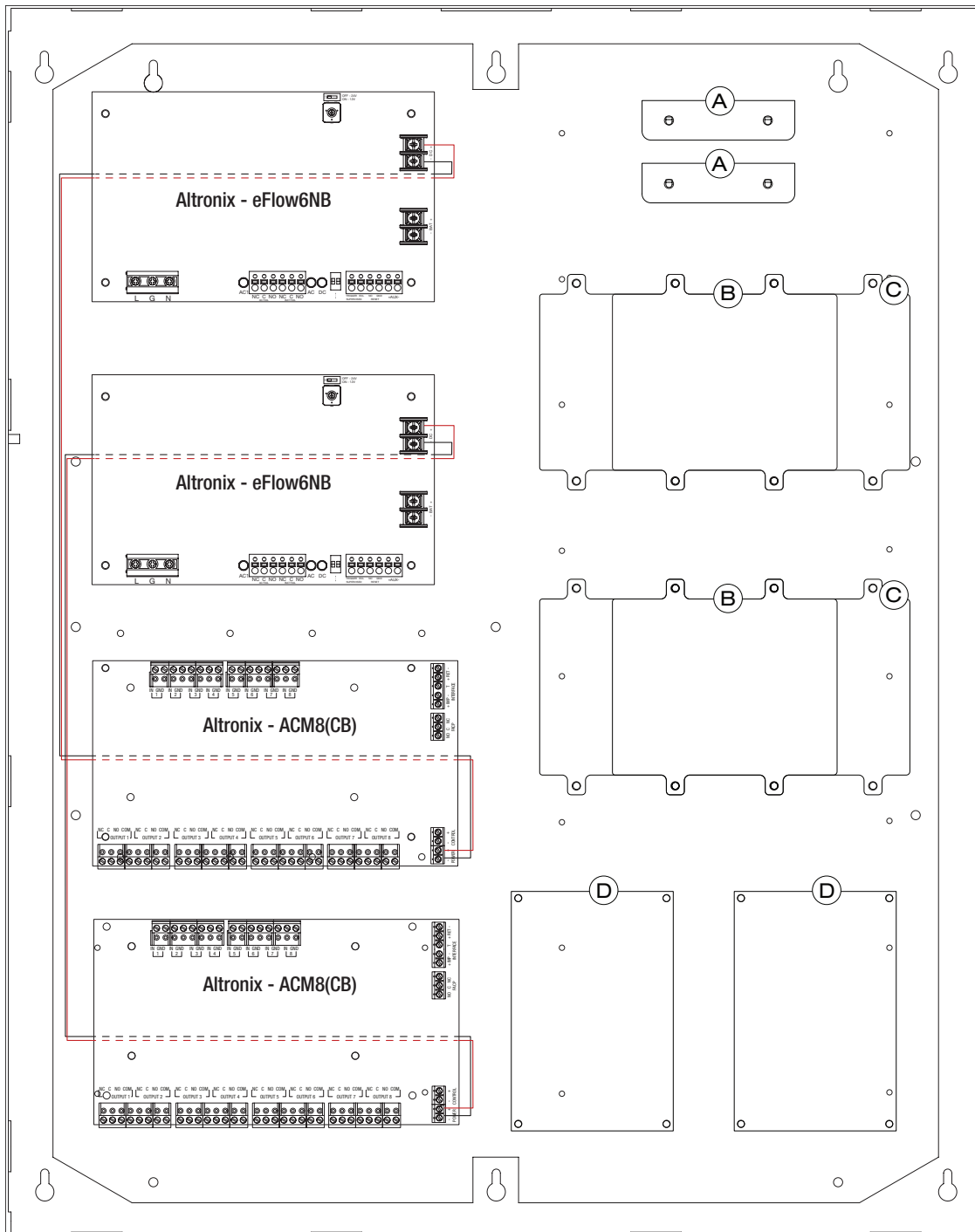
## T2PHK33F16(D): Configuration of Openpath Boards

1. Mount appropriate Openpath boards into the correct positions by positioning pre-mounted spacers over appropriate holes on the backplane and depressing down on board to secure spacer to the backplane (*Fig. 4, pg. 5*).
2. Fasten TC2 backplane to Trove2 enclosure utilizing pan head screws (provided).

### Access Controller Position Chart for the Following Openpath Modules:

| Openpath | Mounting Position |
|----------|-------------------|
| OP-ACC   | (A)               |
| OP-EX-4E | (B)               |
| OP-EX-8E | (C)               |
| OP-16EM  | (D)               |

Fig. 4



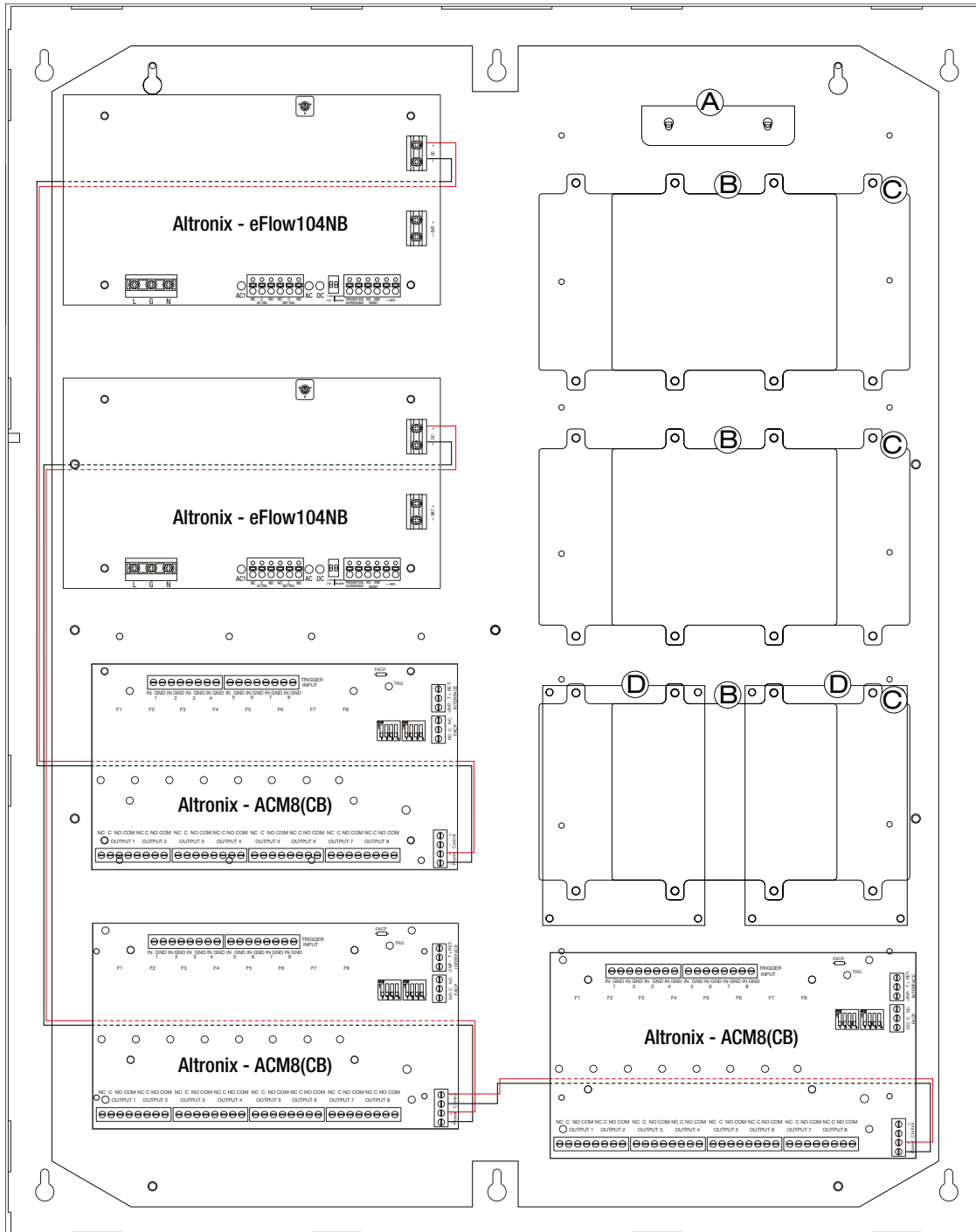
## T2PHK77F24(D): Configuration of Openpath Boards

1. Mount appropriate Openpath boards into the correct positions by positioning pre-mounted spacers over appropriate holes on the backplane and depressing down on board to secure spacer to the backplane (*Fig. 4, pg. 5*).
2. Fasten TC2 backplane to Trove2 enclosure utilizing pan head screws (provided).

### Access Controller Position Chart for the Following Openpath Modules:

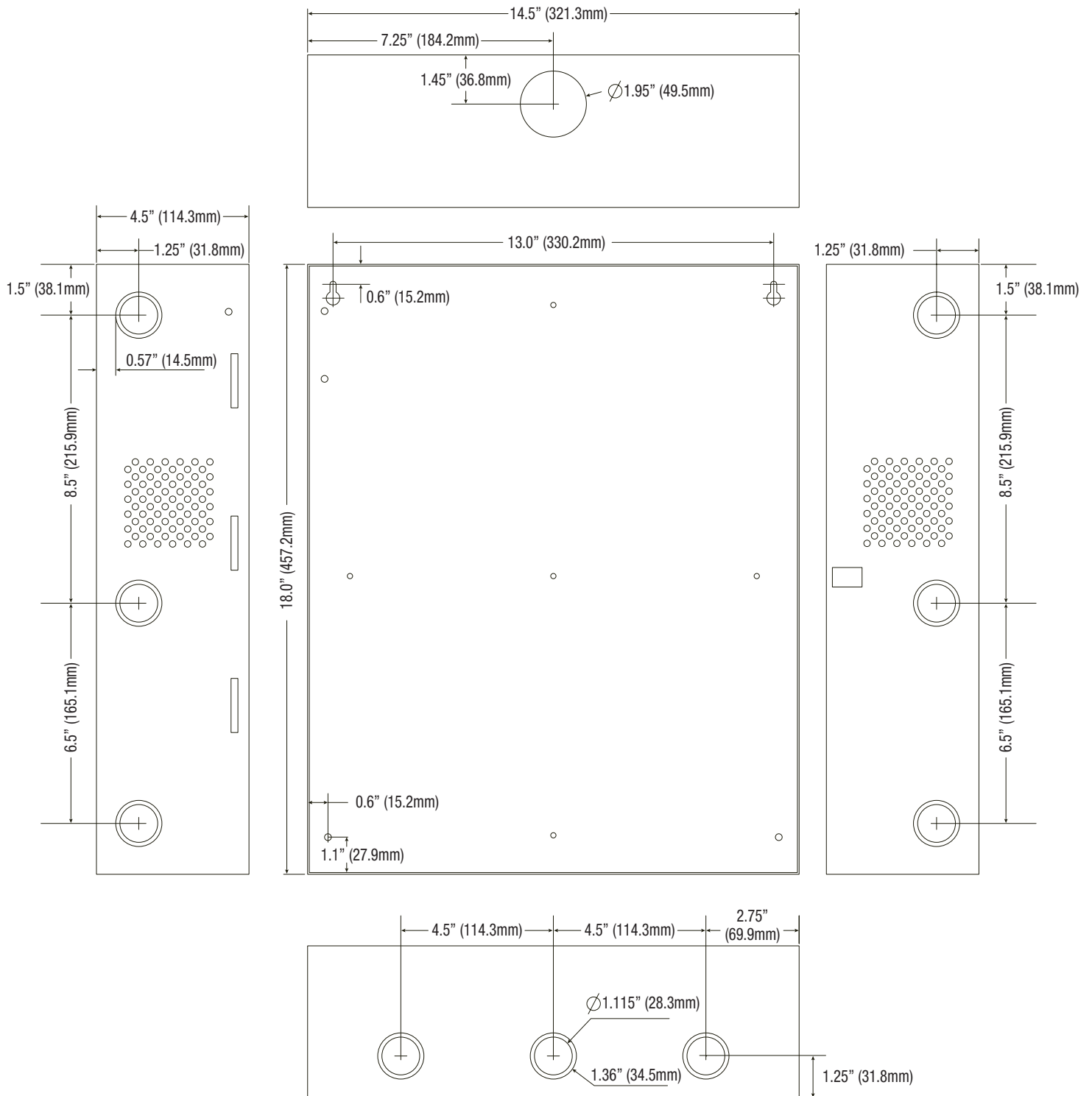
| Openpath | Mounting Position |
|----------|-------------------|
| OP-ACC   | (A)               |
| OP-EX-4E | (B)               |
| OP-EX-8E | (C)               |
| OP-16EM  | (D)               |

Fig. 4



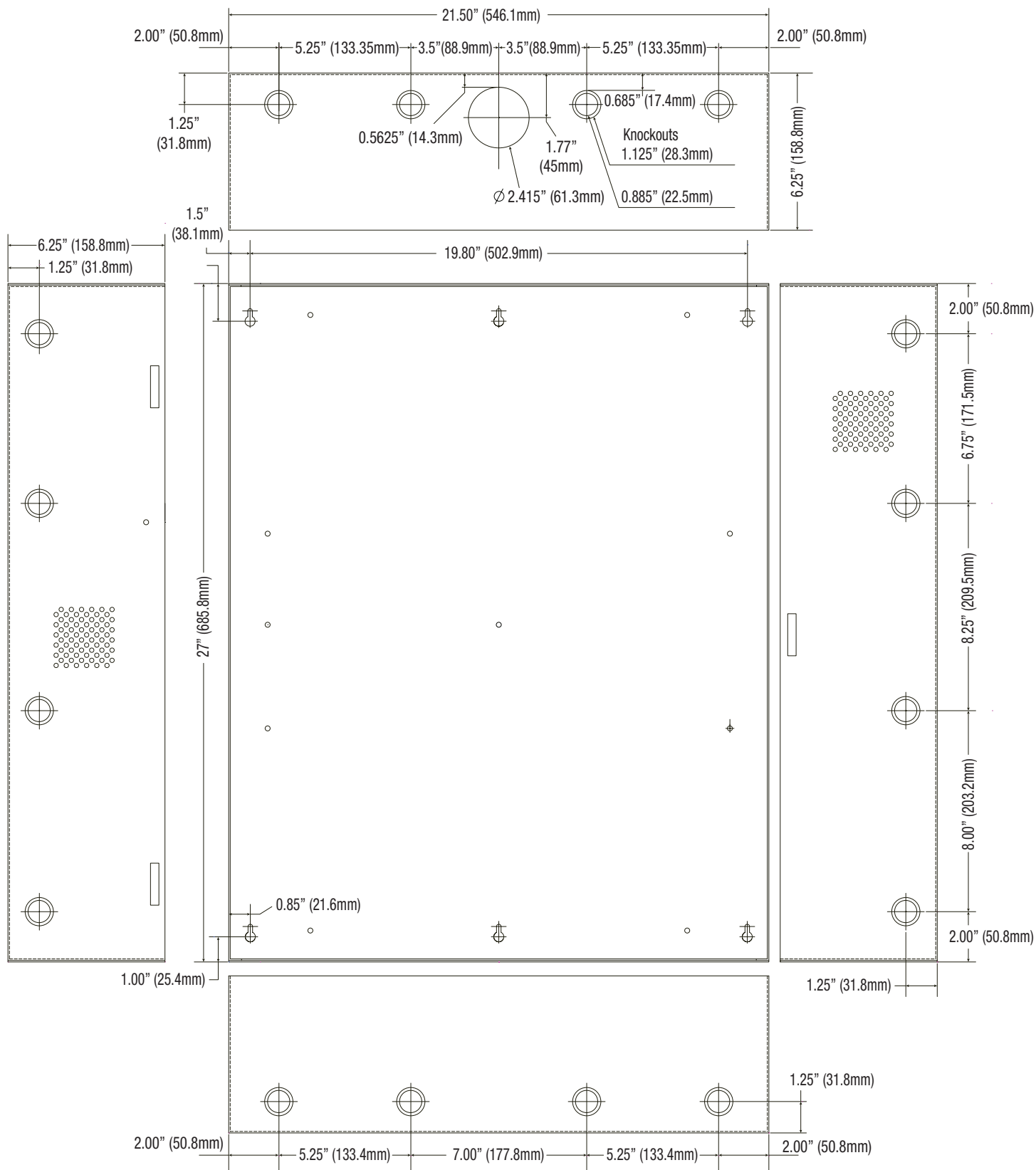
**T1PHK1F4S(D) and T1PHK3F8(D) (Trove1) Enclosure Dimensions (H x W x D approximate):**

18" x 14.5" x 4.625" (457mm x 368mm x 118mm)



## T2PHK33F16(D) and T2PHK77F24(D) (Trove2) Enclosure Dimensions (H x W x D approximate):

27.25" x 21.5" x 6.5" (692.2mm x 552.5mm x 165.1mm)



Altronix is not responsible for any typographical errors.

140 58th Street, Brooklyn, New York 11220 USA | phone: 718-567-8181 | fax: 718-567-9056  
 web site: [www.altronix.com](http://www.altronix.com) | e-mail: [info@altronix.com](mailto:info@altronix.com) | Lifetime Warranty  
 IITrove Openpath Kits

H09U



MEMBER

Trove Openpath Kits