Access & Power Integration

# Altronix Brivo Kits

## Trove1 Kits

### T1BV3F4S
**4 Door Kit with Fused Outputs**
Fully assembled kit includes:
- Trove1 enclosure with TBV1 Altronix/Brivo backplane
- One (1) eFlow6NB - Power Supply/Charger
- One (1) VR6 - Voltage Regulator
- One (1) ACM4 - Fused Access Power Controller

### T1BV3F4SD
**4 Door Kit with PTC Outputs**
Fully assembled kit includes:
- Trove1 enclosure with TBV1 Altronix/Brivo backplane
- One (1) eFlow6NB - Power Supply/Charger
- One (1) VR6 - Voltage Regulator
- One (1) ACM4CB - PTC Access Power Controller

## Trove2 Kits

### T2BV7F8S
**8 Door Kit with Fused Outputs**
Fully assembled kit includes:
- Trove2 enclosure with TBV2 Altronix/Brivo backplane
- One (1) eFlow104NB - Power Supply/Charger
- One (1) VR6 - Voltage Regulator
- One (1) ACMS8 - Dual Input Fused Access Power Controller
- One (1) PDS8 - Dual Input Fused Power Distribution Module

### T2BV75F12S
**12 Door Kit with Fused Outputs**
Fully assembled kit includes:
- Trove2 enclosure with TBV2 Altronix/Brivo backplane
- One (1) eFlow104NB - Power Supply/Charger
- One (1) eFlow102NB - Power Supply/Charger
- One (1) ACMS12 - Dual Input Fused Access Power Controller
- One (1) PDS16 - Dual Input Fused Power Distribution Module

### T2BV7F8SD
**8 Door Kit with PTC Outputs**
Fully assembled kit includes:
- Trove2 enclosure with TBV2 Altronix/Brivo backplane
- One (1) eFlow104NB - Power Supply/Charger
- One (1) ACMS8CB - Dual Input PTC Access Power Controller
- One (1) PDS8CB - Dual Input PTC Power Distribution Module
- One (1) VR6 - Voltage Regulator

### T2BV75F12SD
**12 Door Kit with PTC Outputs**
Fully assembled kit includes:
- Trove2 enclosure with TBV2 Altronix/Brivo backplane
- One (1) eFlow104NB - Power Supply/Charger
- One (1) eFlow102NB - Power Supply/Charger
- One (1) ACMS12CB - Dual Input PTC Access Power Controller
- One (1) PDS16CB - Dual Input PTC Power Distribution Module

### T2BV77F8S
**8 Door Kit with Fused Outputs**
Fully assembled kit includes:
- Trove2 enclosure with TBV2 Altronix/Brivo backplane
- Two (2) eFlow104NB - Power Supply/Chargers
- Two (2) VR6 - Voltage Regulators
- One (1) ACMS8 - Dual Input Fused Access Power Controller
- One (1) PDS8 - Dual Input Fused Power Distribution Module

### T2BV77F12S
**12 Door Kit with Fused Outputs**
Fully assembled kit includes:
- Trove2 enclosure with TBV2 Altronix/Brivo backplane
- Two (2) eFlow104NB - Power Supply/Chargers
- Two (2) VR6 - Voltage Regulators
- One (1) ACMS12 - Dual Input Fused Access Power Controller
- One (1) PDS16 - Dual Input Fused Power Distribution Module

### T2BV77F8SD
**8 Door Kit with PTC Outputs**
Fully assembled kit includes:
- Trove2 enclosure with TBV2 Altronix/Brivo backplane
- Two (2) eFlow104NB - Power Supply/Chargers
- Two (2) VR6 - Voltage Regulators
- One (1) ACMS8CB - Dual Input PTC Access Power Controller
- One (1) PDS8CB - Dual Input PTC Power Distribution Module

### T2BV77F12SD
**12 Door Kit with PTC Outputs**
Fully assembled kit includes:
- Trove2 enclosure with TBV2 Altronix/Brivo backplane
- Two (2) eFlow104NB - Power Supply/Chargers
- Two (2) VR6 - Voltage Regulators
- One (1) ACMS12CB - Dual Input PTC Access Power Controller
- One (1) PDS16CB - Dual Input PTC Power Distribution Module

## Trove3 Kits

### T3BV77F16S
**16 Door Kit with Fused Outputs**
Fully assembled kit includes:
- Trove3 enclosure with TBV3 Altronix/Brivo backplane
- Two (2) eFlow104NB - Power Supply/Chargers
- Two (2) VR6 - Voltage Regulators
- Two (2) ACMS8 - Dual Input Fused Access Power Controllers
- Two (2) PDS8 - Dual Input Fused Power Distribution Modules
- One (1) RSB2 - Rocker Switch Bracket with Two (2) Rocker Switches

### T3BV77F24S
**24 Door Kit with Fused Outputs**
Fully assembled kit includes:
- Trove3 enclosure with TBV3 Altronix/Brivo backplane
- Two (2) eFlow104NB - Power Supply/Chargers
- Two (2) VR10 - Voltage Regulators
- Two (2) ACMS12 - Dual Input Fused Access Power Controllers
- Two (2) PDS16 - Dual Input Fused Power Distribution Modules
- One (1) RSB2 - Rocker Switch Bracket with Two (2) Rocker Switches

### T3BV77F16SD
**16 Door Kit with PTC Outputs**
Fully assembled kit includes:
- Trove3 enclosure with TBV3 Altronix/Brivo backplane
- Two (2) eFlow104NB - Power Supply/Chargers
- Two (2) VR6 - Voltage Regulators
- Two (2) ACMS8CB - Dual Input PTC Access Power Controllers
- Two (2) PDS8CB - Dual Input PTC Power Distribution Modules
- One (1) RSB2 - Rocker Switch Bracket with Two (2) Rocker Switches

### T3BV77F24SD
**24 Door Kit with PTC Outputs**
Fully assembled kit includes:
- Trove3 enclosure with TBV3 Altronix/Brivo backplane
- Two (2) eFlow104NB - Power Supply/Chargers
- Two (2) VR10 - Voltage Regulators
- Two (2) ACMS12CB - Dual Input PTC Access Power Controllers
- Two (2) PDS16CB - Dual Input PTC Power Distribution Modules
- One (1) RSB2 - Rocker Switch Bracket with Two (2) Rocker Switches

# Installation Guide

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

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**Rev. TBVFK_100325**

Installing Company: _____ Service Rep. Name: _____

Address: _____ Phone #: _____

## Overview:

Altronix/Brivo Trove 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 Brivo boards for up to twenty-four (24) doors in a single enclosure.

## Configuration Chart:

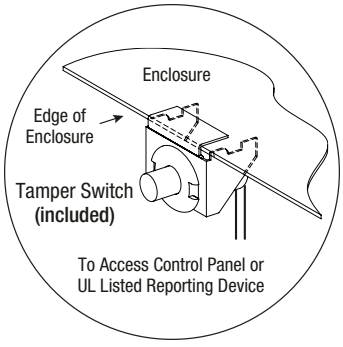
| Altronix Model Number | 120VAC 60Hz Input Current (A) | Power Supply Board Input Fuse Rating | Power Supply Board Battery Fuse Rating | Maximum Supply Current for Main and Aux. Outputs on Power Supply board and Access Power Controllers' outputs | Nominal DC Output Voltage | | | | Fail-Safe/Fail-Secure Outputs | Additional Fuse (PTC) Protected Outputs | Access Power Controller Board Input Fuse (PTC) Rating | Access Power Controller Board Output Fuse (PTC) Rating | Power Distribution Board Input Fuse (PTC) Rating | Power Distribution Board Output Fuse (PTC) Rating |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Power Supply 1 | | Power Supply 2 | | | | | | | |
| | | | | | [DC] | [Aux] | [DC] | [Aux] | | | | | | |
| | | | | | Output Range (VDC) | Output Range (VDC) | Output Range (VDC) | Output Range (VDC) | | | | | | |
| T1BV3F4S | 3.5A | 5A/250V | 15A/32V | 24VDC @ 5.9A | 20.17-26.4 | 20.28-26.4 | – | – | 4 | – | 10A/32V | 3A/32V | – | – |
| T1BV3F4SD | | | | | | | | | | | 9A | 2.5A | | |
| T2BV7F8S | 4.5A | 6.3A/250V | 15A/32V | 24VDC @ 9.4A | 20.17-26.4 | 20.28-26.4 | – | – | 8 | 8 | 15A/32V | 3A/32V | 10A/32V | 3A32V |
| T2BV7F8SD | | | | | | | | | | | 9A | 2.5A | 9A | 2.5A |
| T2BV77F8S | 9.0A | 6.3A/250V | 15A/32V | 24VDC @ 9.4A + 24VDC @ 9.4A | 20.17-26.4 | 20.28-26.4 | 20.17-26.4 | 20.28-26.4 | 8 | 8 | 15A/32V | 3A/32V | 15A/32V | 3A/32V |
| T2BV77F8SD | | | | | | | | | | | 9A | 2.5A | 9A | 2.5A |
| T2BV77F12S | 9.0A | 6.3A/250V | 15A/32V | 24VDC @ 9.4A + 24VDC @ 9.4A | 20.17-26.4 | 20.28-26.4 | 20.17-26.4 | 20.28-26.4 | 12 | 16 | 15A/32V | 3A/32V | 15A/32V | 3A/32V |
| T2BV77F12SD | | | | | | | | | | | 9A | 2.5A | 9A | 2.5A |
| T2BV75F12S | 8.0A | 6.3A/250V and 5A/250V | 15A/32V | 24VDC @ 9.4A + 12VDC @ 9.4A | 20.17-26.4 | 20.28-26.4 | 9.7-13.2 | 10.03-13.2 | 12 | 16 | 15A/32V | 3A/32V | 15A/32V | 3A/32V |
| T2BV75F12SD | | | | | | | | | | | 9A | 2.5A | 9A | 2.5A |
| T3BV77F16S | 9.0A | 6.3A/250V | 15A/32V | 24VDC @ 9.4A + 24VDC @ 9.4A | 20.17-26.4 | 20.28-26.4 | 20.17-26.4 | 20.28-26.4 | 16 | 16 | 15A/32V | 3A/32V | 10A/32V | 3A/32V |
| T3BV77F16SD | | | | | | | | | | | 9A | 2.5A | 9A | 2.5A |
| T3BV77F24S | 9.0A | 6.3A/250V | 15A/32V | 24VDC @ 9.4A + 24VDC @ 9.4A | 20.17-26.4 | 20.28-26.4 | 20.17-26.4 | 20.28-26.4 | 24 | 32 | 15A/32V | 3A/32V | 15A/32V | 3A/32V |
| T3BV77F24SD | | | | | | | | | | | 9A | 2.5A | 9A | 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.
   **If your application requires a raised backplane, re-mount it using metal spacers and screws (provided).**
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. Connect unswitched AC power (120VAC 60Hz) to terminals marked [L, N]. Use 14 AWG or larger for all power connections. Secure green wire lead to earth ground. Green "AC" LED on power supply board will turn on. This light can be seen through the LED lens on the door of the enclosure.
   **Keep power-limited wiring separate from non power-limited wiring (120VAC 60Hz Input, Battery Wires). 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.**
5. Measure voltage before connecting devices. This helps avoiding potential damage.
6. Mount Brivo boards to backplane, *refer to pages 3-9.*
7. Refer to the *eFlow Power Supply/Charger Installation Guide* for eFlow6NB, eFlow102NB, eFlow104NB and corresponding *Sub-Assembly Installation Guide* (ACM4(CB), ACMS8(CB), ACMS12(CB), PDS8(CB), PDS16(CB), VR6, VR10) for further installation instructions.

*Fig. 1*



## T1BV3F4S and T1BV3F4SD: Configuration of Brivo Controls Boards:

1. Align the Brivo board on the backplane to match the boards' mounting holes with corresponding pems.
2. Fasten 4/40 - 5/8" Metal Spacers (provided) to pems that match the hole pattern for Brivo board *(Fig. 2, 2a, pg. 3)*.
   **Note:** Brivo board must be properly grounded.
   Please use provided metal spacers for the lower right mounting holes *(Fig. 2, pg. 3)*.
3. Mount Brivo board to spacers utilizing provided 4/40 - 5/16" Pan Head Screws *(Fig. 2a, pg. 3)*.
4. Fasten backplane to Trove1 enclosure utilizing lock nuts (provided).

## Access Controller Position Chart for the Following Models:

| Brivo Access Controller | Pem Mounting |
|---|---|
| ACS6000-MBE | (A) |
| ACS6100-DB, ACS6100-IO | (B) |

*Fig. 2* - **T1BV3F4S(D) Configurations**

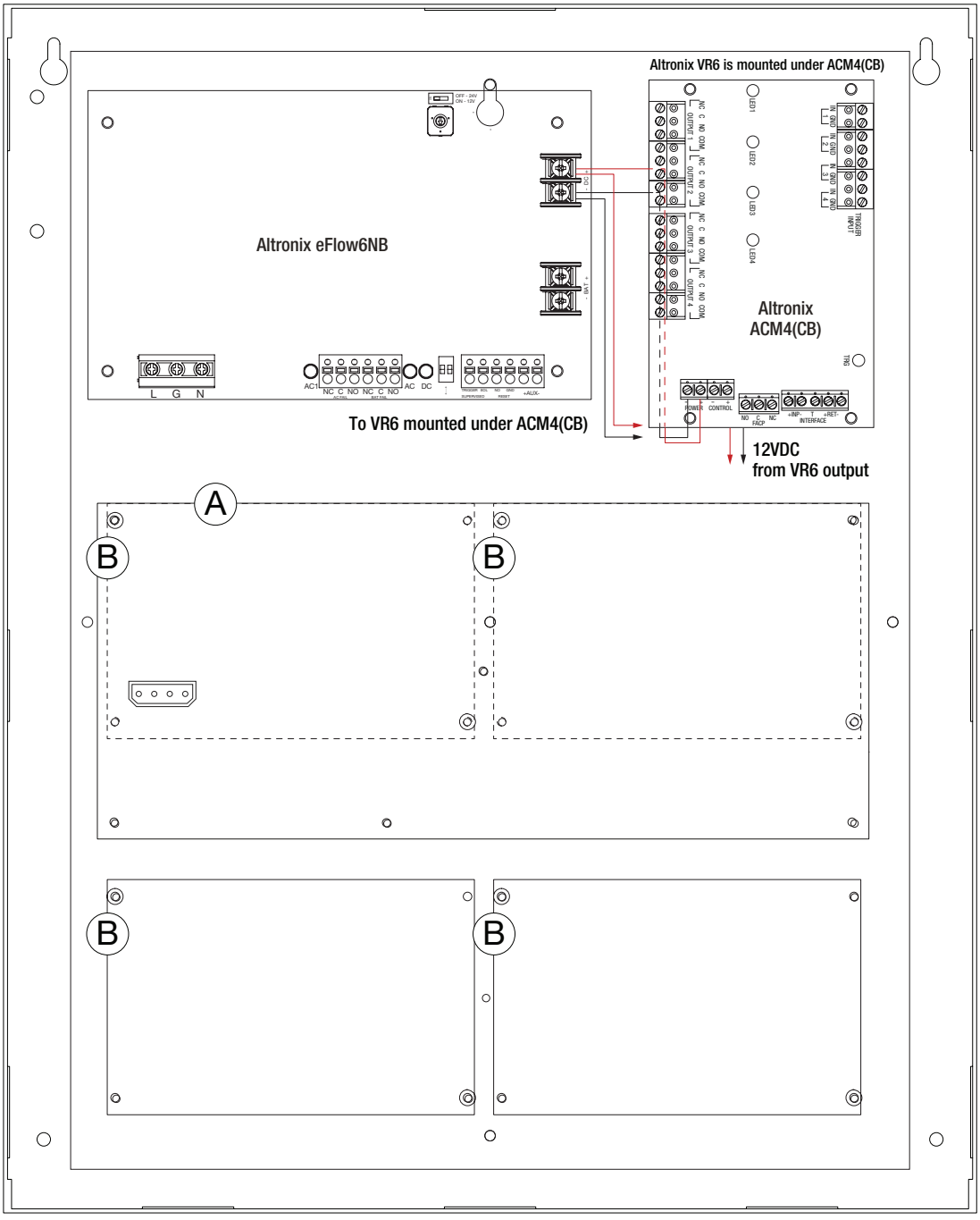
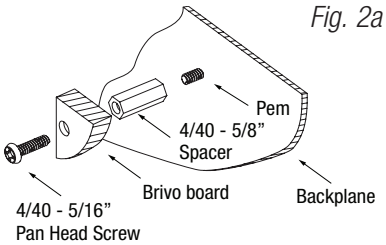



*Fig. 2a*



## T2BV7F8S and T2BV7F8SD: Configuration of Brivo Controls Boards:

1. Align the Brivo board on the backplane to match the boards' mounting holes with corresponding pems.
2. Fasten 4/40 - 5/8" Metal Spacers (provided) to pems that match the hole pattern for Brivo board *(Fig. 3, 3a, pg. 4)*.
   **Note:** Brivo board must be properly grounded.
   Please use provided metal spacers for the lower right mounting holes *(Fig. 3, pg. 4)*.
3. Mount Brivo board to spacers utilizing provided 4/40 - 5/16" Pan Head Screws *(Fig. 3a, pg. 4)*.
4. Fasten backplane to Trove2 enclosure utilizing lock nuts (provided).

## Access Controller Position Chart for the Following Models:

| Brivo Access Controller | Pem Mounting |
|---|---|
| ACS6000-MBE | (A) |
| ACS6100-DB, ACS6100-IO | (B) |

*Fig. 3* - **T2BV7F8S(D) Configurations**

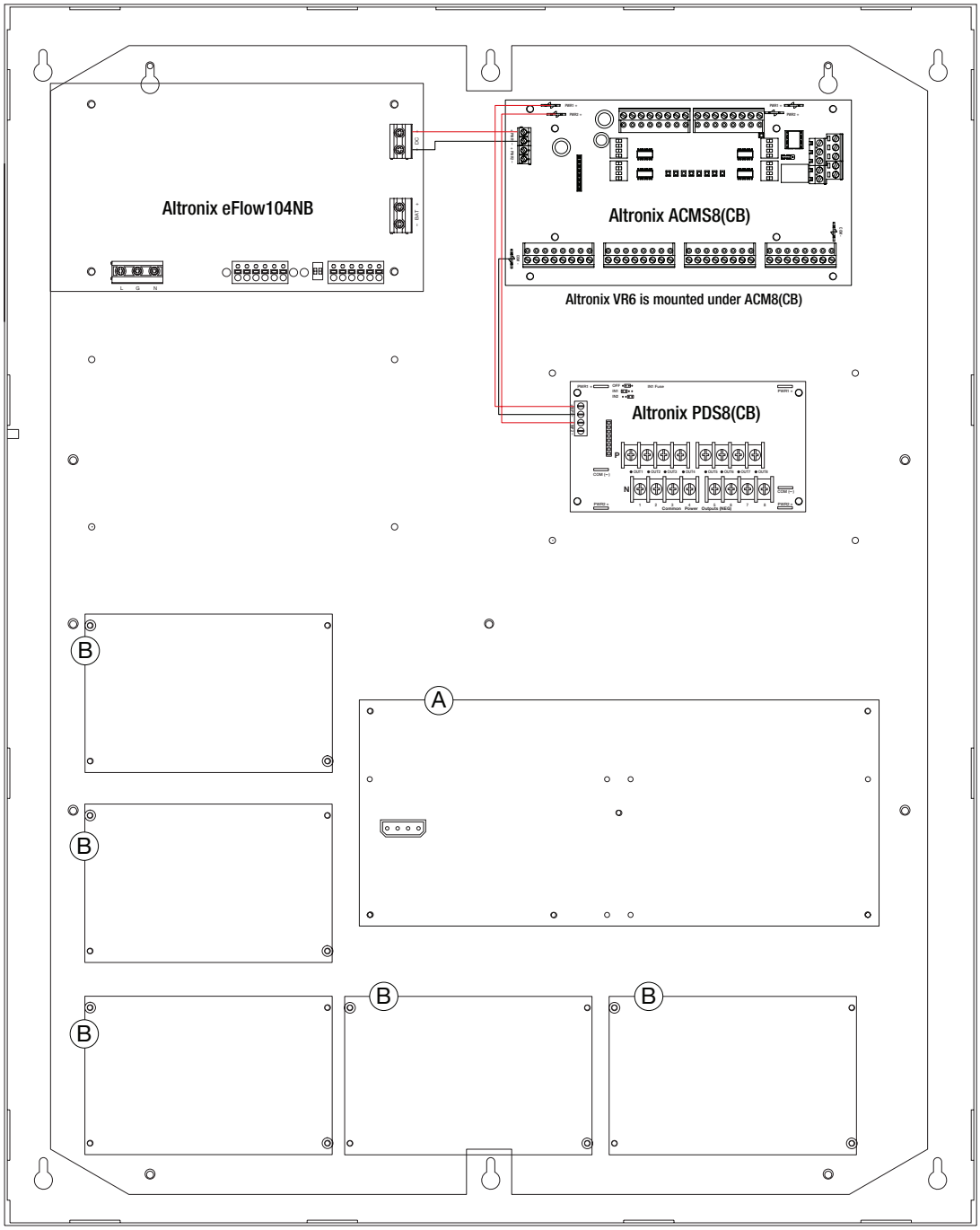
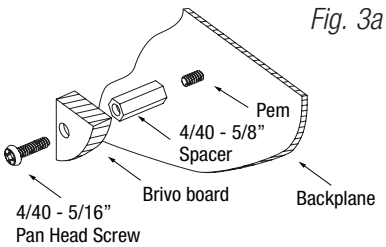



*Fig. 3a*



## T2BV77F8S and T2BV77F8SD: Configuration of Brivo Controls Boards:

1. Align the Brivo board on the backplane to match the boards' mounting holes with corresponding pems.
2. Fasten 4/40 - 5/8" Metal Spacers (provided) to pems that match the hole pattern for Brivo board *(Fig. 4, 4a, pg. 5)*.
   **Note:** Brivo board must be properly grounded.
   Please use provided metal spacers for the lower right mounting holes *(Fig. 4, pg. 5)*.
3. Mount Brivo board to spacers utilizing provided 4/40 - 5/16" Pan Head Screws *(Fig. 4a, pg. 5)*.
4. Fasten backplane to Trove2 enclosure utilizing lock nuts (provided).

## Access Controller Position Chart for the Following Models:

| Brivo Access Controller | Pem Mounting |
|---|---|
| ACS6000-MBE | (A) |
| ACS6100-DB, ACS6100-IO | (B) |

*Fig. 4* - **T2BV77F8S(D) Configurations**

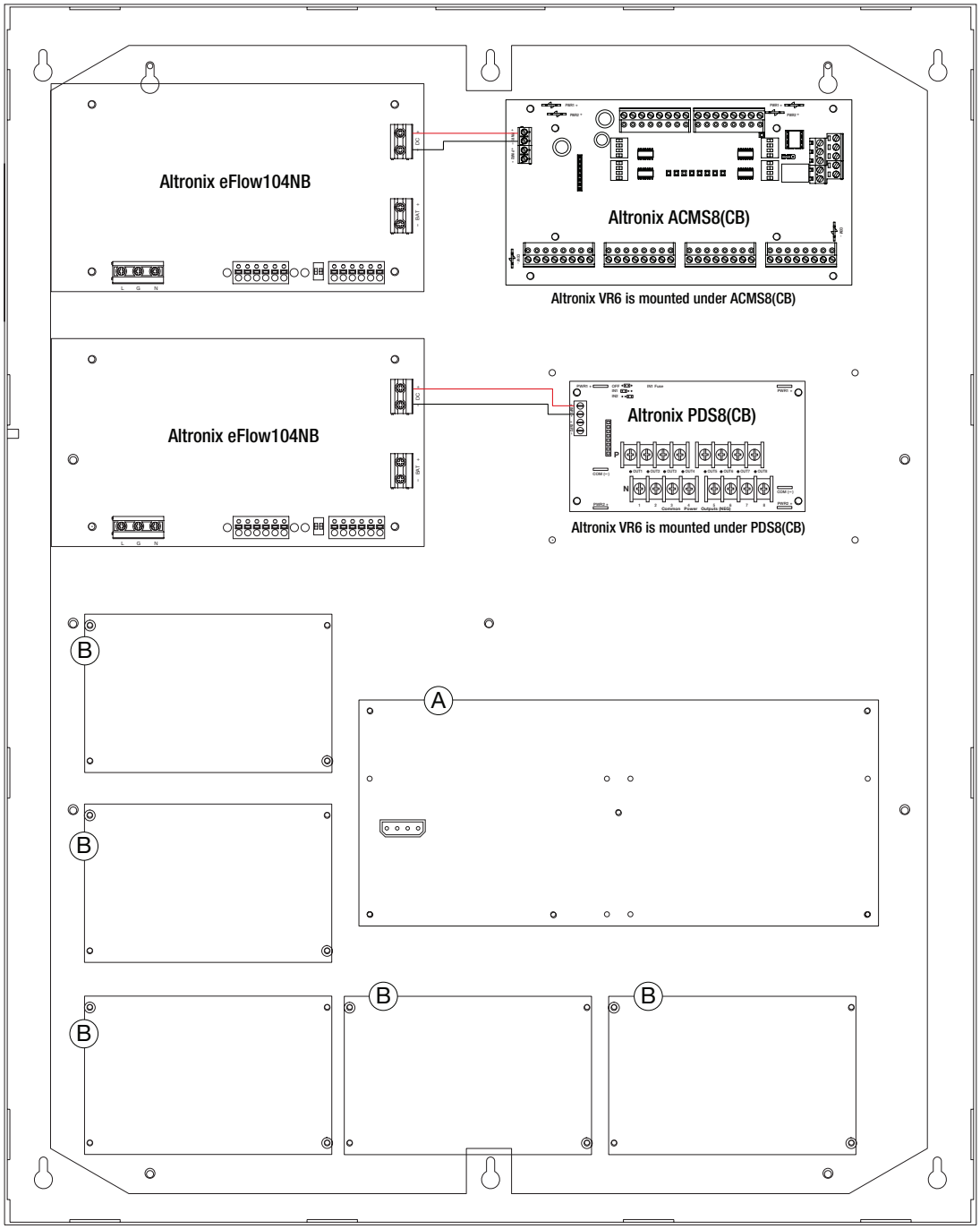
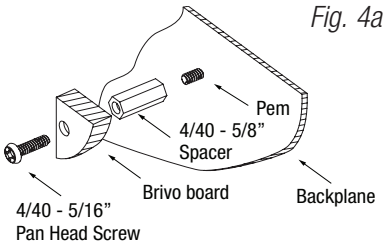



*Fig. 4a*



## T2BV77F12S and T2BV77F12SD: Configuration of Brivo Controls Boards:

1. Align the Brivo board on the backplane to match the boards' mounting holes with corresponding pems.
2. Fasten 4/40 - 5/8" Metal Spacers (provided) to pems that match the hole pattern for Brivo board *(Fig. 5, 5a, pg. 6)*.
   **Note:** Brivo board must be properly grounded.
   Please use provided metal spacers for the lower right mounting holes *(Fig. 5, pg. 6)*.
3. Mount Brivo board to spacers utilizing provided 4/40 - 5/16" Pan Head Screws *(Fig. 5a, pg. 6)*.
4. Fasten backplane to Trove2 enclosure utilizing lock nuts (provided).

## Access Controller Position Chart for the Following Models:

| Brivo Access Controller | Pem Mounting |
|---|---|
| ACS6000-MBE | Ⓐ |
| ACS6100-DB, ACS6100-IO | Ⓑ |

*Fig. 5* - **T2BV77F12S(D) Configurations**

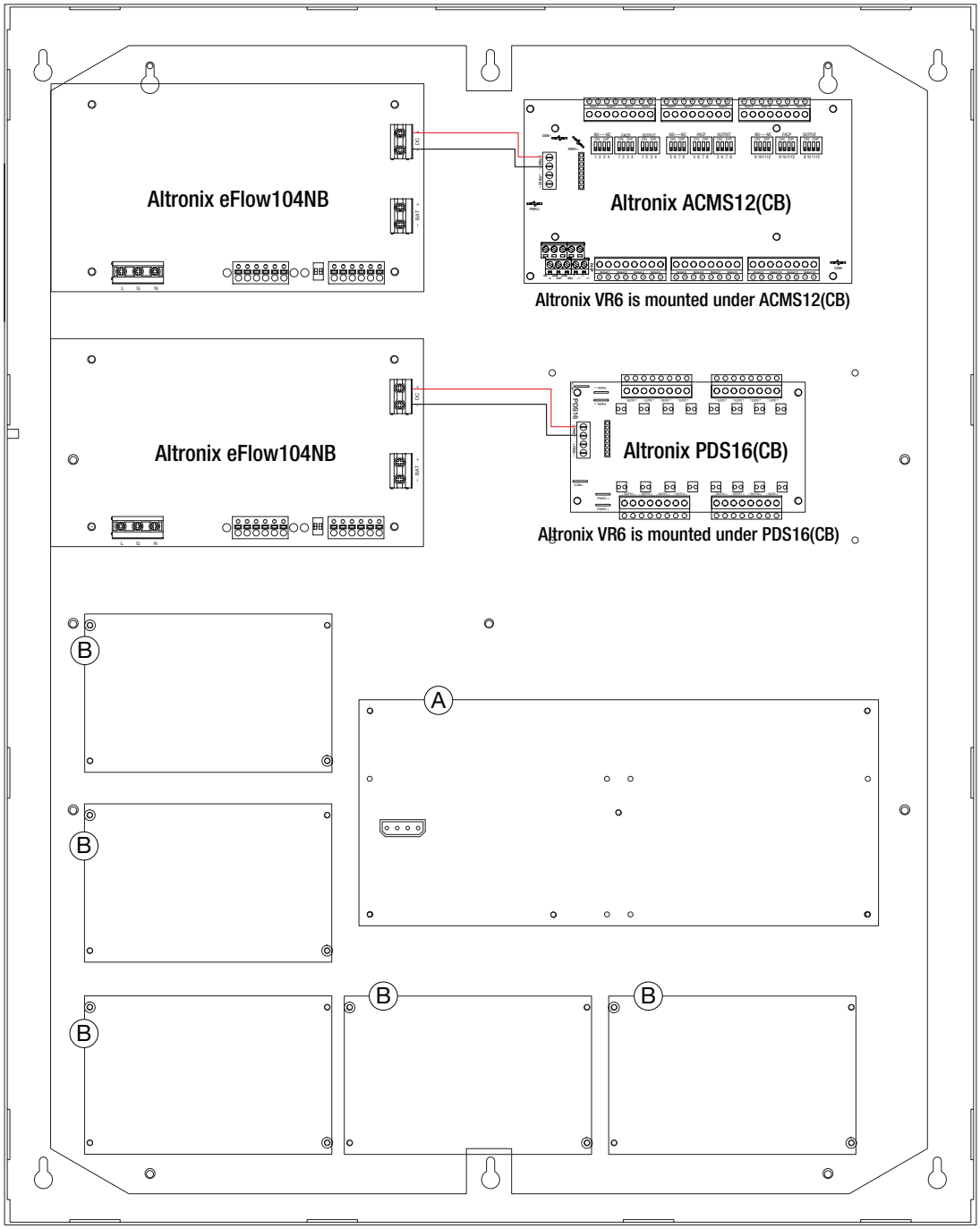
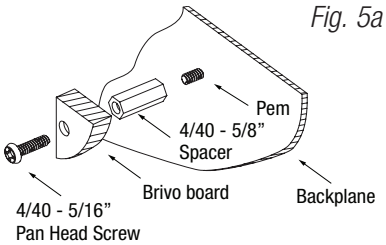



*Fig. 5a*



## T2BV75F12S and T2BV75F12SD: Configuration of Brivo Controls Boards:

1. Align the Brivo board on the backplane to match the boards' mounting holes with corresponding pems.
2. Fasten 4/40 - 5/8" Metal Spacers (provided) to pems that match the hole pattern for Brivo board *(Fig. 6, 6a, pg. 7)*.
   **Note:** Brivo board must be properly grounded.
   Please use provided metal spacers for the lower right mounting holes *(Fig. 6, pg. 7)*.
3. Mount Brivo board to spacers utilizing provided 4/40 - 5/16" Pan Head Screws *(Fig. 6a, pg. 7)*.
4. Fasten backplane to Trove2 enclosure utilizing lock nuts (provided).

## Access Controller Position Chart for the Following Models:

| Brivo Access Controller | Pem Mounting |
|---|---|
| ACS6000-MBE | (A) |
| ACS6100-DB, ACS6100-IO | (B) |

*Fig. 6* - **T2BV75F12S(D) Configurations**

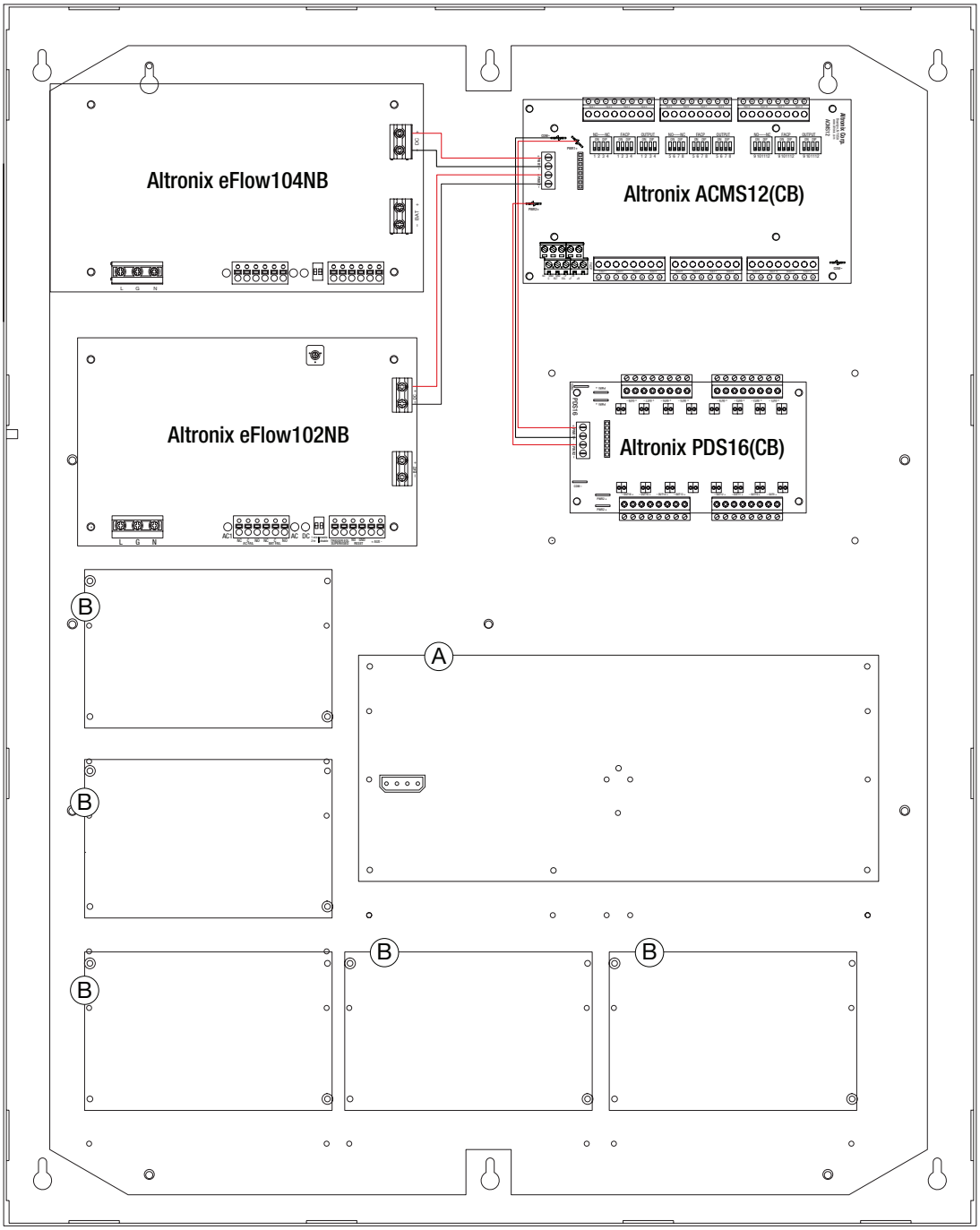
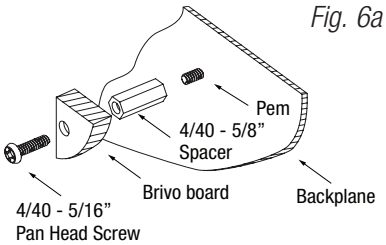



*Fig. 6a*



## T3BV77F16S and T3BV77F16SD: Configuration of Brivo Controls Boards:

1. Align the Brivo board on the backplane to match the boards' mounting holes with corresponding pems.
2. Fasten 4/40 - 5/8" Metal Spacers (provided) to pems that match the hole pattern for Brivo board *(Fig. 7, 7a, pg. 8)*.
   **Note:** Brivo board must be properly grounded.
   Please use provided metal spacers for the lower right mounting holes *(Fig. 7, pg. 8)*.
3. Mount Brivo board to spacers utilizing provided 4/40 - 5/16" Pan Head Screws *(Fig. 7a, pg. 8)*.
4. Fasten backplane to Trove3 enclosure utilizing lock nuts (provided).

## Access Controller Position Chart for the Following Models:

| Brivo Access Controller | Pem Mounting |
|---|---|
| ACS6000-MBE | (A) |
| ACS6100-DB, ACS6100-IO | (B) |

*Fig. 7* - **T3BV77F16S(D) Configurations**

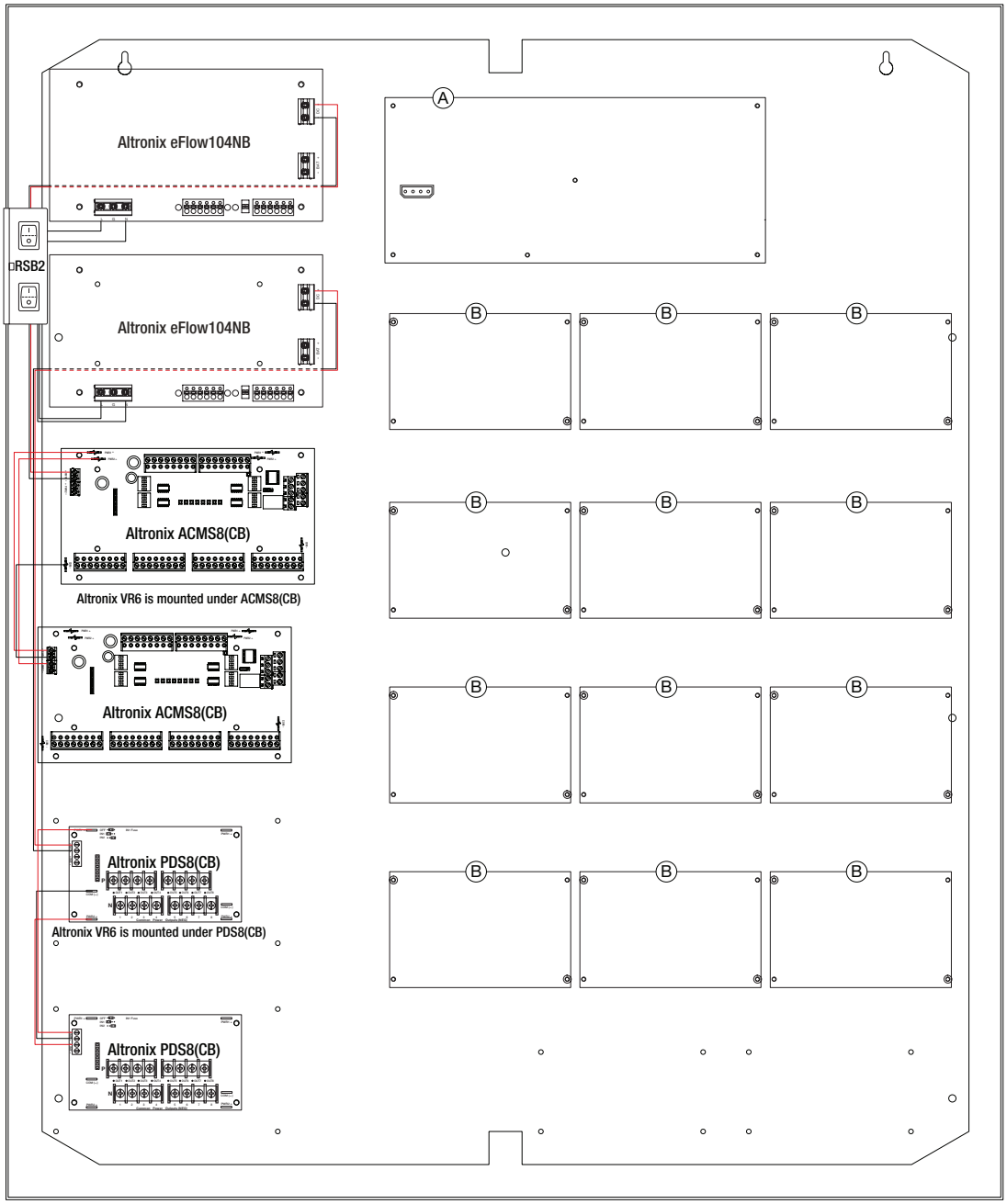
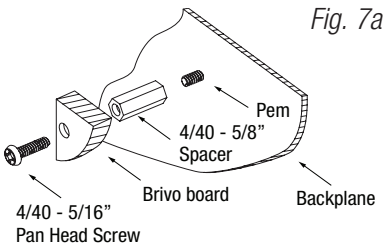



*Fig. 7a*



## T3BV77F24S and T3BV77F24SD: Configuration of Brivo Controls Boards:

1. Align the Brivo board on the backplane to match the boards' mounting holes with corresponding pems.
2. Fasten 4/40 - 5/8" Metal Spacers (provided) to pems that match the hole pattern for Brivo board *(Fig. 8, 8a, pg. 9)*.
   **Note:** Brivo board must be properly grounded.
   Please use provided metal spacers for the lower right mounting holes *(Fig. 8, pg. 9)*.
3. Mount Brivo board to spacers utilizing provided 4/40 - 5/16" Pan Head Screws *(Fig. 8a, pg. 9)*.
4. Fasten backplane to Trove3 enclosure utilizing lock nuts (provided).

## Access Controller Position Chart for the Following Models:

| Brivo Access Controller | Pem Mounting |
|---|---|
| ACS6000-MBE | Ⓐ |
| ACS6100-DB, ACS6100-IO | Ⓑ |

*Fig. 8* - **T3BV77F24S(D) Configurations**

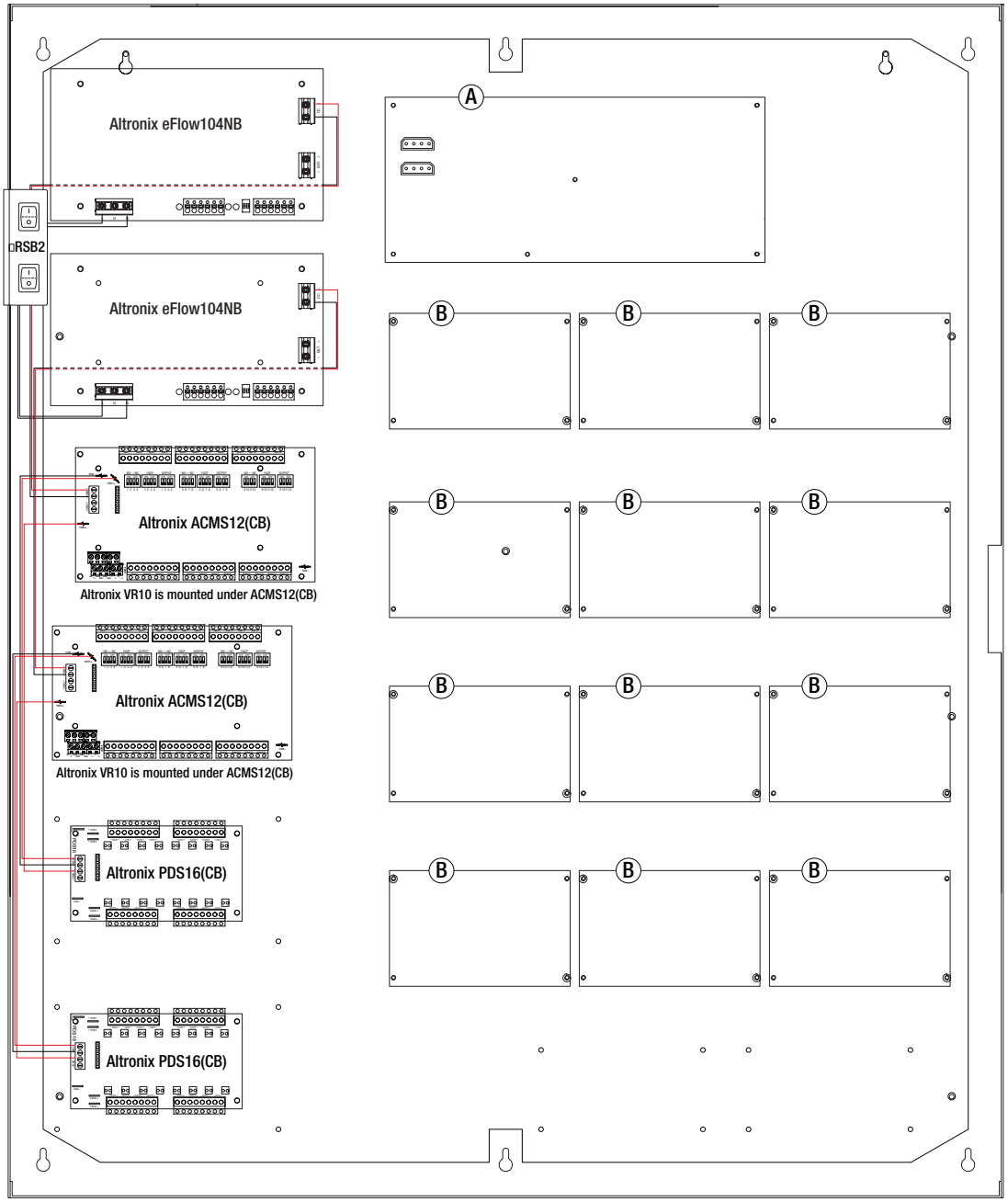
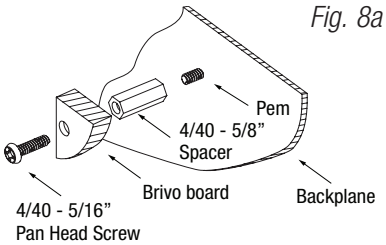
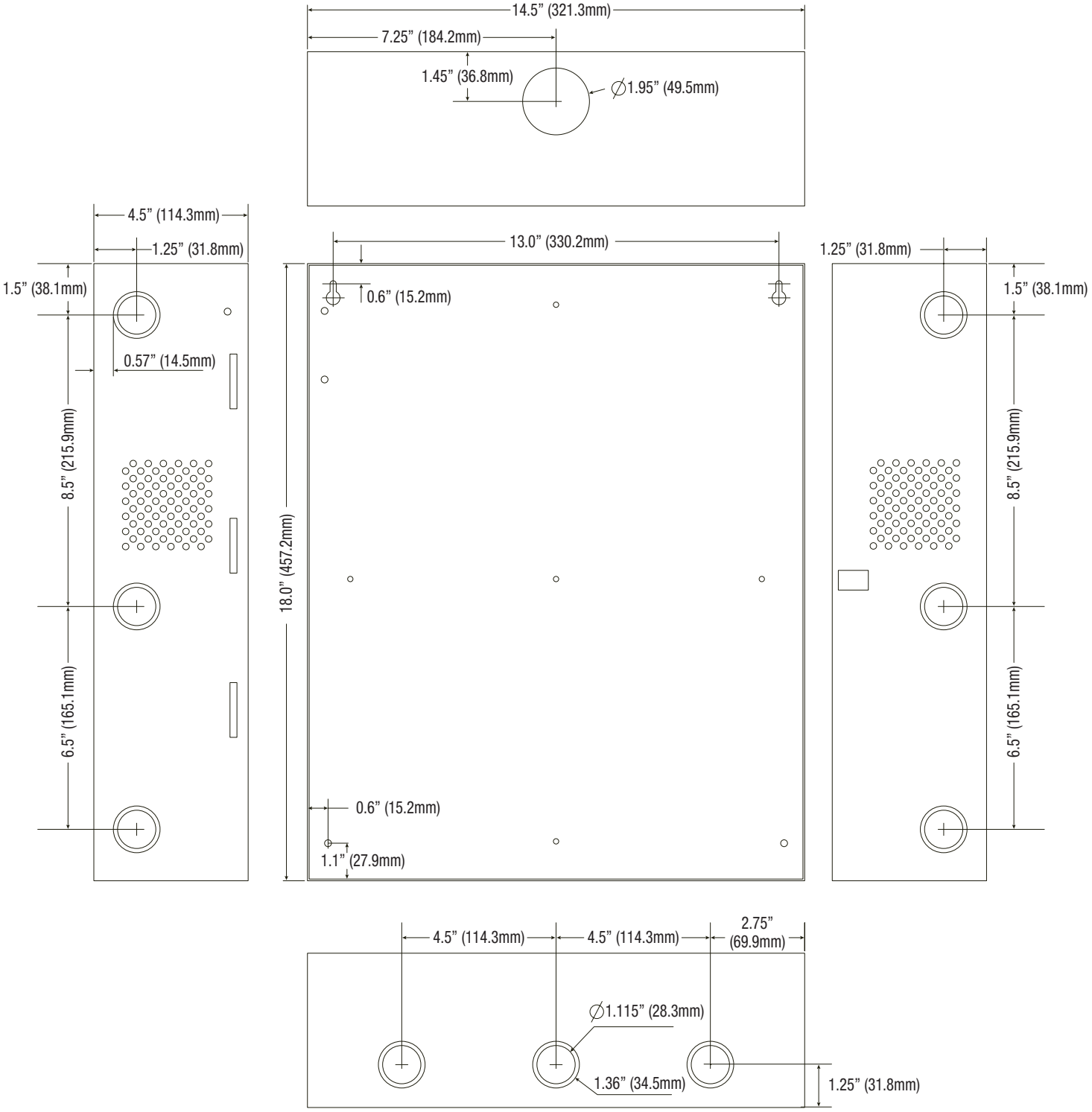



*Fig. 8a*



## **T1BV3F4S and T1BV3F4SD (Trove1) Enclosure Dimensions** (H x W x D approximate)**:**

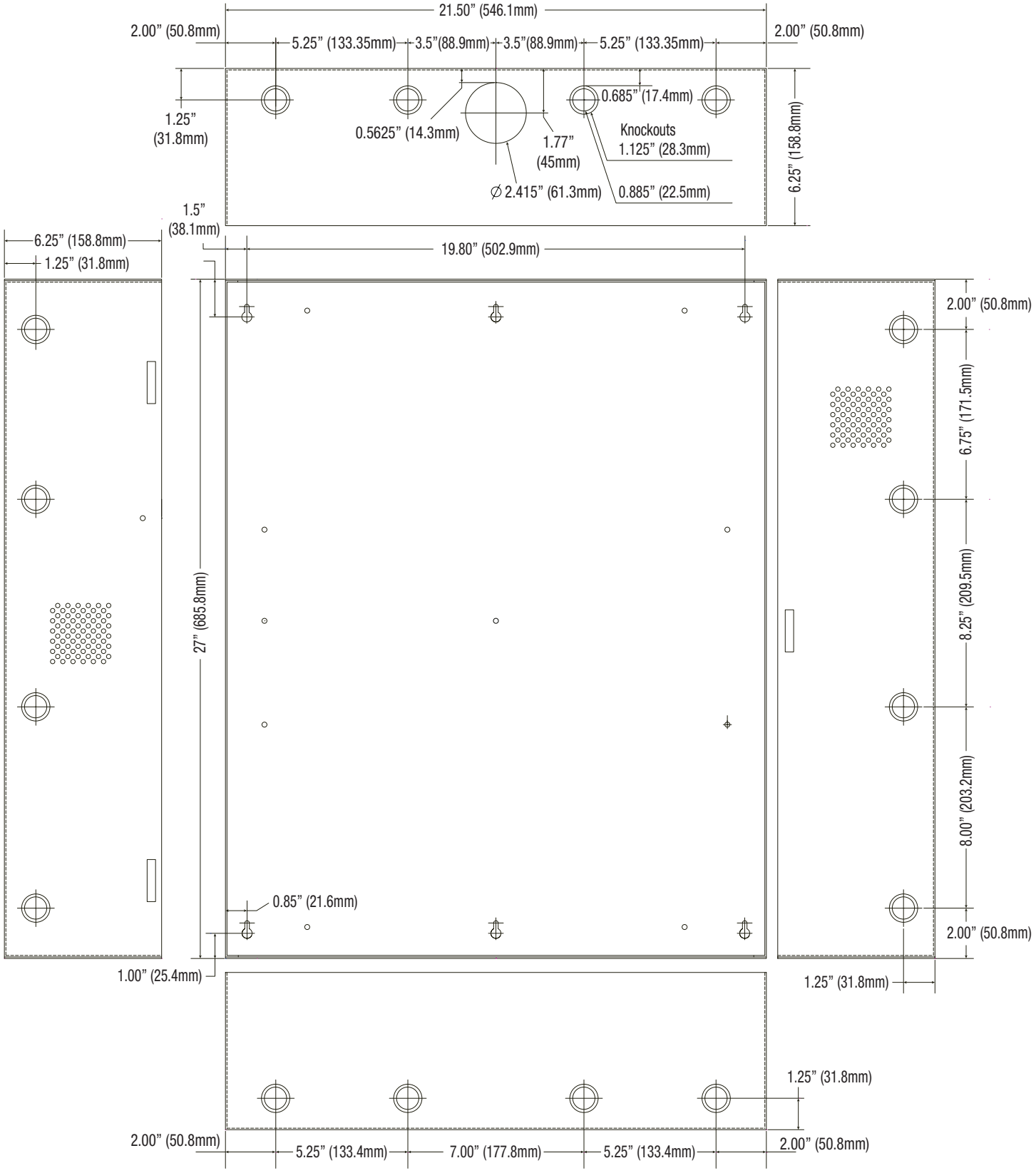
18” x 14.5” x 4.625” (457mm x 368mm x 118mm)



## T2BV7F8S, T2BV7F8SD, T2BV77F8S, T2BV77F8SD, T2BV77F12S, T2BV77F12SD, T2BV75F12S, T2BV75F12SD

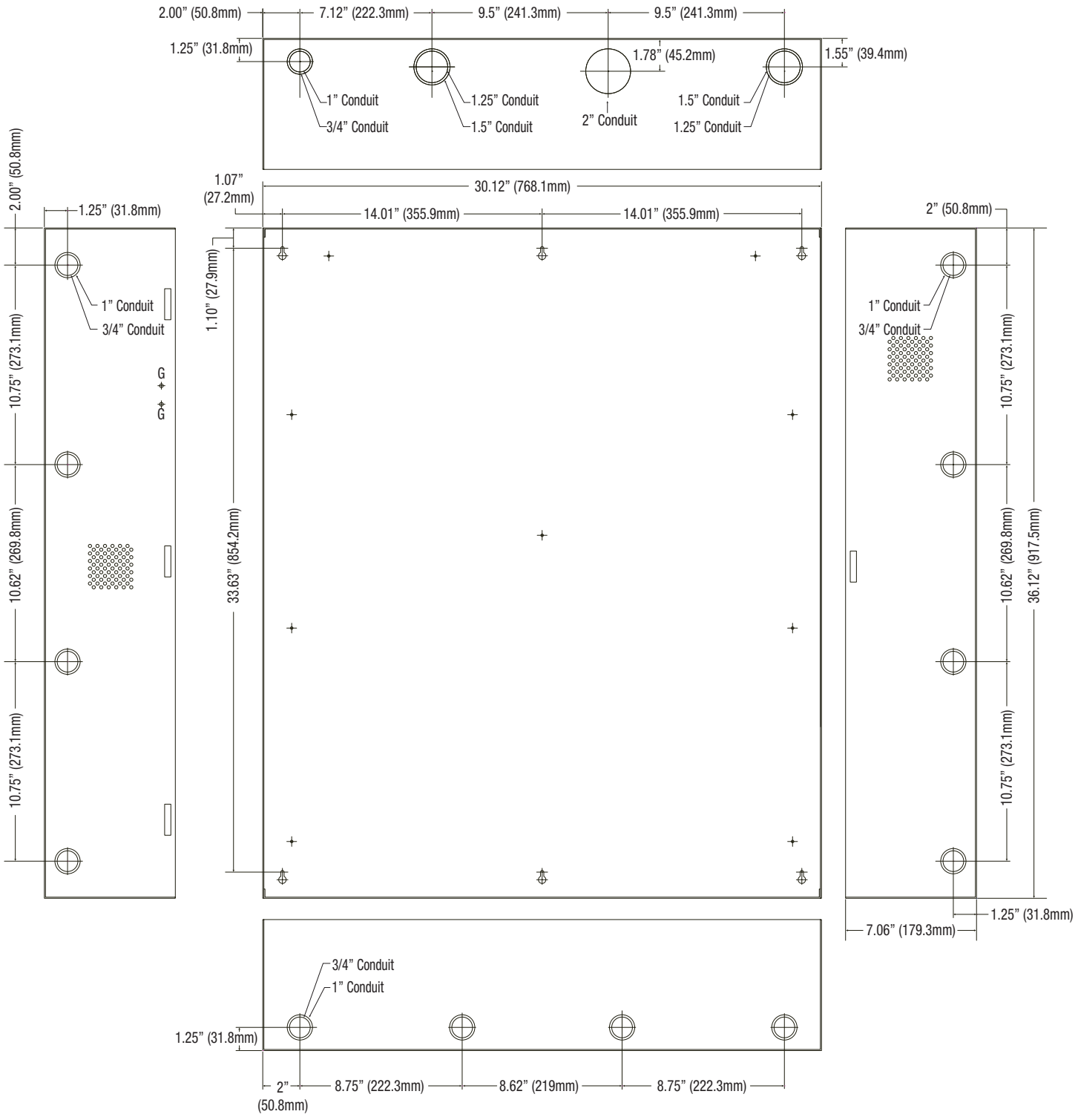
## (Trove2) Enclosure Dimensions (H x W x D approximate):

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



## T3BV77F16S, T3BV77F16SD, T3BV77F24S and T3BV77F24SD (Trove3) Enclosure Dimensions (H x W x D approximate):

36.12” x 30.125” x 7.06” (917.5mm x 768.1mm x 179.3mm)

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