

PDS16/PDS16CB

Dual Input Power Distribution Modules

Installation Guide

Overview:

Altronix PDS16/PDS16CB dual input power distribution module is designed to steer the power from either two (2) low voltage AC or DC power sources. This power is distributed over a total of sixteen (16) fuse/PTC protected outputs.

Specifications:

Power Inputs:

- Input 1 and Input 2 voltage range:
 - PDS16:** 5VDC to 24VDC, up to 10A each or 16VAC to 28VAC, 60Hz, up to 10A each, 20A total input.
 - PDS16CB:** 5VDC to 24VDC up to 10A each or 16VAC to 28VAC, 60Hz, up to 10A each, 16A total input.

Outputs:

- **PDS16:** Fuse protected outputs rated @ 3A per output, non power-limited. Total output 20A max.
- **PDS16CB:** PTC protected outputs rated @ 2A per output, Class 2 power-limited. Total output 16A max.

Do not exceed the individual power supply ratings. Total output current should not exceed max. current rating of the power supplies employed on each input. See **Maximum Output of Altronix Power Supplies** (pg. 3).

- Any of the sixteen (16) fuse/PTC protected power outputs are selectable to follow power Input 1 or Input 2. Output voltage of each output is the same as the input voltage of the input selected.
- Individual outputs may be set to OFF position for servicing.
- Surge suppression.

Outputs Ratings:

- PDS16:** 4.8 - 24 VDC or 15.8 - 28 VAC
- PDS16CB:** 4.8 - 24 VDC or 15.6 - 28 VAC

PDS16 Fuse Ratings:

- Main input fuses rated @ 15A/32V each.
- Individual output fuses rated @ 3A/32V each.

PDS16CB PTC Ratings:

- Main input PTCs rated @ 9A each.
- Individual output PTCs rated @ 2.5A each.

LED Indicators:

- Individual voltage LEDs indicate 12VDC (Green) or 24VDC (Green and Red).

Environmental:

- Operating temperature: 0°C to 49°C ambient.
- Humidity: 20 to 85%, non-condensing.

Mechanical:

- Product dimensions (L x W x H approx.): 5.4" x 3.345" x 0.98" (137.2mm x 85.0mm x 25.4mm).
- Product weight (approx.): 0.4 lb. (0.18 kg).
- Shipping weight (approx.): 0.5 lb. (0.23 kg).

Maximum Output of Altronix Power Supplies:

DC Power Supplies		
UL Listed or Recognized Power Supply	Output Voltage	Max. Output Current
AL300ULXB2	12VDC or 24VDC	2.5A
AL400ULXB2	12VDC or 24VDC	12VDC @ 4A or 24VDC @ 3A
AL600ULXB	12VDC or 24VDC	6A
AL1012ULXB	12VDC	10A
AL1024ULXB2	24VDC	10A
eFlow3NB	12VDC or 24VDC	2A
eFlow4NB	12VDC or 24VDC	4A
eFlow6NB	12VDC or 24VDC	6A
eFlow102NB	12VDC	10A
eFlow104NB	24VDC	10A
VR6	5VDC or 12VDC	6A

AC Power Supplies		
UL Recognized Power Supply	Output Voltage	Max. Output Current
T2428100	24VAC or 28VAC	24VAC @ 4A or 28VAC @ 3.5A
T2428175	24VAC or 28VAC	24VAC @ 7.25A or 28VAC @ 6.25A
T2428300	24VAC or 28VAC	24VAC @ 14A or 28VAC @ 12.5A*

*Total load must not exceed 10A.

Installation Instructions:

Wiring methods shall be in accordance with the National Electrical Code/NFPA 70/NFPA 72/ANSI, with Canadian Electrical Code CSA C22.1, and with all local codes and authorities having jurisdiction. Product is intended for indoor use only and should be installed by qualified personnel.

1. Mount PDS16/PDS16CB in the desired location/enclosure. When mounting PDS16/PDS16CB alone, use female/female spacers (provided). When mounting with optional VR6 voltage regulator, use female/female spacers (provided) between PDS16/PDS16CB and VR6 (Fig. 3, pg. 4). Attach PDS16/PDS16CB to spacers utilizing 5/16" pan head screws (provided).

2. Ensure all output jumpers [OUT1 - OUT16] are placed in the OFF (center) position marked [●].

3. Connect low voltage AC or DC power supplies to terminals marked [+ IN1 -], [+ IN2 -] (Fig. 1, pg. 4, Fig. 2 pg. 5).

Note: You can not combine AC and DC power supplies.

4. Set each output [OUT1 - OUT16] to route power from power supply 1 or 2 (jumper position 1 or 2) (Fig. 1, pg. 4, Fig. 2 pg. 5).

Note: Measure output voltage before connecting devices. This helps avoiding potential damage.

5. Turn power off before connecting devices.

6. Connect devices 1 through 8 to terminal pairs 1 to 8, marked [+ OUT 1 -] through [+ OUT 8 -].

Connect devices 9 through 16 to terminal pairs 9 to 16, marked [- OUT 9 +] through [- OUT 16 +] (Fig. 1, pg. 4, Fig. 2 pg. 5).

Note: For DC devices carefully observe polarity. For AC devices polarity is not observed.

7. Turn main power on after all devices have been connected.

Fig. 1 - PDS16

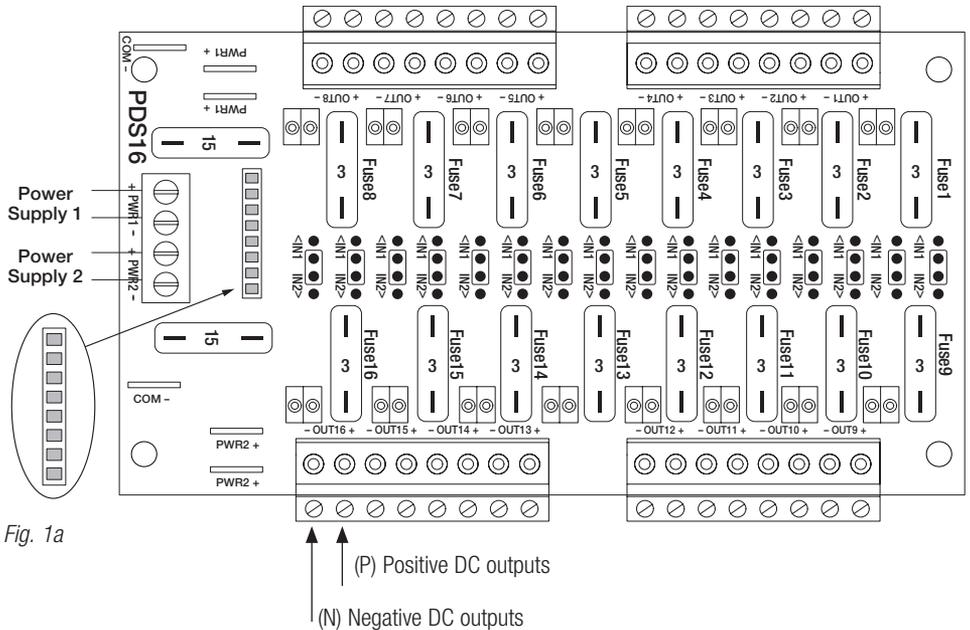


Fig. 1a

Fig. 1a - Connector plug facilitates quick installation with optional VR6 voltage regulator module (see pg. 6).

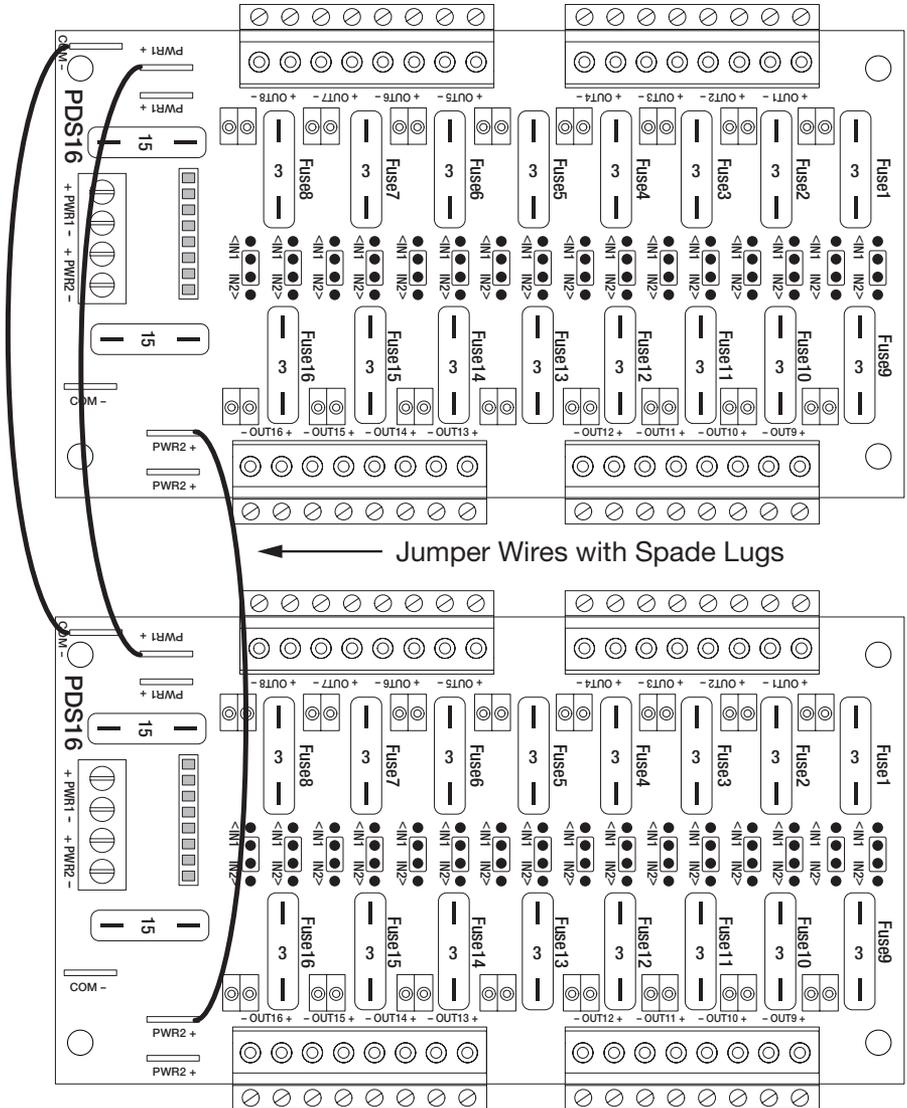
CAUTION: To avoid risk of electric shock or fire hazard, replace fuses with the same type and rating: Input fuses: 15A/32V, Output fuses: 3A/32V.

Daisy Chaining Two (2) PDS16/PDS16CB Dual Output Power Distribution Modules:

Use 18 AWG or larger UL Listed wire equipped with 1/4" UL Recognized quick connect terminals rated for proper voltage/current for all jumper connections.

1. Connect first PDS16/PDS16CB board's spade lug marked [PWR1 +] to the second PDS16/PDS16CB board's spade lug marked [PWR1 +] (Fig. 2, pg. 3).
2. Connect first PDS16/PDS16CB board's spade lug marked [Common (-)] to the second PDS16/PDS16CB board's spade lug marked [Common (-)] (Fig. 2, pg. 3).
3. Connect first PDS16/PDS16CB board's spade lug marked [PWR2 +] to the second PDS16/PDS16CB board's spade lug marked [PWR2 +] (Fig. 2, pg. 3).
4. Complete steps 4-7 from page 2.

Fig. 2



VR6 - Voltage Regulator

Overview:

Altronix VR6 voltage regulator is designed to convert a 24VDC input into a regulated 5VDC or 12VDC output. Refer to VR6 Installation Instructions Rev. 050517.

Specifications:

Power Input / Output:

- Input: 24VDC @ 1.75A – Output: 5VDC @ 6A.
Input: 24VDC @ 3.5A – Output: 12VDC @ 6A.

Output:

- 5VDC or 12VDC regulated output.
- Output rating 6A max.
- Surge suppression.

LED Indicators:

- Input and output LEDs.

Electrical:

- Operating temperature: 0°C to 49°C ambient.
- Humidity: 20 to 85%, non-condensing.

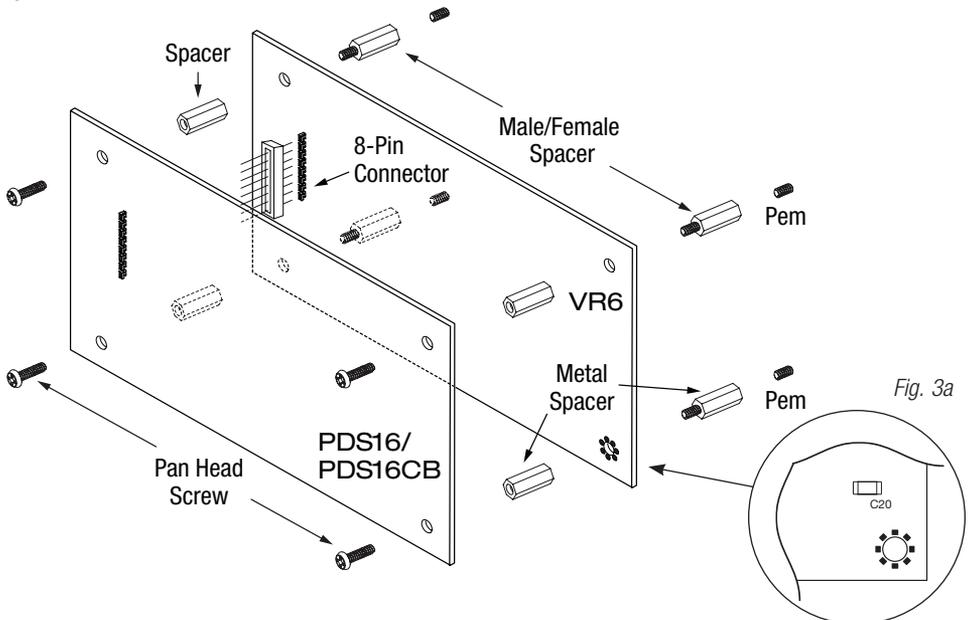
Mechanical:

- Product weight (approx.): 0.4 lb. (0.18 kg).
- Shipping weight (approx.): 0.5 lb. (0.23 kg).

Connecting PDS16(CB) to VR6:

1. Fasten male/female spacers (provided) to pems that match the hole pattern for VR6 in the desired location/enclosure. Use metal spacer for the mounting hole with star pattern.
2. Plug-in male 8-pin connector to female 8-pin receptacle on VR6 board (Fig. 3, pg. 6).
3. Fasten female/female spacers to male/female spacers (Fig. 3, pg. 6).
Use metal spacers over mounting hole with star pattern (Fig. 3a, pg. 6).
4. Align 8-pin male connector with female receptacle of PDS16/PDS16CB, then attach board to spacers utilizing provided 5/16" pan head screws (Fig. 3, pg. 6, Fig 1a, pg. 4).
5. Connect 24VDC power supply to terminal marked [+ IN1 -] of PDS16/PDS16CB (Fig. 3, pg. 6).
6. Select output voltage 5VDC or 12VDC using switch [S1] on VR6.
7. Complete steps 4-8 from page 2.

Fig. 3



Notes:

Notes:

Altronix is not responsible for any typographical errors.

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