



Panduit Pre-Configured Universal Distribution Frame (UDF) Installation Instructions

Part Numbers: ZDINS24 and ZDINS25

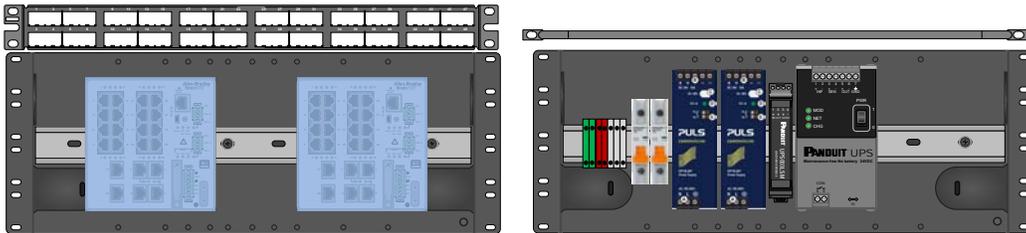


Figure 1: Front of Universal Distribution Frame (UDF) tier, Rear of UDF tier

Table of Contents

Tier Overview	1
Safety Information	1
Tier Installation	3
Thermal Considerations	8
Installing in 12RU Panduit Intermediate Distribution Frame	8
Installation in 26RU Panduit Intermediate Distribution Frame	9

Tier Overview

Panduit’s Universal Distribution Frame Tier allows two (2) industrial switches to be deployed using EAI 19” rails. Each Panduit Universal Distribution Frame Tier also includes a patch panel and cable management for a full solution.

Safety Information

The information and instructions contained in this document are not intended to be utilized as a substitute for proper training and experience in the safe installation and operation of product. Prior to installation, it is the Buyer’s responsibility to consult with the appropriate local Authority Having Jurisdiction (AHJ) for all applicable codes, permits, regulations, and standards. This product, including



any equipment that may be installed inside, should only be installed and serviced by a licensed electrical contractor, or competent technician, that meets the following qualifications;

- Is thoroughly familiar with this product and the instructions for installation and operation.
- Is trained (accredited) in industry-accepted safe operating practices and procedures regarding identification and mitigation of high- and low- voltage hazards and situations.
- Is trained to identify and install appropriately-sized Branch Circuit Disconnect(s) with appropriately-sized Branch-Circuit Protective Rating and Short-Circuit Current Rating (SCCR), before connecting Panduit product to the branch circuit.
- Is trained and authorized to energize, de-energize, clear and ground power distribution equipment.
- Is trained in the care and use of PPE (personal protective equipment) including, but not limited to; arc-flash protective clothing, safety glasses, face shield, hard hat, gloves, and non-conductive tools (clamp stick, hot stick, etc.).

Be sure enclosure or wall is capable of supporting equipment.

DISCLAIMER OF WARRANTIES AND LIMITATION OF LIABILITIES

The practices contained herein are designed as a guide for use by persons having technical skill at their own discretion and risk. Panduit does not guarantee any favorable results or assume any liability in connection with these instructions. Local, State, Federal, and Industry Codes and Regulations, as well as manufacturers requirements, must be consulted before proceeding with any project. Panduit Corp. makes no representations of nor assumes any responsibility for the accuracy or completeness set forth herein. Panduit disclaims any liability arising from any information contained herein or for the absence of same.

For Assistance:

Customer Service

800-777-3300

cs@panduit.com

General Technical Support

TechSupport@panduit.com



Tier Installation

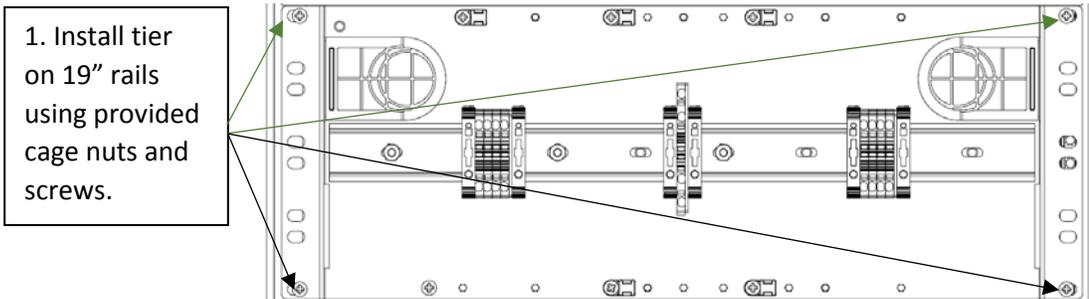


Figure 2 - Front of Tier

1. Install the tier on the rails using the cage nuts supplied with the tier, leaving two (2) rack units above the mounting bracket for cable management and the patch panel. Use the green cage nuts and green screws on the top two positions to show a visibly verifiable ground.

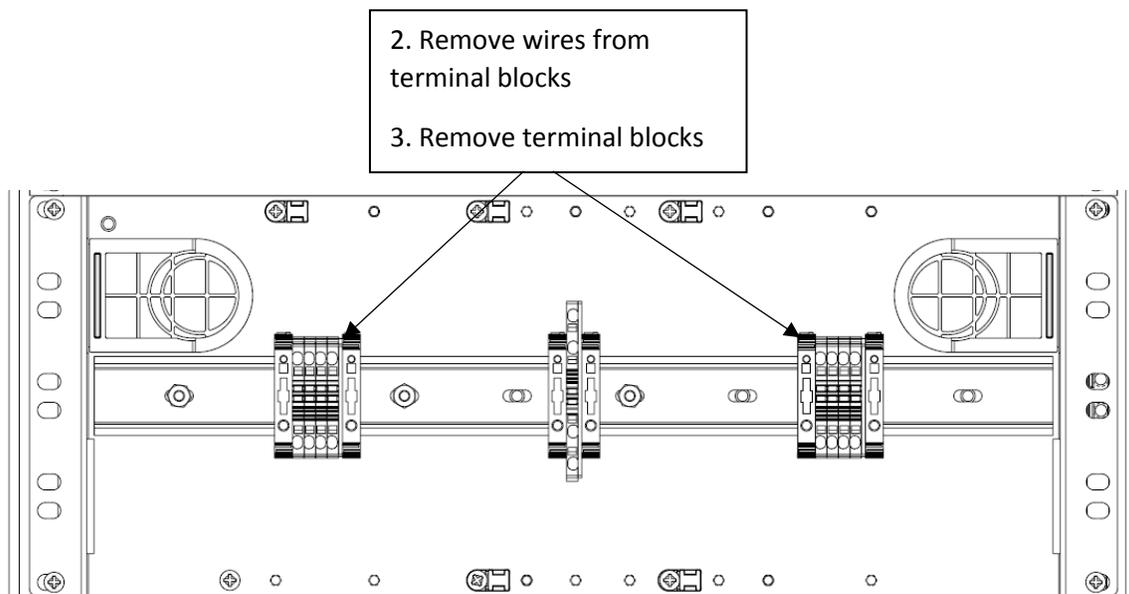
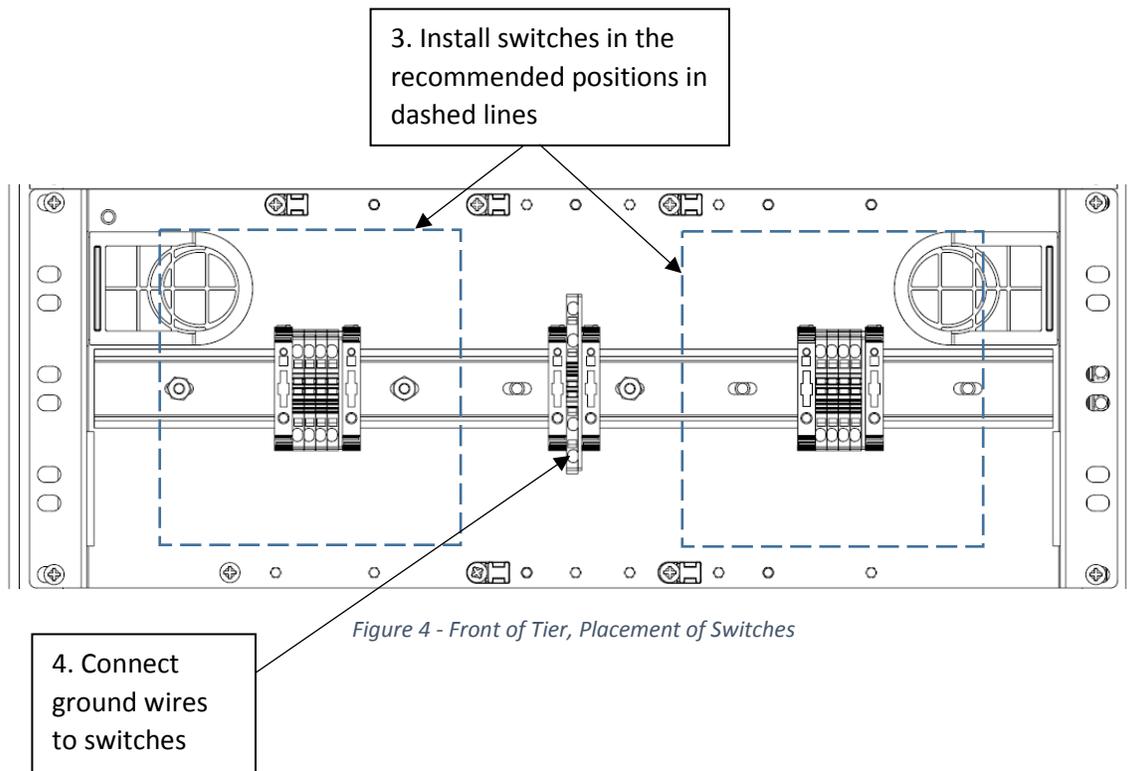


Figure 3 - Front of Tier, Removing Terminal Blocks

2. Remove wires from terminal blocks.

NOTE: Do not apply power prior to terminal block removal and switch installation.

3. Remove terminal blocks.



3. Install switch.

4. Install supplied ground wire to each switch. See manufacturer's instructions for how to ground the switch.



Note: The blanking panel is optional and not required in a 12RU deployment. It is intended to be used in 26RU Universal Distribution Frame (or if space is available) to promote optimal thermal performance of the switches and prevent people from reaching the power supplies. If no space is available for the blanking panel, move the patch panel down 1RU to the tier.

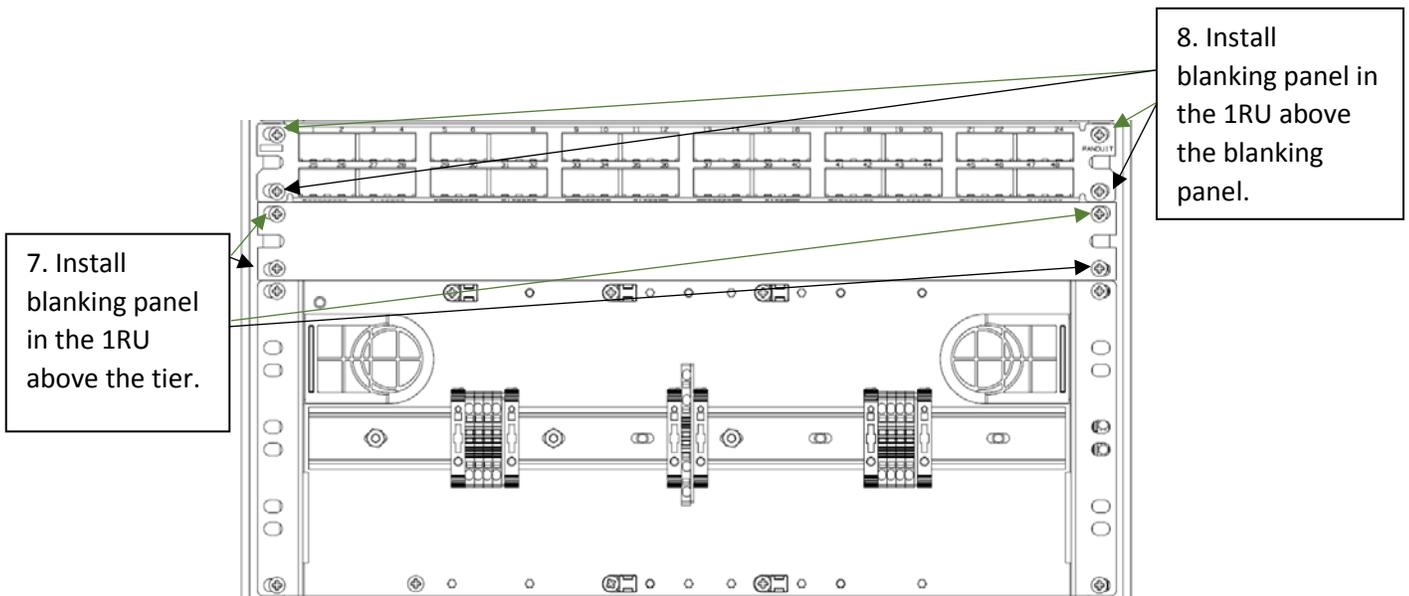


Figure 5 - Front of Tier, Installing Patch Panel and Blanking Panel (Optional)

7. Install blanking panel above the tier using included cage nuts and screws. Use the green cage nuts and green screws on the top two positions to show a visibly verifiable ground.

8. Install patch panel above blanking panel using included cage nuts and screws. Use the green cage nuts and green screws on the top two positions to show a visibly verifiable ground.

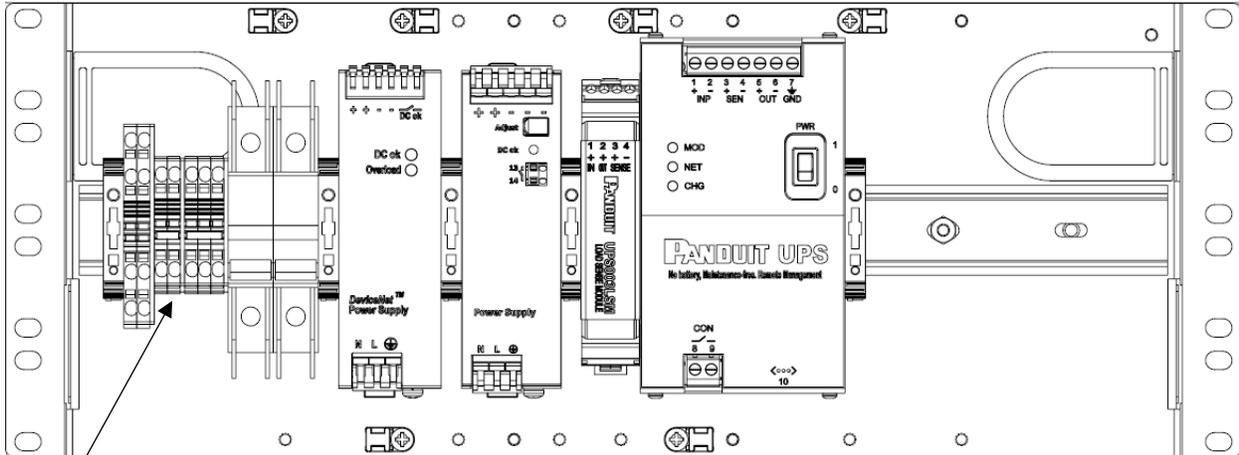


Figure 6 - Rear of Tier, Configuration shown includes Panduit 100W UPS (not included with all part numbers)

9. Wire up incoming power to the tier.

9. Wire switch and power to tier – Refer to switch manufacturer’s instructions and supplied Field Wiring Diagram for proper wiring technique. Make sure circuit breakers are in the OFF position while wiring.

NOTE: Do not apply power prior to terminal block removal and switch installation.



10. Install strain relief bars as needed to support the weight of the cables running to the patch panel. Recommended positions are to use the deeper strain relief bar on the RU behind the patch panel to support the cables, and the more shallow bar to keep the cables from interfering with the power supplies on the back of the tier.

11. Install fiber spool against side of enclosure to manage fiber patch cord slack (if applicable).

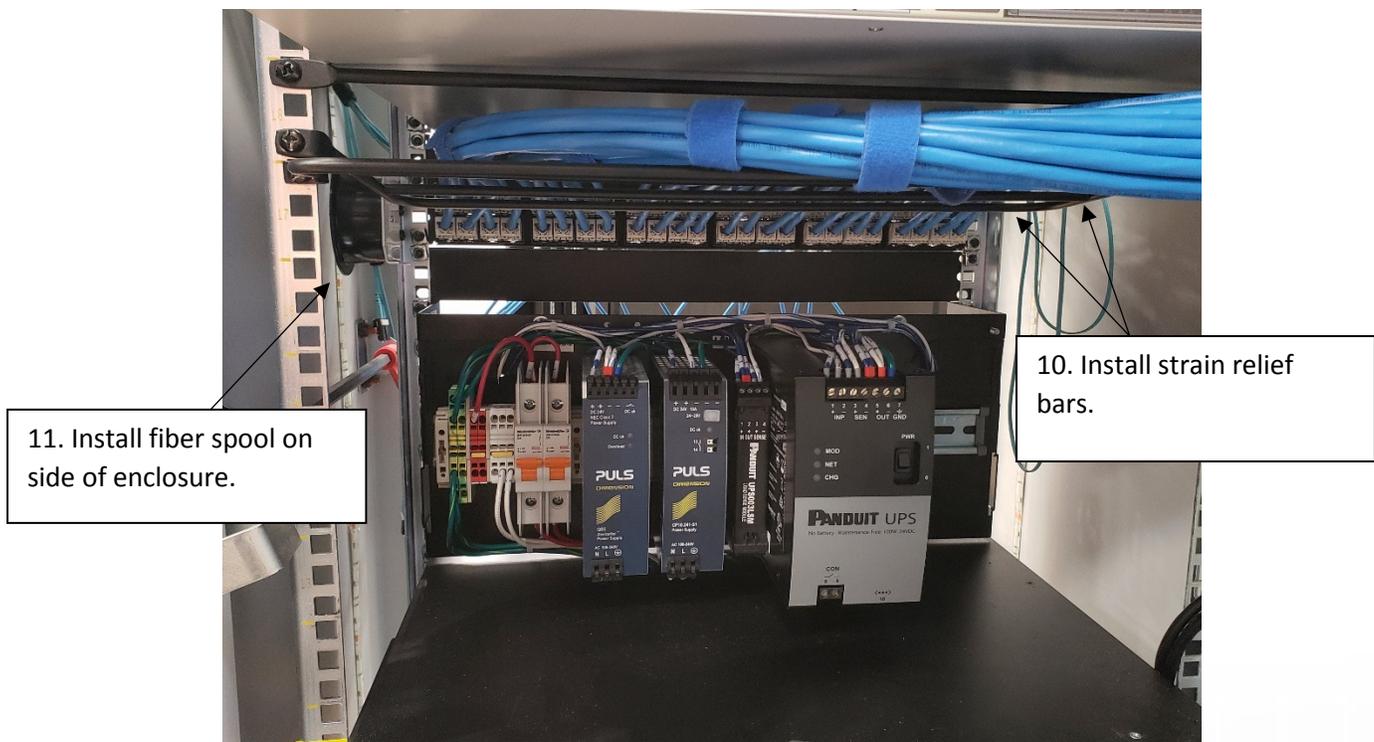


Figure 7 - Installing Cable Strain Relief Bar and Fiber Spool



Thermal Considerations

The Universal Distribution Frame tier can be installed on any EAI 19" rails. Please use the below as a reference for the total thermal load that Panduit Intermediate Distribution Frames can support.

Installing in 12RU Panduit Intermediate Distribution Frame

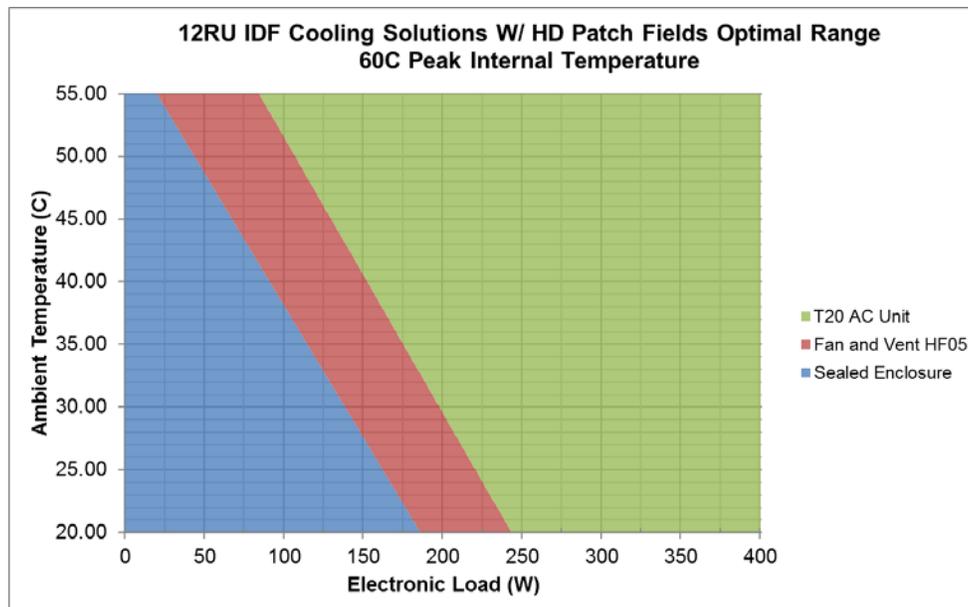


Figure 8 - 12RU UDF enclosure guidelines for three recommended thermal solutions. The examples below demonstrate how to use this graph.

Example 1: An electronic load of 100 watts (sum of heat dissipation of the electronics inside the UDF). A peak ambient temperature of 35 °C (temperature outside the enclosure).

Answer 1: The intersection of the vertical 100 w line and the horizontal 35 °C line is in the blue area. Therefore, the UDF enclosure will adequately dissipate the heat and the peak internal temperature inside the UDF will not exceed 60 °C.

Example 2: An electronic load of 150 watts. A peak ambient temperature of 35 °C (temperature outside the enclosure).

Answer 2: The intersection of the vertical 150 w line and the horizontal 35 °C line is in the red area. Therefore, a fan and vent are required to keep the internal temperature of the UDF enclosure below 60 °C.

Example 3: An electronic load of 200 watts. A peak ambient temperature of 40 °C (temperature outside the enclosure).

Answer 3: The intersection of the vertical 200 w line and the horizontal 40 °C line is in the green area. Therefore, a T20 air conditioner is required to keep the internal temperature of the UDF enclosure below 60 °C.



Installation in 26RU Panduit Intermediate Distribution Frame

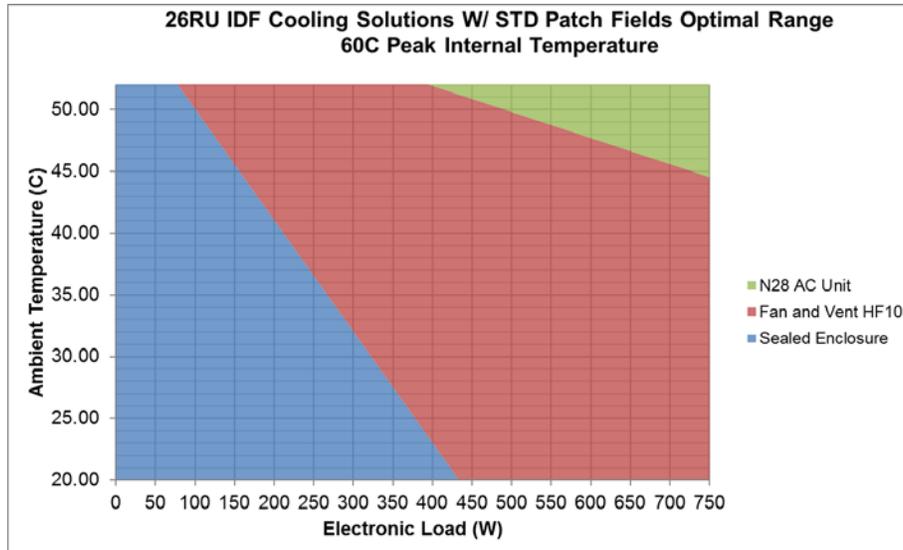


Figure 9 - 26RU UDF enclosure guidelines for three recommended thermal solutions. The examples below demonstrate how to use this graph.

Example 1: An electronic load of 200 watts (sum of heat dissipation of the electronics inside the UDF). A peak ambient temperature of 35 °C (temperature outside the enclosure).

Answer 1: The intersection of the vertical 200 w line and the horizontal 35 °C line is in the blue area. Therefore, the UDF enclosure will adequately dissipate the heat and the peak internal temperature inside the UDF will not exceed 60 °C.

Example 2: An electronic load of 300 watts. A peak ambient temperature of 40 °C (temperature outside the enclosure).

Answer 2: The intersection of the vertical 300 w line and the horizontal 40 °C line is in the red area. Therefore, a fan and vent are required to keep the internal temperature of the UDF enclosure below 60 °C.

Example 3: An electronic load of 550 watts. A peak ambient temperature of 50 °C (temperature outside the enclosure).

Answer 3: The intersection of the vertical 550 w line and the horizontal 50 °C line is in the green area. Therefore, a N28 air conditioner is required to keep the internal temperature of the UDF enclosure below 60 °C.

Note: For more information about how to deploy a Universal Distribution Frame tier, please see the Universal Distribution Frame Thermal Management Application Guide.