Pre-Configured Universal Distribution Frame (UDF) – 12U

specifications

Industrial Ethernet switches shall be deployed and protected with a Universal Distribution Frame (UDF) enclosure which meets UL 508A, UL Type 4/4X/12, and IP66 rated. The UDF shall be thermally and spatially validated for use in environments up to 55°C. There shall be a wall mount option with secure front and rear switch access. The 12U UDF shall accommodate a minimum of two and maximum of four Industrial Ethernet switches for commonly used copper and fiber based deployments. Grounding, cable management, redundant power supplies, terminal blocks, and optional UPS shall be pre-installed in the enclosure. Class 2 power circuits shall be pre-wired, labeled, and tested. A standardized accessory layout and detailed installation guide shall be included.

technical information

Standards:	UL 508A Standard for Industrial Control Panels, cUL Listed per CSA, UL Type 4/12 or 4/4X/12, and IP66 Rated
Dimensions:	Mild steel: 24.09"H x 23.62"W x 31.06"D (612mm x 600mm x 789mm) 316 stainless steel: 24.11"H x 23.62"W x 30.75"D (612.4mm x 600mm x 781mm)
Mounting:	Wall mount
Color and material:	Mild steel enclosure with RAL7035 light-gray polyester powder paint 316 stainless steel enclosure with #4 stainless finish
Thermal analysis:	Validated to 55°C with recommended AC unit

key features and benefits

Universal design	Works with most DIN mount industrial Ethernet switches, providing design flexibility
Switch ready solution	Reduces time required for planning, designing, procurement, and installation resulting in simpler specification and up to 50% faster implementation
Pre-fabricated build	Pre-installed front and rear equipment rails, back panel with cable management, and wall mount option with secure front and rear access
Pre-engineered power infrastructure	Terminal blocks wired, tested, and validated for power distribution
Included redundant power supplies	Minimize the risk of equipment failure for improved network reliability
Optional maintenance free Ultracapacitor 100W UPS	Prevents rebooting of switch during short power outages and includes networked remote management which monitors Hold Time and Lifetime from the plant floor or office, saving time and money
Defined equipment locations and cable routings	Incorporate Panduit® developed best practices in connectivity, cable management, wiring, and grounding to ensure network reliability
Detailed installation guide	Provides easy, repeatable design instructions helping to ensure consistency and saving time on the job-site
Panduit Certification Plus℠ System Warranty*	25 year standards based performance warranty that applies to all registered links and/or channels in an eligible structural cabling system installation

applications

The Panduit Pre-Configured UDF is engineered to deploy and protect Industrial Ethernet switches on the factory floor in an industrial network. Consistent design, equipment placement, cable management, and power features minimize engineering and installation time resulting in faster implementation.

With UL Type 4/4X/12 and IP66 ratings, the enclosures provide reliability and high performance, as an integral component of the end-to-end solution for Industrial Networks and allows easy deployment of cabling subsystem TIA-1005.

*To be eligible for the Certification Plus System Warranty, the system must be registered with Panduit, and must meet all requirements, including without limitation, the requirement that it be installed by a Panduit ONE℠ Enterprise Structured Cabling Partner or an Industrial Automation Infrastructure Partner who has been accredited with the Deploy Competency and meets all Partner ONE Partner requirements. Details of additional requirements may be found at https://www.panduit.com/content/panduit/en/legal-information/Certification-Plus-System-Warranty.html.

Pre-Configured UDF

12RU: ZDF24 See part table on page 2

Din Mount Tiers for Industrial Switch Expansion:

Without UPS:	ZDINS24
With UPS:	ZDINS25
Universal Voltage Isolation Barrier:	UVIB

Panduit Products, Ordered Separately

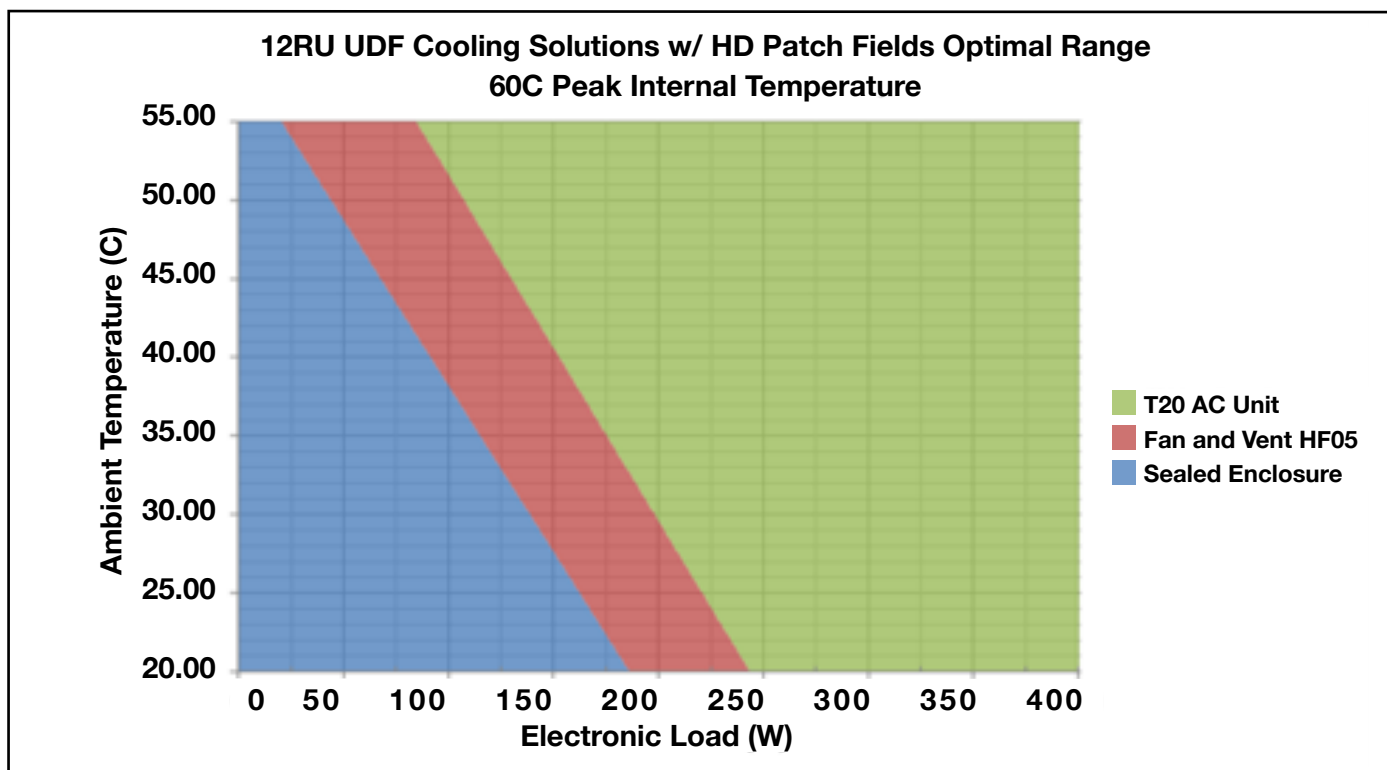|	
Small diameter patch cords:	UTP28SP0.5MBU
Small diameter shielded patch cords:	STP28X0.5MBU
Mini-Com® Modules, Cat 6, RJ45:	CJ688TGBU
Mini-Com® Shielded Modules, Cat 6A, RJ45:	CJS6X88TGBUY
Cat 6 UTP copper cable, riser:	PUR6004BU-UY
LC Opticom® OM3/OM4 FAP:	FAP12WAQDLCZ FAP6WAQDLCZ
Opti-Core® Fiber Optic Patch Cords, LC to LC MM, duplex:	FX2ERLNLNSNM001 FX2ERLNLNSNM002
Opti-Core® OM3 Fiber Optic Distribution Cable, MM, riser:	FODRX24Y
LC OptiCam® OM3/OM4 Duplex Fiber Optic Connectors:	FLCDMCXAQY
StructuredGround™ Bonding Cage Nuts and Screws Green, #12-24:	CNB4K
Cage Nut and Screws #12-24:	CNWS1224-C

Other Equipment, Ordered Separately

nVent T-Series Compact AC Unit:	T200216G100 T200226G100
nVent Fan and Exhaust Grille Kit:	HF0516414 HG0500404

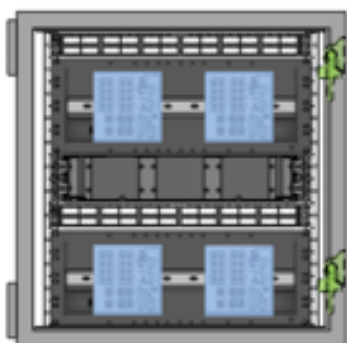# Pre-Configured Universal Distribution Frame (UDF) – 12U

Part Number	Enclosure Type	Switch Ready Deployment	Power Options
ZDF24-S24	4/12 Steel	(2) user defined industrial switches with max power of 42 watts at 24 Vdc	Redundant power supplies
ZDF24-624	4X 316 SS	(2) user defined industrial switches with max power of 42 watts at 24 Vdc	Redundant power supplies
ZDF24-S25	4/12 Steel	(2) user defined industrial switches with max power of 42 watts at 24 Vdc	Redundant power supplies and one maintenance free UPS
ZDF24-625	4X 316 SS	(2) user defined industrial switches with max power of 42 watts at 24 Vdc	Redundant power supplies and one maintenance free UPS
ZDF24-S45	4/12 Steel	(4) user defined industrial switches with max power of 42 watts at 24 Vdc	Redundant power supplies and two maintenance free UPSs

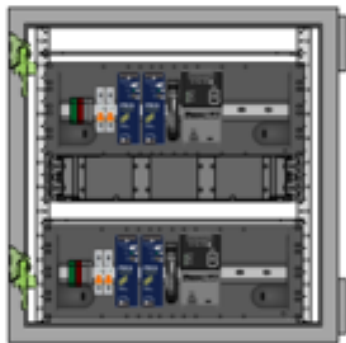## UDF operating range with air conditioner

12RU UDF Cooling Solutions w/ HD Patch Fields Optimal Range
60C Peak Internal Temperature

Ambient Temperature (C) vs Electronic Load (W)

- **T20 AC Unit** (green)
- **Fan and Vent HF05** (red)
- **Sealed Enclosure** (blue)

Pre-Configured Universal Distribution Frame (UDF) – 12U

12U UDF elevation recommendation

Front View

Rear View

RU 12	PANDUIT 48 PORT PATCH PANEL CPP48HDWBLY
RU 8-11	PANDUIT DIN RAIL BRACKET READY FOR TWO SWITCHES
RU 6-7	PANDUIT FIBER ENCLOSURE FRME2U
RU 5	PANDUIT 48 PORT PATCH PANEL CPP48HDWBLY
RU 1-4	PANDUIT IN RAIL BRACKET READY FOR TWO SWITCHES
RU 1	PANDUIT RGRB19CN GROUND BAR

Front View

Rear View

For a copy of Panduit product warranties, log on to www.panduit.com/warranty

For more information

Visit us at www.panduit.com

Contact Customer Service by email: cs@panduit.com
or by phone: 800.777.3300