BELDEN

Belden® Infrastructure Solutions Catalog

Faster.
Easier.
Better.

**Enclosures and Racks
Cable Management
Airflow Management
Enclosure Power Distribution Units
Monitoring (Power, Environment, Access)**

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Belden — the most trusted brand for reliable signal transmission solutions — offers a complete selection of racking, enclosures, power distribution units, monitoring and airflow management products to meet your infrastructure needs for optimizing system performance.

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Belden Infrastructure Solutions

Today's Data Center, Broadcast, AV and Security professionals must ensure that their infrastructure is highly available, scalable and flexible, while at the same time control operating expenses. These conflicting objectives have drawn attention to the performance of physical infrastructure elements, including heating and cooling, rack-level power, bandwidth and physical security management — all of which impact infrastructure availability, and therefore, mission critical applications.

Belden understands the issues you face daily — cooling, power, density and security — and can help you capitalize on these opportunities by implementing the right blend of technologies to maximize the efficiency of your enterprise in a manner that complements your system's performance requirements — today and into the future.

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Application Guide for Belden Enclosures

Rack or Enclosure Style	Page Number	Enterprise Networking	Data Center/ Telco	Broadcast	Audio Video	Security	Cable TV, Head End	Harsh Environment, Networking	General Purpose, Retail, Office, K-12, House of Worship, etc.
XM	13	●	●		●	●	●		■
XS	16	●	●						
XN	22	●	●						
XSS/XSN*	27	●	●						
Passive/Active Containment	31	■	●						
XNM**	35							●	
C Series	37	■	■		●	●			●
XWM	39	●			●	●			●
XDR	43	●	●	●					●
XWR/XWB	46	●							●
XSW	47	●							●
XSF	52			●					
XMF	54			●					
XME	57			●	●	●	●		●
XMER	60			●	●	●	●		●
PDU	69	●	●	●	●	●	●	●	●

● = **Primary Application**

■ = **Secondary Application**

* Seismic certified enclosures.

** Production floor networking equipment hosting.

Engineered to meet your specific needs.

Belden has leveraged its engineering and manufacturing expertise to bring you the most reliable cable, connectivity, enclosure and active systems solutions available — with the largest selection of products and the industry's most trusted technical support and service.

This catalog of Infrastructure Solutions products reflects the same quality and reliability you've come to expect from Belden for the housing and storage of data, broadcast, security and other equipment. Engineered for optimal cable routing, ease of

installation and maximum convenience, Belden racks and enclosures have also been designed to match the unique requirements of various industries and applications.

This table will help you select the Belden rack and enclosure family that best suits your specific application. If you need a custom design for a special application, please call us for assistance. Our Cable Management teams have many years of experience in modifying and customizing enclosure designs to suit many different requirements.

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Product Summary and Selection Guide

Infrastructure Product Family	Rack or Enclosure Style	Page Number	Application	Rack Space	Width	Depth	Height	Equipment Mounting
Free Standing Modular Enclosures	XM	13	X-Series Multi-Media Enclosure	42, 45RU	24", 30"	30", 36", 42", 48"	80.4", 85.6"	19"
	XS	16	X-Series Server Enclosure	42, 45, 48RU	24", 30"	42", 48"	80.2", 85.4", 90.7"	19"
	XN	22	X-Series Networking Enclosure	42, 45, 48RU	30"	42", 48"	78.8", 84", 89.3"	19"
	XSS	27	Seismic Server Enclosure	45RU	24", 30"	48"	84"	19"
	XSN	27	Seismic Switch/Networking Enclosure	45RU	30", 40"	48"	84"	19"
	XNM	35	NEMA 12 Enclosure	45RU	29"	40"	84"	19"
	C Series	37	Multi-Purpose Enclosure	42RU	23.6" or 31.5"	42.9", 50.8"	78.3", 83.5"	19"
	XSF	52	Mobile Broadcast Enclosure	10–48RU	19.2"	18", 24", 30"	20.5" to 87" (14 height options)	19"
	XMF	54	Broadcast Enclosures	11–57RU	22"	24", 30", 36", 40"	22.3" to 103" (26 height options)	19"
	XME	57	Multi-Media Enclosure (fixed sides)	24–44RU	22"	20", 26.5"	48.9" to 83.9" (4 height options)	19"
	XMER	60	Multi-Media Enclosure (removable sides)	24–44RU	22"	26.5", 31.5", 36"	48.9" to 83.9" (4 height options)	19"
Wall Mount Enclosures	XWM	39	Multi-Purpose Wall Mount Enclosures	9, 12, 20RU	21", 23"	22.9", 27.5"	20.1", 25.3", 39.3"	19"
Distribution Racks	XDR	41	Distribution Rack — 2 Post	45RU	20.3"	15"	84"	19"
	XDRS	41	Distribution Rack — 2 Post (steel), Zone 4 Seismic Rated	44RU	24"	15"	84"	19"
	BHRR	41	Distribution Rack — 2 Post (aluminum)	45RU	20.3"	15"	84"	19"
	XDR	41	Server Rack — 4 Post	45RU	20.3"	40", 44", 48"	84"	19"
	XSW	47	Swing Rack	43RU	34.4"	15"	84"	19"
	XWR	46	Wall Mount Rack — Swing Out	19, 26RU	19.8"	18"	36", 48"	19"
	XWR/XWB	46	Wall Mount Rack — Hinged	2, 4, 6RU	19", 19.5"	4", 9.5"	3.5", 7", 11"	19"

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Unique Offerings From Belden

Belden End-to-End Infrastructure Solutions

Whether you're considering Belden racks and enclosures for use in a Data Center, Broadcast Studio, Commercial Enterprise, Industrial Facility or other application, it's important to look at the big picture. Chances are, you're managing a dynamic environment with evolving systems, technologies, logical architectures and new business models. You need to ensure that your infrastructure is highly available, scalable and flexible, while at the same time, control your operating expenses.

Manage Conflicting Objectives

These often conflicting objectives focus attention on the performance of physical infrastructure elements, including heating and cooling, rack-level power, bandwidth and physical security management. The challenge is that these elements typically tend to work against each other. For example, as load is increased with high-density active equipment, the system's power and cooling requirements are increased, and so are energy costs. Because these issues are directly interrelated, complications can arise from each system being manufactured, installed and supported by different vendors. That's why a systems approach for cost-effectively cooling, managing use of power and optimizing use of available space is critical.

Belden Can Help

We optimize cooling, power and density opportunities because we have expertise in all three areas, offering solutions that effectively deal with all three at the rack/enclosure level.

Belden Offers:

- Airflow, power distribution and power- and climate-monitoring devices that effectively help with high-density computing environments

- High-density racks, enclosures, copper and optical fiber cabling system components and cable management solutions that enable maximum bandwidth and availability in an efficient footprint for better air flow and optimal use of real estate

Advantages of Belden End-to-End Infrastructure Solutions

- Greater convenience of entire solution from a single source

- Assurance that all components work together

- The most reliable product performance in the industry

- Dependable service and superior support

- The most trusted name in the industry with a large global sales and distribution network

Delivering **complete infrastructure solutions** to maximize efficiencies.
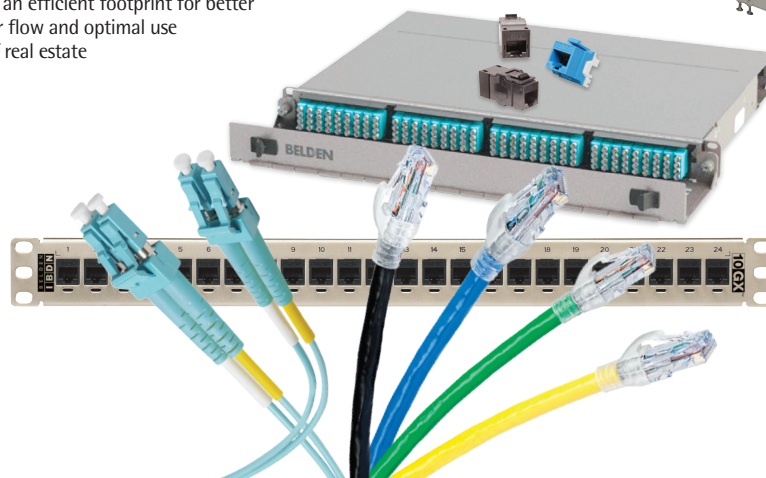
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Unique Offerings From Belden

Data Center Ready Solutions

Data Centers require adequate planning to address equipment hosting, power and thermal management. Once active equipment has been chosen, the next step is to make sure you have the infrastructure to support the availability and performance your active equipment needs to deliver. Belden's dedicated engineering and manufacturing resources will design, build and deliver enclosures that support and optimize the performance of your selected active equipment. The result is a turnkey solution — from design to roll-out — on the Data Center floor. This service takes 100% of the guesswork out of the design process, making it ideal for Data Center designers, consultants, system integrators, facility planners and managers.

Optimized Integration

- Single-source physical infrastructure solutions designed to work together to support the optimal performance of the selected active equipment

- Pre-configured equipment hosting solution with optimal mix of fiber and copper connectivity, cable managers and power distribution units (PDUs), along with airflow management for heat containment

Reduction of Deployment Time and Cost

- Pre-configured, design-validated and labeled enclosures ready to receive servers or switches at the specific data center location (as per the assigned label)

- Use of best-in-class pre-terminated fiber and copper systems, smart PDUs and active heat containment for fast deployment and reduced labor costs

Streamlined Logistics

- Simplified coordination of all equipment hosting-related tasks — all passive components arrive pre-installed

- Designs can be templated, saved, duplicated and modified for future use

Ease of Standardization

- Single part number ordering for fully configured solution enables easy standardization, specification, ordering and simplified supply-chain hurdles

- Control of deployment methodology across single or multiple sites

Greening of Deployment

- Configured components are pre-installed to specific requirements, eliminating the need for individual packaging, thereby reducing waste disposal of cartons, boxes and plastics

- Consolidated shipping allows efficient packaging and a reduction in the CO_2 footprint

Contact Belden Today

Belden engineers are ready to work with you to design your Data Center Ready Solution. Contact us now to start the process of delivering the optimal support environment for your active equipment.

Designing the **optimal support environment** for your active equipment.

World-Class Enclosures

Belden's broad portfolio of enclosures for hosting servers, switch and networking equipment in Enterprise, Data Center and Broadcast applications is based on proven concepts and products. Each enclosure is built to meet specific application and customer needs. The modular approach and pre-configured capabilities of our enclosures enable fast installation of IT equipment with cable and connectivity management, while providing options for bandwidth scalability, secure features and power and air-flow management.

Key Features and Benefits of structural elements, security components, air flow dynamics and cable and power management are depicted in the value triangle below.

An **engineered, modular approach** enables Belden to meet your specific needs — quickly and effectively.

Smart

- IP-Based Enclosure Air Flow Management
- IP-Based Enclosure PDUs
- Secure IP-Based Electronic Locks
- Air Flow Management to Reduce Energy Consumption
- Zero U PDU
- Recyclable Materials
- Zero U Connectivity
- Innovative Packaging and Logistics
- Modular and Reconfigurable

Green

Scalable
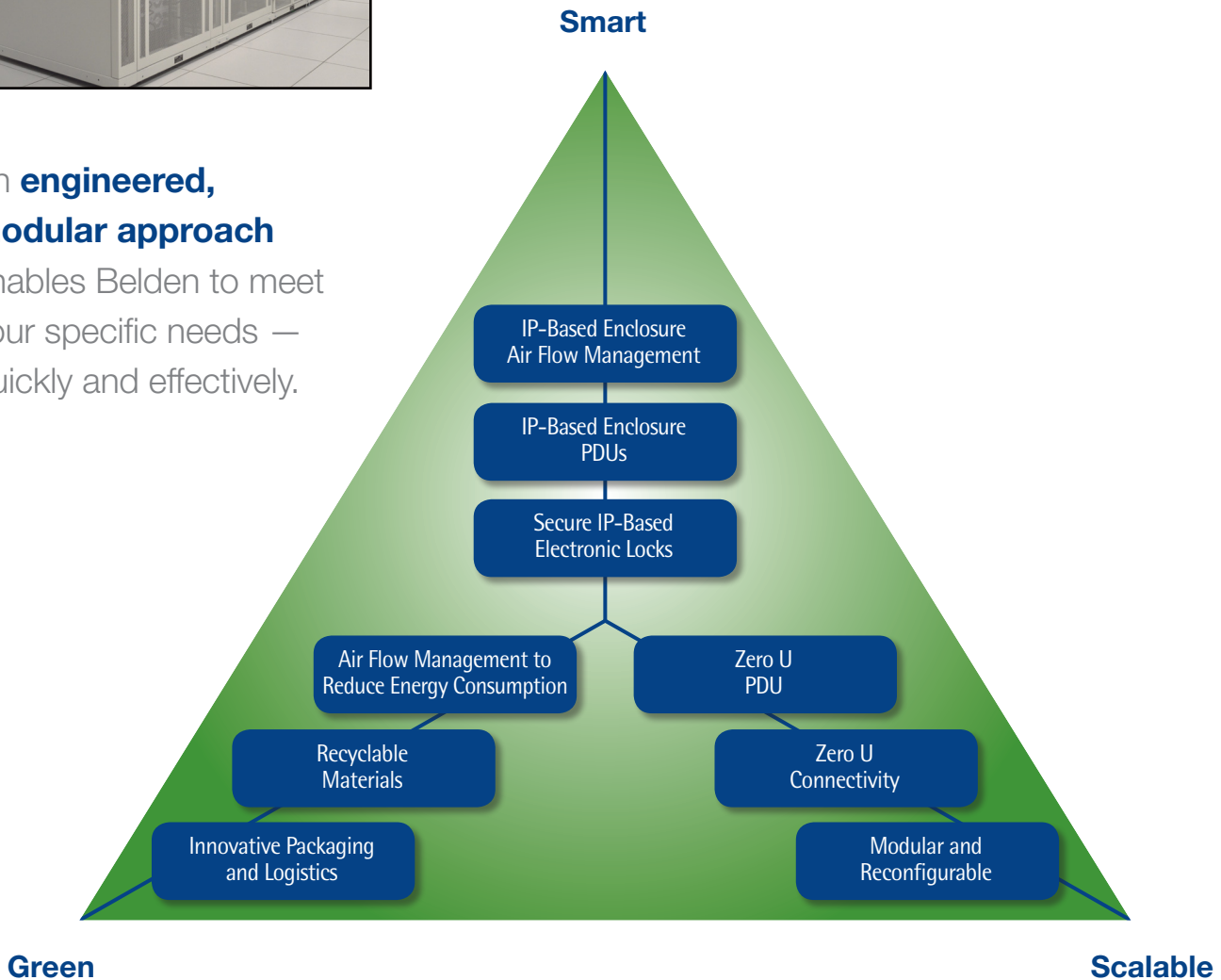
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Features and Benefits of Belden Enclosures

Load Capacity

As Data Centers increase in density and bandwidth with blade servers and high port count switches, the need for higher load capacity enclosures is a growing trend. Most Belden enclosures have welded frame construction to accommodate static loads up to 3,000 lbs

To accommodate flexibility in data centers during the initial installation, the enclosures come with casters rated to dynamic loads up to 2,800 lbs

Modularity

A modular enclosure design accommodates frame widths from 22" to 40", heights from 42RU to 52RU and depths from 30" to 48" — all while ensuring cable management, power components and air flow management work seamlessly across the different sizes. This modular approach enables field-upgradable changes to chimney containment systems, PDUs and cable management.

Scalability

With Zero U mounting options, fiber and copper connectivity in the enclosures is scalable to address multiple-generation connectivity needs for servers and switches. Similarly, a broad portfolio of rack PDU offerings, from basic to 3-phase remote switched products, enables enclosures to support power requirements of multiple-generation active IT gear.

Adaptability

A selection of vertical and horizontal cable managers capable of handling a wide range of cable and connectivity density can be accommodated in the enclosures. The doors are field reversible with lift-off hinges.

In addition, the doors, top and bottom panels are configurable based on heat management needs for hot-aisle/cold-aisle configuration or chimney containment.

Environmental and Seismic

Belden's seismic enclosures are designed to pass Zone 4 Telcordia and/or NEB requirements in seismic zones, thus offering a stable working base for servers and switches. Similarly, the NEMA enclosures can accommodate factory floor or other harsh-environment equipment hosting requirements.

Security and Intelligence

Enclosures can be configured with a key access or smart access system with lock control at the enclosure level or end-of-row POD level.

IP-based air flow management and environmental monitoring-alarming systems and sensors for maximum availability.

Wide selection of smart PDUs with power monitoring and switching options for optimized power management and PUE measurement.

High Capacity Hosting

- Door designed to provide low resistance to air flow passage.
- Use of hexagonal 78% open perforated patterns
- Door design to maximize perforated surface

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Customized Racks and Enclosures to Meet the Unique Needs of Your Installation

Unequaled agility to develop and deliver **compromise-free custom solutions**.

In-House Design, Prototyping and Manufacturing

Belden's in-house engineering and state-of-the-art sheet-metal fabrication, powder-coating and silk-screening capabilities enables racks and enclosures production from raw materials to finished goods. This gives unequaled agility to quickly develop — and deliver — technically sound, cost-competitive and compromise-free custom solutions to meet the challenges of your specific project.

Cellular-Based Manufacturing for Fast, Flexible Service

- Customer communicates project needs, goals and challenges directly to Belden design team

- Customization available for quantities as low as ten enclosures

- Quick-turnaround service — only 4–6 weeks from concept to delivery

Varying Levels of Customization to Meet Your Needs

- Custom paint color matching and silk-screened logos

- Ability to modify standard enclosure frame sizes

- Complete design/build of project-specific enclosures in steel, aluminum or stainless steel

Value Added Services Typically Performed for Customers

- NEMA-style enclosures for industrial networking and outdoor networking applications

- Kitting of racks or enclosures equipped with Belden and/or other manufacturers' components to enable quick and easy logistics and deployment in applications like retail POS

- Integration of power, cable management, connectivity, cooling and climate monitoring systems into enclosures

- Enclosures designed for heat containment with ducting to support high-bandwidth blade servers and switches

- Rack power distribution unit (PDU) customization for specific numbers of receptacles, single- and three-phase power and special overlays to enhance user experience

- Chimney containment customization to accommodate varying ceiling heights with options of passive or active sensors and fan-based units
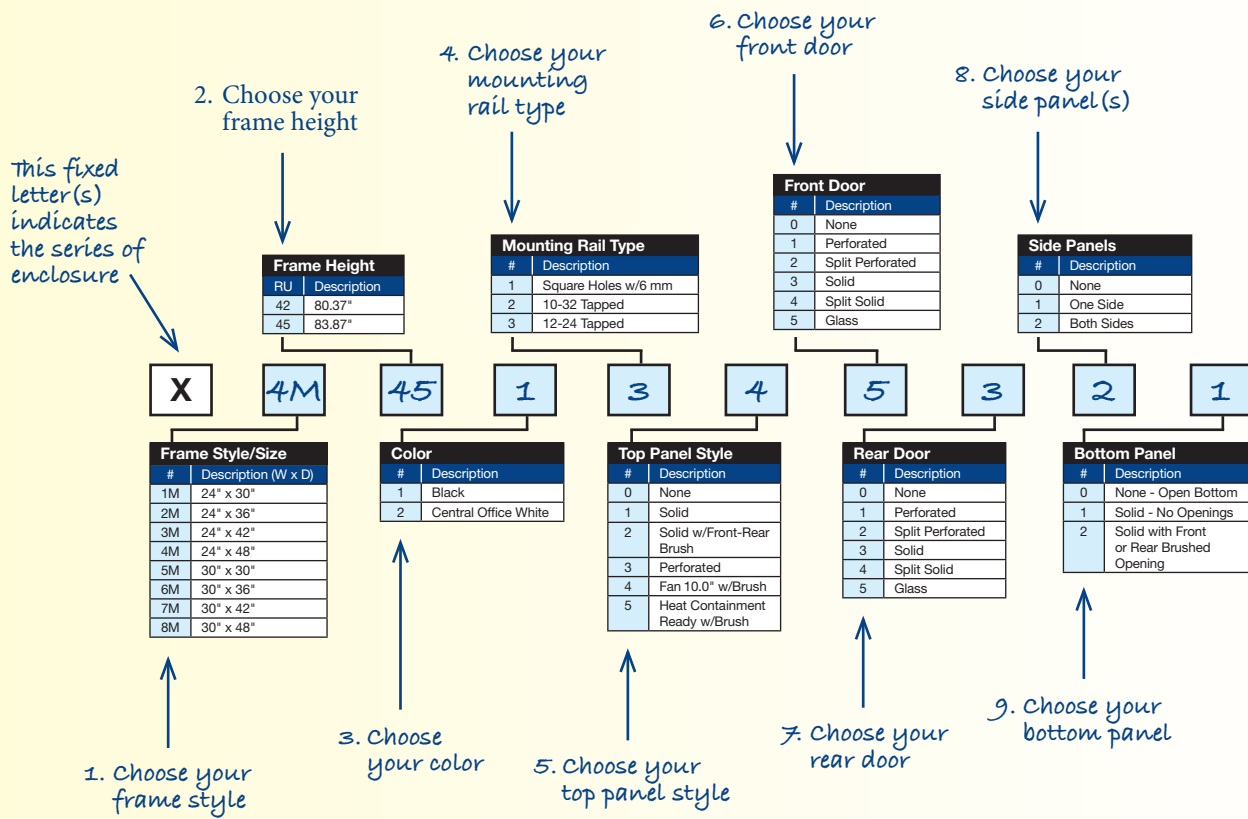
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How to Use the Ordering Matrix

Building a *Smart*Part Number

There are *Smart*Part ordering matrixes throughout this catalog that allow you to build part numbers for enclosures, options and accessories to meet your individual specifications. To build a part number, you simply choose from the options listed in the light blue boxes. The example shown below is for an enclosure.

2. Choose your frame height

4. Choose your mounting rail type

6. Choose your front door

8. Choose your side panel(s)

This fixed letter(s) indicates the series of enclosure

Front Door

#	Description
0	None
1	Perforated
2	Split Perforated
3	Solid
4	Split Solid
5	Glass

Frame Height

RU	Description
42	80.37"
45	83.87"

Mounting Rail Type

#	Description
1	Square Holes w/6 mm
2	10-32 Tapped
3	12-24 Tapped

Side Panels

#	Description
0	None
1	One Side
2	Both Sides

X	4M	45	1	3	4	5	3	2	1

Frame Style/Size

#	Description (W x D)
1M	24" x 30"
2M	24" x 36"
3M	24" x 42"
4M	24" x 48"
5M	30" x 30"
6M	30" x 36"
7M	30" x 42"
8M	30" x 48"

Color

#	Description
1	Black
2	Central Office White

Top Panel Style

#	Description
0	None
1	Solid
2	Solid w/Front-Rear Brush
3	Perforated
4	Fan 10.0" w/Brush
5	Heat Containment Ready w/Brush

Rear Door

#	Description
0	None
1	Perforated
2	Split Perforated
3	Solid
4	Split Solid
5	Glass

Bottom Panel

#	Description
0	None - Open Bottom
1	Solid - No Openings
2	Solid with Front or Rear Brushed Opening

1. Choose your frame style

3. Choose your color

5. Choose your top panel style

7. Choose your rear door

9. Choose your bottom panel

Final part number built to your specifications → **X4M451345321**

By looking at the part number, you can tell that it's an X Series enclosure that's 24"W x 48"D x 83.87"H (45RU). It's black with 12-24 tapped mounting rails. The top panel has a 10" fan with brush for guiding cables into the enclosure. It also has a glass front door, a solid rear door, side panels on each side and a solid bottom panel with no openings.

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Specific Solutions for a Wide Array of Applications

As the premier supplier of cable and connectivity systems, Belden has leveraged its networking skills, engineering expertise and end-user experience to provide a broad portfolio of enclosures and racks that meet security, availability and efficiency challenges.

With the X Series (XM, XS, XN), Belden offers an enclosure solution that seamlessly integrates power distribution, airflow containment and management, networking connectivity and cable management to provide optimized hosting conditions for today's servers and switches. Designed to work seamlessly with Belden's market-leading fiber and copper connectivity solutions, the X Series vertical and horizontal cable management system supports high cabling/connectivity density, while providing ease of moves, adds and changes.

Shipped fully assembled and configured to exact end-user requirements, the X Series modular design includes a myriad of options for doors, side panels, airflow through passive chimneys or active AEHC units and PDU mounting for easy installation and reconfiguration. Single part number ordering permits ease of standardization and logistics.

Belden XS (Server) and XN (Switch) enclosures reduce Data Center operational costs by:

- Offering a modular and scalable system that adapts to changing requirements for hosting multiple generations of IT equipment

- Enabling seamless heat containment integration for reduced energy consumption

- Providing ganging compatibility for flexible arrangement in distributed, end-of-row or in-row switching environments

- Featuring a new simplistic, durable yet light-weight door design with an integrated punched hex pattern that offers an opening of 78% for superior air flow and a patent-pending hinge for maximum security and flexibility with a dual 270-degree swing (legacy doors available upon request).

Seamlessly integrate power distribution, air-flow containment and management, networking connectivity and **cable management into one comprehensive enclosure solution** — optimizing Data Center hosting conditions for servers and switches.

XM Series — Multi-Media Enclosures
### Value-minded but versatile and feature-rich

Applications

With multiple enclosure footprints to better suit your space and application needs, the XM Series is ideal for Security, Broadband, Enterprise Networking and Data Center applications. Its basic yet highly functional construction makes for a technically sound and economical enclosure system.

Design and Structural Features

- Perforated Door Mesh Opening: 78% (legacy 63% door available upon request)
- Patent-pending Secure Door Hinge: Dual 270-degree swing prevents aisle blocking for end-of-row enclosures
- Frame Construction: Welded 16 and 14 gauge
- Mounting Rails Construction: 12 gauge, marked RU, RU 1 is at bottom of enclosure
- Static Load Capacity: 2,500 lbs
- Capacity on Casters: 1,080 lbs with regular capacity casters, 2,000 lbs with high-capacity casters
- EIA 310 Compliant: 19" mounting standard with optional 23" mount for 30" wide enclosures
- Vertical Cable Management Options
  (See pages 20–21 for X Series Enclosure Accessories)
- Horizontal Cable Management Options
  (See page 65 for Accessories)
- Tool-Less PDUs Mounting Options
  (See pages 20, 75)
- Heat Containment Options
  (See pages 31–34)
- Engineered and made in the USA
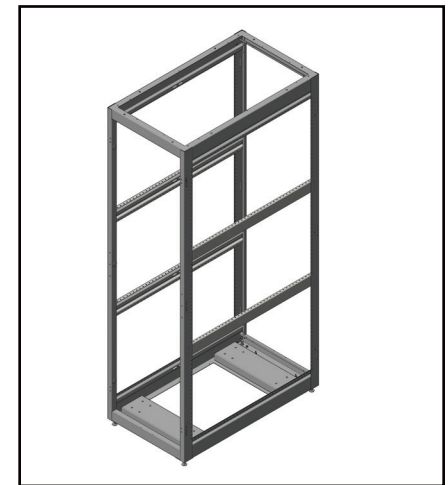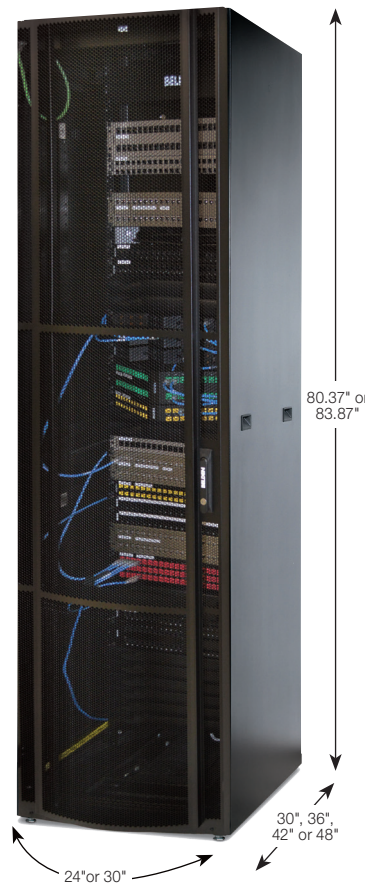
Part No. shown: X2M451300000
(45RU x 24" W x 36" D)

80.37" or 83.87"

30", 36", 42" or 48"

24"or 30"

24" Wide Enclosures

XM Series Type	X1M42	X2M42	X3M42	X4M42	X1M45	X2M45	X3M45	X4M45
Dimensions: W x D x H (of Frame)	24" x 30" x 78.62"	24" x 36" x 78.62"	24" x 42" x 78.62"	24" x 48" x 78.62"	24" x 30" x 83.87"	24" x 36" x 83.87"	24" x 42" x 83.87"	24" x 48" x 83.87"
Available Mounting Rack Units (RU)	42RU				45RU			
Front Frame Opening (W x H)	21.25" x 73.62"				21.25" x 78.87"			
Depth with Two Perf. Doors	35"	41"	47"	53"	35"	41"	47"	53"
Usable Depth (1)	27.75"	33.75"	39.75"	45.75"	27.75"	33.75"	39.75"	45.75"
Single Door Perforated Area	938 sq. in.				1,014 sq. in.			

30" Wide Enclosures

XM Series Type	X5M42	X6M42	X7M42	X8M42	X5M45	X6M45	X7M45	X8M45
Dimensions: W x D x H (of Frame)	30" x 30" x 78.62"	30" x 36" x 78.62"	30" x 42" x 78.62"	30" x 48" x 78.62"	30" x 30" x 83.87"	30" x 36" x 83.87"	30" x 42" x 83.87"	30" x 48" x 83.87"
Available Mounting Rack Units (RU)	42RU				45RU			
Front Frame Opening (W x H)	27.25" x 73.62"				27.25" x 78.87"			
Depth with Two Perf. Doors	32"	38"	44"	50"	32"	38"	44"	50"
Usable Depth (1)	27.75"	33.75"	39.75"	45.75"	27.75"	33.75"	39.75"	45.75"
Single Door Perforated Area	1,330 sq. in.				1,437 sq. in.			

Note:

(1) Distance from front-most mounting rail face to inside of rear frame.

Enclosures and Racks

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Ordering Matrix for XM Series

Part number example:

X7M451315221

30"x42"x45RU black frame with casters and levelers, 12-24 tapped rails, solid top panel, glass front door with lock handle, split perforated rear door with lock handle, two side panels with lock, solid bottom.
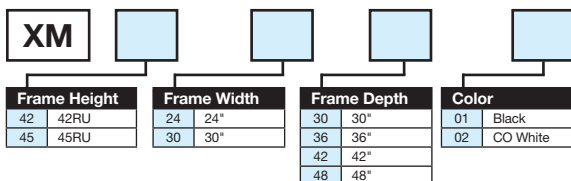
Front Door (8-9)

#	Description
0	None
1	Perforated
2	Split Perforated
3	Solid
4	Split Solid
5	Glass

Frame Height

RU	Description
42	80.37"
45	83.87"

Mounting Rail Type (3-4)

#	Description
1	Square Holes w/6 mm
2	10-32 tapped
3	12-24 tapped

Side Panels (10-11)

#	Description
0	None
1	One Side
2	Both Sides

| X | 7M | 45 | 1 | 3 | 1 | 5 | 2 | 2 | 1 |

Frame Style/Size (1)

#	Description (W x D)
1M	24" x 30"
2M	24" x 36"
3M	24" x 42"
4M	24" x 48"
5M	30" x 30"
6M	30" x 36"
7M	30" x 42"
8M	30" x 48"

Color (2)

#	Description
1	Black
2	Central Office White

Top Panel Style (5)

#	Description
0	None
1	Solid
2	Solid w/Front-Rear Brush
3	Perforated
4	Fan 10.0" w/Brush (6)
5	Heat Containment Ready w/Brush (7)

Rear Door (8-9)

#	Description
0	None
1	Perforated
2	Split Perforated
3	Solid
4	Split Solid
5	Glass
6	Fan Doors (13)

Bottom Panel (12)

#	Description
0	None - Open Bottom
1	Solid - No Openings
2	Solid with Front or Rear Brushed Opening

Style 1   Style 2   Style 3   Style 4   Style 5

Notes:

1) Frame includes casters, levelers, ganging hardware, grounding studs in frame base front/rear.

2) Other colors and silk screening options available for volume orders.

3) Includes 2 pair of 19" mount EIA rails (marked RU, 1 bottom) with mounting hardware (qty = 50). 6 mm hardware standard with square rails.

4) Default front rail position 3.0" from enclosure face and 24" between rails for 30" and 36" deep, 30" between rails for 42" and 48" deep.

5) Custom top panel available for volume orders.

6) Fan top panel included, 10" dia., 550 CFM fan (120V).

7) Heat containment top (42" and 48" deep only) ready to accept passive or active containment chimney.

8) Front and rear doors include latching handle with key lock and bonding strap.

9) Single door swings left to right and is field reversible

10) Side panel includes key lock and bonding strap. Each panel adds 0.63" to enclosure width.

11) Separator panels for use between ganged enclosures (do not add width) are available (refer to component section.)

12) Bottom brush panel can be rotated 180º for choice of front or rear brush entry.

13) For 24"W single door with (4) 7" dia. fans (940 CFM total). For 30"W split doors (8) 7" dia. fans (1880 CFM total).
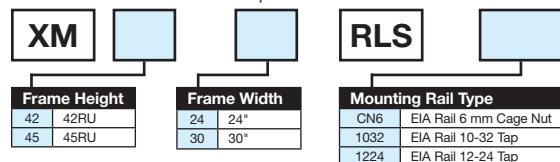
XM Series — Individual Components Ordering Options

Enclosure Frame
No rails, levelers and casters.

XM

Frame Height		**Frame Width**		**Frame Depth**		**Color**	
42	42RU	24	24"	30	30"	01	Black
45	45RU	30	30"	36	36"	02	CO White
				42	42"		
				48	48"		

EIA Mounting Rails
Includes two pair of rails and mounting hardware (50). Default hardware for cage nut style rails is M6. Black only. EIA 23" mount available on custom request for 30" wide enclosure.

XM ... **RLS**

Frame Height		**Frame Width**		**Mounting Rail Type**	
42	42RU	24	24"	CN6	EIA Rail 6 mm Cage Nut
45	45RU	30	30"	1032	EIA Rail 10-32 Tap
				1224	EIA Rail 12-24 Tap

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Enclosures and Racks

XM Series — Options (continued)

Top Panel
Style 5 heat containment ready top panel only applicable to 42" and 48" deep enclosure.

| XM | | | TP | | |

Frame Width		Frame Depth		Top Panel Style		Color	
24	24"	30	30"	1	Solid	01	Black
30	30"	36	36"	2	With Brushed Openings	02	CO White
		42	42"	3	Perforated		
		48	48"	4	With Brush Frame, w/10" dia. 550 CFM fan		
				5	Heat Containment Ready w/Brush		

Side or Separator Panel
Side panel adds 0.63" to width of enclosure.
Separator panel does not add width to enclosure.

| XM | | | S | | |

Frame Height		Frame Depth		Side Panel Type		Color	
42	42RU	30	30"	P	Side Panel Surface Mount with Lock	01	Black
45	45RU	36	36"	SP	Separator Panel Flush Mount	02	CO White
		42	42"				
		48	48"				
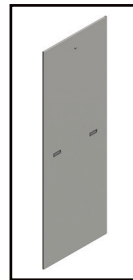
Side Panel
with Lock

Door with Latch Lock Handle
Fan door single piece 940 CFM for 24" wide and split doors;
1880 CFM for 30" wide.

| XM | | | | D | |

Frame Width		Frame Height		Door Style		Color	
24	24"	42	42RU	P	Perforated	01	Black
30	30"	45	45RU	SP	Split Perforated	02	CO White
				S	Solid		
				SS	Split Solid		
				G	Glass		
				F	Fan Door		

Enclosure Bottom Cover
When panel with brush is selected, will ship with brush in enclosure rear.

| XM | | | BC | | |

Frame Width		Frame Depth		Cable Access		Color	
24	24"	30	30"	S	Solid	01	Black
30	30"	36	36"	WB	w/Brush	02	CO White
		42	42"				
		48	48"				

XM Series — Accessories

Front to Rear Cable Manager
Front to rear manager with trough only compatible with 30" wide enclosures.

| XMFRM | | | |

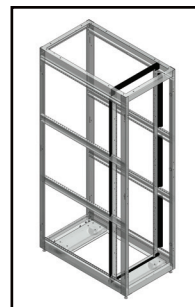| Manager Style		Frame Depth		Color	
01	Manager Bar Only	30	30"	01	Black
02	Manager Bar w/Trough	36	36"	02	CO White
		42	42"		
		48	48"		
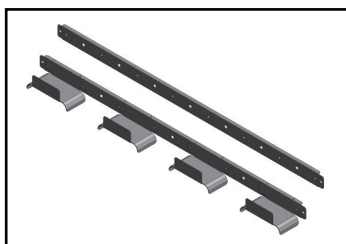
Front to Rear Cable Manager

Front Rail Air Seal Kit
To be used when using passive or active containment chimneys. Rail seal kits are factory installed.

| XMSK | | | |

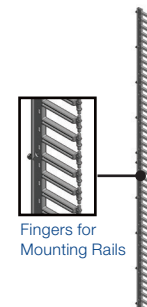| Frame Height		Frame Width		Color	
42	42RU	24	24"	01	Black
45	45RU	30	30"	02	CO White

Front Rail Air Seal Kit
(shown in black)

Cable Manager Fingers
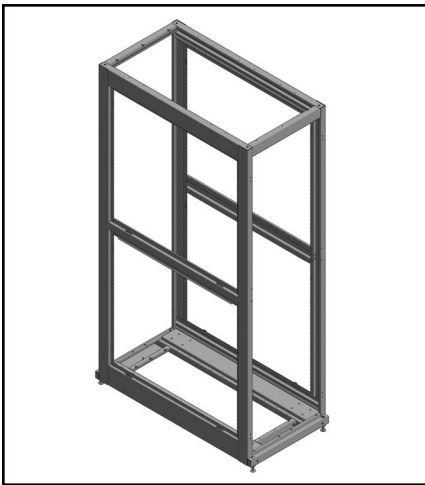Cable management fingers mount to EIA rails front and/or rear.
*One per

| XMFS | |

Size	
01	11RU Section
42	42RU
45	45RU

Fingers for
Mounting Rails

BELDEN

Part No. shown: X3S450000000
(45RU H x 30" W x 48" D)

Part No. shown: X2S451121110 XS Enclosure with optional
Zeru U patch panel (24"W x 48"D x 45RU)

XS Series — Server Enclosures
Supports high load capacities and proper air flow management

80.16"
or 85.41"
or 90.66"

42" or 48"

24" or 30"

Aesthetics
• Designed and manufactured in the USA and fully customizable to meet specific equipment hosting challenges
• Available in Central Office white for improved internal visibility and reduced lighting needs
• 270-degree door swing means doors won't block aisles on end-of-row enclosures (legacy doors available upon request)

Construction
• Welded 14-gauge frame and 11-gauge mounting rails support a static load of 3,000 pounds (2,250 pounds with casters) to host a full rack of blade servers
• Rail seal and adaptive containment eliminate hot spots and provide energy efficiency, monitoring and alarming
• Designed and tested for use with Belden Fiber and Copper Networking solutions

Ease of Installation
• Modular design with options on doors, side panels, air flow management, cable management and PDU monitoring, offering ease of installation plus scalability
• Doors can be easily removed and oriented for left or right swing to suit application needs.
• Highly integrated and shipped fully assembled with power, air flow, connectivity and cable management
• Optimal physical density and networking bandwidth for ease of moves, adds and changes

Cable and Air-Flow Management
• Open frame design with no center rail support strut maximizes usable space, eases cable routing and supports Zero U connectivity in both 24" and 30" wide designs
• Integrated punched hex pattern is 78% open for low-resistance airflow through doors (legacy doors available upon request)
• Front rail seals enable physical separation of supply and return air for optimized hot/cold aisle and containment deployment
• 42" and 48" deep versions easily host deep equipment chassis with rear space for power and cable management
• Available in 42, 45 and 48RU for a variety of hosting requirements

Containment and Power Distribution
• Complete line up of IP-based power distribution units (PDUs) with available monitoring, alarming and receptacle-level switching
• Enables up to 30kW per enclosure with Belden's innovative passive and adaptive (AEHC) chimney-based containment systems

XS Series — Server Enclosures (continued)

XS Series Specifications
- Perforated Door Mesh Opening: 78%
- Patent-pending Hinge Design: Secure, Dual 270-degree Swing
- Frame Construction: Welded 14 gauge
- Mounting Rails Construction: 11 gauge, marked RU, RU 1 is at bottom of enclosure
- Static Load Capacity: 3,000 lbs

- Capacity on Casters: 1,080 lbs with regular capacity casters, 2,250 lbs with high capacity casters
- EIA 310 Compliant: 19" mounting
- Vertical Cable Management Options (See pages 20–21 for X Series Enclosure Accessories)
- Horizontal Cable Management Options (See page 65 for Accessories)

- Zero U — Vertical Patch Panel (See page 21)
- Tool Less PDUs Mounting Options (See pages 20, 75)
- Heat Containment Options (See pages 31–34)
- Engineered and made in the USA

24" Wide Enclosures

XS Series Type	X1S42	X1S45	X1S48	X2S42	X2S45	X2S48
Dimensions: W x D x H (of Frame) – Inch	24" x 42" x 80.16"	24" x 42" x 85.41"	24" x 42" x 90.66"	24" x 48" x 80.16"	24" x 48" x 85.41"	24" x 48" x 90.66"
Available Mounting Rack Units (RU)	42	45	48	42	45	48
Front Frame Opening (W x H) – Inch	21" x 73.65"	21" x 78.90"	21" x 84.15"	21" x 73.65"	21" x 78.90"	21" x 84.15"
Depth with Two Perf Doors – Inch	46.06"			52.06"		
Usable Depth (1) – Inch	38.37"			44.37"		
Single Door Perforated Area	989 sq. in.	1,062 sq. in.	1,134 sq. in.	989 sq. in.	1,062 sq. in.	1,134 sq. in.

30" Wide Enclosures

XS Series Type	X3S42	X3S45	X3S48	X4S42	X4S45	X4S48
Dimensions: W x D x H (of Frame) – Inch	30" x 42" x 80.16"	30" x 42" x 85.41"	30" x 42" x 90.66"	30" x 48" x 80.16"	30" x 48" x 85.41"	30" x 48" x 90.66"
Available Mounting Rack Units (RU)	42	45	48	42	45	48
Front Frame Opening (W x H) – Inch	27" x 73.65"	27" x 78.90"	27" x 84.15"	27" x 73.65"	27" x 78.90"	27" x 84.15"
Depth with Two Perf Doors – Inch	46.06"			52.06"		
Usable Depth (1) – Inch	38.37"			44.37"		
Single Door Perforated Area	1,326 sq. in.	1,423 sq. in.	1,520 sq. in.	1,326 sq. in.	1,423 sq. in.	1,520 sq. in.

Note:

(1) Distance from front-most mounting rail face to inside of rear frame.

XS Series — Configured Enclosures
Belden will configure enclosures to your exact requirements.
The following are commonly requested configured enclosures.
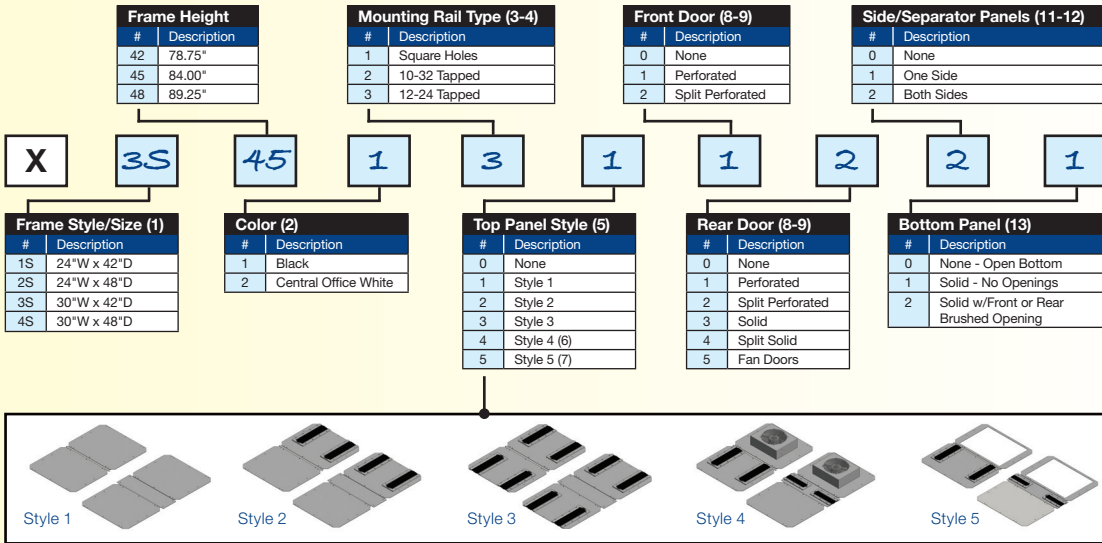Please contact your sales representative to discuss your specific needs.

Item	Part #	Frame Size			Color	Rails	Top Panel	Doors		Side Panel	Bottom Panel	Lacing/PDU Panel	Vertical Mngr.	
		Width	Depth	Height				Front	Rear				Fingers on Rail	Box Style Mngr.
1	X1S45-C1000	24	42	45RU	Black	Square Rails	Brush Front/Rear	Perf.	Perf.	1 Solid	Open	2 x 3" + 2 x 7" Rear	No	No
2	X2S45-C1000	24	48	45RU	Black	Square Rails	Brush Front/Rear	Perf.	Perf.	1 Solid	Open	2 x 7" Rear	Rear Rails	No
3	X3S45-C1000	30	42	45RU	Black	Square Rails	Brush Front/Rear	Perf.	Split Perf.	1 Solid	Open	2 x 3" + 2 x 7" Rear	No	No
4	X4S45-C1000	30	48	45RU	Black	Square Rails	Brush Front/Rear	Perf.	Split Perf.	1 Solid	Open	2 x 7" Rear	No	Rear Rails
5	X2S45-C1001	24	48	45RU	Black	Square Rails	Brush+Chimney Ready	Perf.	Solid	1 Solid	w/brush	2 x 7" Rear	Rear Rails	No
6	X4S45-C1001	30	48	45RU	Black	Square Rails	Brush+Chimney Ready	Perf.	Split Solid	1 Solid	w/brush	2 x 7" Rear	No	Rear Rails
7	X1S45-C2000	24	42	45RU	CO White	Square Rails	Brush Front/Rear	Perf.	Perf.	1 Solid	Open	2 x 3" + 2 x 7" Rear	No	No
8	X2S45-C2000	24	48	45RU	CO White	Square Rails	Brush Front/Rear	Perf.	Perf.	1 Solid	Open	2 x 7" Rear	Rear Rails	No
9	X3S45-C2000	30	42	45RU	CO White	Square Rails	Brush Front/Rear	Perf.	Split Perf.	1 Solid	Open	2 x 3" + 2 x 7" Rear	No	No
10	X4S45-C2000	30	48	45RU	CO White	Square Rails	Brush Front/Rear	Perf.	Split Perf.	1 Solid	Open	2 x 7" Rear	No	Rear Rails
11	X2S45-C2001	24	48	45RU	CO White	Square Rails	Brush+Chimney Ready	Perf.	Solid	1 Solid	w/brush	2 x 7" Rear	Rear Rails	No
12	X4S45-C2001	30	48	45RU	CO White	Square Rails	Brush+Chimney Ready	Perf.	Split Solid	1 Solid	w/brush	2 x 7" Rear	No	Rear Rails

Enclosures and Racks

BELDEN

Ordering Matrix for XS Series

Part number example:

X3S451311221

30"x42"x45RU, black frame with casters and levelers, 12-24 tapped rails, solid top, perforated front door with lock handle, split perforated rear door with locking handle, both side panels with locks, solid bottom.
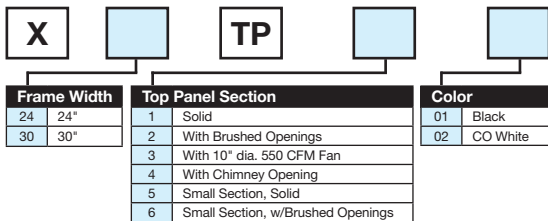
Frame Height

#	Description
42	78.75"
45	84.00"
48	89.25"

Mounting Rail Type (3-4)

#	Description
1	Square Holes
2	10-32 Tapped
3	12-24 Tapped

Front Door (8-9)

#	Description
0	None
1	Perforated
2	Split Perforated

Side/Separator Panels (11-12)

#	Description
0	None
1	One Side
2	Both Sides

X **3S** **45** **1** **3** **1** **1** **2** **2** **1**

Frame Style/Size (1)

#	Description
1S	24"W x 42"D
2S	24"W x 48"D
3S	30"W x 42"D
4S	30"W x 48"D

Color (2)

#	Description
1	Black
2	Central Office White

Top Panel Style (5)

#	Description
0	None
1	Style 1
2	Style 2
3	Style 3
4	Style 4 (6)
5	Style 5 (7)

Rear Door (8-9)

#	Description
0	None
1	Perforated
2	Split Perforated
3	Solid
4	Split Solid
5	Fan Doors

Bottom Panel (13)

#	Description
0	None - Open Bottom
1	Solid - No Openings
2	Solid w/Front or Rear Brushed Opening

Style 1   Style 2   Style 3   Style 4   Style 5

Notes:

1) Frame includes levelers, ganging harware, grounding studs in frame base front and rear.

2) Other colors and silk screening options available for volume orders.

3) Includes 2 pair of 19" mount EIA rails (marked RU, 1 at bottom) with mounting hardware (qty = 50). 6 mm hardware standard with square rails.

4) Default front rail position 3.81" from enclosure face and 30" between front and rear rails.

5) Custom top panel available for volume orders.

6) Fan top panel included, 10" dia., 550 CFM fan (120V).

7) Style 5 top ready to accept passive or active containment chimney.

8) Front and rear doors include latching handle with key lock and bonding strap.

9) Single door swings left to right and is field reversible.

10) For 24"W single door with (4) 7" dia. fans (940 CFM total), For 30"W split doors (8) 7" dia. fans (1880 CFM total).

11) Side/separator panel includes two half-height panels with key lock and bounding strap. Panel does not add width to enclosure.

12) Side/separator panels with brushed or perforated rear available from component selection.

13) Bottom brush panel can be rotated 180º for choice of front or rear brush entry.

XS Series — Individual Components Ordering Options

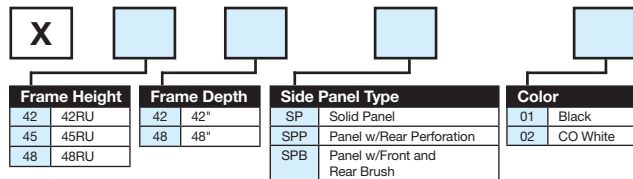### Top Panel Sections

Small section 5 and 6 only applicable to 48" deep enclosure.
No panel required for chimney containment on 24" wide enclosure.

X **TP**

Frame Width		Top Panel Section		Color	
24	24"	1	Solid	01	Black
30	30"	2	With Brushed Openings	02	CO White
		3	With 10" dia. 550 CFM Fan		
		4	With Chimney Opening		
		5	Small Section, Solid		
		6	Small Section, w/Brushed Openings		

Side or Separator Panel

Side or Separator panel mounted (default position) on right side when facing enclosure front. Solid panel as lock, perforated and brushed side panel does not have lock. Panel part # includes bottom and top panels.

X

Frame Height		Frame Depth		Side Panel Type		Color	
42	42RU	42	42"	SP	Solid Panel	01	Black
45	45RU	48	48"	SPP	Panel w/Rear Perforation	02	CO White
48	48RU			SPB	Panel w/Front and Rear Brush		

Faster.
Easier.
Better.

XS Series — Options (continued)

EIA Mounting Rails
Includes two pair of rails and mounting hardware (50).
Default hardware for cage nut style rails is M6.

XS [ ] [ ] **RLS** [ ]

Frame Height		Frame Width		Mounting Rail Type	
42	42RU	24	24"	CN6	EIA Rail 6 mm Cage Nut
45	45RU	30	30"	1032	EIA Rail 10-32 tap
48	48RU			1224	EIA Rail 12-24 tap

Door with Latch Handle
Fan door (F) only applicable to 24" wide. Split fan door (SF) only applicable to 30" wide.

XS [ ] [ ] [ ] **D** [ ]

Frame Width		Frame Height		Door Style		Color	
24	24"	42	42RU	P	Perforated	01	Black
30	30"	45	45RU	SP	Split Perforated	02	CO White
		48	48RU	S	Solid		
				SS	Split Solid		
				F	(4) 7" Fans (940 CFM Total)		
				SF	Split (8) 7" Fans (1880 CFM total)		

Enclosure Frame
Enclosure Frame 24 x 42 x 42U, no mounting rails, no caster, no levelers.

X [ ] [ ] [ ]

Frame Style/Size		Frame Height		Color	
1S	24"W x 42"D	42	42RU	01	Black
2S	24"W x 48"D	45	45RU	02	CO White
3S	30"W x 42"D	48	48RU		
4S	30"W x 48"D				

Enclosure Bottom Cover
When panel with brush is selected, will ship with brush in enclosure rear.

XS [ ] [ ] **BC** [ ]

Frame Width		Frame Depth		Cable Access		Color	
24	24"	42	42"	S	Solid	01	Black
30	30"	48	48"	WB	w/Brush	02	CO White

Bottom Seal Skirt
Front and side skirt allow sealing below enclosures when on levelers.

XS [ ] [ ] **S** [ ]

Skirt Width		Skirt Style		Color	
24	24"	B	Bottom Front	01	Black
30	30"	S	Bottom Side	02	CO White
42	42"				
48	48"				

XS Series — Accessories

Front Rail Air Blocker
Air blocker with brushes, only applicable to 30" wide enclosure.

XS [ ] [ ] **RS** [ ]

Frame Height		Frame Width		Accessories		Color	
42	42RU	24	24"	K	No Brush	01	Black
45	45RU	30	30"	KB	w/Brush	02	CO White
48	48RU						

Front to Rear Cable Manager
Front to rear manager with trough only compatible with 30" wide enclosures.

XFRM [ ] [ ] [ ]

Manager Style		Frame Depth		Color	
01	Front to Rear Manager Bar	42	42"	01	Black
02	Front to Rear Trough Kit	48	48"	02	CO White

Finger Strip Kit
Cable management fingers mount to EIA rails front and/or rear.
*For One Rail

XFS [ ] [ ]

Frame Height		Quantity (for 1 rail)	
42	42RU	1	Single
45	45RU	2	Double
48	48RU		

Single Finger Manager

Double Finger Manager
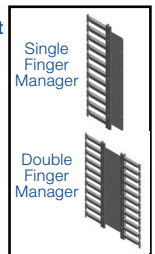
Other Accessories

| Description	Belden Part Number
Seal Kit Accessories	
EIA Rail Seal Brush Kit (3) for 30" Wide Enclosure Air Blocker	XSRSBK01
Finger Strips	
Finger Strip Single (Qty=1) 11RU Section	XFS01
Finger Strip Double (Qty=2) 11RU Section	XFS02
Bracket Kit	
Corner Mounted PDU Brackets, 2 per Kit (2.0" max PDU width)	XSPDUB01

Top Cable Through with Cover

XS [ ] **TT** [ ]

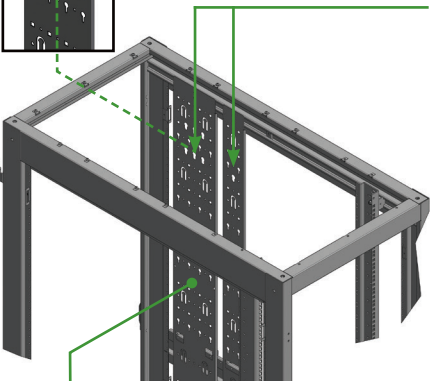| Frame Width		Color	
24	24"	01	Black
30	30"	02	CO White

Top Cable Through with Cover (8.5" W x 4.0" H)

BELDEN
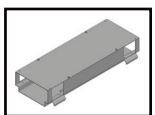
Lacing Panel
(close-up)
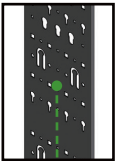
Vertical Lacing/PDU
Mounting Panel
3.5" and 7" wide

Lacing Panel shown in enclosure
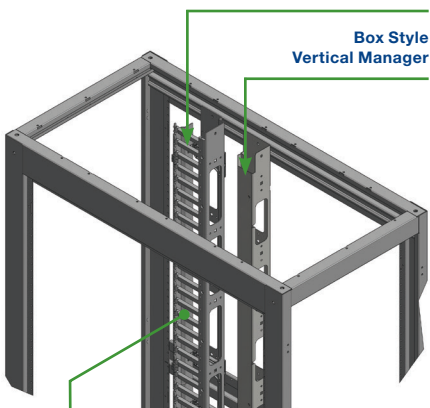
Belden's XM and XS Series Enclosures —
Cable Management and Zero U Patching

Belden's XM and XS Series enclosures and cable management components were specifically designed for integration with the Belden IBDN copper and fiber networking system for a true end-to-end solution.

The combination of Belden's extensive cable and connectivity design knowledge and years of interaction with installers and system designers has enabled us to offer:

Features

- A broad selection of modular vertical and horizontal cable managers in configurations that meet your exact requirement for compromise-free hosting
- Flexibility to meet customer needs requiring low to extremely high networking/hosting density
- Modular cable management compontents and enclosures that protect your investment because they can be reconfigured to meet evolving hosting requirements (typical enclosure system will play host to 3–5 generation active equipment)
- Vertical managers that enable ease of moves, adds and changes, making management of your network fast and precise while still allowing you to maintain an organized, consistent look
- A cable management system designed to maintain proper cable bend radius and minimal tension through the use of support fingers, an attachment point for cable bundles and a slack management spool, ensuring maximum bandwidth from your copper and fiber networks

See page 65 for Horizontal Cable Management options.

Vertical Lacing/PDU Mounting Panel*

- Manager panel 7" and 3.5" wide
- Mounts on rail struts for depth adjustability
- Panels can be mounted side by side to create manager surface
- Tool-less PDU mounting
- Lacing of cable bundles
- Attachment of ring managers
- Attachment of slack management spools
- Attachment of quick mount base

*Lacing-PDU mounting panels (p.21 and 75) are not included with the enclosures or the PDU's and need to be ordered separately. PDU's/panels uses tool less "button" style mounting.

Box and Finger Style Vertical Managers

- Mounts on rail struts for depth adjustability
- Compatible with both 24" and 30" wide enclosures
- Can be used in enclosure front and rear
- Includes doors to hide cables and provide organized look
- Vertical manager can be oriented two different ways to optimize cable routing

Box Style Features:

- 4" wide x 3" deep for 12 sq. in. of cross sectional area
- For low- and medium-density applications
- Oblong opening allows cable routing into the manager
- Low-cost vertical manager option

Finger Style Features:

- 5.5" wide x 3.6" deep for 20 sq. in. of cross sectional area
- For medium- and high-density applications
- Management fingers align with mounting rail RU
- Finger allows for cable support and bend radius control
- Oblong opening allows cable routing into the manager

Finger Style Vertical Manager

Box Style
Vertical Manager

Vertical Manager shown in enclosure

Faster.
Easier.
Better.

XM and XS Series — Accessories

Enclosures and Racks

Vertical Lacing/PDU Mounting Panel

| XVMP | | | |

Panel Width		Frame Height		Color	
01	3.5"	42	42RU	01	Black
02	7"	45	45RU	02	CO White
		48	48RU		

Vertical Manager — Box Style
With door.

| XVM | 01 | | |

Frame Height		Color	
42	42RU	01	Black
45	45RU	02	CO White
48	48RU		

Vertical Manager — Finger Style
With door.

| XVM | 02 | | |

Frame Height		Color	
42	42RU	01	Black
45	45RU	02	CO White
48	48RU		

Description	Belden Part Number
Other Accessories	
Ring Kits	
Cable Management Ring Plastic (Qty = 5) 3" x 1.5" Reversible	XMR01
Cable Management Ring Kit (Qty = 5) 6.5" Wide x 3" Deep	XMR02
Cable Management Ring Kit (Qty = 5) 2.5" Wide x 3" Deep	XMR03
Fiber Slack Management Spools 6" deep (includes 2 spools)	BHSP020
Fiber Slack Management Spools 2" deep for lacing panels (includes 2 spools)	BHSP030
Quick Mount Base (Qty=10) includes Fastener, for 1/4" Holes	XTCM01
Velcro Cable Ties, 25 per Roll, 8"L	AX100783
Velcro Cable Ties, 25 per Roll, 12"L	AX100784
Vertical Ground Bars	
Vertical Ground Bar, Insulated, 42RU	XVGB0142
Vertical Ground Bar, Insulated, 45RU	XVGB0145
Vertical Ground Bar, Insulated, 48RU	XVGB0148

Vertical Managers:
Lacing/PDU Panel   Box Style   Finger Style
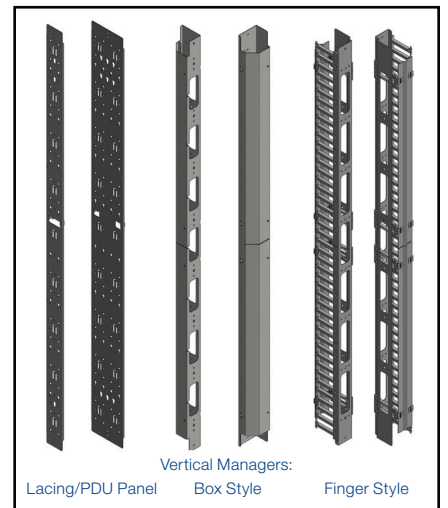
Zero U — Vertical Patch Panel and Connectivity

Features
- Attach to mounting rails
- 24" wide enclosure can accept up to four x 7 positions vertical patch panels
- 30" wide enclosure can accept up to four x 14 positions vertical patch panels
- Vertical patch panels are fully compatible with Belden copper and fiber connectivity (FX UHD, FX Ultra Frames and Cassettes)
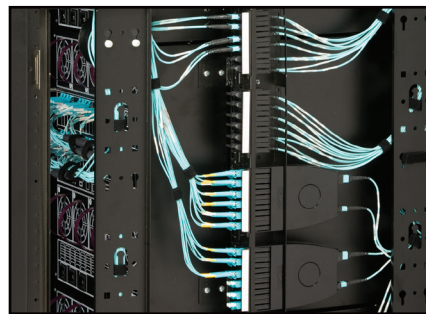
Description	Belden Part Number
Zero U — Vertical Patch Panel and Connectivity	
Vertical Patch Panel (7 positions), Compatible with 24" and 30" Wide XS Enclosures	XZUK01
Vertical Patch Panel (14 positions), Compatible with 30" Wide XS Enclosures	XZUK02
FXUHD KeyConnect Frame Blank	FFZH00BB
FXUHD KeyConnect Frame 6-Port, Black (Empty)	FFZH06KC
FXUHD KeyConnect Frame 8-Port, Black (Empty)	FFZH08KC
10GX KeyConnect Couplers for Vertical Mount Patch Panel, 8-Port, Black	AX105366
CAT6+ KeyConnect Couplers for Vertical Mount Patch Panel, 8-Port, Black	AX105367

Belden Zero U - Vertical patch panel allows for optimal use of mounting space into XS Series enclosures by providing high-density connectivity options along the equipment mounting rails.
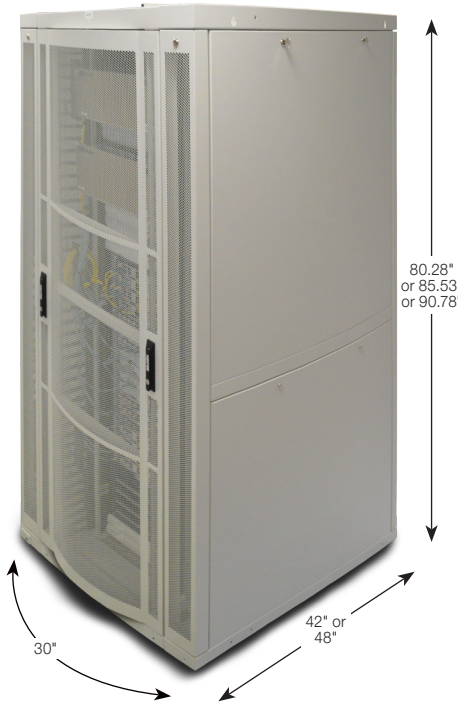
BELDEN

XN Series Frame Only

XN Series — Networking and Switch Enclosures
Designed to handle dense patching fields while ensuring proper air flow

80.28"
or 85.53"
or 90.78"

42" or
48"

30"

XN Series with 6" end-of-row extension

Features
- Modular enclosure designed for networking (cross connect) and switch hosting into Data Centers
- 30" wide enclosure, 42" or 48" deep with 42, 45 and 48 RU height options
- Unique open frame construction allows structural uprights to be positioned inside the frame, resulting in a corner post-free structure, enabling unobstructed access to front and rear vertical managers
- 6" enclosure extension can be mounted on each side of the 30" frame, resulting in a 42" frame for hosting of side-to-side venting switches
- Dual 270-degree swing prevents aisle blocking for end-of-row enclosures and optimizes access to right and left cable manager
- Doors feature 78% opened integrated hexagonal mesh for low air resistance and optimal cooling of the hosted gears (legacy doors available upon request)
- Integrated front and rear finger-style vertical managers
- Modular front-to-rear cable management options
- Vertical (Zero U) patch panel options, for integration of Belden pre-terminated copper and fiber connectivity products
- Front rail air seal and baffle for high level of separation between cold-supply air and hot-return air, ideal for high-density hosting
- Available in black and central office white

Containment Ready
- Fully compatible with passive or active (AEHC) chimney containment, up to 30kW of hosting capacity

Power Ready
- XN enclosures are ready to host high-end power distribution units from Belden's line up of smart PDUs

Switch Ready
- Switch-specific configuration includes air director for side-to-side venting switches (Ex: Cisco Catalyst 6509, Nexus 7018)

30" Wide Enclosures

XN Series Type	X3N42	X3N45	X3N48	X4N42	X4N45	X4N48
Dimensions: W x D x H (of Frame)	30" x 42" x 80.28"	30" x 42" x 85.53"	30" x 42" x 90.78"	30" x 48" x 80.28"	30" x 48" x 85.53"	30" x 48" x 90.78"
Available Mounting Rack Units (RU)	42	45	48	42	45	48
Front Frame Opening (W x H)	19.67" x 73.74"	19.67" x 78.99"	19.67" x 84.24"	19.67" x 73.74"	19.67" x 78.99"	19.67" x 84.24"
Depth with Doors	42"			48"		
Usable Depth (1)	27.42"			33.42"		
Single Door Perforated Area	1,278 sq. in.	1,375 sq. in.	1,472 sq. in.	1,278 sq. in.	1,375 sq. in.	1,472 sq. in.

Note:

(1) Distance from front-most mounting rail face to inside of rear frame.

Faster.
Easier.
Better.

XN Series — Networking and Switch Enclosures (continued)

XN Series Specifications

- Frame Construction: Welded
  14 and 12 gauge
- Static Load Capacity: 3,000 lbs
- Capacity on Casters: 2,250 lbs
  with high-capacity casters
- Engineered and made in the USA

**XN enclosure frames
30"W x 48"D x 45RU**

**6" between enclosure
extension includes front
and rear removable panels**

**6" end-of-row extension
includes front and rear
removable panels and side panel**

**78% open hex patterned door
with patent-pending hinge design
that offers superior security and a
dual 270-degree swing**

**Optional air intake/exhaust
duct for hosting of side-
to-side venting switches**

**PDU mounting provision for
easy integration of Belden
high capacity smart PDUs**

**Corner-free frame allows
for optimal access to
integrated front and
rear vertical managers**
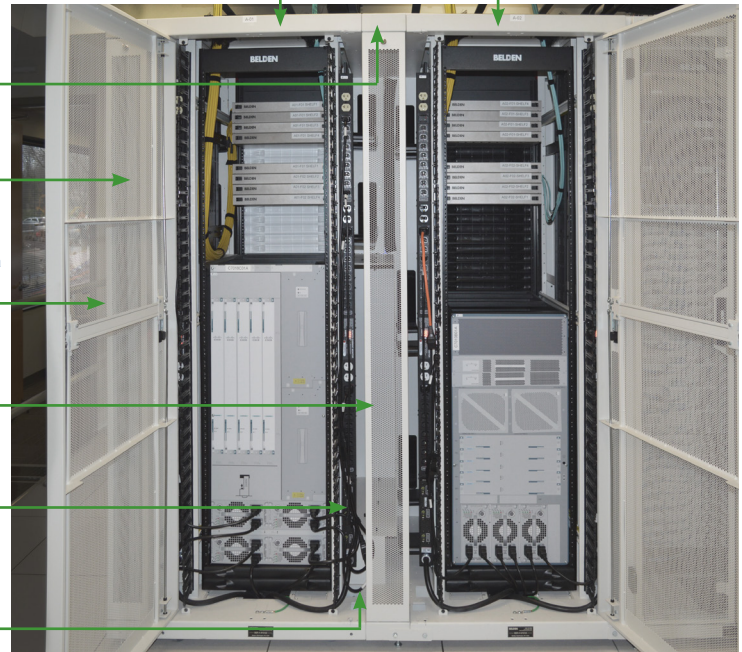
Ganged XN frames with end-of-row 6" extension and between enclosure 6" extension (rear view)

XN Series — Switch-Ready Configured Enclosures

Belden will configure enclosures to your exact requirements.
The following allows seemless hosting of switches from CISCO's Catalyst and Nexus Series.
Please contact your Belden sales representative to discuss your specific needs.

Item	Part #	Frame Size			Color*	Rails	Top Panel	Doors		Lacing/PDU Panel	Air Director Duct	6" Frame Ext.
		Width	Depth	Height				Front	Rear			
1	X4N45-C6509101	30	48	45RU	Black	Square Rails	Brush Front/Rear	Perf.	Split Perf.	2 Rear	(1) 6509	None
2	X4N45-C6509102	30	48	45RU	Black	Square Rails	Brush+Chimney Ready	Perf.	Split Solid	2 Rear	(1) 6509	None
3	X4N45-C6509103	30	48	45RU	Black	Square Rails	Brush Front/Rear	Perf.	Split Perf.	2 Rear	(2) 6509	None
4	X4N45-C6509104	30	48	45RU	Black	Square Rails	Brush+Chimney Ready	Perf.	Split Solid	2 Rear	(2) 6509	None
5	X4N45-C7009101	42	48	45RU	Black	Square Rails	Brush Front/Rear	Perf.	Split Perf.	2 Rear	7009	Left/Right Side
6	X4N45-C7009102	42	48	45RU	Black	Square Rails	Brush+Chimney Ready	Perf.	Split Solid	2 Rear	7009	Left/Right Side
7	X4N45-C7010101	30	48	45RU	Black	Square Rails	Brush Front/Rear	Perf.	Split Perf.	2 Rear	None	None
8	X4N45-C7010102	30	48	45RU	Black	Square Rails	Brush+Chimney Ready	Perf.	Split Solid	2 Rear	None	None
9	X4N45-C7018101	42	48	45RU	Black	Square Rails	Brush Front/Rear	Perf.	Split Perf.	2 Rear	7018	Left/Right Side
10	X4N45-C7018102	42	48	45RU	Black	Square Rails	Brush+Chimney Ready	Perf.	Split Solid	2 Rear	7018	Left/Right Side

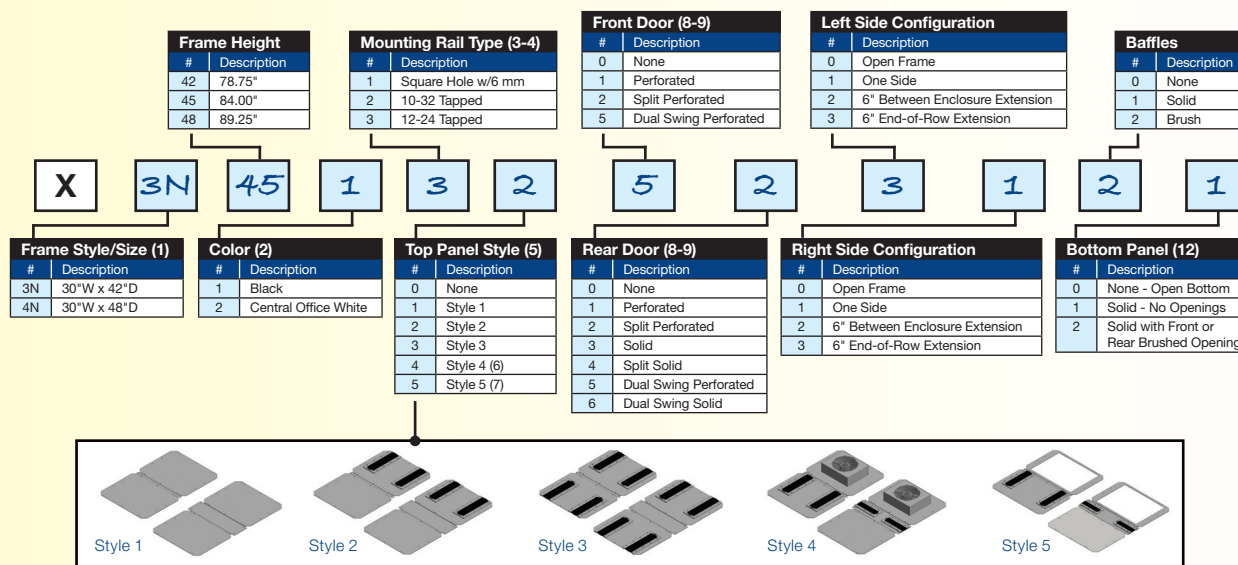* For Central Office White color, replace 1 with 2 (ex: X4N45-C7018201).

Notes:
Switch-specific configuration includes all enclosure components needed to host given switch.
Configuration 3 and 4 allows for hosting of two CISCO Catalyst Series 6509 per enclosure.
Mounting Rails Construction: 11 gauge, marked RU, RU 1 is at bottom of enclosure.
Power Distribution Units (PDUs) are not included in above configurations; refer to PDUs Section of the catalog (pgs. 69–76) for options.
For "chimney-ready" configuration, refer to Containment Section of the catalog (pgs. 31–34) for chimney and accessories options.
Bottom panel with rear brushes is included.
Side panels (left and right) is included.
6" extension frame includes extension front and rear panels.
Solid rear panel for chimney ready enclosures.

BELDEN

Ordering Matrix for XN Series

Part number example: **X3N45132523121**

30"x42"x45RU black frame with casters and levelers, 12-24 tapped rails, top panel with rear brush, perforated front door with dual lock handle, split perforated rear door with lock handle, 6" end-of-row extension left, side panel on right, brushed baffles, solid bottom.
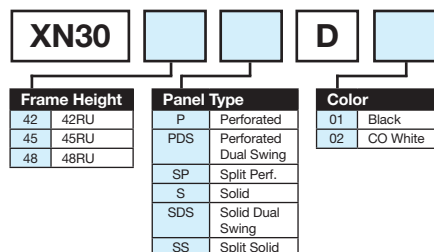
Frame Height

#	Description
42	78.75"
45	84.00"
48	89.25"

Mounting Rail Type (3-4)

#	Description
1	Square Hole w/6 mm
2	10-32 Tapped
3	12-24 Tapped

Front Door (8-9)

#	Description
0	None
1	Perforated
2	Split Perforated
5	Dual Swing Perforated

Left Side Configuration

#	Description
0	Open Frame
1	One Side
2	6" Between Enclosure Extension
3	6" End-of-Row Extension

Baffles

#	Description
0	None
1	Solid
2	Brush

X 3N 45 1 3 2 5 2 3 1 2 1

Frame Style/Size (1)

#	Description
3N	30"W x 42"D
4N	30"W x 48"D

Color (2)

#	Description
1	Black
2	Central Office White

Top Panel Style (5)

#	Description
0	None
1	Style 1
2	Style 2
3	Style 3
4	Style 4 (6)
5	Style 5 (7)

Rear Door (8-9)

#	Description
0	None
1	Perforated
2	Split Perforated
3	Solid
4	Split Solid
5	Dual Swing Perforated
6	Dual Swing Solid

Right Side Configuration

#	Description
0	Open Frame
1	One Side
2	6" Between Enclosure Extension
3	6" End-of-Row Extension

Bottom Panel (12)

#	Description
0	None - Open Bottom
1	Solid - No Openings
2	Solid with Front or Rear Brushed Opening

Style 1   Style 2   Style 3   Style 4   Style 5

Notes:

1) Frame includes casters, levelers, ganging harware, grounding studs in frame base front and rear.

2) Other colors and silk screening options available for volume orders.

3) Includes 2 pair of 19" mount EIA rails (marked RU, 1 at bottom) with mounting hardware (qty = 50). 6 mm hardware standard with square rails.

4) Default front rail position 3.81" from enclosure face and 30" between front and rear rails.

5) Custom top panel available for volume orders.

6) Fan top panel includes 10" dia. 550 CFM fan (120V).

7) Style 5 top panel to accept passive or active containment chimney.

8) Front and rear doors include latching handle with key lock and bonding strap.

9) Single door swings left to right and is field reversible.

10) Side panel includes two half-height panels with key lock and bounding strap. Panel does not add width to enclosure.

11) Side panels with brushes or perforated rear available from component selection.

12) Bottom brush panel can be rotated 180º for choice of front or rear brush entry.

XN Series — Individual Components Ordering Options

Door with Latch Lock Handle
When switching doors out, door adapter comes with door.

XN30   **D**

Frame Height

42	42RU
45	45RU
48	48RU

Panel Type

P	Perforated
PDS	Perforated Dual Swing
SP	Split Perf.
S	Solid
SDS	Solid Dual Swing
SS	Split Solid

Color

| 01 | Black |
| 02 | CO White |

Side Extension Doors
Side Extension Panel with lock. Includes one panel (can be use front or rear).

XN   **SXF**

Frame Height

42	42RU
45	45RU
48	48RU

Door Style

| SD | Solid Door |
| PD | Perforated Door |

Color

| 01 | Black |
| 02 | CO White |
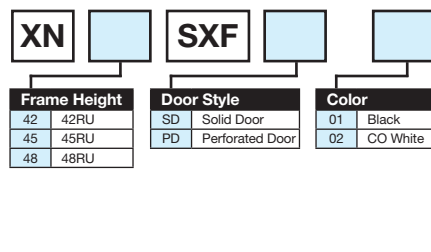
Top Panel Sections
Small section 5 and 6 only applicable to 48" deep enclosures. No panel required for chimney containment on enclosure.

X24TP

Top Panel Section

1	Solid
2	With Brushed Openings
3	With 10" dia. 550 CFM Fan
5	Small Section, Solid
6	Small Section, w/Brushed Openings
7	With Large Brushed Openings

Color

| 01 | Black |
| 02 | CO White |

BELDEN   1.800.BELDEN.1 (800.235.3361)   www.belden.com
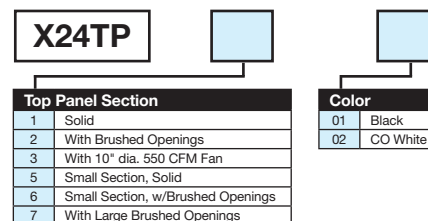
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XN Series — Options (continued)

Enclosure Frame
No rails, levelers, and casters.

X		N		

Frame Depth	
3	42"
4	48"

Frame Height	
42	42RU
45	45RU
48	48RU

Color	
01	Black
02	CO White

EIA Mounting Rails
Includes two pair of rails and mounting hardware (50). Default hardware for cage nut style rails is M6.

XN		30LRS	

Frame Height	
42	42RU
45	45RU
48	48RU

Mounting Rail Type	
CN6	6 mm Cage Nut
1032	10-32 Tap
1224	12-24 Tap

Enclosure Bottom Cover
When panel with brush is selected, will ship brush in enclosure rear.

XN24		BC		

Frame Depth	
42	42"
48	48"

Panel Type	
S	Solid
WB	w/Brush

Color	
01	Black
02	CO White

Side and Extension Panel
Side panel mounted (default position) on right side facing enclosure front.
Panel # includes bottom and top panels, mullion.

XN			SP		

Frame Height	
42	42RU
45	45RU
48	48RU

Frame Depth	
42	42"
48	48"

Side Panel Kit (2)	
S	w/Lock
PP	w/Rear Perforation w/Lock
PB	w/Front and Rear Brush w/Lock

Color	
01	Black
02	CO White
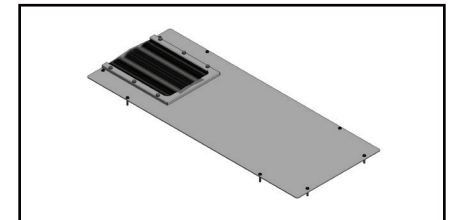
Enclosure Bottom Cover

XN Series — Accessories

Horizontal Managers
Horizontal manager waterfall attaches to horizontal manager bar.

XNFRM			

Frame Depth	
42	42"
48	48"

Style	
1	For Enclosure
F1	Waterfall

Color	
01	Black
02	CO White

Horizontal Trough Managers

XNFRT		1	

Frame Depth	
42	42"
48	48"

Color	
01	Black
02	CO White

Vertical Ground Bars

XVGB01	

Frame Height	
42	42RU
45	45RU
48	48RU

Vertical Lacing Panel
Needs (3) horizontal manager bars for mounting.

XNVLP				

Frame Height	
42	42RU
45	45RU
48	48RU

Frame Depth	
42	42"
48	48"

Panel Width	
1	3.5"
2	7.0"

Color	
01	Black
02	CO White

Side Extension Kits with Side Panel
Allows for 6" extension to enclosure, can be used on both sides. Front and rear panel not included.

XN			SXF4	

Frame Height	
42	42RU
45	45RU
48	48RU

Frame Depth	
42	42"
48	48"

Color	
01	Black
02	CO White

Between Enclosures Extension Kits
6" extension kits for bolting between two enclosures. Front and rear panel not included.

XN		SXF1	

Frame Depth	
42	42"
48	48"

Color	
01	Black
02	CO White
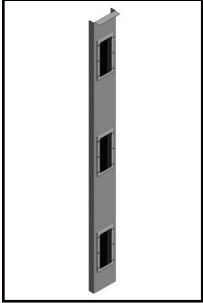
Seal Kit for ganged
enclosures
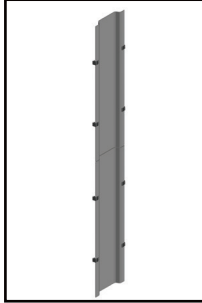
Vertical Door Kit
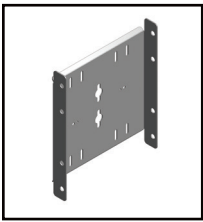
PDU Mounting Bracket
(Single)

XN Series — Accessories (continued)

Seal Kit
Seal kit bolt between the front of two 30"
frames to allow front-to-rear air separation.

XN ☐ ☐ ☐

Frame Height	
42	42RU
45	45RU
48	48RU

Seal Type	
SK	Solid Seal Kit
SKB	Seal Kit w/ Brush (3)

Color	
01	Black
02	CO White

Vertical Door Kit
Mounts between two existing frames
with fingers on the post.

XN ☐ **DK** ☐

Frame Height	
42	42RU
45	45RU
48	48RU

Color	
01	Black
02	CO White

Description	Belden Part Number

Other Accessories

Front Air Baffle	
Air Baffle 45RU X 2.0" Wide, Single, Black	XN4530ADS0101
Air Baffle 45RU X 6.25" Wide, Single, Black	XN4530ADS0301
Air Baffle with Brush (3) 45RU X 6.25" Wide, Single, Black	XN4530ADS0401
Air Baffle 45RU X 2.0" Wide, Single, CO White	XN4530ADS0102
Air Baffle 45RU X 6.25" Wide, Single, CO White	XN4530ADS0302
Air Baffle with Brush (3) 45RU X 6.25" Wide, Single, CO White	XN4530ADS0402
Brush for Front Air Baffle	
Brush Kit 5.5"W x 11.5"H (1 per) for Front Air Baffle, Black Frame	XNSKB01
Brush Kit 5.5"W x 11.5"H (1 per) for Front Air Baffle, CO White Frame	XNSKB02
Finger Managers	
Finger Manager Kit Front Face Mount for 1 Rail, 42RU	XNFS42
Finger Manager Kit Front Face Mount for 1 Rail, 45RU	XNFS45
Finger Manager Kit Front Face Mount for 1 Rail, 48RU	XNFS48
Power Distribution Mounting Brackets	
PDU Mounting Bracket Double, Post Mounting 2 PDU Side-by-Side Facing into Enclosure	XNPM01
PDU Mounting Bracket Single, Rear Facing Pair	XNPM02
PDU Mounting Bracket Rear Facing Pair Between Frames	XNPM03
PDU Mounting Bracket Rear Facing Pair Between Frames with Extension	XNPM04
Slack Spool Management	
Slack Spool Management Plastic 5.0" (Qty = 2) Kit	BHSP020
Slack Spool Management Metal 2.5" (Qty = 2) Kit	BHSP030
Cable Management Accessories	
Cable Management Ring Plastic (Qty = 5) 3" x 1.5" Reversible (22991)	XMR01
Cable Management Ring Kit (Qty = 5) 6.5" Wide x 3" Deep	XMR02
Cable Management Ring Kit (Qty = 5) 2.5" Wide x 3" Deep	XMR03
Quick Mount Base (Qty=10) with Fastener, for 1/4" Holes	XCTM
Enclosure Accessories	
Casters Kit (4), Regular Capacity 1,080 lbs	XCK01
Casters Kit (4), High Capacity 2,250 lbs	XCK02
Levelers Kit (4)	XLK01
Bolt-Together Kit for X Series Enclosure	XBK01

Faster.
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XSS Series — Server Enclosure, XSN Series — Networking Switch Enclosure
Certified to Seismic Zone 4 for mission-critical Data Centers

Applications

Belden's seismic enclosures feature a robust steel frame for hosting servers, switches and network components in earthquake zones. Certified to Seismic Zone 4 requirements, these enclosures have passed vibration and shock testing per GR-063-CORE Network Equipment Building System (NEBS) Requirements with no structural damage in a certified lab.

Design and Structural Features

- Welded steel frame construction reinforced with a heavy gauge steel sub-frame for extra rigidity
- Highly perforated doors with stiffener channels ensure sturdiness while reducing risk of equipment damage during seismic events
- Adjustable EIA mounting rails support a 2,000 lb static load under normal operating conditions
- Finger-style vertical managers with brushed cable pass throughs enable front-to-rear routing while maintaining supply-return air sealing properties
- Compatible with passive and active chimney-based containment solutions
- Pre-configured switch enclosures with cable management, air baffles, intake and exhaust duct (for side-to-side venting) and power distribution units (PDUs) to host CISCO Catalyst 6000 and Nexus 7000 Series switches
- Offered in standard colors of black and Central Office white
- Integral anchoring floor mount locations*

*Belden recommends the use of a qualified contractor for the installation of seismic enclosures as per the local, state and federal building code requirements.

83.75"

24", 30" or 40"

48"

XSS and XSN Series Specifications

- Perforated door mesh opening: 78%
- Frame construction: 16-, 12- and 11-gauge welded steel
- Mounting rail construction: 12-gauge, marked RU, RU 1 is at bottom of enclosure
- Static load capacity: 2,000 lbs
- Static load capacity (seismic): 1,000 lbs

- Capacity on casters: 1,080 lbs (regular capacity), 2,000 lbs (high-capacity)
- Seismic certification: Zone 4 NEBS GR-063-CORE
- EIA 310 compliant: 19" mount equipment
- Horizontal Cable Management Options (See page 65 for Accessories)
- Heat Containment Options (See pages 31–34)

XSS and XSN Series Seismic Server Specifications

XSS and XSN Seismic Series Type	X1SS44	X2SS44	X1SN44	X2SN44
Dimensions: W x D x H (of frame)	24" x 48" x 83.75"	30" x 48" x 83.75"	30" x 48" x 83.75"	40" x 48" x 83.75"
Available Mounting Rack Units (RU)	44		44	
Front Frame Opening (W x H)	20.00" x 77.50"	25.50" x 77.50"	25.50" x 77.25"	35.50" x 77.25"
Depth with Doors	50"		50"	
Usable Depth (1)	46"		46"	
Single Door Perforated Area	1,200 sq. in.	1,548 sq. in.	1,548 sq. in.	2,129 sq. in.

Notes:

(1) Distance from front-most mounting rail face to inside of rear frame.

Engineered and made in the USA.

Seismic Configured Enclosures

Configured Enclosures

Belden offers fully configured enclosures as a single part number to meet specific application needs.

The following are a sample of common configurations for Belden XSS and XSN Series.

Contact your local Belden sales representative to discuss your specific needs.

Part No. shown: X2SN-C70182001
(44RU H x 40" W x 48" D)

XSS and XSN Series — Configured Enclosures

Item	Part #	Frame Size			Color*	Rails	Top Panel	Doors		Lacing/PDU Panel	Vertical Manager	
		Width	Depth	Height				Front	Rear		Fingers on Rail	Box Style Mgr.
1	X1SS-C1001	24	48	44RU	Black	Square Rails	Brush Front/Rear	Perf.	Perf.	2 x 7" Rear	Rear Rails	No
2	X1SS-C1002	24	48	44RU	Black	Square Rails	Brush+Chimney Ready	Perf.	Solid	2 x 7" Rear	Rear Rails	No
3	X2SS-C1001	30	48	44RU	Black	Square Rails	Brush Front/Rear	Perf.	Split Perf.	2 x 7" Rear	Rear Rails	No
4	X2SS-C1002	30	48	44RU	Black	Square Rails	Brush+Chimney Ready	Perf.	Split Solid	2 x 7" Rear	Rear Rails	No

Item	Part #	Frame Size			Color*	Rails	Top Panel	Doors		Lacing/PDU Panel	Lacing/PDU Panel with (6) Rings	Horizontal Managers	Air Director Duct Kit	Vertical Manager (Fingers on Rail)
		Width	Depth	Height				Front	Rear					
1	X1SN-C1001	30	48	44RU	Black	Square Rails	Brush Front/Rear	Perf.	Split Perf.	(2) 10" Center	(2) Rear	(4) per Side	None	Front & Rear Rails
2	X1SN-C1002	30	48	44RU	Black	Square Rails	Brush+Chimney Ready	Perf.	Split Solid	(2) 10" Center	(2) Rear	(4) per Side	None	Front & Rear Rails
3	X1SN-C70101001	30	48	44RU	Black	Square Rails	Brush Front/Rear	Perf.	Split Perf.	(2) 10" Center	(2) Rear	(4) per Side	None	Front Rails
4	X1SN-C70101002	30	48	44RU	Black	Square Rails	Brush+Chimney Ready	Perf.	Split Solid	(2) 10" Center	(2) Rear	(4) per Side	None	Front Rails
5	X2SN-C65091001	40	48	44RU	Black	Square Rails	Brush Front/Rear	Perf.	Split Perf.	(2) 10" Center	(2) Rear	(4) per Side	(1) 6509	Front Rails
6	X2SN-C65091002	40	48	44RU	Black	Square Rails	Brush+Chimney Ready	Perf.	Split Solid	(2) 10" Center	(2) Rear	(4) per Side	(1) 6509	Front Rails
7	X2SN-C65091004	40	48	44RU	Black	Square Rails	Brush Front/Rear	Perf.	Split Perf.	(2) 10" Center	(2) Rear	(4) per Side	(2) 6509	Front Rails
8	X2SN-C65091005	40	48	44RU	Black	Square Rails	Brush+Chimney Ready	Perf.	Split Solid	(2) 10" Center	(2) Rear	(4) per Side	(2) 6509	Front Rails
9	X2SN-C70181001	40	48	44RU	Black	Square Rails	Brush Front/Rear	Perf.	Split Perf.	(2) 10" Center	(2) Rear	(4) per Side	7018	Front Rails
10	X2SN-C70181002	40	48	44RU	Black	Square Rails	Brush+Chimney Ready	Perf.	Split Solid	(2) 10" Center	(2) Rear	(4) per Side	7018	Front Rails

* For Central Office White color, replace 1 with 2 (ex: X1SS-C2001, X1SN-C70102001).

Notes:

All configured enclosures include one Side Panel and one Bottom Panel with Brush.

Switch-specific configuration includes all enclosure components needed to host given switch.

Power Distribution Units (PDUs) are not included in above configurations, refer to PDUs Section of the catalog (pgs. 69–76) for options.

Configured seismic enclosures include front rail air seal kit.

For "chimney-ready" configuration, refer to Containment Section of the catalog (pgs. 31–34) for chimney and accessories options.

Faster.
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Ordering Matrix for Seismic Server Enclosures (XSS)

Part number example:

X2SS441211222

XSS Enclosure, 30"Wx48"D frame, 44RU, Black, 10-32 tapped rails, solid top panel, perforated front door, split perforated rear door, 2 side panels, bottom panel with brush opening.
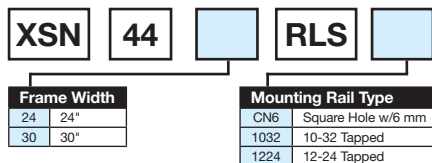
Frame Height

RU	Description
44	84.00"

Mounting Rail Type (6-8)

#	Description
1	Square Hole w/6 mm
2	10-32 Tapped
3	12-24 Tapped

Front Door (9)

#	Description
0	None
1	Perforated

Side Panels

#	Description
0	None
1	One Side
2	Both Sides

Part number blocks: **X** **2SS** **44** **1** **2** **1** **1** **2** **2** **2**

Frame Style/Size (1-3)

#	Description
1SS	24"W x 48"D
2SS	30"W x 48"D

Color

#	Description
1	Black
2	Central Office White

Top Panel Style (4)

#	Description
0	None
1	Solid
2	Solid, w/Front Rear Brush (5)
3	Heat Containment Ready w/Brush (5)

Rear Door (9-10)

#	Description
0	None
1	Perforated
2	Split Perforated (10)
3	Solid
4	Split Solid (10)

Bottom Panel

#	Description
1	Solid Panel
2	Brush Panel

Notes:

1) Enclosure dimension (measured without doors).

2) Enclosure construction: Welded steel, ganging harware, grounding studs in frame base front and rear.

3) Enclosure static load capacity is 2,000 lbs, Enclosure seismic load capacity is 1,000 lbs; BELLCORE GR-63-CORE, Section 5.4.1 Certification.

4) Custom top panel available on request for volume orders.

5) 30" wide frame is provided with six top brush openings for networking and power cable entry.

6) 11 AWG mounting rails provide standard 19" rack spacing to EIA-310-D requirements.

7) Equipment mounting hardware (50) included with rails (4).

8) Each EIA Rail has numerial marking for each rack unit (starting at unit 1 at bottom).

9) Doors are surface mounted, reversible and provisioned with "swing handle" hardware, allowing changing of locksets.

10) Split doors only available on 30" wide frame, with three-point latching "swing handle" hardware to facilitate change of lock set.

XSS Series — Options and Accessories

EIA Mounting Rails

Includes two pair of rails and mounting hardware (50). Default hardware for square hole style rails is M6.

Part number blocks: **XSS** **44** **RLS**

Frame Width

24	24"
30	30"

Mounting Rail Type

CN6	Square Hole w/6 mm
1032	10-32 Tapped
1224	12-24 Tapped

Side or Separator Panel

Includes one side panel. Seismic panel provisioned to be bolted to enclosure.

Part number blocks: **XSS** **44** **48** **SP1**

Color

01	Black
02	CO White
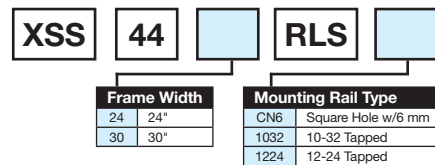
Description	Belden Part Number
Front Rail Air Seal Kit (with side air blockers)	
Front Rail Air Seal Kit, 44RU, 24" Wide, Black	XSS4424RSK01
Front Rail Air Seal Kit, with Brush Openings, 44RU, 30" Wide, Black	XSS4430RSK01
Front Rail Air Seal Kit, 44RU, 24" Wide, CO White	XSS4424RSK02
Front Rail Air Seal Kit, with Brush Openings, 44RU, 30" Wide, CO White	XSS4430RSK02
Cable Manager Lacing Panels	
Vertical Manager Panel 3.5" Wide, Black	XSSVMP014401
Vertical Manager Panel 7.0" Wide, Black	XSSVMP024401
Vertical Manager Panel 3.5" Wide, CO White	XSSVMP014402
Vertical Manager Panel 7.0" Wide, CO White	XSSVMP024402
Cable Manager Fingers for Mounting Rails	
Finger Strip Kit for 1 Rail, 44RU (mounts to EIA rail)	XSSFS4401
Finger Strip (Qty=1) 11RU Section	XMFS01

BELDEN

Ordering Matrix for Seismic Networking-Switch Enclosures (XSN)

Part number example:

X1SN441311222

XSN Enclosure, 40"Wx48"D frame, 44RU, black, 12-24 tapped rails, solid top panel, perforated front door, split perforated rear door, 2 side panels, bottom panel with brush opening.

Mounting Rail Type (6-8)

#	Description
1	Square Hole w/6 mm
2	10-32 Tapped
3	12-24 Tapped

Front Door (9-10)

#	Description
0	None
1	Perforated
2	Split Perforated

Side Panels

#	Description
0	None
1	One Side
2	Both Sides

Frame Height

RU	Description
44	84.00"

X	1SN	44	1	3	1	1	2	2	2

Frame Style/Size (1-3, 5)

#	Description
1SN	30"W x 48"D
2SN	40"W x 48"D

Color

#	Description
1	Black
2	Central Office White

Top Panel Style (4)

#	Description
0	None
1	Solid
2	Solid, w/Front Rear Brush
3	Heat Containment Ready w/Brush

Rear Door (9-10)

#	Description
0	None
1	Perforated
2	Split Perforated
3	Solid
4	Split Solid

Bottom Panel

#	Description
1	Solid Panel
2	Brush Panel
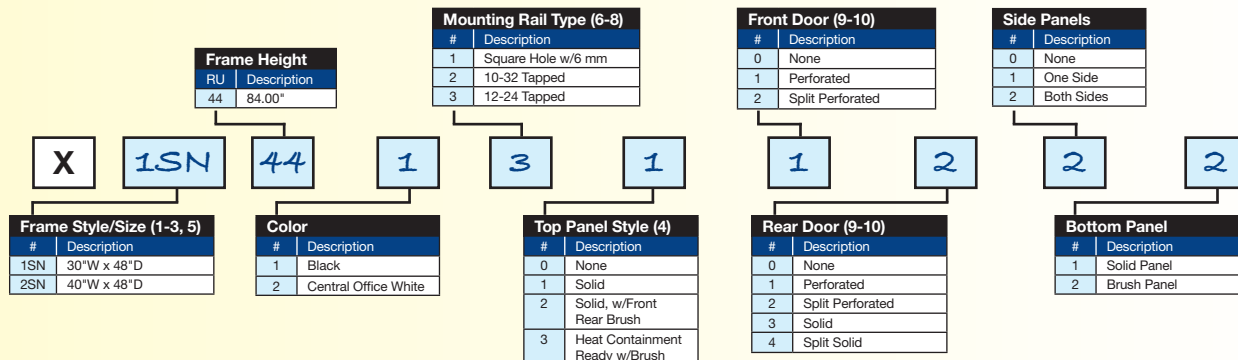
Notes:

1) Enclosure dimension (measured without doors).

2) Enclosure construction: Welded steel, ganging harware, grounding studs in frame base front and rear.

3) Enclosure static load capacity is 2,000 lbs, enclosure seismic load capacity is 1,000 lbs; BELLCORE GR-63-CORE, Section 5.4.1 Certification.

4) Custom top panel available on request for volume orders.

5) Enclosure frame is provided with six top brush openings for networking and power cable entry.

6) 11 AWG mounting rails provide standard 19" rack spacing to EIA-310-D requirements.

7) Equipment mounting hardware (50) included with rails (4).

8) Each EIA Rail has numerial marking for each rack unit (starting at unit 1 at bottom).

9) Doors are surface mounted, reversible and provisioned with "swing handle" hardware, allowing changing of locksets.

10) Split doors only available on 30" wide frame, with three-point latching "swing handle" hardware to facilitate change of lock set.

XSN Series — Options and Accessories

EIA Mounting Rails
Includes two pair of rails and mounting hardware (50). Default hardware for square hole style rails is M6.

XSN	44		RLS	

Frame Width

24	24"
30	30"

Mounting Rail Type

CN6	Square Hole w/6 mm
1032	10-32 Tapped
1224	12-24 Tapped

Side or Separator Panel
Includes one side panel. Seismic panel provisioned to be bolted to enclosure.

XSN	44	48	SP1	

Color

01	Black
02	CO White
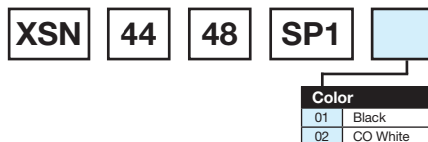
Description	Belden Part Number
Cable Lacing Panels	
Vertical Manager/Lacing Panel, 10" Wide, Black	XSNVMP440301
Vertical Manager/Lacing Panel, 10" Wide, CO White	XSNVMP440302
Cable PDU/Manager Rear Panel	
Cable PDU Manager Rear Panel, 44RU, Rear, Black	XSN44VRPM101
Cable PDU Manager Rear Panel, 44RU, Rear, with 6 Rings, Black	XSN44VRPM201
Cable PDU Manager Rear Panel, 44RU, Rear, CO White	XSN44VRPM102
Cable PDU Manager Rear Panel, 44RU, Rear, with 6 Rings, CO White	XSN44VRPM202
Top Cable Trough with Cover	
Top Cable Trough with Cover, 30" Wide, Black	XSNTCT3001
Top Cable Trough with Cover, 40" Wide, Black	XSNTCT4001
Top Cable Trough with Cover, 30" Wide, CO White	XSNTCT3002
Top Cable Trough with Cover, 40" Wide, CO White	XSNTCT4002
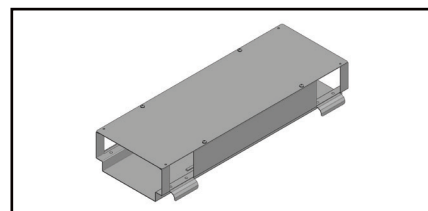
Top Cable Through with Cover (8.5" W x 4.0" H)

Heat Containment Systems
Aisle and Enclosure Containment Systems

Containment Overview

A major challenge faced by data center managers today is ensuring that cooling systems do not fail and continue to provide uninterrupted cool air to equipment, especially in high-density data center environments with advanced virtualized equipment that can reach exhaust air temperatures in excess of 125° F. Most data centers that use a standard cold/hot aisle approach are oversupplied with cold air at a ratio of 2 to 2.5 (volume of cold air supplied to volume consumed by computing equipment). With cooling representing 30-40% of total operational costs for a typical data center, containment solutions present a strong ROI potential. A standard cold/hot aisle approach can also lead to hot spots that cause equipment overheating and failures, further resulting in higher operating costs.

Containment is an industry proven method of eliminating cold air bypass and the mixing of hot and cold air that allows for optimal use of available cooling capacity for overall lower operating costs. With containment, hot exhaust air from equipment is directed to CRAC units either through aisle containment systems for groups of cabinets or through active or passive chimneys at the cabinet level. This increases the differential between the inlet and outlet temperatures of CRAC units, significantly improving overall cooling system efficiency and eliminating the need to oversupply cold air. Creating separation between the hot return air and cold supply air also allows for potentially raising the supply air temperature while maintaining stable intake temperature for networking equipment, providing a more efficient, reliable and hot spot-free computing space. The containment approach easily handles the high-temperature exhaust air from advanced data processing equipment, allowing data centers to host more equipment while lowering energy consumption and total operating costs.

Belden's complete line of containment options range from the enclosure to the cold/hot aisle, offering customers the greatest flexibility for upgrading, designing and implementing a tailored solution that fits their specific data center needs in both "brownfield" or "greenfield" applications. Based on computing load, cabinet layout and computing space specifications, Belden engineers can recommend and design containment solutions that will optimize availability, efficiency and hosting capacity.

- Reduces cooling cost by 30–50% over traditional hot/cold aisle deployment
- Creates a high level of separation between supply and return air
- Eliminates hot spots for increased IT equipment availability

- Eliminates bypass air and air recirculation
  - Reduces or eliminates cold air oversupply (2.5 to <1.2)
  - Maximizes hosting density for up to 30kW per enclosure without precision cooling
  - Increases supply air temperature (better use of economizer loop, 8–10°)
  - Increases return air temperature for better CRAC efficiency

Heat Containment Systems (continued)
Hot and Cold Aisle Containment Systems

Aisle Containment

Belden's Aisle Containment solutions eliminate mixing of hot and cold air in data center environments to maximize energy efficiency and lower operating costs. Our aisle containment systems are vendor agnostic, featuring innovative transparent panels that are lightweight and easily attached horizontally or vertically to data center cabinets using a universal rail system. The panels are field modifiable to meet varying height and space requirements between rows of cabinets and from the top of the cabinets to the ceiling. The aisle containment systems can also interact with smoke or fire alarm systems to ensure proper operation of critical fire suppression and safety systems.

Solutions offered are for both hot and cold aisle containment system.

Vertical Containment

Vertical panels direct hot return air to overhead return plenum, eliminating mixing and improving overall operating efficiency of perimeter CRAC units. Using a fully ducted cold air delivery system with vertical panels also allows for cold air to be placed directly into the cold aisle, eliminating the need to use the underfloor space for supply air.

Horizontal Containment

For raised-floor environments with overhead obstructions or no ceiling plenum, non-ducted panels form a roof to trap cold air, enabling higher supply temperatures and maximizing available cooling. This design can also be used for data centers utilizing in-row cooling solutions.

Aisle Doors

Belden offers both swinging and sliding door options for the end of the row.

Faster.
Easier.
Better.

Heat Containment Systems (continued)
Hot and Cold Aisle Containment Systems
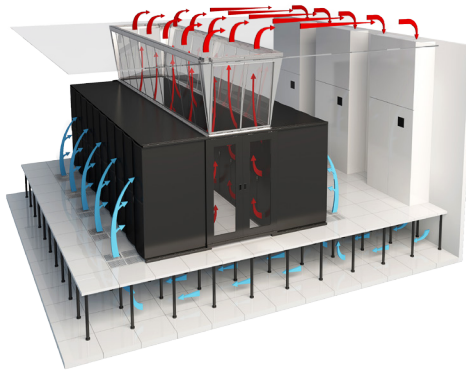
Hot-Aisle Vertical Style Design
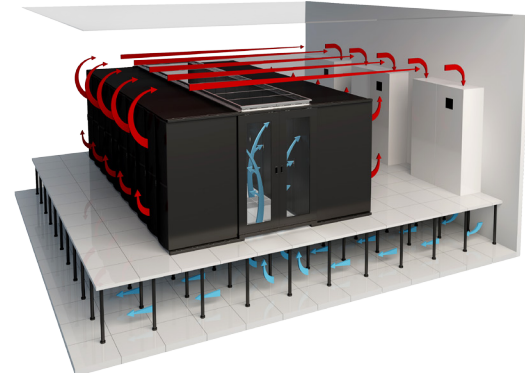
Cold Aisle Horizontal Design

Vertical Style Heat Containment

Part number example from configuration shown below: **XSAC1143.720032**

Fixed Letter Series	1. Choose Cabinet Series	Fixed Letters	2. Choose pod type	3. Choose containment panel type	4. Measure distance cabinet to ceiling	5. Enter aisle length	7. Choose aisle width	8. Choose door type
X	S	AC	1	1	43.7	200	3	2

Cabinet Series End[1, 9]

#	Description
C	C-Series
M	XM-Series
N	XN-Series
S	XS-Series
Z	Custom

Hot Air/Cold Air[2]

#	Description
1	Hot Aisle
2	Cold Aisle

Panel Orientation[3]

#	Description
1	24" Vertical Fixed Black
2	24" Vertical Fixed White
3	24" Vertical Hinged Black
4	24" Vertical Hinged White

Vertical Panel[4]

#	Description
###	Ceiling Height
###	Cabinet Height

Aisle Length in inches[5]

Aisle Width[6]

#	Description
1	48
2	54
3	60
4	66
5	72

Door Options[7]

#	Description
1	Swing Door Black
2	Swing Door White
3	Sliding Door Black
4	Sliding Door White

Notes

1. Enter the end of row cabinet for mounting door, (will have to know top and side attachment points of customer cabinet)
2. Enter cabinet pod type, cold air or hot air containment
3. Enter containment panel type
4. Enter aisle width or custom width in inches
5. Enter aisle lenth in inches, there will be a trim piece for panels under 24"
6. Enter aisle width or custom width in inches, custom widths availabe on request
7. Enter door type, sliding or swing, must enter cabinet end of row type for mounting of doors
8. Custom colors available on request
9. There may have to be modifications to customer cabinets at location

Horizontal Flat Heat Containment Tops

Part number example from configuration shown above: **XSAC11052004333**

Fixed Letter Series	1. Choose Cabinet Series	Fixed Letters	2. Choose pod type	3. Measure distance cabinet to ceiling	4. Enter aisle length	5. Choose exhaust option 1	6. Choose quantity option 1	7. Choose aisle width	8. Choose door type
X	S	AC	1	105	200	4	3	3	3

Cabinet Series End[1, 11]

#	Description
C	C-Series
M	XM-Series
N	XN-Series
S	XS-Series
Z	Custom

Hot Air/Cold Air[2]

#	Description
1	Hot Aisle
2	Cold Aisle

Height Cabinet to Ceiling[3]

#	Description
###	Ceiling Height
###	Cabinet Height

Aisle Length in inches[4]

Exhausting per row[5, 12]

#	Description
0	None
1	10" fan
2	Chimney Adapter
3	AEHC Heat Containment

Quantity of Option 1

#	Description
0	5
1	6
2	7
3	8
4	9

Aisle Width[7]

#	Description
1	48
2	54
3	60
4	66
5	72

Door Options[7]

#	Description
1	Swing Door Black
2	Swing Door White
3	Sliding Door Black
4	Sliding Door White

Notes

1. Enter the end of row cabinet for mounting door, (will have to know top and side attachment points of customer cabinet)
2. Enter cabinet pod type, cold air or hot air containment
3. Enter ceiling height and (cabinet height (3 options))
4. Enter aisle length or custom width in inches
5. Enter fan or chimney adapter, or AEHC Heat Containment (Chimney sold seprately)
6. Enter only 1 number 0 - 9 (there are 2 columns)
7. Enter aisle width
8. Enter door type, sliding or swing, must enter cabinet end of row type for mounting of doors
9. Custom colors available on request
10. Pods will all come with solid horizontal panels unless using (option 1)
11. There may have to be modifications to customer cabinets at location

Heat Containment Systems (continued)
Passive and Adaptive Enclosure Heat Containment (AEHC) System

AEHC chimney shown here in through-the-ceiling version

Passive chimney shown here in adjustable and against-the-ceiling version

AEHC chassis (23.5"Wx16.9"Dx11.5"H) host the fans and controller

Example of both Passive and Active Chimney Systems

Containment Enclosures
- Designed for chimney containment, Belden XM, XS, XSS-XSN Seismic and XN Series enclosures feature sealing front mounting rails that separate cold supply air from hot return
- 42" or 48" deep enclosures are recommended for optimal chimney containment performance
- Gasketed solid rear door options and brushed cable entries prevent hot return air from leaking back into computing space
- All X Series enclosures can be equipped with passive or active chimneys

Passive and Active Chimney Systems
- Active system can support up to 30kW per enclosure for today's extremely high heat loads
- Passive systems rely on the effectiveness of server fans, combined with pressure differential between the enclosure and return spaces
- Passive system capacity peaks around 10kW (but can be higher) and varies based on chimney length, position in relation to CRAC, return plenum pressure and exhaust air temperature
- Passive and active chimneys are available as through-ceiling chimneys that protrude approximately 2" into the return plenum, and against-the-ceiling chimneys that adjust and feature a rubber gasket for effective sealing against the drop ceiling
- To account for fans and controller units, chimney length for active containment should be sized by deducting 11.5" from distance between enclosure top and return ceiling
- Belden X Series enclosures equipped with containment top panels accept both passive and active chimneys, allowing for easy passive-to-active conversion

AEHC Overview
Belden's active Adaptive Enclosure Heat Containment (AEHC) System is a highly efficient and cost-effective method for cooling enclosures while preventing the mixing of hot and cold air in the data center. When networked, AEHC chimneys allow aggregation of exhaust air volume of entire enclosure pods, enabling real-time control of CRAC units and creating a logical link between the cooling plant and the computing load. This unique attribute allows reduction of cooling-operating costs, particularly in virtualized, clustered computing environments characterized by highly dynamic computing loads.

- AEHC uses high-capacity fans controlled by a pressure sensor to ensure dynamic balancing of intake and exhaust air volumes
- Maintains neutral pressure in the enclosure plenum for highly efficient server fan operation
- Can be networked in a pod/row for redundancy in virtualized, clustered computing environments
- Multiple enclosures can share AEHC chimneys based on hosted computing density (three enclosures per chimney is typical)
- AEHC is highly scalable with chimneys added as needed with increased computing loads
- A pair of hot swappable brushless fans with a combined capacity of 10, 20 or 30kW connect to the AEHC controller, enabling quick and easy capacity upgrades (different capacity fans cannot be used in the same enclosure)
- Fan motors are engineered to ensure longevity, high air displacement and low power consumption for mission-critical facilities
- Ideal for existing data centers, and non-Belden enclosures can be retrofitted with chimney by using a customized adapter plate

Faster.
Easier.
Better.

Heat Containment Systems (continued)
Pressure-based containment control for best use of cooling capacity
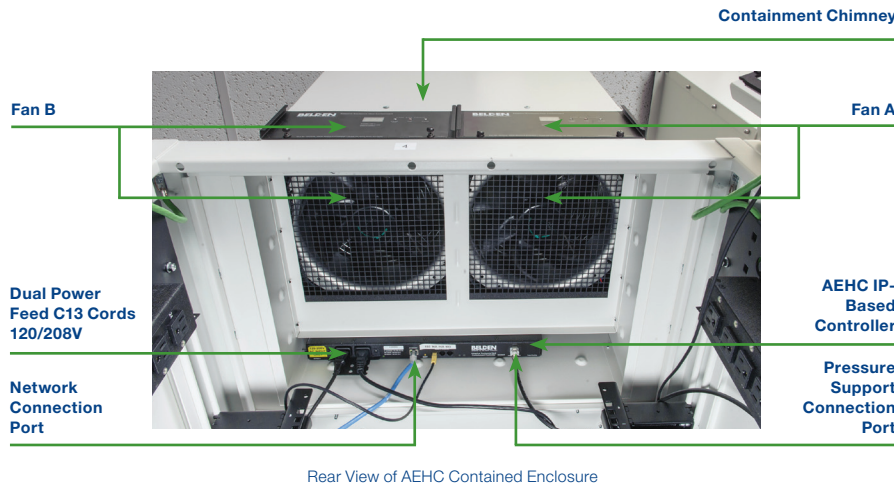
Rear View of AEHC Contained Enclosure

Containment Chimney

Fan B

Fan A

Dual Power Feed C13 Cords 120/208V

Network Connection Port

AEHC IP-Based Controller

Pressure Support Connection Port

Embedded software allows each AEHC unit to be fully autonomous. The AEHC controllers have their own IP address, enabling network connection. The AEHC then allows for real-time monitoring of the heat load, temperature and alarm conditions for each IT enclosure.

- The AEHC system is powered (autosensing 120 or 208V) via the enclosure PDUs and accepts two distinct power feeds for redundancy
- A combination of temperature-humidity sensors with AEHC controller can collect and store environmental data. When networked, real-time data can be accessed via the intuitive user interface or Belden Cormant-CS Infrastructure Management Software using SNMP (MIB file)
- Environmental, mechanical and electrical thresholds and alarms are easy to configure and can be sent directly to e-mail addresses (through an escalation process)

Belden AEHC Is Comprised of:
- An enclosure configured to accept the AEHC system
- A chassis with controller and two fans
- A controller for power input and system networking and control
- A pair of AEHC fans per chassis with a combined containment capacity of 10, 20 or 30kW
- A pressure sensor for fan speed control
- A dual-function temperature/humidity sensor to monitor intake air
- An AEHC chimney to provide the physical link between the chassis and return plenum

The threshold setting in Belden's AEHC system software provides early warning alarms for problem conditions. Alarms are automatically reported. Supported Network Protocols: DHCP, HTTPS, SMPT/POP3, HTTP, ICMP, TCP/IP, SNTP, DNS.
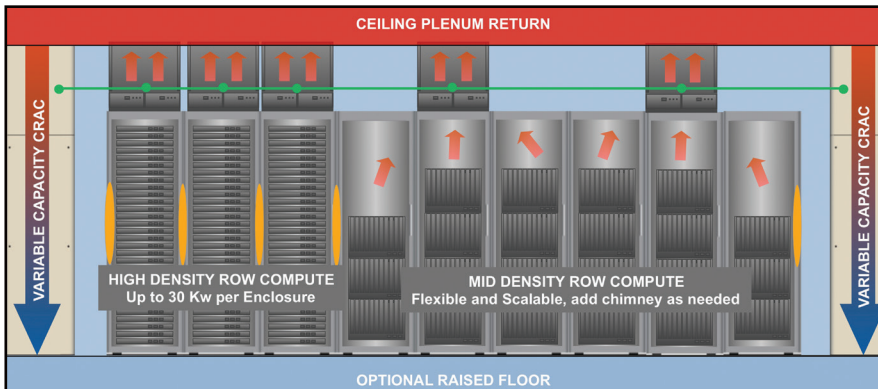
AEHC Row Function Diagram

CEILING PLENUM RETURN

VARIABLE CAPACITY CRAC

HIGH DENSITY ROW COMPUTE
Up to 30 Kw per Enclosure

MID DENSITY ROW COMPUTE
Flexible and Scalable, add chimney as needed

VARIABLE CAPACITY CRAC

OPTIONAL RAISED FLOOR
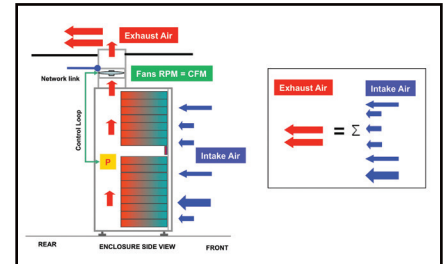
AEHC Single Enclosure Diagram (Side View)

Heat Containment Systems (continued)
Options and Accessories

AEHC Controller

Intelligent hot swappable fan cartridges allow for ease of maintenance and system scalability.
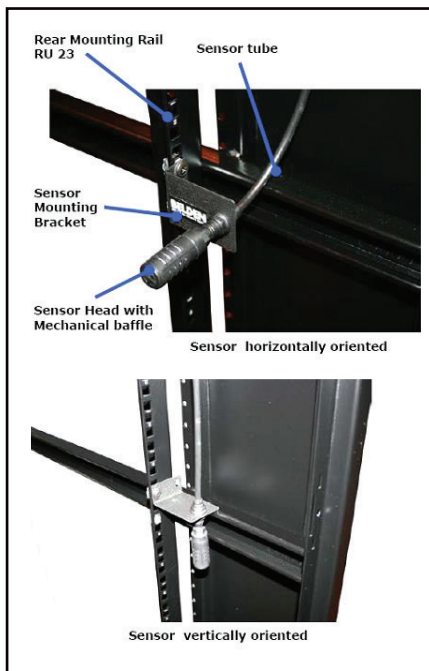
Belden's AEHC System utilizes pressure sensing to dynamically adjust for speed, resulting in perfect balance between intake and exhuast air volume.

Passive Chimney — Through Ceiling

HCDP0 ☐ ☐

Chimney Height			
24	24"	60	60"
33	33"	66	66"
36	36"	72	72"
42	42"	78	78"
48	48"	84	84"
54	54"		

Color	
B	Black
W	CO White

Passive Chimney — Against Ceiling (Adjustable)

HCDPA0 ☐ ☐

Chimney Height	
24	21"– 27"
36	33"– 39"
48	45"– 51"
60	57"– 63"
72	69"– 75"
84	81"– 87"

Color	
B	Black
W	CO White

AEHC Chimney — Through Ceiling

HCD0 ☐ ☐

Chimney Height			
24	24"	60	60"
33	33"	66	66"
36	36"	72	72"
42	42"	78	78"
48	48"	84	84"
54	54"		

Color	
B	Black
W	CO White

AEHC Chimney — Against Ceiling (Adjustable)

HCDA0 ☐ ☐

Chimney Height	
24	21"– 27"
36	33"– 39"
48	45"– 51"
60	57"– 63"
72	69"– 75"
84	81"– 87"

Color	
B	Black
W	CO White

Adaptive Enclosure Heat Containment System
Includes (1) Black Chassis, (1) Controller, (2) Fan Cartridges, (1) Pressure Sensor, (1) Temperature/Humidity Sensor, (2) C13 Power Cords, (2) 5-15P Power Cords

HCS0 ☐ ☐

Containment Capacity	
10	10kW
20	20kW
30	30kW

Color	
B	Black
W	CO White

Description	Belden Part Number
Other Accessories	
AEHC Controller	
AEHC Controller (1) with Power Cords C13 (2), 5-15P (2)	**HCH001**
AEHC Fans	
AEHC 10kW AEHC Fan (1) with Digital Display	**HCFD10**
AEHC 20kW AEHC Fan (1) with Digital Display	**HCFD20**
AEHC 30kW AEHC Fan (1) with Digital Display	**HCFD30**
AEHC Sensors	
AEHC Dual Function Temperature/Humidity Sensor (1)	**HCP002**
AEHC Pressure Sensor (1)	**HCP001**
AEHC Chassis	
AEHC Chassis, Black	**HCC001-B**
AEHC Chassis, Central Office White	**HCC001-W**
AEHC Chassis Blank Panels	
AEHC Chassis Blank Panels, includes Blank for Fans and Controller, Black	**HCCBP-B**
AEHC Chassis Blank Panels, includes Blank for Fans and Controller, Central Office White	**HCCBP-W**
Chimney Blank Panel for Active or Passive Containment (compatible with 24", 30" and 40" enclosures)	
Black	**HCDBP-B**
Central Office White	**HCDBP-W**

Faster.
Easier.
Better.

XNM Series — NEMA-12 Enclosures
Ideal for use in industrial networking

XNM Style NEMA-12 Enclosure with Front and Rear Doors, Side Panels, EIA Mounting Rails and Optional Side-Mounted Air Conditioning Unit. Part No. shown: XNM84-3-11212.

84"
40"   29"

Applications

Designed for dusty environments, Belden XNM enclosures allow hosting of networking/control equipment in factories, warehouses and on the production floor. Optional air conditioning AC units allow temperature control for stand-alone applications. Belden has extensive NEMA-style networking enclosure experience and capability to customize products-solutions.

Design and Structural Features

- NEMA 12 compliant for hosting servers and switches in industrial environments
- Free standing welded frame with modular construction
- 84"H x 29"W x 40"D
- Mounting rails are adjustable to either 19" or 23" EIA spacing
- Three-point compression-style lift-and-turn latch system
- Glass front door uses scratch-resistant tempered safety glass

Solid side panel with cam lock and six-point clamping from interior

(4) Adjustable EIA Mtg. with 10-32 tapped holes; 43RU

Four 4" access holes with sealed removable covers

Solid rear door with three-point latch and three lift-off hinges

Optional A/C unit mounted to side panel

Front door with 1/4" tempered glass with three-point latching and three lift-off hinges

Leveling legs and casters

XNM Front with Doors and Panels

Ordering Matrix for NEMA-12 Enclosures

Part number example:

XNM84311212

XNM Enclosure, 29"Wx40"D frame, 45RU, black, 19" mount 10-32 tapped rails, 2500 BTU AC, glass front door, solid rear door, 2 side panels.

Frame Height

#	Description
84	84" (45RU)

Mounting

#	Description
1	19" Mounting, 10-32 Tapped
2	23" Mounting, 10-32 Tapped

Front Door

#	Description
0	None
1	Solid 3 Pt. Latch
2	Glass 3 Pt. Latch
3	Fan/Filtered 3 Pt. Latch
4	Glass 3 Pt. Latch w/Keyboard Compartment

Sides

#	Description
0	None
1	One Solid Side
2	Two Solid Sides

XNM 84 3 1 1 2 1 2

Color

#	Description
3	Black

Cooling (1)

#	Description
0	None
1	2500 BTU A/C
2	5000 BTU A/C

Rear Door

#	Description
0	None
1	Solid 3 Pt. Latch
2	Glass 3 Pt. Latch
3	Fan/Filtered 3 Pt. Latch

Notes:

1) *Additional cooling options up to 20K BTU/AC available.

Technical Specifications

Belden Part Number	H	W	D	Mounting	Enclosure Weight*	Load Capacity**	Rack Spaces	Usable Depth	
Enclosure Size (Including gland plate, casters and levelers)								At Latch	To Inside of Door
XNM84-3-10000	84"	29"	40"	19" or 23"	462 lbs	2,000 lbs	45RU	37.5"	38.5"

* Enclosure weight is an estimate for shipping a fully configured enclosure with Top, Doors, Sides and Power Strip.

** Load capacity on levelers.

Enclosure Components: Doors and Side Panels

Description	Belden Part Number
Front/Rear Doors	
Solid w/3 pt. Swing Handle Latch and Lock	8429-NSD-3
Tempered Glass w/3 pt. Swing Handle Latch and Lock	8429-NGD-3
Fan/Filtered (7" fan = 235 CFM) with 3 pt. Swing Handle Latch and Lock	8429-NFD-3
Tempered Glass w/Keyboard Compartment with Fan/Filtered Latch	8429-NKD-3
Side Panels	
One Solid w/Lock	8440-01-NSP-3
Two Solid w/Lock	8440-02-NSP-3

Air Conditioning Units

Air Conditioners

Most Belden enclosures can be customized to accept highly efficient air conditioning units.

Technical Specifications

BTUs/Hr.	Volts (Hz)	Amps (max.)	Temp. (max.)	Weight	H	W	D
Air Conditioning Units							
2200	120/60	6.0	125º F	57 lbs	30.1"	12.27"	6.34"
3000	120/60	8.1	125º F	57 lbs	30.1"	12.27"	6.34"
3800	120/60	7.8	125º F	65.5 lbs	30.1"	12.27"	8.34"
2500	120/60	7.9	125º F	73 lbs	28.5"	19.25"	6.38"
3500	120/60	8.2	125º F	73 lbs	28.5"	19.25"	6.38"
5000	120/60	8.7	125º F	74 lbs	28.5"	19.25"	6.38"
12000	120/60	19.6	131º F	139 lbs	52.1"	17.65"	10.34"

Enclosures and Racks

C Series Enclosures
Multi-use enclosure balancing performance and value

Highly versatile, cost-efficient 19" mount enclosure provides quality solutions for a wide variety of IT, Security and Data Center applications. Perfect for both stand-alone or ganged configurations.

Features
- Available in:
  - 600 and 800 mm width options
  - 1000 and 1200 mm depth options
  - 42RU height
- 1,980 lbs static load capacity
- Lightweight and strong
- Manufactured with premium-grade hot and cold rolled steel sheet
- Contoured high-density perforated quick-release, field-reversible doors
- Two-piece side panels provide convenient access to installed equipment in stand-alone applications
- Standard 19" mount per EIA -310D
- Fully adjustable mounting rail depth
- Rack unit (RU) identifier printed on mounting rails for quick identification
- Open bottom for easy cable access
- Top panel with rear brush opening
- All materials RoHS compliant

Standard Configuration includes
- Black powder-coat paint
- Perforated front door with lock handle
- Split perforated rear door with lock handle
- Four EIA mounting rails, cage nut style with M6 hardware included (50 pieces)
- Cable routing opening in mounting rails (only for 800 mm wide enclosure)
- Two solid side panels
- Top panel with brushed openings
- Open bottom
- Two rear cable lacing/PDU mount panels
- Casters, levelers and ganging kit/hardware included
- Grounding provision front/rear and top/bottom
- Bonding wires between frame and doors
- For shelves and horizontal managers
  see pages 64–65
- For PDUs see pages 69–76

1936 mm

600 mm
or 800 mm

1000 mm
or
1200 mm

800 mm Wide Enclosure (front view)

Brushed Top Panel Opening
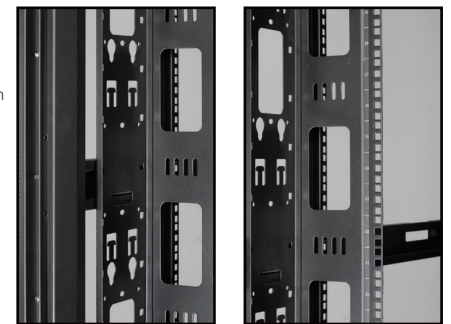
(2) Rear Cable Lacing/PDU Mount Panels

Cable Routing Opening in Mounting Rails for the 800 mm Wide Enclosure

BELDEN

C Series Enclosures (continued)
Available in 600 mm (23.6") and 800 mm (31.5") width options

Ordering Information

Description	Belden Part Number			
	C1S42-1-211221		C2S42-1-211221	
600 mm Wide Enclosure				
Width	600 mm	23.62 in.	600 mm	23.62 in.
Depth	1000 mm	39.37 in.	1200 mm	47.24 in.
Height	42RU		42RU	
Height without Casters	1936 mm	76.22 in.	1936 mm	76.22 in.
Height with Casters	1981 mm	77.99 in.	1981 mm	77.99 in.
Net Weight	106.5 kg	235 lbs	110.4 kg	243 lbs
Static Load Capacity	900 kg	1984 lbs	900 kg	1984 lbs
Maximum Mounting Depth	895 mm	35.24 in.	1095 mm	43.11 in.
Front Door Total Open Area	1,074 sq. in.		1,074 sq. in.	
Rear Door Total Open Area	1,046 sq. in.		1,046 sq. in.	
Door Opening Radius	135˚		135˚	

Description	Belden Part Number			
	C3S42-1-211221		C4S42-1-211221	
800 mm Wide Enclosure				
Width	800 mm	31.50 in.	800 mm	31.50 in.
Depth	1000 mm	39.37 in.	1200 mm	47.24 in.
Height	42RU		42RU	
Height without Casters	1936 mm	76.22 in.	1936 mm	76.22 in.
Height with Casters	1981 mm	77.99 in.	1981 mm	77.99 in.
Net Weight	114.4 kg	252 lbs	117.4 kg	259 lbs
Static Load Capacity	900 kg	1984 lbs	900 kg	1984 lbs
Maximum Mounting Depth	895 mm	35.24 in.	1095 mm	43.11 in.
Front Door Total Open Area	1,483 sq. in.		1,483 sq. in.	
Rear Door Total Open Area	1,563 sq. in.		1,563 sq. in.	
Door Opening Radius	135˚		135˚	

Faster.
Easier.
Better.

XWM Series — Wall Mount Enclosures
Wall Mount Enclosures are an ideal hosting option in confined spaces

Applications

Wall mount enclosures provide IT/Networking hosting in spaces that often serve another primary function, and where space optimization is critical. They are designed for applications that require secure hosted devices and are ideal for locations where floor mounting space is limited, as is common in retail establishments, schools and offices.

Available in mounting unit increments of 9RU, 12RU and 20RU, Belden Wall Mount Enclosures offer great aesthetics, rugged construction, optimized equipment access and flexible cable management and access features.

XWM-2312-GD

XWM-2109-GD

Design and Structural Features

- Sturdy welded steel construction
- Durable black powder-coat finish
- Front door options: vented, smoked Plexiglass or solid front
- Door swing direction is field reversible
- Lockable front door, sides and rear section
- Open rear section for cable access through mounting wall
- Top and bottom holes in rear section for conduit connection and cable access
- Comes with mounting template for quick and easy wall mounting
- Removable sides for improved access (12RU and 20RU only)

- Two pairs of 12-24 tapped 19" EIA depth-adjustable mounting rails (includes mounting hardware)
- Swing-out mid-section for rear access to equipment
- Vented front (Plexiglass door only), sides, top and bottom panels for proper heat dissipation
- Top and bottom panel allow optional 4" fan mounting

XWM-2312-SD

Enclosures and Racks

XWM Series — Wall Mount Enclosures (continued)
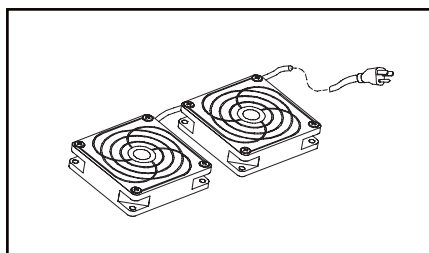
Dimensions

XWM-9312-1600 Fan Assembly

19.75"
20.125"
22.875"
21.00"

XWM-2109-GD

21.65"
25.25" or 39.25"
27.50"
23.00"
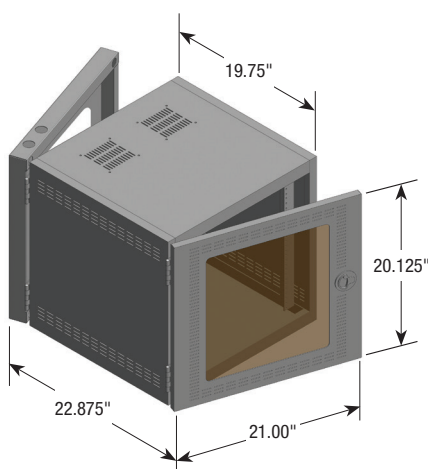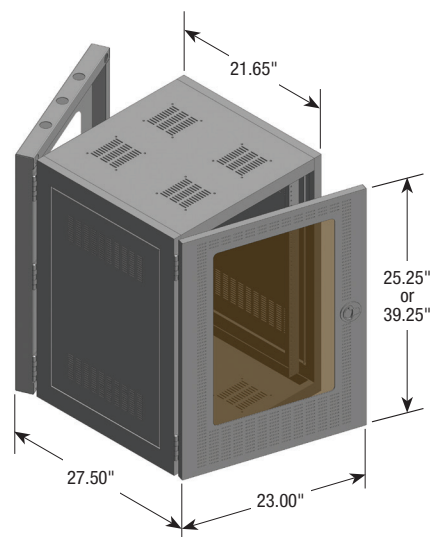
XWM-2312-GD and XWM-2320-GD

Ordering Information

Belden Part Number	W	H	D	Cable Entry	Mounting	Removable Side Panels	Rack Unit (RU)	Door Type	Weight	Weight Capacity
Wall Mount Enclosures										
XWM-2109-GD	21"	20.12"	22.87"	(4) 1" Conduit	(4) 13/32" dia.	No	9	Plexiglass	45 lbs	130 lbs
XWM-2109-SD	21"	20.12"	22.87"	(4) 1" Conduit	(4) 13/32" dia.	No	9	Solid	45 lbs	130 lbs
XWM-2312-GD	23"	25.25"	27.5"	(6) 2" Conduit	(4) 13/32" dia.	Yes	12	Plexiglass	70 lbs	150 lbs
XWM-2312-SD	23"	25.25"	27.5"	(6) 2" Conduit	(4) 13/32" dia.	Yes	12	Solid	70 lbs	150 lbs
XWM-2320-GD	23"	39.25"	27.5"	(6) 2" Conduit	(6) 13/32" dia.	Yes	20	Plexiglass	95 lbs	175 lbs
XWM-2320-SD	23"	39.25"	27.5"	(6) 2" Conduit	(6) 13/32" dia.	Yes	20	Solid	95 lbs	175 lbs

Description	Belden Part Number
Optional Accessories	
Fan Assembly (2-4" Diameter Fans, 160 CFM with Guard)	XWM-9312-1600
Lacing Panel 3" Wide x 9RU	XWMLP9
Lacing Panel 3" Wide x 12RU	XWMLP12
Lacing Panel 3" Wide x 20RU	XWMLP20
12-24 Mounting Hardware (Bag of 25)	8917-0125
PDU, Rack Mount, 1RU, 120V, 15A, 5-15P Plug w/10' Cord, 6 x 5-15R Receptacles, On/Off Switch, Thermal Circuit Breaker and Surge Suppression	9BF1-061002
PDU, Rack Mount, 1RU, 120V, 20A, 5-20P Plug w/10' Cord, 10 x 5-20R Receptacles, On/Off Switch, Thermal Circuit Breaker and Surge Suppression	9BG1-101001

Faster.
Easier.
Better.

2- and 4-Post Distribution Rack Systems
Modular High Density Racking System (HDRS) for network cross-connect

Applications

These high-reliability products have been designed specifically for networking environments — from Telecom closets to world-class Data Centers — to help you make the best use of valuable real estate and simplify MACs (Moves, Adds and Changes).

The HDRS is a well-engineered cross connect and hosting platform that offers you a high level of versatility and flexibility in systems design for ultimate network density and manageability.

How It Works

Create exactly the racking system you need from our selection of steel and aluminum distribution and server racks, combined with more than 50 standard cable management components and accessories. These items have been designed for complete compatibility and integration. The components include:

• Distribution and server racks in aluminum or steel; knockdown or welded; 2 or 4 posts

• Choice of low- or high-density vertical cable managers in single- or double-sided configurations

• High-density vertical manager half door allows easy cable access and hinging of the doors to both right and left side

• Horizontal cable managers with bend radius control and double-hinge cover

• **Accessories:** Retention Gates, Divider Bars, Transition Channels and more

How To Order

Select any of the Distribution and Server Rack styles.

Select any of the Vertical Cable Managers listed for Distribution and Server Racks.

Choose any of the Accessories for the BHV Vertical Managers, Horizontal Managers or Transition Channels (**See pages 44–45** for Technical Specifications and Options Tables).

HDRS Modular High-Density Racking System

WIDTH
DEPTH

DEPTH
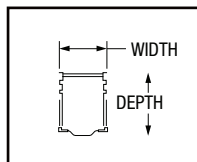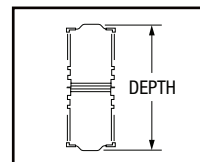
Single-Sided   Double-Sided
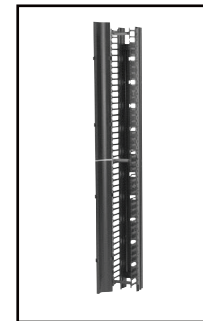
BHVH006*
High-Density, Single-Sided Vertical Manager
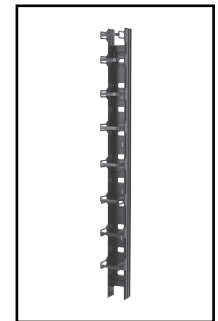
BHVL006*
Low-Density, Single-Sided Vertical Manager
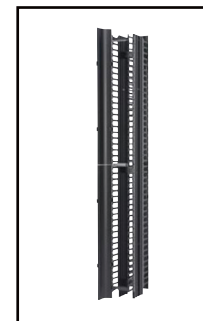
BHVHH06
High-Density, Double-Sided Vertical Manager
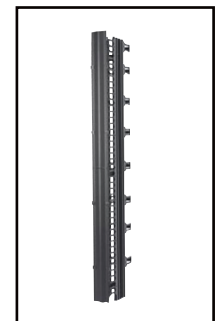
BHVHL06
High/Low-Density, Double-Sided Vertical Manager

*High- and low-density vertical manager shown here with optional back covers, BHBV06X.

HDRS Vertical Manager Capacity

Single-Sided Manager				# of Cable 35% Fill	
High	Low	Width (in.)	Depth (in.)	Cat 6 0.250" dia.	Cat 6A 0.295" dia.
BHVH003	BHVL003	3.6	8.75	194	126
BHVH006	BHVL006	6	8.75	321	209
BHVH010	BHVL010	10	8.75	535	348
BHVH012	BHVL012	12	8.75	642	417

Double-Sided Manager				# of Cable 35% Fill	
High/High	High/Low	Width (in.)	Depth (in.)	Cat 6 0.250" dia.	Cat 6A 0.295" dia.
BHVHH03	BHVHL03	3.6	13.75	388	252
BHVHH06	BHVHL06	6	13.75	642	417
BHVHH10	BHVHL10	10	13.75	1070	696
BHVHH12	BHVHL12	12	13.75	1283	835

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2- and 4-Post Distribution Rack Systems (continued)
High-Density Racking System Features

High-Density (1RU) Fingers

High-Density Vertical Manager

Low-Density Vertical Manager

Cable Retention Gate Pointer

Double-Hinged Cable Retention Gate

Low-Density Finger

Double-Hinged Cable Retention Gate

Snap-On Door Hinge

Horizontal Manager BHH192UR

Double-Hinged Half-Door

High-Density Fingers
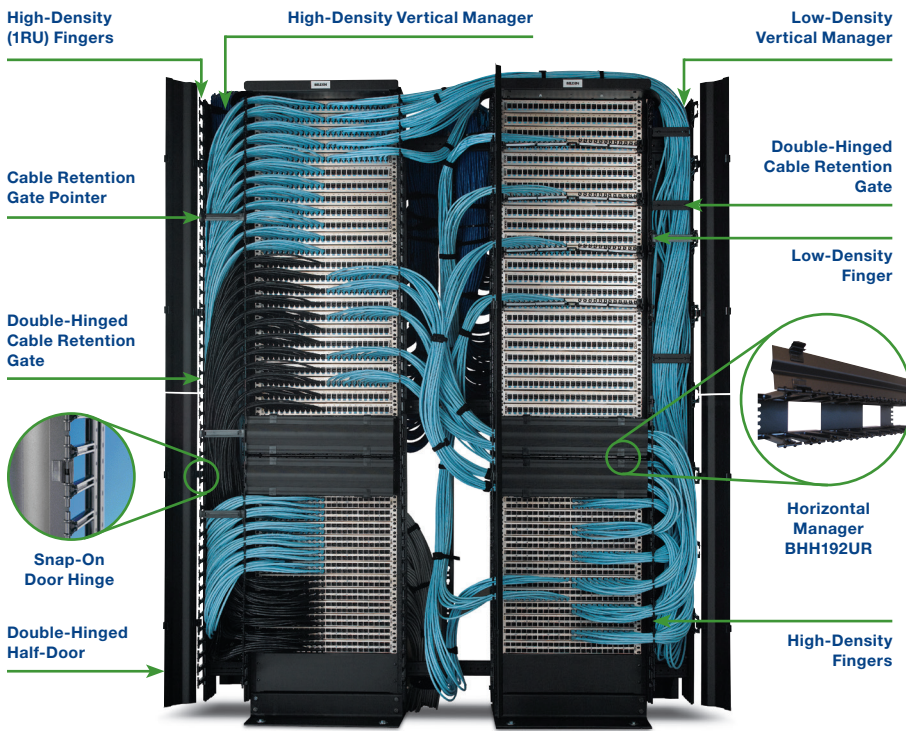
Vertical Manager Part Sets
- Includes a complete set of necessary components, including doors (on high-density managers), gates, push-in fasteners, cable strap mounts, cable retainer bars and mounting hardware

Modular, Removable Finger Sections
- Available in high or low density, finger sections can be easily removed during reconfigurations and easily replaced as needed
- High-density 11RU sections easily screw into vertical managers and align with the rack units, eliminating horizontal managers

System Scalability
- The HDRS is easily reconfigured and modified to handle future system growth, add-ons or changes

Compatibility of Vertical Managers
- Compatible with any EIA-310-D compliant 2- and 4-post racks

Mixed Media Application
- Designed to handle both copper and optical fiber structured cable networks

Accessory Mounting Holes
- 1/4" diameter mounting holes along length of each vertical manager enable easy attachment of accessories, like cable bundle fasteners

Any-Point-to-Any-Point Routing Capability
- Cable can be easily routed from one patch panel to another within the same rack, to the back of the rack or to an adjacent rack, while still maintaining proper cable bend radius

Unmatched Density
- Designed to work seamlessly with Belden IBDN copper and fiber systems, cable management fingers align with rack RUs for easy routing of patch cords to vertical managers, eliminating the need for horizontal managers

High Level of Modularity
- Enables ease of removal or reconfiguring Belden's wide selection of accessories and components
- Interchangeable cable retention gates, doors, fingers and accessories adapt to specific needs

Easy Installation
- Only standard hand tools are required for quick installation and simple field reconfiguration and modification

Great Aesthetics
- Professional flat-black finish is suitable for any world-class telecom environment
- Central Office white color option allows for seamless integration where light-color enclosures are used, improving visibility

Faster.
Easier.
Better.

2- and 4-Post Distribution Rack Systems (continued)
Suitable for single-rack to multi-rack high-density cross-connect

Applications

Belden offers a complete line of open racks and rack accessories from single-rack applications (Retail, Telecom closet) to high-density, multi-rack patching and switching fields (Computer Room, Data Centers, Central Offices). Belden's unique cable and connectivity expertise was central in the design of a feature-rich racking system that offers ease of installation, ease with MACs and is highly scalable.

Rack Features: 2- and 4-Post

- EIA-310 compliant, choice of 19" and 23" mounting
- Consult customer service for 23" rack and accessories (horizontal managers)
- Equipment mounting hardware is included
- 2-post rack uprights are front and rear tapped
- Easy rack unit identification for faster install
- Grounding stud standard on all 2-post and 4-post racks
- Steel or aluminum construction
- Seismic certified options
- Knockdown or welded construction
- 4-post racks are adjustable, providing for 28", 32" and 36" depths

Color

- Black (Standard)
- Central Office White available on request

Zone 4 Seismic-Rated Distribution Rack Type XDRS
Part No. Shown: XDRS8419-610

Dimensions

XDR8419-310 Rack (Steel)

XDR8419-3102836 Rack (Steel)

XDRS8419-610 Seismic Rack (Steel)

XDRS8419-610S02 Seismic Rack (Steel)
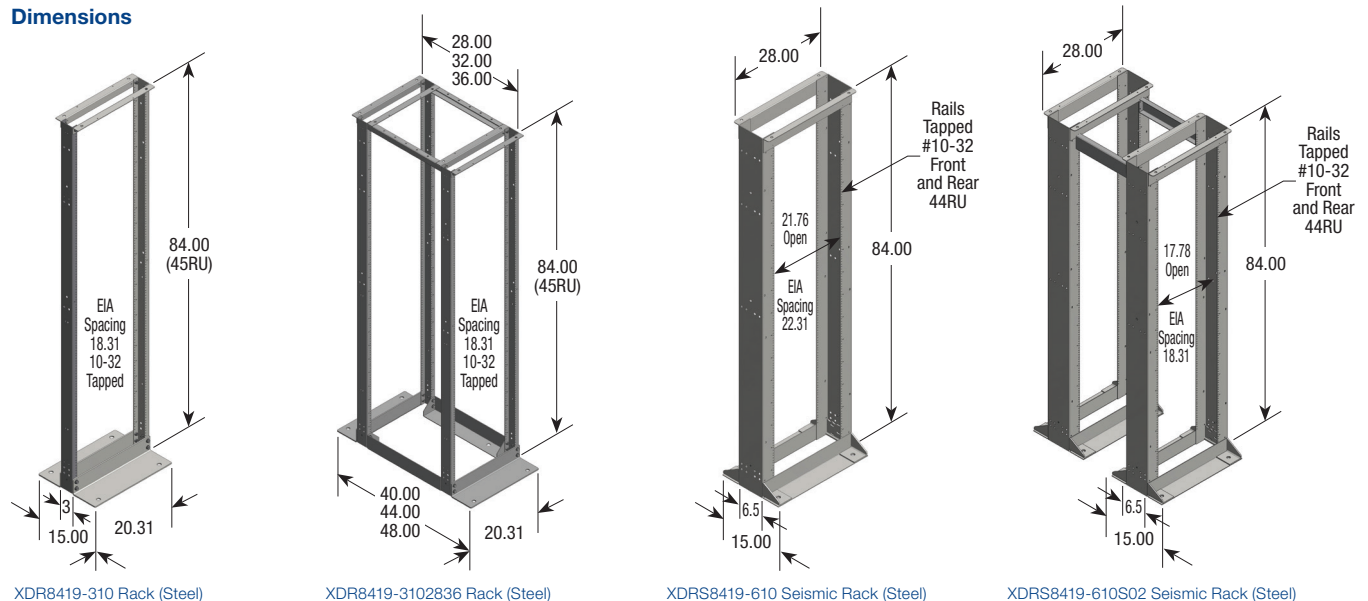
BELDEN

XDR8419-310N1M and XDR8419-312N1M

XDR8419-310N2M and XDR8419-312N2M

2- and 4-Post Distribution Rack Systems (continued)
Technical Specifications

Ordering Information

Description	Weight	Mounting**	Load Capacity	Height/Rack Spaces	Belden Part Number
2-Post Distribution Racks — Steel — Knockdown*					
#10-32 Tapped 3" Vertical Upright w/Angle Base	63 lbs	19"	1,000 lbs	84"/45RU	XDR8419-310
#12-24 Tapped 3" Vertical Upright w/Angle Base	63 lbs	19"	1,000 lbs	84"/45RU	XDR8419-312
Value Series Rack, #10-32 Tapped 3" Vertical Upright w/Angle Base	63 lbs	19"	1,000 lbs	84"/45RU	XDR8419-310N
Value Series Rack, #12-24 Tapped 3" Vertical Upright w/Angle Base	63 lbs	19"	1,000 lbs	84"/45RU	XDR8419-312N
2-Post Distribution Racks Kit — Steel — Knockdown*					
Value Series Rack Kit, #10-32 Tapped 3" Vertical Upright w/Angle Base, Includes One 4"x 4" Vertical Manager with Snap-On Cover (part # VCMFDR4X4)	76 lbs	19"	1,000 lbs	84"/45RU	XDR8419-310N1M
Value Series Rack Kit, #10-32 Tapped 3" Vertical Upright w/Angle Base, Includes Two 4"x 4" Vertical Manager with Snap-On Cover (part # VCMFDR4X4)	89 lbs	19"	1,000 lbs	84"/45RU	XDR8419-310N2M
Value Series Rack Kit, #12-24 Tapped 3" Vertical Upright w/Angle Base, Includes One 4"x 4" Vertical Manager with Snap-On Cover (part # VCMFDR4X4)	76 lbs	19"	1,000 lbs	84"/45RU	XDR8419-312N1M
Value Series Rack Kit, #12-24 Tapped 3" Vertical Upright w/Angle Base, Includes Two 4"x 4" Vertical Manager with Snap-On Cover (part # VCMFDR4X4)	89 lbs	19"	1,000 lbs	84"/45RU	XDR8419-312N2M
2-Post Distribution Racks — Steel — Welded					
#10-32 Tapped 3" Vertical Upright w/Angle Base – Welded	66 lbs	19"	1,000 lbs	84"/45RU	XDR8419-310W
#12-24 Tapped 3" Vertical Upright w/Angle Base – Welded	66 lbs	19"	1,000 lbs	84"/45RU	XDR8419-312W
2- and 4-Post Zone 4 Seismic Distribution Racks — Steel — Welded*					
2-Post Seismic Rack, #10-32 Tapped 6" Vertical Upright w/Angle Base	105 lbs	19"	900 lbs	84"/45RU	XDRS8419-610
4-Post Seismic Rack, 28" Deep, #10-32 Tapped 6" Vertical Upright w/Angle Base	215 lbs	19"	900 lbs	84"/45RU	XDRS8419-61028
4-Post Seismic Rack, 32" Deep, #10-32 Tapped 6" Vertical Upright w/Angle Base	220 lbs	19"	900 lbs	84"/45RU	XDRS8419-61032
2-Post Distribution Racks — Aluminum — Knockdown*					
#12-24 Tapped, Black, Knockdown 3" Vertical Upright	30 lbs	19"	1,200 lbs	84"/45RU	BHRR194
#12-24 Tapped, Black, Knockdown 6" Vertical Upright	41 lbs	19"	1,200 lbs	84"/45RU	BHRR6194
4-Post Distribution Racks — Steel — Knockdown*					
4-Post Rack with Adjustable Depth 28"-32"-36", #10-32 Tapped 3" Vertical Upright w/Angle Base	115 lbs	19"	1,500 lbs	84"/45RU	XDR8419-3102836
4-Post Rack with Adjustable Depth 28"-32"-36", #12-24 Tapped 3" Vertical Upright w/Angle Base	115 lbs	19"	1,500 lbs	84"/45RU	XDR8419-3122836
4-Post Server Rack — Steel — Welded**					
XM Series Black Frame with (4) Ajustable Mounting Rails, Square Hole Type with 6 mm Mounting Hardware Included. Frame Size 24"W x 42"D x 85.6"H (45RU), Includes Levelers and Casters	240 lbs	19"	2,000 lbs	85"/45RU	X3M45-1-100000

* Knockdown rack shipped not assembled, assembly hardware is included
** For EIA-23" mounting consult Belden customer service
*** 4-post seismic rack is made of two welded 2-post rack structures, linked with front to rear member, shipped unassembled
**** 4-post server rack is not compatible with vertical managers (see page 45)

Enclosures and Racks

Faster.
Easier.
Better.

2- and 4-Post Distribution Rack Managers and Accessories

Ordering Information

Description	Belden Part Number
Vertical Cable Managers	
Value Vertical Manager with Snap-On Cover 4"W x 4"D	VCMFDR4X4
Single-Sided High-Density Vertical Manager w/Doors, 3 5/8"W x 84"H, Black	BHVH003
Single-Sided High-Density Vertical Manager w/Doors, 6"W x 84"H, Black	BHVH006
Single-Sided High-Density Vertical Manager w/Doors, 10"W x 84"H, Black	BHVH010
Single-Sided High-Density Vertical Manager w/Doors, 12"W x 84"H, Black	BHVH012
Single-Sided Low-Density Vertical Manager w/o Doors, 3 5/8"W x 84"H, Black	BHVL003
Single-Sided Low-Density Vertical Manager w/o Doors, 6"W x 84"H, Black	BHVL006
Single-Sided Low-Density Vertical Manager w/o Doors, 10"W x 84"H, Black	BHVL010
Single-Sided Low-Density Vertical Manager w/o Doors, 12"W x 84"H, Black	BHVL012
Double-Sided High-Density Vertical Managers w/Doors, 3 5/8"W x 84"H, Black	BHVHH03
Double-Sided High-Density Vertical Managers w/Doors, 6"W x 84"H, Black	BHVHH06
Double-Sided High-Density Vertical Managers w/Doors, 10"W x 84"H, Black	BHVHH10
Double-Sided High-Density Vertical Managers w/Doors, 12"W x 84"H, Black	BHVHH12
High/Low-Density Vertical Manager w/Front Door, 3 5/8"W x 84"H, Black	BHVHL03
High/Low-Density Vertical Manager w/Front Door, 6"W x 84"H, Black	BHVHL06
High/Low-Density Vertical Manager w/Front Door, 10"W x 84"H, Black	BHVHL10
High/Low-Density Vertical Manager w/Front Door, 12"W x 84"H, Black	BHVHL12
Accessories for BHV Vertical Managers	
3 5/8"W, Black, Vertical Manager Backcover	BHBC03X
6"W, Black, Vertical Manager Backcover	BHBC06X
10"W, Black, Vertical Manager Backcover	BHBC10X
12"W, Black, Vertical Manager Backcover	BHBC12X
3 5/8"W, Black, Vertical Manager Doors (1 pr)	BHDK03X
6"W, Black, Vertical Manager Doors (1 pr)	BHDK06X
10"W, Black, Vertical Manager Doors (1 pr)	BHDK10X
12"W, Black, Vertical Manager Doors (1 pr)	BHDK12X
Slack Management Spool Kit, Black	BHSK020
Slack Management Spools (2), Black	BHSP020
Gate Kit, 3 5/8"W, Black	BHGL03X
Gate Kit, 6"W, Black	BHGL06X
Gate Kit, 10"W, Black	BHGL10X
Gate Kit, 12"W, Black	BHGL12X
Retention Gate (6) 3 5/8"W, Black	BHGR03X
Retention Gate (6) 6"W, Black	BHGR06X
Retention Gate (6) 10"W, Black	BHGR10X
Retention Gate (6) 12"W, Black	BHGR12X
Finger Section, 11U, Black	BHFS11U
Rack Mount Finger Bracket, 11U, Black	BHFB11U
Divider Bar, 3 5/8"W, Black	BHDB03X
Divider Bar, 6"W, Black	BHDB06X
Divider Bar, 10"W, Black	BHDB10X
Divider Bar, 12"W, Black	BHDB12X
Fastener for Vertical Manager (100)	BHPF100
Tie Mount for Vertical Manager (100)	BHSM100
Horizontal Manager with Cover	
19"W x 1RU, Black	BHH191UR
19"W x 2RU, Black	BHH192UR
19"W x 3RU, Black	BHH193UR
19"W x 4RU, Black	BHH194UR
1RU, Rack Mount, Finger Duct Manager 3.0"H x 3.0"D Deep with Cover	9512-1901
2RU, Rack Mount, Finger Duct Manager 3.0"H x 3.0"D Deep with Cover	9512-1902N
Transition Channel (Top transition channels are only compatible with knockdown racks)	
Top Transition Channel, 19"W x 6"D x Y"H, Black	BHTT196
Top Transition Channel High-Density, 19"W x 6"D x 6"H, Black	BHTTH196
Lower Transition Channel, 19"W x 6"D x 1.75"H, Black	BHTL196
Lower Transition Channel Double, 19"W x 6"D x 3.5"H, Black	BHTD196
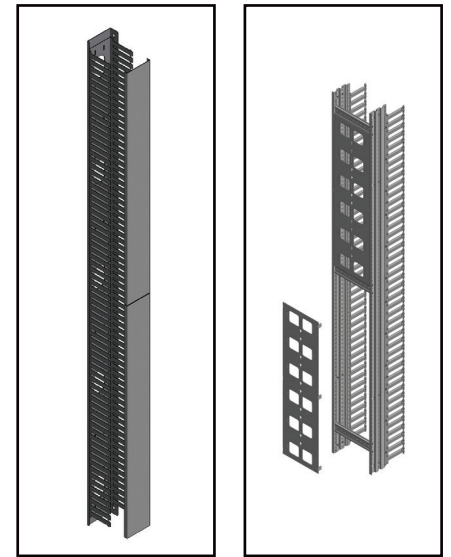
VCMFDR4X4

BHBC10X
(Vertical manager not included)

9512-1902N
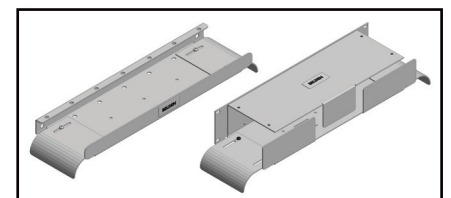
BHTT196 and BHTD196
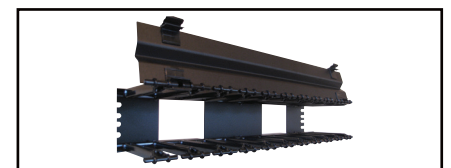
BHH192UC Horizontal Manager

XWR and XWB Series — Wall Mount Racks
Hinged and swing-out for rear access in tight spaces

Wall Mount Racks are available in two styles: hinged and swing-out. The hinged rack is 12" in height and features an adjustable lower shelf (adjusts 2" to 6"). The swing-out rack is available in heights of 36" and 48" with 19" mounting rails. 2RU, 4RU and 6RU Wall Mount Brackets are also offered for mounting a limited number of components or pieces of equipment.
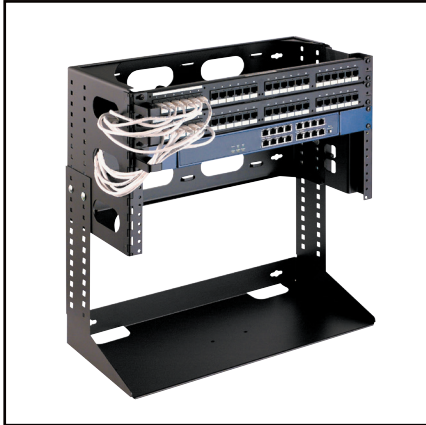
XWR-1219 Wall Mount Rack in Hinged Style
(shown in closed position with equipment mounted)

XWR-3619-18 Swing-Out Style Wall Mount Rack
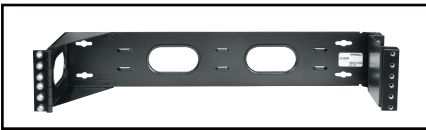
XWB-2U 2RU Wall Mount Bracket
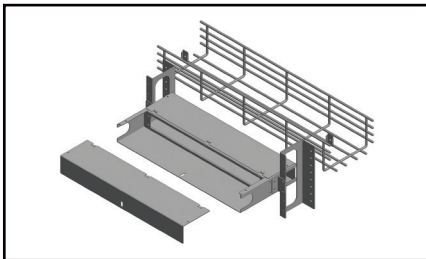
XPE-S0001 1RU rack attach to basket tray
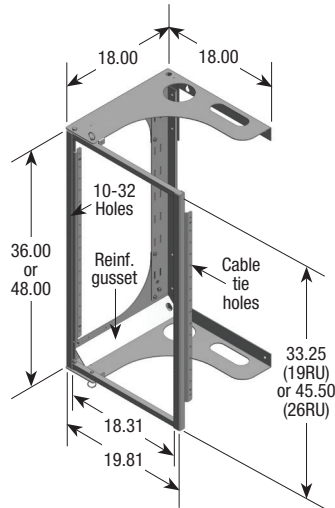
Heavy-Duty XWR Swing-Out Style Wall Mount Rack
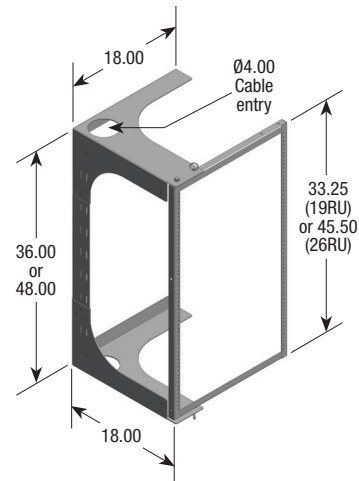
XWR Swing-out Style Wall Mount Rack

Ordering Information

Description	H	W	D	Weight	Mounting	Load Capacity	Rack Spaces	Belden Part Number
Wall Mount Racks								
Standard Swing-Out Rack: 36" Wall Mount Rack with 19" Mounting Rails	36"	19.75"	18"	30 lbs	19"	100 lbs	19RU	**XWR-3619-18**
Heavy Swing-Out Rack: 36" Wall Mount Rack with 19" Mounting Rails	36"	19.75"	18"	35 lbs	19"	200 lbs	19RU	**XWR-3619-18HD**
Standard Swing-Out Rack: 48" Wall Mount Rack with 19" Mounting Rails	36"	19.75"	18"	39 lbs	19"	100 lbs	26RU	**XWR-4819-18**
Heavy-Duty Swing-Out Rack: 48" Wall Mount Rack with 19" Mounting Rails	36"	19.75"	18"	40 lbs	19"	200 lbs	26RU	**XWR-4819-18HD**
Hinged Rack: 12" Wall Mount Rack, Hinged, 19" Mounting Rails, Adjustable Lower Shelf 2"–11" to Accomodate Equipment Space	10.9"	19.5"	9.5"	26 lbs	19"	50 lbs	6RU	**XWR-1219**
Wall Mount Brackets								
2RU Wall Mount Bracket, Black	3.5"	19"	8"	4 lbs	19"	50 lbs	2RU	**XWB-2U**
4RU Wall Mount Bracket, Black	7.0"	19"	8"	8 lbs	19"	50 lbs	4RU	**XWB-4U**
6RU Wall Mount Bracket, Black	10.50"	19"	8"	10 lbs	19"	50 lbs	6RU	**XWB-6U**
1RU rack, includes basket tray attachment hardware	2.0"	19"	N/A	12 lbs	19"	20 lbs	1RU	**XPE-S0001**

Faster.
Easier.
Better.

XSW Series — Swing Rack
Free-standing swing-out rack used where space is limited

The Swing Rack provides easy access to the rear of rack mounted equipment in a free-standing environment. It is ideal for applications where space is limited and rear access is essential.

- Rack can be assembled as a left or right hinge and open 90º
- Rack can be positioned as close as 7" from wall
- Equipment up to 18.5" deep can be pivoted
- Cable management allows for cable routing without interference of the swing rack
- Racks can be bolted side-to-side
- Friction lock prevents rack movement while servicing

XSW Top View

Optional Basket

XSW-8419 Swing Rack (shown with equipment mounted)
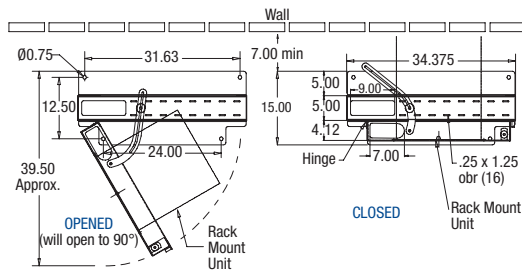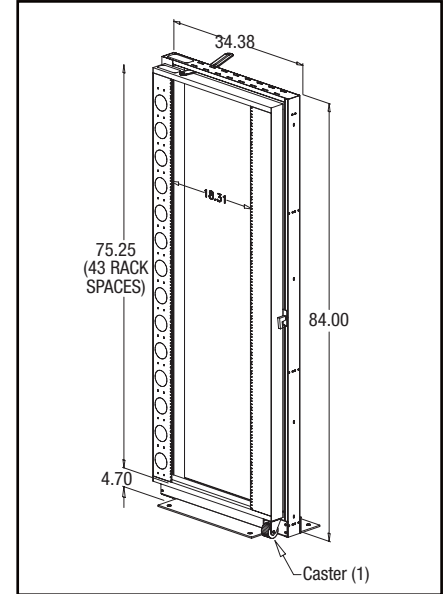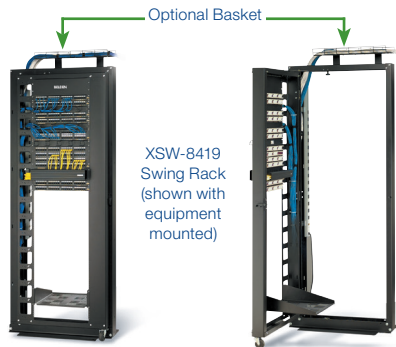
XSW Front View

Ordering Information

Description	Weight	Mounting	Load Capacity	Rack Spaces	Belden Part Number
Swing Racks					
84" Swing-Out Distribution Rack	179 lbs	19"	500 lbs	34RU	**XSW-8419**
Accessories (Sold Separately)					
Top Mounting Wire Basket	—	—	—	—	**XSW-0200**
Power Strip Mounting Kit	—	—	—	—	**XSW-0100**

BELDEN

Belden offers four series of **high-quality enclosures and racks** for your unique Entertainment, Security, Head End and Mobile Telecom applications.

Engineered for Performance and Ease of Installation for Broadcast, Audio Video, Security, Head End and Mobile Telecom Applications

Belden has designed its Broadcast, Audio Video and Security Rack/Enclosure Series using the same top-quality and user-friendly principles that go into all of our market-leading solutions.

These uncompromisingly strong and well-built structures are combined with component features that optimize cable performance and provide extraordinary flexibility in cable management. These features provide a unique approach to equipment housing and storage needs.

The following pages detail the breadth of our rack/enclosure offering for the Entertainment, Security and Broadcast industries. In addition, Belden offers a complete array of shelves for 19" mount racks and enclosures, including cantilevered, 4-point mount, sliding and keyboard-type shelves.

Advantages in Using Belden Broadcast Enclosure and Rack Series

Construction
• Welded frame construction for greater strength and structural integrity is standard on all broadcast racks and enclosures

Accessories
• A full complement of accessories will outfit your enclosures with the needed mounting, shelving, work surface and cable management support

Ease of Installation
• EIA rails are marked with rack space increments for ease of equipment mounting

Cable Management
• Numerous top and bottom entry points simplify cabling
• The rounded, steel-formed cable tie bar (Photo A) reduces pressure points
• The multiple attachment points for our Quick Mount System — or Nylon ties along the mounting rails, rail supports and cable tie bar (Photos B and C) — provide the utmost flexibility in cable routing and lacing
• The Quick Mount fastening system (Photo D) is comprised of a unique swivel base and base fastener. Velcro ties are easily threaded through the fastener base, allowing the cable bundles to be secured to the rack. The system's swivel base allows for a 90º angle between the cable bundle and the cable tie to allow pressure distribution along the cables

Aesthetics
• Powder coating process provides a textured black finish for a highly resistant, high-end look that showcases your equipment
• Aesthetics can be tailored to your requirements with a variety of doors, panels and customized silk screening options

Temperature Control
• Perforated and vented doors, along with a variety of top panel options, provide flexible cooling options

Power Distribution
• A complete line of Belden power distribution units, including rack mount and vertical mount options, can be found on pages 69–76
• Grounding studs allow for integral grounding of enclosures and accessories

Seismic Rating
• XME and XMER Series include NEBS seismic rating when anchored with optional seismic anchor bracket kit

The enclosure shown here is the XMER Style (Media Enclosure)
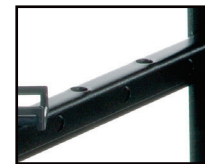
Photo A

Photo C

Photo B

Photo D

Broadcast Enclosures and Racks
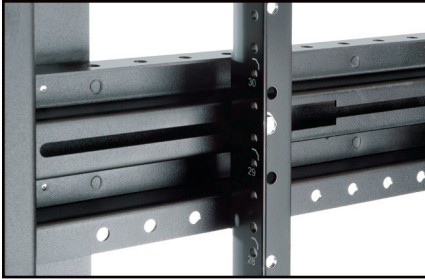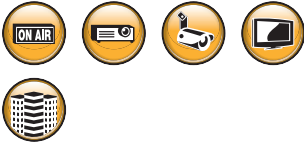
BELDEN

EIA Rail Kits

Side Panels

Solid
Vented
10" Fan
(4) 4" Fan
Top Panels
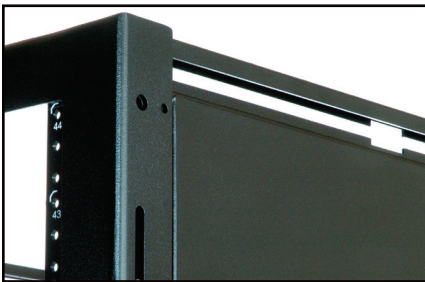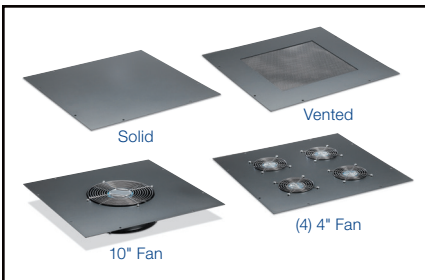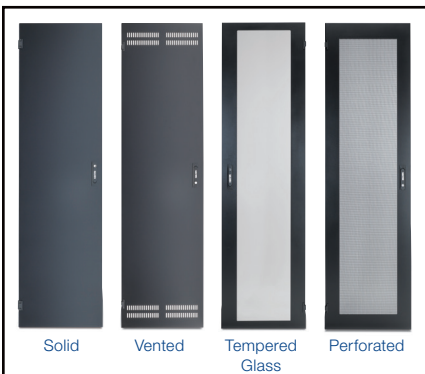
Solid   Vented   Tempered   Perforated
                    Glass
Doors

Advantages in Using Belden Broadcast Enclosure and Rack Series (continued)
Features and Benefits

EIA Rail Kits
- Rails are made of 12-gauge steel (XSF uses 16-gauge steel)
- Use standard EIA-310 hole-pattern (10-32 or 12-24 tapped holes)
- Fully adjustable depth; designed to be moved without need to remove rail support hardware
- Mounting hardware supplied with rack
- A series of lacing holes along the rails allow for the easy attachment of cables. Holes are also compatible with our Quick Mount fasteners
- RU marking on all rails facilitates equipment mounting
- RU marks are hidden once the equipment is mounted

Side Panels
- The tool-less surface-mounted side panels are quick and easy to install
- Flush version side panels (available only on the XMF Series) can be installed in between joined racks (heat barrier) or end-of-row units without any additional floorspace requirements
- Panels can be used to transform a rack into a free-standing enclosure or to close a row on ganged racks (enhancing the installed look and providing added security)
- Feature lifting handles for easy panel removal

Top Panels
- Solid tops prevent dust from entering the enclosure
- Vented tops allow for convection cooling
- Solid top with 10" (550 CFM) fan for forced hot air evacuation
- Solid top with four 4" (320 CFM), low noise fans for forced hot air evacuation

Doors
- Rugged and rigid construction
- Doors mounted with lift-off hinges are capable of 180° swing, even when enclosures are ganged
- Door swing is field reversible
- Glass door uses anti-static tempered glass, allowing easy cleaning, rigidity and high-end look
- Perforated door features 63% mesh opening allowing for minimal air resistance for optimized cooling

- High-quality swing latch includes locking mechanism

Side Cable Chase
(Available on XMER Series)
- Adds 4" of valuable cable management space
- Can be mounted to the side of the enclosure and is compatible with the side panels — or can be mounted in between the enclosures to share cable management space

Base
- 4" riser base allows for easy cable routing from rack to rack
- Available in XMF Series: gangable 1-, 2- and 3-bay bases with easy-to-use anchoring holes
- Series of mounting holes allow rack to be secured using common nuts and bolts
- Feature power outlet mounting openings with cover plate
- Includes mounting hardware and grounding stud
- Multi-rack riser bases to meet your specific space requirements (length, height) are available on custom basis

Recessed Caster Base

- Allows for easy positioning of the rack
- Installs directly to bottom flanges of enclosure
- Recessed casters allow the leveling legs to be lowered when the enclosure is in position and raises the casters off the floor
- Includes hardware
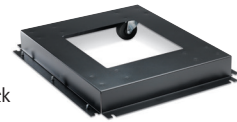
Rack Mount Drawer

- Convenient sliding storage drawers
- 16" deep with lock
- Available in four heights

Front Mount Work Surface

- Provides a convenient work surface
- 16" deep, single-bay (22") and double-bay (44") width
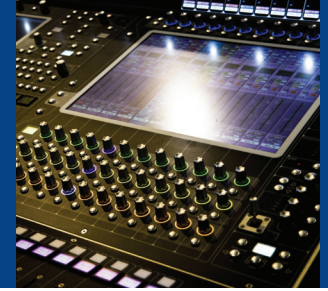
Broadcast Enclosures and Racks

ON AIR

Advantages in Using Belden Broadcast Enclosure and Rack Series (continued)
Features and Benefits

Vertical Lacing Bar
- 1" wide vertical lacing bar is supplied with mounting hardware
- Mounts to the rail supports; fully adjustable depth
- Series of lacing holes are compatible with Belden Quick Mount fasteners to provide flexibility in cable routing

Vertical Lacing Panel
- Mounts to the rail support
- Fully adjustable depth
- Panel is 3" wide and features multiple lacing points
- Ideal for attaching cable bundle

Power Distribution Units
- Extensive offering
- Includes monitored and IP-based smart PDUs
- Climate monitoring option available

(See page 78)

Grounding Provision
- Belden racks are provisioned with grounding studs, enabling integral grounding of rack and accessories
- The copper vertical ground bar mounts to the rack support
- Fully adjustable depth
- Bar is 3/4" wide x 1/8" thick

Quick Mount Fasteners
- Velcro hook and loop with cable tie mount and fasteners provide a quick, flexible way to route the cable bundle within the rack
- Racks are designed with multiple attachment holes (rails, rail supports) for flexibility, ease of installation and to protect cable integrity

Shelves
- Broad selection for 19" mount racks and enclosures
- Cantilevered, 4-point mounted, sliding and keyboard styles

(See page 64)

Belden Broadcast Enclosure and Rack Series Comparison Chart

pg. 52   pg. 54   pg. 57   pg. 60

Specifications		XSF	XMF	XME	XMER
Application		Broadcast, Mobile Telecom, Space Optimization	Broadcast	Broadcast, Audio Video, Security	Broadcast, Audio Video, Security, Head End
Style		Rack Gangable	Rack/Enclosure Stand-Alone or Gangable	Enclosure with Fixed Side Panels Stand-Alone or Gangable	Rack/Enclosure Stand-Alone or Gangable
Dimensions:	Height	20.5"–87" (10–48RU)	22.25"–103" (11–57RU)	48.87"–83.87" (24–44RU)	48.87"–83.87" (24–44RU)
	Width	19.19"	22"	22"	22"
	Depth	18", 24" or 30"	24", 30", 36" or 40"	20" or 26.5"	26.5", 31.5" or 36"
Frame Construction (Fully Welded)		11-Gauge Steel	11- and 14-Gauge Steel	16-Gauge Steel	14- and 16-Gauge Steel
Front and Rear Mounting Rails		Yes: Tapped Corner Posts, (fixed front), Adjustable Rear Rails (5/8" increments)	Yes Fully Adjustable	Yes Fully Adjustable	Yes Fully Adjustable
EIA-310 Compliant		Yes (#10-32 or 12-24 tapped)	Yes (#10-32 or 12-24 tapped)	Yes (#10-32 tapped)	Yes (#10-32 tapped)
Door Options:	Reversible Front and Rear Doors	No	Yes	Yes	Yes
	Solid, Perforated or Tempered Glass	—	Solid or Vented	Yes	Yes
Top Options		No	Solid, Vented, Forced Air Fan	Solid, Vented, Forced Air Fan	Solid, Vented, Forced Air Fan
Side Panel Options:	Removable	No	Yes	No: Fixed	Yes
	Panel Style	—	Flush or Surface Mount	Built-In Frame	Surface Mount
Shelves (Solid, Vented and Keyboard)		Yes	Yes	Yes	Yes
Caster Base Option		No	Yes	Yes	Yes
Power Strip Mounting Provision		Yes	Yes	Yes	Yes
Cable Management Tie Bar		No	Yes, Optional	No	Yes, Optional

BELDEN

XSF Series Racks in ganged arrangement

XSF Series — Slim Frame
Light and customizable frames for Broadcast Trucks and Mobile Telecom

18", 24"
or 30"

19.19"

Part No. shown here: XSF473010000
(47RU H x 19.19"W x 30"D)

Applications

The ultra-slim XSF frame has been designed to minimize the footprint for installation and use in mobile TV trucks. The narrow 19.19" width will accommodate standard 19" mount equipment. The frames gain strength when ganged together in a series.

Design and Structural Features
- Available in 14 heights and 3 depths
- 11-gauge steel, one-piece formed top and bottom; 11-gauge steel formed vertical corner posts
  - 20.5" (10RU) to 87" (48RU) Height x 19.19" Wide x 18", 24" or 30" Deep
- Optional aluminum, weight-saving version available on request
- Front corner post contains EIA-310 hole pattern: 10-32 or 12-24 tapped
- Rail support channels are 16-gauge steel, riveted and welded in place
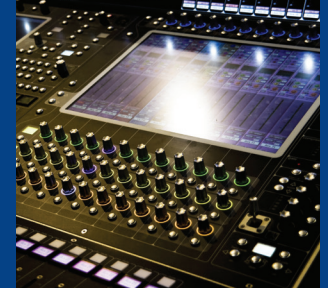
Ease of Installation
- One pair, 16-gauge steel EIA rails, moveable front to rear in .62" increments
- Each frame is supplied with 10-32 or 12-24 clip nuts for attaching equipment to the rails
- Holes in side flanges of each corner post are available for ganging purposes
- Open bottom with hole pattern to bolt frame to floor; captive grounding studs in bottom sills

Color
- Black durable powder coat

Ordering Matrix for XSF Series

Part number example:

XSF282410000

XSF Enclosure, 28RU, 24" depth, with 10-32 tapped frame, no top panel, no rear panel, and no side panels.

Frame Depth

#	Description
18	18"
24	24"
30	30"

Top Panel

#	Description
0	None

Side Panels

#	Description
0	None

XSF 28 24 10 0 0 0

Frame Height

#	Description
10	20.5"
11	22.25"
14	27.5"
19	36.25"
28	52"
29	53.75"
31	57.25"
34	62.5"
39	71.25"
42	76.5"
44	80"
46	83.5"
47	85.25"
48	87"

Mounting Rail Kit
(Includes 1 pair of rails with hardware)

#	Description
10	10-32 Clip Nuts
12	12-24 Clip Nuts

Rear Panel

#	Description
0	None

Note:
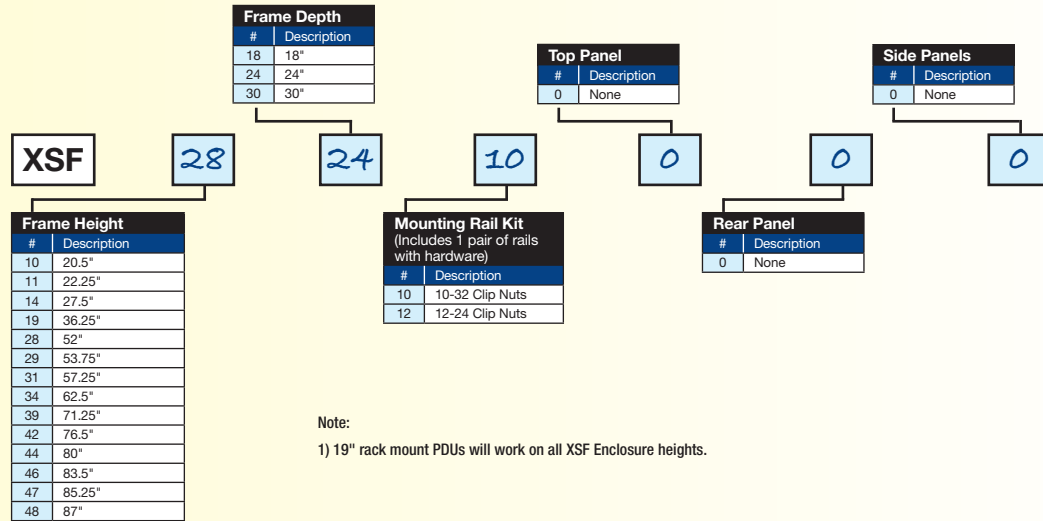
1) 19" rack mount PDUs will work on all XSF Enclosure heights.

XSF Series — Options and Accessories

EIA Rail Kit – 1 Pair
Includes mounting hardware.

XSF [ ] CN [ ]

Rail Height (RU)	
Refer to RU in Frame Height Chart (above)	

Tapped Style	
10	10-32 Clip Nuts
12	12-24 Clip Nuts
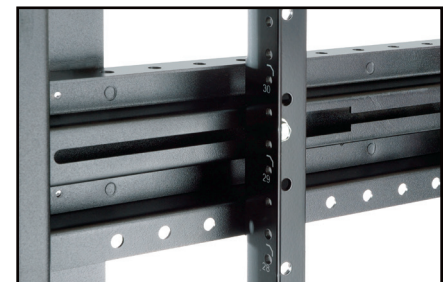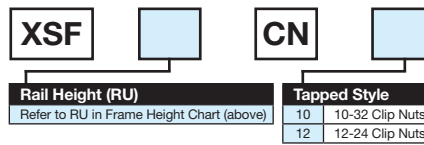
EIA Rail Kit – 1 pair with hardware

Description	Belden Part Number
Other Accessories	
Lacing Accessories	
Quick Mount with Fastener, 10 Pieces	XMFCTM

Broadcast Enclosures and Racks

BELDEN

XMF Series - Media Frame
Flexible cable management in a narrow frame for Broadcast Studios

Part No. shown here: XMF4424100000TB
(44RU H x 22" W x 24" D)

24", 30"
36" or 40"

22"

Part No. shown here: XMF4424102140
(44RU H x 22" W x 24" D)

Cable Management
- Numerous lacing points on two surfaces of each rail support
- Cable tie holes span entire length of EIA rail on the attachment flange (spaced at 1.75")
- Unique cable tie bar is made of formed steel to eliminate sharp edges; provides multiple attachment points; features cable bend radius control and lacing holes; factory mounted when tie bar option is selected

Design and Structural Features
- Available in 26 heights and 4 depths for versatility in designing studios or production facilities
- 11-gauge steel corner posts; 11-gauge formed top and bottom members; 14-gauge formed rail supports
    - 22.25" (11RU) to 103" (57RU) Height x 22" Wide x 24", 30", 36" or 40" Deep
- (4) 12-gauge EIA mounting rails (10-32 or 12-24 tapped)
- Frame is provisioned to accept optional front and rear doors, side and top panels
- **Reversible Doors:** Surface mount solid, 16-gauge doors or top and bottom vented styles
- **Side Panel:** Solid, 16-gauge flush side panel or 1-piece formed surface mount panel; surface mount panels add 1/2" per side to overall width
- **Top Panel:** Solid, vented or with 10" fan
- **Vertical Spacing Panel:** Easy-to-install; 2.75", 3.66", 4.40" and 5.50" widths; 11RU–57RU heights
- **Riser Base:** 4" height, 1-3 bays; fully-welded, gangable; power outlet openings with covers; anchoring holes supplied to ease installation
- **Caster Base:** Recessed; 20", 30", 36" and 40" depths; adds 2.5" to frame height; caster bases install directly to bottom flanges of enclosures; casters are recessed, enabling leveling legs to be lowered when enclosure is in position, allowing the casters to be raised off the floor
- **Rack–Mount Drawers:** 16" deep sliding storage drawers with lock; available in four heights; mount on EIA rails (mounting hardware included); compatible with all 19" mount racks

Ease of Installation
- Frame is provisioned for attaching a tool-less, formed surface mount side panel or a flat, flush panel. Flush side can be installed between joined enclosures without any additional floorspace
- Vertical spacing panels add cable management space between racks; includes two panels with attachment studs; panel features lifting handles
- Open top with optional configurable panels
- Open bottom with hole pattern to bolt frame to floor or a raised base; captive grounding studs in bottom sills
- Ganging can be done after equipment is placed in rack

Color
- Black durable powder coat
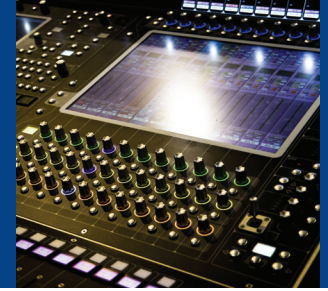
Ordering Matrix for XMF Series

Part number example:

XMF443012104TB

XMF Enclosure, 44RU height, 30" depth, with 10-32 tapped frame, vented top panel, solid swing front door, no rear door, set of surface mount side panels, no power strip, tie bar.

Frame Depth

#	Description
24	24"
30	30"
36	36"
40	40"

Top Panel

#	Description
0	None
1	Solid
2	Vented
3	Solid w/10" Fan

Rear Door

#	Description
0	None
1	Solid Swing
2	Vented

Tie Bar (optional)

#	Description
TB	Tie Bar (also see notes)

XMF	44	30	1	2	1	0	4	TB

RU

RU	Frame Height	RU	Frame Height
11	22.25"	36	66"
12	24"	39	71.25"
13	25.75"	40	73"
14	27.5"	43	78.25"
16	31"	44	80"
17	32.75"	45	81.75"
19	36.25"	46	83.5"
20	38"	48	87"
21	39.75"	49	88.75"
23	43.25"	50	90.5"
24	45"	51	92.25"
28	52"	52	94"
32	59"	57	103"

Mounting Rail Kit
(Includes 2 pair of rails with hardware)

#	Description
1	10-32 Tapped
2	12-24 Tapped

Front Door

#	Description
0	None
1	Solid Swing
2	Vented

Side Panels

#	Description
0	None
1	Flush Mount Side Panel, One
2	Flush Mount Side Panels, Set
3	Surface Mount Side Panel, One
4	Surface Mount Side Panels, Set

Notes:

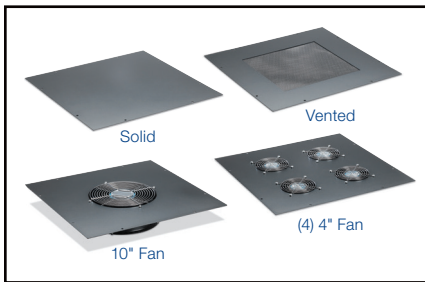1) Tie bar option (TB): 11–14RU=2TB, 16–19RU=4TB, 20–32RU=8TB, 36–57RU=12TB.

2) 19" rack mount PDUs will work on all XMF Enclosure heights.

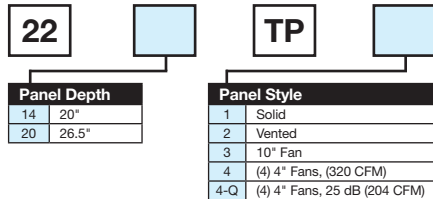## XMF Series — Options and Accessories
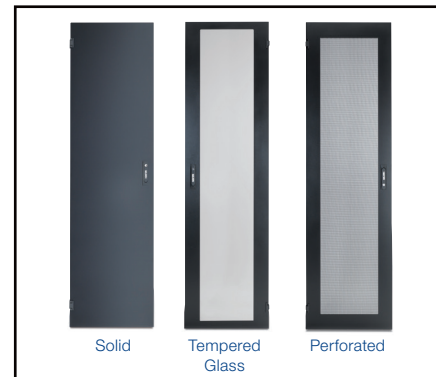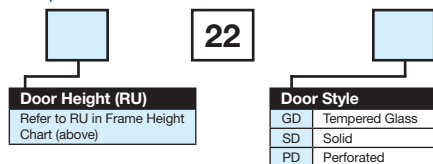
Refer to RU and FRAME DEPTH charts (above).

Top Panel Options

XMF22		TP	

Panel Depth

24	24"
30	30"
36	36"
40	40"

Panel Style

1	Solid
2	Vented
3	10" Fan

Top Panel Options: Solid, 10" Fan, Vented

Base Options

XMF		B		4

Bays (4" High)

1	1 Bay
2	2 Bays
3	3 Bays

Base Depth

24	24"
30	30"
36	36"
40	40"

Recessed Caster Base

Use of caster base adds 2.5" to enclosure height.

XMF22		CB

Base Depth

24	24"
30	30"
36	36"
40	40"
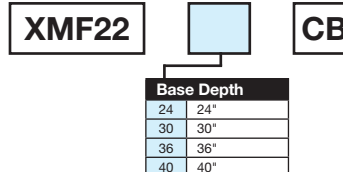
Base Options: 1 Bay, 2 Bays, 3 Bays and Recessed Caster Base

Broadcast Enclosures and Racks

ON AIR

XMF Series — Options and Accessories (continued)

Refer to RU and FRAME DEPTH charts (on previous page).

EIA Rail Kits

EIA Rail Kits – 1 Pair
Includes mounting hardware.
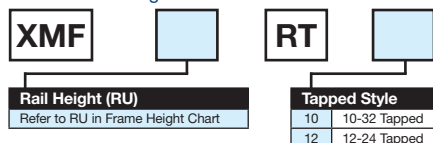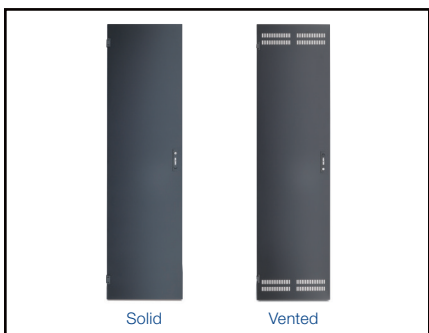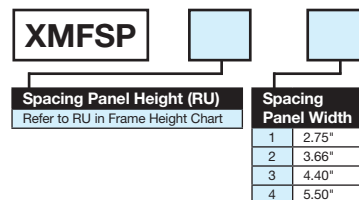
XMF		RT	

Rail Height (RU)	Tapped Style	
Refer to RU in Frame Height Chart	10	10-32 Tapped
	12	12-24 Tapped

Vertical Spacing Panel

XMFSP		

Spacing Panel Height (RU)	Spacing Panel Width	
Refer to RU in Frame Height Chart	1	2.75"
	2	3.66"
	3	4.40"
	4	5.50"

Doors

Door Options
Compatible with enclosure front or rear.

XMF		22	

Door Height (RU)	Door Style	
Refer to RU in Frame Height Chart	SD	Solid
	VD	Vented Top and Bottom

Solid   Vented

Vertical Lacing Bar

XMFVLB	

Lacing Bar Height (RU)
Refer to RU in Frame Height Chart

Vertical Ground Bar

XMFVGB	

Ground Bar Height (RU)
Refer to RU in Frame Height Chart
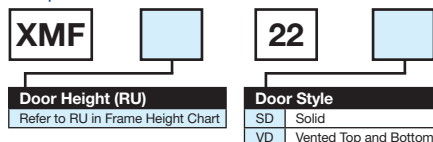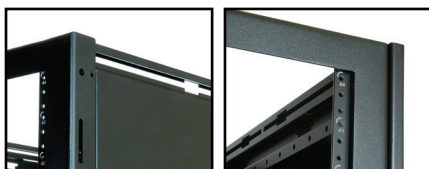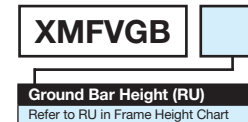
Side Panel Options: Flush Flat Panel (left),
Formed Surface Mount Panel (right)

Side Panel Options

Panel Height (RU)	Panel Depth	Panel Style	
Refer to RU in Frame Height Chart	Refer to Frame Depth Chart	FS	Flush Flat Panel, Single
		SS	Formed Surface Mount Panel, Single

Vertical Lacing Panel

XMFVLP	

Lacing Panel Height (RU)
Refer to RU in Frame Height Chart
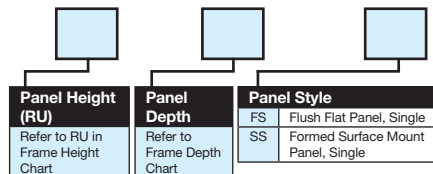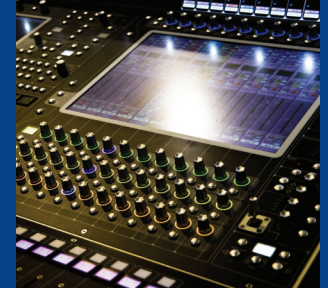
Quick Mount System Components XMFCTM

Description	Belden Part Number
Other Accessories	
Lacing Accesories	
Quick Mount with Fastener, 10 Pcs.	XMFCTM
Velcro 12" Long, Hook and Loop, 10 Pcs./Kit	XCTV12
Velcro 18" Long, Hook and Loop, 10 Pcs./Kit	XCTV18
Velcro 24" Long, Hook and Loop, 10 Pcs./Kit	XCTV24
Seismic Anchor Bracket Kit	
Seismic Anchor Bracket Kit	XMFSB
Adjoining Kits	
Bolt-Together Kit for Frames (incl. hardware)	XMFBK01
Kit for Loaded Rack Application	XMFBK02
Bolt-Together Kit for Bay Bases (incl. hardware)	XMFBK03
Edge Guard Kits (for use with Base Bolt-Together Kit)	
24"D, 30"D (1 base cutout)	XMFEG01
36"D, 40"D (1 base cutout)	XMFEG02

XME Series — Media Enclosure

Cost effective and efficient design for Broadcast, Commercial AV and Security applications

Design and Structural Features

- Available in four heights and two depths
- 16-gauge, one-piece formed and vented sides; 16-gauge formed bottom and top
  - 48.87" (24RU) to 83.87" (44RU) Height x 22" Wide x 20" or 26.5" Deep
- Top and bottom EIA rail support channels are an integral part of the top and bottom; formed center rail support channels are spot welded to the sides
- Two 12-gauge EIA mounting rails (10-32 tapped); additional rails can be added (optional)
- Front and side ventilation for convection cooling
- Stand-alone or gangable, with integrated side panels
- **Reversible Doors:** Frame is available with optional front and rear solid, glass or perforated surface mount doors
- **Top Panel:** Solid, vented, with 10" fan or (4) 4" fans; depths of 20 and 26.5"
- **Caster Base:** Recessed, depths of 20" and 26.5"; adds 1" to height of frame; casters are recessed, allowing leveling legs to be lowered when enclosure is in position, allowing casters to be raised off the floor
- **Rack Mount Drawers:** 16" deep sliding storage drawers with lock; available in four heights; mount on EIA rails (mounting hardware included); compatible with all 19" mount racks

Cable Management

- **Rear Access —** Top: three antenna knockouts, each .62" dia. two conduit knockouts, .87" dia. and 1.12" dia. 9" x 2.25" opening with cover plate. Bottom: 4 conduit knockouts, two @ .87" dia., two @ 1.12" dia. 9" x 2.25" opening with cover plate
- **Side Access —** Top: 4" dia. knockout, located toward the rear. Bottom: 4" dia. knockout, located toward the rear. Optional edge guard to protect the cable is available
- **Top Access —** 1", 1.5" and 2" knockouts, located toward the rear of top panel
- Cable tie holes span entire length of EIA rail on the attachment flange (spaced at 1.75")
- Fully open top and bottom facilitate cable routing

Ease of Installation

- Partially open top with optional configurable panels; rear of top contains various electrical knockouts for cable entry
- Open bottom with leveling legs and hole pattern to bolt frame to floor, captive grounding studs in bottom sills
- Ganging can be done after equipment is placed in rack

Part No. shown here: XME44260001
(44RU H x 22" W x 26" D)

20" or 26.5"

22"

Part No. shown here: XME442641310
(44RU H x 22" W x 26" D)

Color

- Black durable powder coat

Broadcast Enclosures and Racks

BELDEN

Ordering Matrix for XME Series

XME44203131

XME Enclosure, 44RU height, 20" depth, with 10" fan top panel, glass swing front door, perforated swing rear door, and two fixed vented side panels.

Frame Depth

#	Description
20	20"
26	26"

Front Door

#	Description
0	None
1	Glass Swing
2	Solid Swing
3	Perforated Swing

Side Panels

#	Description
1	Two (2) Integrated Solid Sides w/Venting

XME **44** **20** **3** **1** **3** **1**

RU

RU	Frame Height
24	48.87"
35	68.12"
40	76.87"
44	83.87"

Top Panel

#	Description
0	None
1	Solid
2	Vented
3	Solid w/10" Fan
4	Solid w/(4) 4" Fans

Rear Door

#	Description
0	None
1	Glass Swing
2	Solid Swing
3	Perforated Swing
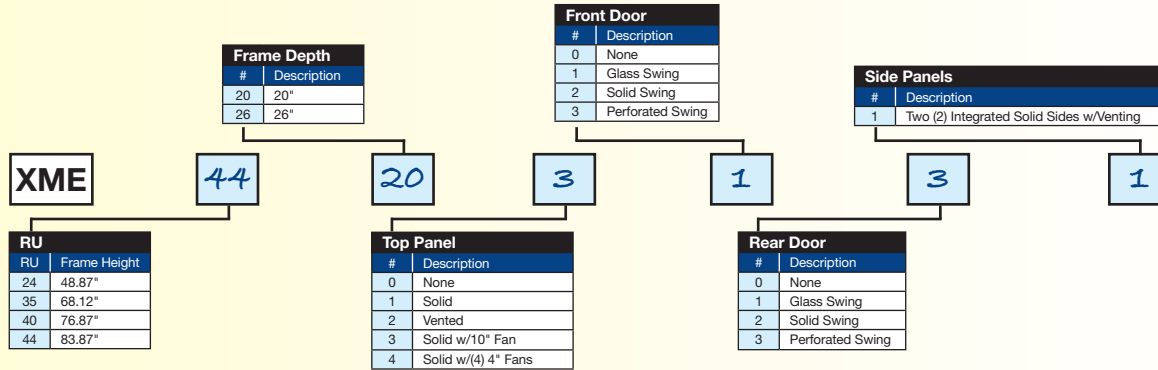
Note:

1) 19" rack mount PDUs will work on all XME Enclosure heights.

XME Series — Options and Accessories

Refer to RU and FRAME DEPTH charts (above) as needed.

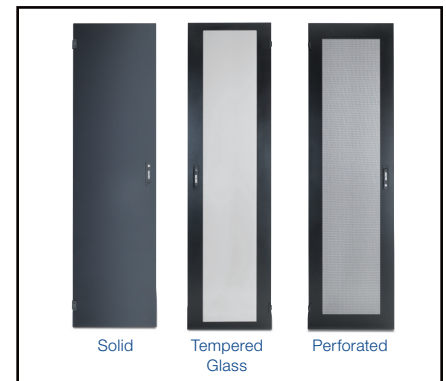Solid

Vented

(4) 4" Fan

10" Fan

Top Panels

Top Panel Options

22 **TP**

Panel Depth

14	20"
20	26.5"

Panel Style

1	Solid
2	Vented
3	10" Fan
4	(4) 4" Fans, (320 CFM)
4-Q	(4) 4" Fans, 25 dB (204 CFM)

Door Options
Compatible with enclosure front or rear.

22

Door Height (RU)

Refer to RU in Frame Height Chart (above)

Door Style

GD	Tempered Glass
SD	Solid
PD	Perforated

Solid

Tempered Glass

Perforated

Doors

Broadcast Enclosures and Racks
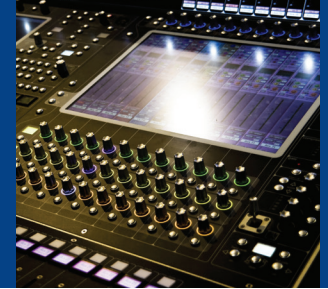
XME Series — Media Enclosure Options and Accessories (continued)

Refer to RU and FRAME DEPTH charts (on previous page).

Front Mount Work Surface
For standard 19" mounting.

XMEW [ ]

Work Surface	
22	1 Bay, 22"
44	2 Bays, 44"
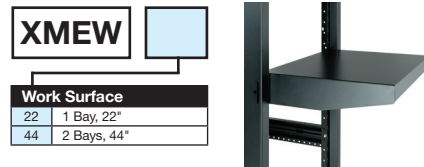
Vent Kits
Allows for top vent to be blocked to optimize forced air cooling (fanned top).

XME [ ]

Vent Kit	
SVC	Side Vent Cover Kit. Plate to Block Off Vents in Side
FVC	Front Vent Cover Kit. Plate to Block Off Vents in Front

Vent Kits

Vertical Lacing Panel

LP [ ]

Lacing Panel			
24	24RU	40	40RU
35	35RU	44	44RU

EIA Rail Kits — 1 Pair with Hardware

XMER [ ] **RT10**

Rail Height (Frame HT)			
24	48"	40	76"
35	67.5"	44	83"

EIA Rail Kits

Recessed Caster Base

22 [ ] **CB1**

Base Depth	
20	20"
26	26"

Rack Mount Drawers
For standard 19" mounting.

RMD [ ]

Drawer Height			
2	2RU	4	4RU
3	3RU	5	5RU

Rack Mount Drawers

Description	Belden Part Number
Other Accessories	
Lacing Accesories	
Quick Mount with Fastener, 10 Pcs.	XMFCTM
Velcro 12" Long, Hook and Loop, 10 Pcs./Kit	XCTV12
Velcro 18" Long, Hook and Loop, 10 Pcs./Kit	XCTV18
Velcro 24" Long, Hook and Loop, 10 Pcs./Kit	XCTV24
Rack Mount Lacing Bar	
Rack Mount Lacing Bar	9512-1903
Top Mounted Ladder Rack Support	
Top-Mounted Ladder Rack Support	XMELM
Adjoining Kit	
(4) 1/4" Whiz Bolt and Whiz Nuts	XMEBK01
Grounding Kit	
Straps and 1/4" Wing Nuts	XMEGK01
Edge Guard Kits	
Edge Guard Kit	XMEEG01
Seismic Anchor Bracket Kit	
Seismic Anchor Bracket Kit	XMERSB

Quick Mount Swivel Base Fastener XMFCTM

Broadcast Enclosures and Racks

BELDEN

Part No. shown: XMER44310000
(44RU H x 22" W x 31.5" D)
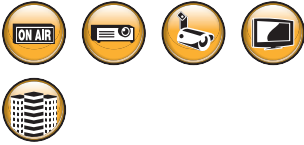
XMER Series - Media Enclosure
Flexible and economical design for Broadcast, Commercial AV, Security and Head End applications

48.87"– 83.87"

26.5", 31.5", or 36"

22"

Part No. shown: XMER443131320
(44RU H x 22" W x 31.5" D)

Ease of Installation
- Open top with optional configurable panels
- Open bottom with leveling legs and hole pattern to bolt frame to floor; captive grounding studs in bottom sills
- Ganging can be done after equipment is placed in rack

Design and Structural Features
- Available in four heights and three depths; taller units (48RU, 50RU and 52RU) available on demand
- 14-gauge, one-piece formed top and bottom; 16-gauge formed vertical corner posts
    - 48.87" (24RU) to 83.87" (44RU) Height x 22" Wide x 26.5", 31.5" or 36" Deep
- EIA rail support is integral part of the top and bottom with spot-welded inner support channel
- Middle rail support channels are spot-welded construction of two 16-gauge formed rail channels, creating .12" thick support channels per side
- (4) 12-gauge EIA mounting rails (10-32 tapped)
- **Reversible Doors:** Frame available with optional front and rear solid, glass or perforated surface mount doors
- **Side Panels:** Surface mount removable side panels, adds 1/2" to overall width
- **Top Panel:** Solid, vented, with 10" fan or (4) 4" fans; depths of 26.5", 31.5" and 36"
- **Side Cable Chase:** 4" wide chase for added cable management; can be mounted between enclosures or used as side unit; will accept a side panel (44RU enclosures only)
- **Caster Base:** Recessed, depths of 26.5", 31.5" and 36"; adds 1" to frame height. Caster bases install directly to bottom flanges of enclosures; casters are recessed, allowing leveling legs to be lowered when enclosure is in position, and casters to be raised off floor

Cable Management
- **Rear Access —** Top: three antenna knockouts, each .62" dia. two conduit knockouts, .87" dia. and 1.12" dia. 9" x 2.25" opening with cover plate; Bottom: four conduit knockouts, two @ .87" dia., two @ 1.12" dia. 9" x 2.25" opening with cover plate
- **Side Access —** Top: 4" dia. knockout, located toward rear; Bottom: 4" dia. knockout, located toward rear; optional edge guard to protect the cable available
- **Top Access —** 1", 1.5" and 2" knockouts, located toward rear of top panel
- Lacing points on two surfaces of each rail support facilitate cable management
- Cable tie holes span entire length of EIA rail on attachment flange (spaced at 1.75")
- Cable tie bar made of formed steel, eliminates sharp edges; provides multiple attachment points; features cable bend radius control and lacing holes; factory mounted when tie bar option is selected

Color
- Black durable powder coat

Ordering Matrix for XMER Series

Part number example:

XMER40362232

XMER Enclosure, 40RU height, 36" depth, with vented top panel, solid swing front door, perforated swing rear door, and two solid side panels.

Frame Depth

#	Description
26	26"
31	31"
36	36"*

*36"D N/A in 24RU Frame Height

Front Door

#	Description
0	None
1	Glass Swing
2	Solid Swing
3	Perforated Swing

Side Panels

#	Description
0	None
1	Flush Mount Side Panel, One
2	Flush Mount Side Panels, Set

Tie Bar (optional)

#	Description
TB	Tie Bar (also see notes)

XMER — **40** — **36** — **2** — **2** — **3** — **2**

RU

RU	Frame Height
24	48.87"
35	68.12"
40	76.87"
44	83.87"

Top Panel

#	Description
0	None
1	Solid
2	Vented
3	Solid w/10" Fan
4	Solid w/(4) 4" Fans

Rear Door

#	Description
0	None
1	Glass Swing
2	Solid Swing
3	Perforated Swing

Notes:

1) Tie bar option (TB) 24RU=8TB, 35–40–44RU=12TB.

2) 19" rack mount PDUs will work on all XMER Enclosure heights.

XMER Series — Options and Accessories

Refer to RU and FRAME DEPTH charts (above).

Top Panel Options

22 — **TP**

Panel Depth	
26	26.5"
31	31.5"
36	36"

Panel Style	
1	Solid
2	Vented
3	10" Fan
4	(4) 4" Fans (320 CFM)
4-Q	(4) 4" Fans, 25 dB (204 CFM)

Solid

Vented

10" Fan

(4) 4" Fan

Door Options
Compatible with enclosure front or rear.

22

Door Height (RU)
Refer to RU in Frame Height Chart

Door Style	
GD	Tempered Glass
SD	Solid
PD	Perforated
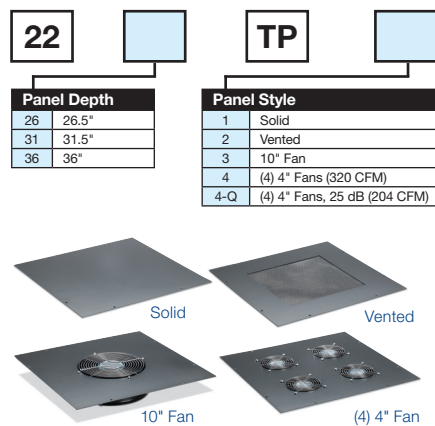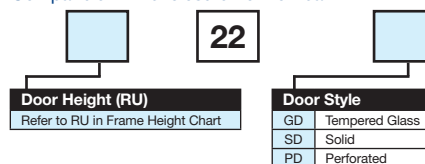
Side Panel Options
Solid removable (single).
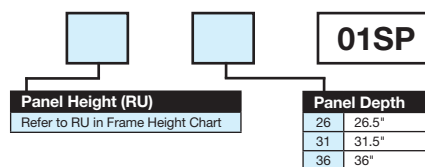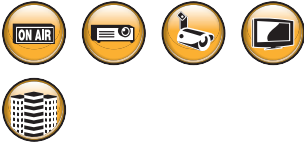
01SP

Panel Height (RU)
Refer to RU in Frame Height Chart

Panel Depth	
26	26.5"
31	31.5"
36	36"

Solid

Tempered Glass

Perforated

Doors

Broadcast Enclosures and Racks

BELDEN

XMER Series — Options and Accessories (continued)

Refer to RU and FRAME DEPTH charts (on previous page).

EIA Rail Kits — 1 Pair with Hardware

| XMER | | RT10 |

Rail Height (Frame HT)			
24	48"	40	76"
35	67.5"	44	83"

EIA Rail Kits

Side Cable Chase (4" Wide)

| 44 | | CC |
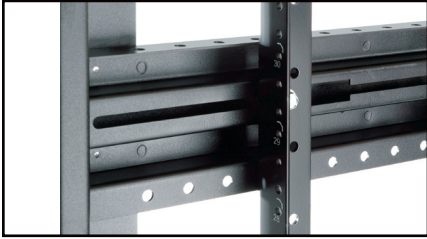
Chase Depth	
26	26.5" (RU44)
31	31.5" (RU44)
36	36" (RU44)

Rack Mount Drawers
For standard 19" mounting.

| RMD | |

Drawer Height			
2	2RU	4	4RU
3	3RU	5	5RU

Rack Mount Drawers

Vertical Lacing Panel

| LP | |

Lacing Panel			
24	24RU	40	40RU
35	35RU	44	44RU

Recessed Caster Base

| 22 | | CB1 |

Base Depth	
26	26"
31	31"
36	36"

Recessed Caster Base

Front Mount Work Surface
For standard 19" mounting.

| XMEW | |

Work Surface	
22	1 Bay, 22"
44	2 Bays, 44"

Seismic Anchor Bracket Kit

Description	Belden Part Number
Other Accessories	
Lacing Accesories	
Quick Mount with Fastener, 10 Pcs.	XMFCTM
Velcro 12" Long, Hook and Loop, 10 Pcs./Kit	XCTV12
Velcro 18" Long, Hook and Loop, 10 Pcs./Kit	XCTV18
Velcro 24" Long, Hook and Loop, 10 Pcs./Kit	XCTV24
Rack Mount Lacing Bar	
Rack Mount Lacing Bar	9512-1903
Top-Mounted Ladder Rack Support	
Top-Mounted Ladder Rack Support	XMELM
Adjoining Kit	
(4) 1/4" Whiz Bolt and Whiz Nuts	XMEBK01
Grounding Kit	
Straps and 1/4" Wing Nuts	XMEGK01
Seismic Anchor Bracket Kit	
Seismic Anchor Bracket Kit	XMERSB

BELDEN

Components and Accessories

Access control with authentication done

Remotely manage server access

while maintaining an indisputable audit trail with Belden Enclosure Access Systems.

Large Selection of Rack and Enclosure Accessories to Meet Equipment Mounting, Cable Management, Grounding/Bonding and Access Control Challenges

Components and accessories designed for seamless compatibility with Belden racks and enclosures products.

- Cantilevered and 4-point mount shelf mounting options for non-rack mount components

- Organize and manage patch cords and cables with horizontal managers available in multiple sizes and capacities

- Optimize air separation for improved availability with solid and brushed filler panels

- Ensure installation security and electrical conformance with bonding and grounding products

- Meet active equipment mounting requirements with multiple mounting hardware products

- Access control for enclosures protects your physical assets and data

BELDEN

Enclosure Shelves
19" Shelves
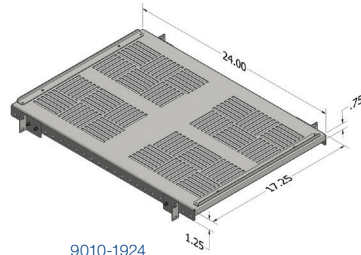
9010-1924
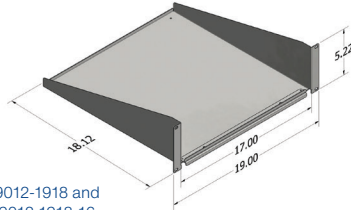
9012-1918 and
9012-1918-16

9010-1930

9011-1918 and
9011-1918-16
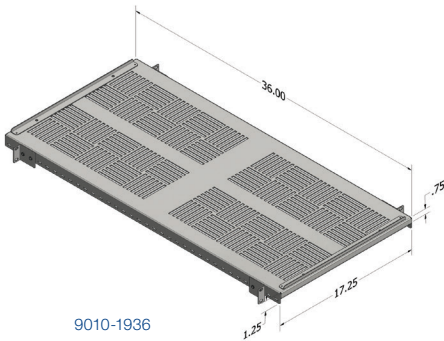
9010-1936

9011-1912

9015-1909

Features

- Compatible with 19" mount enclosures and racks (23" mount option available on request)
- Available in depths of 12" to 36" cantilevered or 4–point mount types
- Shelves include mounting hardware
- Load ratings range from 25 lbs to 200 lbs
- Standard shelf color is black (other colors are available on custom basis for volume orders)
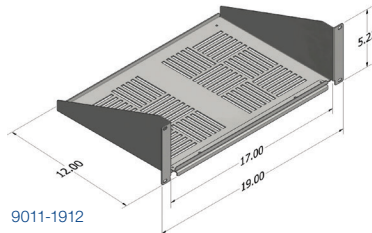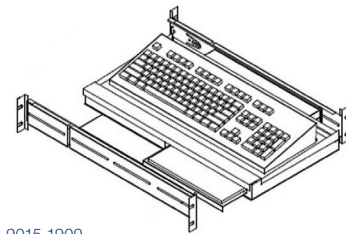
Technical Specifications

Description	Depth*	Load Rating	Belden Part Number
19" Heavy-Duty Adjustable Shelf (Vented), 4-Point Mounting	24"	150 lbs	**9010-1924**
19" Heavy Duty Adjustable Shelf (Vented), 4-Point Mounting	30"	150 lbs	**9010-1930**
19" Heavy Duty Adjustable Shelf (Vented), 4-Point Mounting	36"	150 lbs	**9010-1936**
19" Flush Mount Cantilevered Shelf (Vented) – Compatible with 27.5" Deep Wall Mount Enclosures	12"	50 lbs	**9011-1912**
19" Flush Mount Cantilevered Shelf (Vented)	18"	50 lbs	**9011-1918**
19" Flush Mount Cantilevered Shelf (Vented)	18"	25 lbs	**9011-1918-16**
19" Flush Mount Cantilevered Shelf (Solid)	18"	50 lbs	**9012-1918**
19" Flush Mount Cantilevered Shelf (Solid)	18"	25 lbs	**9012-1918-16**
19" Heavy-Duty Sliding Adjustable Shelf (Vented), 4-Point Mounting	24"	100 lbs	**9013-1924**
19" Sliding Rotating Keyboard Shelf	N/A	N/A	**9015-1909**

Note:
*Compatibility with enclosure frame size to be validated when selecting shelf depth.

Faster.
Easier.
Better.

Horizontal Cable Management

Application

Horizontal managers allow routing of copper and fiber cables/patch cords in racks and enclosures while helping to maintain proper bend radius and organize array for ease of moves, adds and changes.

Features include:

- 1RU to 4RU height
- 19" mount includes mounting hardware
- Compatible with racks and enclosures
- Selection of ring, finger and cable tie bar style horizontal managers
- Standard color is black (other colors available on volume orders)

Top: 9512-1901, Bottom: 9512-1902

9510-1901
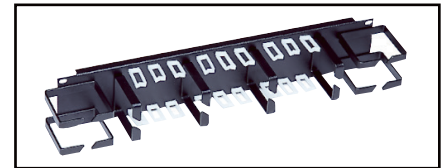
9511-1902
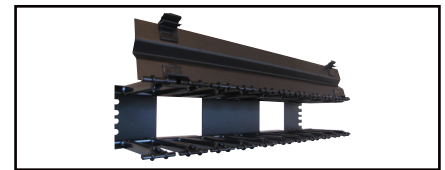
BHH192UC Horizontal Manager
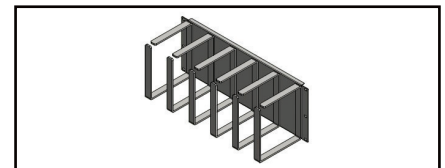
9511-1904-01

Horizontal Managers

Description	RU	Manager Cross Section	Belden Part Number
Horizontal Manager with Saddle Rings	1RU	1.65"H x 3"D	9510-1901
Horizontal Manager with Saddle Rings	2RU	3"H x 3"D	9511-1902
Horizontal Manager with Finger Stock and Cover	1RU	1.5"H x 2"D	9512-1901
Horizontal Manager with Finger Stock and Cover	2RU	3"H x 3"D	9512-1902N
Horizontal Manager with Finger Stock and Cover, Front & Rear	2RU	3"H x 3"D Front/Rear	9512-1902-FR
Horizontal Manager with Molded Fingers and Hinging Cover, Enclosure Application	1RU	1.75"H x 5.66"D	BHH191UC
Horizontal Manager with Molded Fingers and Hinging Cover, Enclosure Application	2RU	3.5"H x 5.66"D	BHH192UC
Horizontal Manager with Molded Fingers and Hinging Cover, Enclosure Application	3RU	5.25" x 5.66"D	BHH193UC
Horizontal Manager with Molded Fingers and Hinging Cover, Enclosure Application	4RU	7" x 5.66"D	BHH194UC
Horizontal Manager with Molded Fingers and Hinging Cover, Open Rack Application	1RU	1.75"H x 7.22"D	BHH191UR
Horizontal Manager with Molded Fingers and Hinging Cover, Open Rack Application	2RU	3.5"H x 7.22"D	BHH192UR
Horizontal Manager with Molded Fingers and Hinging Cover, Open Rack Application	3RU	5.25" x 7.22"D	BHH193UR
Horizontal Manager with Molded Fingers and Hinging Cover, Open Rack Application	4RU	7" x 7.22"D	BHH194UR
Horizontal Cable Tie Bar with 1.5" Deep Offset	1RU	N/A	HCB-1932-1.5-01
Horizontal Cable Tie Bar with 2.5" Deep Offset	2RU	N/A	HCB-1932-2.5-01
Horizontal Ring Style Manager, High Capacity, Open Rack Application	2RU	3.5"H x 6.8"D	9511-1902-01
Horizontal Ring Style Manager, High Capacity, Open Rack Application	3RU	5.25"H x 6.8"D	9511-1903-01
Horizontal Ring Style Manager, High Capacity, Open Rack Application	4RU	6.9"H x 6.8"D	9511-1904-01

BELDEN

Light Kits

9420-1905

9420-1906

Construction

• Light Kits are compatible with all 19" mount racks or enclosures
• Uses one (1) rack unit
• Includes 120V AC adapter and mounting hardware

Options

Description	Belden Part Number
Dual Adjustable 5W Halogen Lights & Dimmer, UL Listed	9420-1905
Single Adjustable 5W Halogen Light & Dimmer, UL Listed	9420-1906
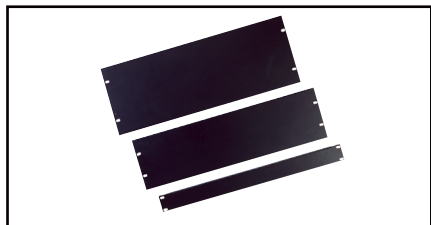
Steel Filler Panels
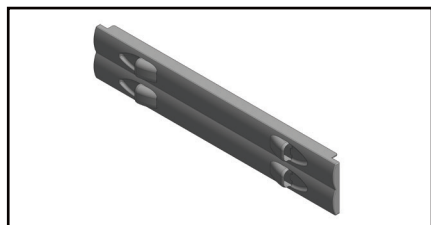
Plastic Filler Panel
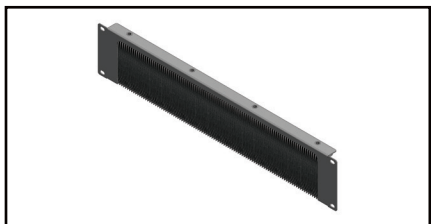
XFPWB2U101
Brushed filler panel allows routing of cable from front to rear while providing air flow separation. Panel is open ended, allowing mounting without having to unplug cables.

Filler Panels

Application

• Filler Panels allow blocking of unused rack units (RU) for optimized airflow and separation between cold supply air and hot return air
• Best practices in Data Centers includes blanking of all unused rack units (RU)
• Filler Panels are compatible with 19" mount racks and enclosures

Options

Description	Color	Belden Part Number
Filler Panels, Steel (includes Mounting Hardware)		
1RU Solid Filler Panel	Black/CO White	9910-0100-01/-02
2RU Solid Filler Panel	Black/CO White	9911-0200-01/-02
2RU Solid Filler Panel with "Belden" Logo Silk Screen	Black	9911-0201-01
3RU Solid Filler Panel	Black/CO White	9912-0300-01/-02
4RU Solid Filler Panel	Black/CO White	9913-0400-01/-02
8RU Solid Filler Panel	Black/CO White	9914-0800-01/02
Filler Panels, Plastic Tool-Less		
1RU Solid Filler Panel (fits 10-32, 12-24 and square holes rails)	Black/CO White	9910-0100PL-01/-02
2RU Solid Filler Panel (fits 10-32, 12-24 and square holes rails)	Black/CO White	9911-0200PL-01/-02
Filler Panels with Brush Pass Thru (includes Mounting Hardware)		
1RU Filler Panel with Brush (open ended)	Black/CO White	XFPWB1U101/02
2RU Filler Panel with Brush (open ended)	Black/CO White	XFPWB2U101/02
3RU Filler Panel with Brush (open ended)	Black/CO White	XFPWB3U101/02
4RU Filler Panel with Brush (open ended)	Black/CO White	XFPWB4U101/02

Components and Accessories

Grounding and Bonding

Options

Description	Belden Part Number
19" Horizontal Isolated Copper Ground Bar, .25" Thickness x 1" W, Tapped 10-32	**9714-0190**
Grounding/Bonding Strap Kit (11" strap with hardware)	**XBS-11-0001**
Grounding/Bonding Strap Kit (18" strap with hardware)	**XBS-18-0002**
Grounding/Bonding Strap Kits	
Bonding Strap Kit (11" strap with hardware and anti-oxidation compound)	**XBS-11-0001**
Bonding Strap Kit (18" strap with hardware and anti-oxidation compound)	**XBS-18-0001**
Grounding Lug Kit (Ground Lug and 1/4-20 Kep Nut)	**20128-KIT**

Notes:
Bonding strap kit is included with enclosure doors, sides and top panels.
Grounding lug kit is for use with rack and enclosure welded ground studs.

9714-0190
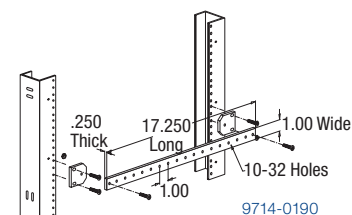
19" mount grounding bar is 0.25" thick x 1.25" wide, with #10-32 tapped holes; isolating mounts with hardware are included.

Mounting Hardware

Application

Included adjoining hardware for ganging of racks and enclosures, plus a variety of bolts, screws and nuts for mounting of active and passive networking devices into enclosures and racks.

Description	Quantity/Package	Belden Part Number
10-32 Hardware		
10-32 Mounting Screws	50	**8911-0100**
10-32 Cage Nuts (for use with square hole rails)	50	**8915-0100**
10-32 Cage Nuts (for use with square hole rails)	20	**8915-0220**
10-32 Clip Nuts	20	**8915-0320**
12-24 Hardware		
12-24 Mounting Screws	50	**8917-0100**
12-24 Cage Nuts (for use with square hole rails)	50	**8917-0220**
12-24 Clip Nuts	20	**8917-0320**
M6 Hardware		
M6 Cage Nut (for use with square hole rails)	50	**8913-0100**
M6 Cage Nut (for use with square hole rails)	20	**8913-0220**
M6 Clip Nut	20	**8913-0320**
M6 x 16 mm Mounting Screw	50	**8914-0100**
Cable Ties		
Velcro Cable Ties, 8"L x 0.5"W, 25 per Roll	25	**AX100783**
Velcro Cable Ties, 12"L x 0.5"W, 25 per Roll	25	**AX100784**
12" Fiber Optic Cable Manager	1	**AX102516**
24" Fiber Optic Cable Manager	1	**AX102517**
Quick Mount Velcro Saddle with Fastener	10	**XMFCTM**

AX102516 Cable Slack Management Ring - 12" diameter

Adjoining Hardware

Description	Enclosure Series	Belden Part Number
Enclosure Adjoining Kit (4) 5/16-18 Hex Head Bolt; (4) 5/16-18 Hex Nut; (8) 5/16 Flat Washer)	XS, XN, XM,XSS, XNX	**8910-0100**
Enclosure Adjoining Kit for NEMA 12 (4) 5/16-18 Hex Head Bolt; (4) 5/16-18 Hex Nut; (8) 5/16 Flat Washer, includes Gasketing	XNM	**XNM-0100**
Bolt-Together Kit for XSF Frames (incl. hardware)	XSF	**XSFBK01**
Adjoining Kit (4) 1/4-20 x 5/8 Carriage Bolt; (4) 5/16 External Tooth Lock Washer; (4) Whizlock Nuts	XMF	**XMFBK01**
Loaded Rack Application Bolt Kit (4) 12-24 x 1 3/4 Screw; (8) External Tooth Washer; (4) 12-24 Hex Nuts; (4) .5 x .125"W Tubing Nylon	XMF	**XMFBK02**
Adjoining Kit (4) 1/4-20 x 5/8 Whizlock Bolt; (4) 1/4-20 Whizlock Nut	XME, XMER	**XMEBK01**
Joining Kit (4) 5/16 x 1 Bolt, (8) 5/16 Washers, (4) 5/16 Nuts	—	**XBK01**

Note:
Adjoining hardware is included with the enclosures.

Components and Accessories

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Enclosure Access Sytems
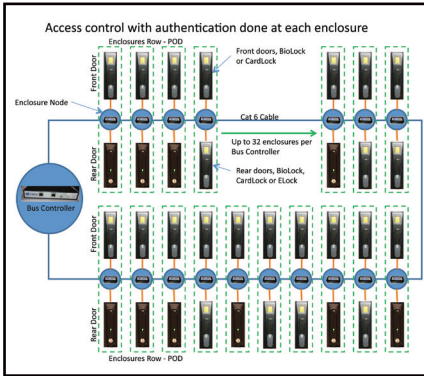
Access control with authentication done at each enclosure
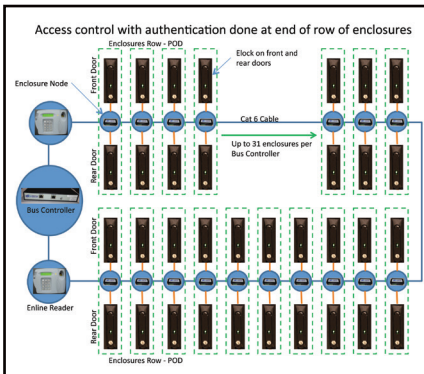
Access control with authentication done at end of row of enclosure

8815-0210 BUS Enline Reader w/PIN and Fingerprint

iClass Card, Biometrics and E-Lock Handle Options

Application

Physical assets protection/access is key to IT operations, such as Data Centers, Enterprise and Remote Computing locations. Belden enclosures can be equipped with a variety of locking handles, including state-of-the-art enclosure access control and management solutions, allowing conformance to privacy rules and regulations (PCI DSS, HIPAA, FISMA and more).

Features

- Centralized administration of up to thousands of units
- Real-time monitoring and alerts
- Indisputable audit trails
- Enclosures or row/pod level access
- Flexibility to choose between fingerprint or RFID card access

Stand alone enclosure access systems are for smaller or distributed installations. Each cabient has a dedicated controller and biometric (BioLock) or card reader (CardLock) used for user authentification.

In a networked enclosure access sytem, a central controller distributes control signals and power to up to 32 enclosures when authenticating at the enclosure level and 31 enclosures when authenticating at the end of row. For enclosure level authentication, choose between fingerprint (BioLock) or RFID card (CardLock). For end-of-row authentication, the user enters which enclosure door they are attempting to access, then uses any combination of PIN, RFID card and fingerprint to authenticate.

Description	Belden Part Number
Locking Swing Handles	
Swing Handle (1) w/Common CH-751 Lock Cylinder/Key, w/Belden Logo Silk Screen	8815-0100
Swing Handle (1) w/Special Non CH-751 Lock Cylinder/Key, w/Belden Logo Silk Screen	8815-0101
Swing Handle (1) w/Key Lock and Padlock Loop (1), Padlock Not Included	8815-0102
Swing Handle (1) w/3 Digit Combination Lock and Key Overide	8815-0103
Smart Lock/Access System	
BUS Controller, includes 48 VDC PSU, 2 x 14' CAT 6 Cable	8815-0200
End of Rows Reader	
BUS Enline Reader w/PIN and Fingerprint	8815-0210
BUS Enline Reader w/PIN, Fingerprint and HID ICLASS 13.56 MHz	8815-0211
BUS Enline Reader w/PIN, Fingerprint and HID 125 KHz	8815-0212
Enclosures Level & Row Level Access Systems - Networked application	
Enclosure Node w/1 Biolock Swing Handle	8815-0221
Enclosure Node w/1 Biolock and 1 Elock Swing Handle	8815-0222
Enclosure Node w/2 Biolocks Swing Handle	8815-0223
Enclosure Node w/1 Cardlock Swing Handle	8815-0224
Enclosure Node w/1 Cardlock and 1 Elock Swing Handle	8815-0225
Enclosure Node w/2 Cardlocks Swing Handle	8815-0226
Enclosure Node w/1 Elock Swing Handle	8815-0227
Enclosure Node w/2 Elocks Swing Handle	8815-0228
Enclosures Level Access Systems - Stand alone application	
Access Controller w/1 Cardlock, 18.5 V PSU, 1 Door Switch	8815-0240
Access Controller w/1 Cardlock, 1 Elock, 18.5 V PSU, 2 Door Switches	8815-0241
Access Controller w/2 Cardlocks, 18.5 V PSU, 2 Door Switches	8815-0242
Access Controller w/1 Biolock, 18.5 V PSU, 1 Door Switch	8815-0243
Access Controller w/1 Biolock, 1 Elock, 18.5 V PSU, 2 Door Switches	8815-0244
Access Controller w/2 Biolocks, 18.5 V PSU, 2 Door Switches	8815-0245
Software - Access Interface and Management	
Server/Client Software for Connection up to 10 Enclosures	8815-0280
Server/Client Software for Connection up to 50 Enclosures	8815-0282
Server/Client Software for Connection up to 100 Enclosures	8815-0283
Server/Client Software for Connection up to 250 Enclosures	8815-0284
Electronic Slide Handle	
Electronic Slide Handle (TZ compatible) with Multiport Link & Lock Cylinder	8815-0104

Note:
Includes door switch(es) and 14' of Cat 6 cables.

BELDEN

Power Distribution & Climate Monitoring

Power Availability, Distribution, Allocation and Monitoring are Critical Data Center and Broadcast Studio Requirements

Precisely distribute, monitor, analyze and manage power distribution in your facility to **maximize processing capacity** and promote power efficiency.

Belden in-enclosure mounted Power Distribution Units (PDUs) and Environment Monitors and Sensors are designed from high-quality components to support all your mission critical applications.

A key component of our Data Center Ready Solution (DCRS), Belden PDUs allow configuration of integrated and optimized hosting systems, including fiber/copper connectivity and cabling, enclosures, cable management and air flow management. They are designed to facilitate seamless integration into Belden enclosures and racks, and include multiple mounting options for maximized air flow and cable management in high-density servers or switch hosting applications.

Paired with our extensive line of environmental monitors and sensors, which include alarm thresholds, reporting functionality, and a built-in intuitive web interface for remote access, Belden has everything you need to precisely monitor, analyze and log key parameters, enabling you to identify current fluctuations and quickly troubleshoot potential problems.

*Lacing-PDU mounting panels (p.75) are not included with the enclosures or the PDU's and need to be ordered separately. PDU's/panels uses tool less "button" style mounting.

BELDEN

Enclosure Power Distribution Units (PDUs)

Belden PDU Options and Features

- All Belden PDUs are UL and cUL listed 60650
- Select from a wide offering of PDUs designed to meet your specific power requirements; single phase, 3-phase (WYE and Delta configurations)

Power	Amp	Voltage	Phase	Plug
3.3kW	20A	250V	1 Phase	L6-20P or 2P, 3W
5kW	30A	250V	1 Phase	L6-30P or 2P, 3W
11kW	20A	230/400V	3 Phase WYE	L22-20P or 4P, 5W
16.6kW	30A	230/400V	3 Phase WYE	L22-30P or 4P, 5W
1.4kW	15A	125V	1 Phase	5-15P or L5-15P
1.9kW	20A	125V	1 Phase	5-20P or L5-20P
2.8kW	30A	125V	1 Phase	L5-30P
5.7kW	20A	120/208V	3 Phase WYE	L21-20P
8.6kW	30A	120/208V	3 Phase WYE	L21-30P
8.6kW	30A	250V	3 Phase Delta	L15-30P
17.2kW	60A	208V	3 Phase Delta	3P/4W
23kW	80A	208V	3 Phase Delta	Hard Wired
34kW	120A	208V	3 Phase Delta	Hard Wired

- Over 500 standard PDUs available to ship within 10 days of ordering, or custom PDUs available to ship within 20 days of ordering
- C-13 and C-19 receptacles with optional locking feature for mission critical applications
    - Unplugging cords requires simple "push" of release button
    - Locking mechanism binds to the ground pin on the plug and is compatible with standard IEC cord, thus eliminating the need for expensive proprietary cords

XN Series enclosures with end-of-row and in between 6" extensions
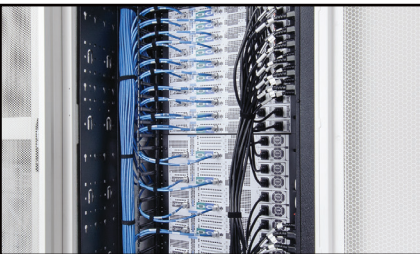
Organized networking and power cable management for proper server airflow

Side-by-side PDU mounting using 7" wide PDU mounting panel (Part No. XVMP024501)

Locking Receptacles
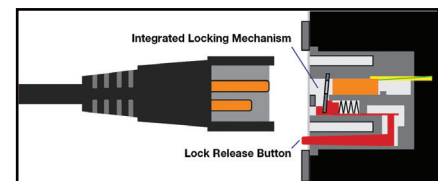
Inside View of Locking Mechanism

Enclosure Power Distribution Units (PDUs) (continued)

PDU Selection: Basic, with Local Monitoring and Intelligent

- PDU mounted display option for local current or power monitoring, making phase balancing easier (the PDU itself is not phase balancing)

Intelligent PDU Options and Features

- Remote aggregate, circuit or receptacle power monitoring for granular PUE measurement
- Switched (on/off) options allow remote outlet management and equipment reboot with sequential delay features; avoid power interruption due to inrush current, equipment start up in desired sequence

- Highly secure access with admin, control and view-only accounts
- Intuitive Ethernet-based firmware with email alarm or SNMP trap features prevents downtime with early notification of power threshold breaches
- SNMP (MIB) enabled for compatibility with all leading DCiM packages
- Integrated environmental monitoring capabilities; monitor temperature, air flow, humidity and dew point via optional connected sensors
- Internal memory for up to two week of trending of critical parameters for clear understanding of power allocation and usage
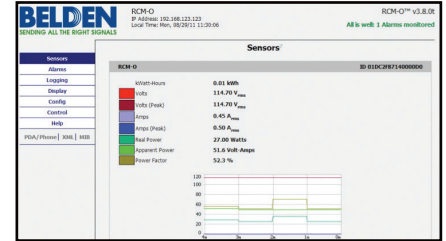
PDU Firmware, Trending Page
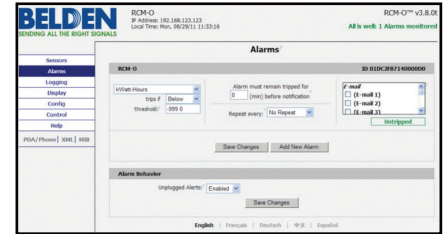
PDU Firmware, Alarm Setting Page

Belden PDU Type	Local Display/ Monitoring	Intelligent-Remote Monitoring (3)				
		Current	Power Circuit Level	Environmental Port (4)	Power Outlet Level (5)	Outlet Switched (6)
Basic (B)	No	No	No	No	No	No
Local (L)	Yes	No	No	No	No	No
Current (C)	Yes (1)	Yes	No	No	No	No
Power (P)	Yes (2)	Yes	Yes	Yes	No	No
Power Outlet (O)	Yes (2)	Yes	Yes	Yes	Yes	No
Switched (S)	Yes (2)	Yes	Yes	Yes	Optional	Yes

Notes:

(1) Local current/amp meter, monitoring at circuit level for multi-circuit PDU.

(2) Local power meter provides Amps, Volts, Watts, Volt-Amps, kWh and Power Factor.

(3) Remote functions (IP-based) accessible via web browser.

(4) Remote IP-based environmental monitoring, (2) port per PDU. Requires external sensor, refer to accessories (p. 78) for selection.

(5) Remote IP-based receptacle level monitoring, Amps, Volts, Watts, kWh.

(6) Remote IP-based receptacle level switching (on/off) with configurable time delay.

Intelligent PDU Communication and Environmental Monitoring Ports

Power, Cooling and Air Handling Relations

PDU Nameplate Current Rating (A)	Branch Circuit Rating (A)	Nameplate Volts (V)	Volts Actual Delivered (V)	Phase*	PDU Nominal Power Watts (W)	PDU De-Rated Power (W)	PDU De-Rated Power (kW)	PDU De-Rated Power (BTU/hr.)	AC Tons** (BTU/12000)	Air Volume*** (120 CFM* kW)
12	15	125	120	1	1,800	1,440	1.4	4,916	0.41	168
16	20	125	120	1	2,400	1,920	1.9	6,555	0.55	228
24	30	125	120	1	3,600	2,880	2.9	9,832	0.82	348
16	20	250	208	1	4,160	3,328	3.3	11,362	0.95	396
24	30	250	208	1	6,240	4,992	5.0	17,043	1.42	600
35	50	250	208	1	10,400	7,280	7.3	24,854	2.07	876
48	60	250	208	1	12,480	9,984	10.0	34,085	2.84	1,200
16	20	230	230	1	4,600	3,680	3.7	12,564	1.05	444
24	30	230	230	1	6,900	5,520	5.5	18,845	1.57	660
48	60	230	230	1	13,800	11,040	11.0	37,691	3.14	1,320
16	20	120/208	208	3	7,197	5,757	5.8	19,656	1.64	696
24	30	120/208	208	3	10,795	8,636	8.6	29,484	2.46	1,032
35	50	120/208	208	3	17,992	12,594	12.6	42,997	3.58	14,712
48	60	120/208	208	3	21,616	17,293	17.3	58,968	4.91	2,076
80	100	120/208	208	3	36,027	28,821	28.8	98,279	8.19	3,456
100	125	120/208	208	3	45,033	36,027	36.0	122,849	10.24	4,320
120	150	120/208	208	3	54,040	43,232	43.2	147,419	12.28	5,184
16	20	230/400	230	3	13,856	11,085	11.0	37,691	3.14	1,320
24	30	230/400	230	3	20,785	16,628	16.6	56,563	4.71	1,992
		*3-Phase power is calculated by multiplying single phase by the square root of 3 or 1.73.								
		**Tons of air conditioning required to remove heat from associated IT load.								
		***The volume of air that is typically required by the IT equipment for each kW of IT load can typically range from 80 to 140 CFM. 120 CFM was used for calculation.								

Power Distribution & Climate Monitoring

Single-Phase PDUs

Front View 9LF1-101001

Rear View 9LF1-101001

9LB2-301001

UL Listed Single-Phase PDUs

Type: B = Basic; L = Local Monitored

Belden Part #	Type	De-Rated Power (kW)	Amps (A)/ Volts (V)	Plug Type	Total Receptacle	Receptacle Type/Qty	Thermal Circuit Breaker	On-Off Switch	Surge Supression	Monitoring-Local	Mounting (4)	Dimensions L x W x D (in.)
9BF1-061001	B	1.4	15/120	5-15P	6	5-15R/6	Yes	Yes	No	No	Rack - 19"	17 x 1.72 x 3.75
9BF1-061002	B	1.4	15/120	5-15P	6	5-15R/6	Yes	Yes	Yes	No	Rack - 19"	17 x 1.72 x 3.75
9BF1-081001	B	1.4	15/120	5-15P	8	5-15R/8	Yes	Yes	No	No	Vertical	24 x 1.61 x 1.61
9LF1-101001	L	1.4	15/120	5-15P	10	5-15R/10	Yes	Yes	No	Power	Rack - 19"	17 x 1.72 x 4.5
9BF1-141001	B	1.4	15/120	5-15P	14	5-15R/14	Yes	Yes	Yes	No	Vertical	47.5 x 1.61 x 1.61
9BG2-081001	B	1.9	20/120	L5-20P	8	5-20R/8	Yes	Yes	No	No	Vertical	24 x 1.61 x 1.61
9BG1-101001	B	1.9	20/120	5-20P	10	5-20R/10	Yes	Yes	Yes	No	Rack - 19"	17 x 1.72 x 3.75
9LG1-101001	B	1.9	20/120	5-20P	10	5-20R/10	Yes	No	No	Power	Rack - 19"	17 x 1.72 x 4.5
9BG1-141001	B	1.9	20/120	5-20P	14	5-20R/14	Yes	Yes	No	No	Vertical	47.5 x 1.61 x 1.61
9BG2-141001	B	1.9	20/120	L5-20P	14	5-20R/14	Yes	Yes	No	No	Vertical	47.5 x 1.6.1 x 1.61
9BG1-141002	B	1.9	20/120	5-20P	14	5-20R/14	Yes	No	Yes	No	Vertical	47.5 x 1.6.1 x 1.61
9BG2-141002	B	1.9	20/120	L5-20P	14	5-20R/14	Yes	No	Yes	No	Vertical	47.5 x 1.6.1 x 1.61
9LH2-241001	L	2.8	30/120	L5-30P	24	5-20R/24	Magnetic	Breaker	No	Power	Vertical	66.25 x 2 x 2
9LB2-121001	L	5	30/208	L6-30P	12	C-13/12	Magnetic	Breaker	No	Power	Rack - 19"	17 x 1.72 x 6.5
9LB2-301001	L	5	30/208	L6-30P	30	C-13/24 + C-19/6	Magnetic	Breaker	No	Power	Vertical	66.25 x 2 x 2

Notes:

(1) Standard cord length is 10 ft. For other lengths, change dd digit in part # (ex: 9PB2-30dd01 would be 9PB2-300801 = 8 ft). Available in 2, 4, 6, 8, 10, 15, 20 ft.

(2) Standard cord exits from chassis face; top of chassis exit available on request.

(3) Standard PDU chassis color is black, custom color overlay available on request.

Front View 9PG2-101001

Rear View 9PG2-101001

9OB2-241001

UL Listed Single-Phase PDUs

Type: P = Remote Power Monitored; O = Outlet Monitored

Belden Part #	Type	De-Rated Power (kW)	Amps (A)/ Volts (V)	Plug Type	Total Receptacle	Receptacle Type/Qty	Thermal Circuit Breaker	On-Off Switch	Monitoring-Local/ Remote	Environmental Monitoring	Mounting (4)	Dimensions L x W x D (in.)
9PG2-101001	P	1.9	20/120	5-20P	10	5-20R/10 + 0	Magnetic	No	Power/Aggregate	Yes - 2 Port	Rack - 19"	17 x 1.72 x 6.5
9PB2-301001	P	5	30/208	L6-30P	30	C-13/24 + C-19/6	Magnetic	Breaker	Power/Circuit Breaker	Yes - 2 Port	Vertical	66.25 x 2 x 2.25
9PB2-301002	P	5	30/208	L6-30P	30	C-13L/24 + C-19L/6	Magnetic	Breaker	Power/Circuit Breaker	Yes - 2 Port	Vertical	72 x 2 x 2.25
9PB2-421001	P	5	30/208	L6-30P	42	C-13/36 + C-19/6	Magnetic	Breaker	Power/Circuit Breaker	Yes - 2 Port	Vertical	70 x 2 x 2.25
9OB2-241001	O	5	30/208	L6-30P	24	C-13L/18 + C-19L/6	Magnetic	Breaker	Power/Circuit Breaker + Outlet	Yes - 2 Port	Vertical	72 x 2.25 x 2.25

Notes:

(1) Standard cord length is 10 ft. For other lengths, change dd digit in part # (ex: 9PB2-30dd01 would be 9PB2-300801 = 8 ft). Available in 2, 4, 6, 8, 10, 15, 20 ft.

(2) Standard cord exits from chassis face; top of chassis exit available on request.

(3) C-13L, L refers to receptacles with locking feature.

(4) Standard PDU chassis color is black, custom color overlay available on request.

(5) These PDUs have no Surge Supression.

Power Distribution & Climate Monitoring

3-Phase PDUs

9LI2-301001

ZPB248-106IBBPS15

UL Listed 3-Phase PDUs

Type: B = Basic; L = Local Monitored

Belden Part #	Type	De-Rated Power (kW)	Amps (A) x Phases	Input Volts (V)/ Output Volts (V)	Plug Type	Total Receptacle	Receptacle Type/Qty(s)	Circuit Breaker (Amp/Qty)	Monitoring- Local/Remote	Mounting	Dimensions L x W x D (in.)
9LI2-301001	L	5.7	20 x 3 Ph.	120/208 WYE/208	L21-20P	30	C-13/24 + C-19/6	No	Amp (X,Y,Z)/No	Vertical	66.25 x 2 x 2 Dog House - No
9LJ2-301001	L	8.6	30 x 3 Ph.	120/208 WYE/208	L21-30P	30	C-13/24 + C-19/6	20/3D	Amp (X,Y,Z)/No	Vertical	66.25 x 2 x 2 Dog House - No
9BJ2-331001	B	8.6	30 x 3 Ph.	120/208 WYE/120 & 208	L21-30P	33	C-13/24 + C-19/3 + 5-20R/6	20/3D	Amp (X,Y,Z)/No	Vertical	66.25 x 2 x 2 Dog House - No
9LC2-301001	L	11	20 x 3 Ph.	230/400 WYE/230	L22-20P	30	C-13/24 + C-19/6	No	Amp (X,Y,Z)/No	Vertical	66.25 x 2 x 2 Dog House - No
9LC3-301001	L	11	20 x 3 Ph.	230/400 WYE/230	4P, 5W	30	C-13/24 + C-19/6	No	Amp (X,Y,Z)/No	Vertical	66.25 x 2 x 2 Dog House - No
9LD2-301001	L	16.6	30 x 3 Ph.	230/400 WYE/230	L22-30P	30	C-13/24 + C-19/6	20/3D	Amp (X,Y,Z)/No	Vertical	66.25 x 2 x 2 Dog House - Yes
9LD3-301001	L	16.6	30 x 3 Ph.	230/400 WYE/230	4P, 5W	30	C-13/24 + C-19/6	20/3D	Amp (X,Y,Z)/No	Vertical	66.25 x 2 x 2 Dog House - Yes
9BL3-121001	B	17.3	60 x 3 Ph.	208 Delta/208	3P, 4W	12	C-19/12 + 0	20/6	Breaker/No	Rack - 19"	17 x 3.4 x 9 Dog House - No
9BL3-241001	B	17.3	60 x 3 Ph.	208 Delta/208	3P, 4W	24	C-13/12 + C-19/12	20/6	Breaker/No	Vertical	66.25 x 2.3 x 3.45 Dog House - No

Notes:

(1) Standard cord length is 10 ft. For other lengths, change dd digit in part # (ex: 9PB2-30dd01 would be 9PB2-300801 = 8 ft). Available in 2, 4, 6, 8, 10, 15, 20 ft.

(2) Standard cord exits from chassis face; top of chassis exit available on request.

(3) C-13L, L refers to receptacles with locking feature.

(4) Ex: 20/3D, D refers to double pole breakers (20A in this case).

(5) Standard PDU chassis color is black, custom color overlay available on request.

(6) These PDUs have no Surge Supression or On/Off Switch.

(7) PDU "Dog House" hosts the circuit breaker and protrude from the PDU chassis by 1.44".

9PC2-441001

9OJ2-301001

UL Listed 3-Phase PDUs

Type: C = Remote Current Monitored; P = Power Monitored; O = Outlet Monitored

Belden Part #	Type	De-Rated Power (kW)	Amps (A) x Phases	Input Volts (V)/ Output Volts (V)	Plug Type	Total Receptacle	Receptacle Type/Qty(s)	Circuit Breaker (Amp/Qty) (4)	Monitoring- Local/Remote	Environ. Monitoring	Dimensions L x W x D (in.)
9PC2-441001	P	5.8	20 x 3 Ph.	120/208 WYE/208	L21-20P	44	C-13/36 + C-19/6 + 5-20R/2	No	Power/X, Y, Z	Yes - 2 Port	70 x 2 x 2.25 Dog House - No
9CJ2-301001	C	8.6	30 x 3 Ph.	120/208 WYE/208	L21-30P	30	C-13/24 + C-19/6	20/3D	Current/Current	No	66.25 x 2 x 2 Dog House - Yes
9OJ2-301001	O	8.6	30 x 3 Ph.	120/208 WYE/208	L21-30P	30	C-13L/24 + C-19L/6	20/3D	Power/X, Y, Z + Outlet	Yes - 2 Port	72 x 2.25 x 2.25 Dog House - Yes
9OC2-241001	O	11	20 x 3 Ph.	230/400 WYE/230	L22-20P	24	C-13L/18 + C-19L/6	No	Power/X, Y, Z + Outlet	Yes - 2 Port	66.25 x 2 x 2 Dog House - No
9OD3-241001	O	16.6	30 x 3 Ph.	230/400 WYE/230	4P, 5W	24	C-13L/18 + C-19L/6	20/6	Power/X, Y, Z + Outlet	Yes - 2 Port	72 x 2.25 x 2.25 Dog House - Yes
9PL3-301001	P	17.3	60 x 3 Ph.	208 Delta/208	4P, 4W	30	C-13/24 + C-19/6	20/6D	Power/X, Y, Z	Yes - 2 Port	72 x 2.3 x 3.45 Dog House - No

Notes:

(1) Standard cord length is 10 ft. For other lengths, change dd digit in part # (ex: 9PB2-30dd01 would be 9PB2-300801 = 8 ft). Available in 2, 4, 6, 8, 10, 15, 20 ft.

(2) Standard cord exits from chassis face; top of chassis exit available on request.

(3) C-13L, L refers to receptacles with locking feature.

(4) Ex: 20/3D, D refers to double pole breakers (20A in this case).

(5) Standard PDU chassis color is black, custom color overlay available on request.

(6) These PDUs have no Surge Supression or On/Off Switch.

(7) PDU "Dog House" hosts the circuit breaker and protrude from the PDU chassis by 1.44".

(8) All these 3-Phase PDUs are vertically mounted.

Power Distribution & Climate Monitoring

BELDEN

Single- and 3-Phase PDUs

Front View 9SG1-081002   Rear View 9SG1-081002

9SJ2-241001   9SJ2-241002

UL Listed Single- and 3-Phase PDUs
Type: S = Remotely Switched

Belden Part #	Type	De-Rated Power (kW)	Amps (A) x Phases	Input Volts (V)/ Output Volts (V)	Plug Type	Total Receptacle	Receptacle Type/ Qty(s)	Circuit Breaker (Amp/Qty) (4)	Monitoring-Local/ Remote	Mounting (5)	Dimensions L x W x D (in.)
9SG1-081001	S	1.9	20	120/120	5-20P	8	5-20R/8	No	Power/Agg Power	Rack - 19"	17 x 1.72 x 8.5 Dog House - No
9SG1-081002	S	1.9 or 3.3	20	120 or 208/120 or 208	C-20	8	C-13L/8	No	Power/Agg + Outlet	Rack - 19"	17 x 1.72 x 8.5 Dog House - No
9SB2-241001	S	5	30	208/208	L6-30P	24	C-13L/20 + C-19L/4	20/2D	Power/Agg, Circuit, Outlet	Vertical	70 x 2.5 x 2.25 Dog House - Yes
9SJ2-241001	S	8.6	30 x 3 Ph.	120/208 WYE/208	L21-30P	24	C-13L/18 + C-19L/6	20/3D	Power/Agg, Circuit	Vertical	70 x 2.5 x 2.25 Dog House - Yes
9SJ2-241002	S	8.6	30 x 3 Ph.	120/208 WYE/208	L21-30P	24	C-13L/18 + C-19L/6	20/3D	Power/Agg, Circuit, Outlet	Vertical	70 x 2.5 x 2.25 Dog House - Yes
9SC3-241001	S	11	20 x 3 Ph.	230/400 WYE/230	3P, 4W	24	C-13L/21 + C-19L/3	No	Power/Agg, Circuit	Vertical	66.25 x 2.5 x 2.25 Dog House - No
9SC3-241002	S	11	20 x 3 Ph.	230/400 WYE/230	3P, 4W	24	C-13L/21 + C-19L/3	No	Power/Agg, Circuit, Outlet	Vertical	66.25 x 2.5 x 2.25 Dog House - No
9SC2-241001	S	11	20 x 3 Ph.	230/400 WYE/230	L22-20P	24	C-13L/21 + C-19L/3	No	Power/Agg, Circuit	Vertical	66.25 x 2.5 x 2.25 Dog House - No
9SC2-241002	S	11	20 x 3 Ph.	230/400 WYE/230	L22-20P	24	C-13L/21 + C-19L/3	No	Power/Agg, Circuit, Outlet	Vertical	66.25 x 2.5 x 2.25 Dog House - No
9SD3-241001	S	16.6	30 x 3 Ph.	230/400 WYE/230	4P, 5W	24	C-13L/21 + C-19L/3	20/6	Power/Agg, Circuit	Vertical	72 x 2.5 x 2.25 Dog House - No
9SD3-241002	S	16.6	30 x 3 Ph.	230/400 WYE/230	4P, 5W	24	C-13L/21 + C-19L/3	20/6	Power/Agg, Circuit, Outlet	Vertical	72 x 2.5 x 2.25 Dog House - No
9SD2-241001	S	16.6	30 x 3 Ph.	230/400 WYE/230	L22-30P	24	C-13L/21 + C-19L/3	20/6	Power/Agg, Circuit	Vertical	72 x 2.5 x 2.25 Dog House - No
9SD2-241002	S	16.6	30 x 3 Ph.	230/400 WYE/230	L22-30P	24	C-13L/21 + C-19L/3	20/6	Power/Agg, Circuit, Outlet	Vertical	72 x 2.5 x 2.25 Dog House - No
9SL3-241001	S	17.2	60 x 3 Ph.	208 Delta/208	3P, 4W	24	C-13L/18 + C-19L/6	20/6D	Power/Agg, Circuit	Vertical	66.25 x 4 x 3.45 Dog House - No
9SL3-241002	S	17.2	60 x 3 Ph.	208 Delta/208	3P, 4W	24	C-13L/18 + C-19L/6	20/6D	Power/Agg, Circuit, Outlet	Vertical	66.25 x 4 x 3.45 Dog House - No

Notes:

(1) Standard cord length is 10 ft. For other lengths, change dd digit in part # (ex: 9PB2-30dd01 would be 9PB2-300801 = 8 ft). Available in 2, 4, 6, 8, 10, 15, 20 ft. 9SG1-081002 Power Cord is sold separately.

(2) Standard cord exits from chassis face; top of chassis exit available on request.

(3) C-13L, L refers to receptacles with locking feature.

(4) Ex: 20/3D, D refers to double pole breakers (20A in this case).

(5) Standard PDU chassis color is black, custom color overlay available on request.

(6) These PDUs have no On/Off Switch or Surge Supression.

(7) PDU "Dog House" hosts the circuit breaker and protrude from the PDU chassis by 1.44".

(8) All these Single- and 3-Phase PDUs have a Switched Outlet and a 2-port Environmental Monitor.

1.800.BELDEN.1 (800.235.3361)   www.belden.com

Faster.
Easier.
Better.

PDU Accessories — Mounting, Cord Management and Cord Set

Description	Belden Part Number
Tool-Less PDU Mounting Panel (for XM and XS Style Enclosures)	
Lacing-PDU Mounting Panel, 3.5"W, 42RU, Black	XVMP014201
Lacing-PDU Mounting Panel, 3.5"W, 45RU, Black	XVMP014501
Lacing-PDU Mounting Panel, 3.5"W, 48RU, Black	XVMP014801
Lacing-PDU Mounting Panel, 7"W, 42RU, Black	XVMP024201
Lacing-PDU Mounting Panel, 7"W, 45RU, Black	XVMP024501
Lacing-PDU Mounting Panel, 7"W, 48RU, Black	XVMP024801
Lacing-PDU Mounting Panel, 3.5"W, 42RU, White	XVMP014202
Lacing-PDU Mounting Panel, 3.5"W, 45RU, White	XVMP014502
Lacing-PDU Mounting Panel, 3.5"W, 48RU, White	XVMP014802
Lacing-PDU Mounting Panel, 7"W, 42RU, White	XVMP024202
Lacing-PDU Mounting Panel, 7"W, 45RU, White	XVMP024502
Lacing-PDU Mounting Panel, 7"W, 48RU, White	XVMP024802
Tool-Less PDU Mounting Panel (for XN Style Enclosures)	
PDU Mounting Bracket Double, Post Mounting 2 PDU Side-by-Side Facing Into Enclosure	XNPM01
PDU Mounting Bracket Single, Rear Facing Pair	XNPM02
PDU Mounting Bracket Rear Facing Pair Between Frames	XNPM03
PDU Mounting Bracket Rear Facing Pair Between Frames with Extension	XNPM04
Vertical Manager Panel, 42RU X 7.0"W, Black	XNVLP42901
Vertical Manager Panel, 45RU X 7.0"W, Black	XNVLP45901
Vertical Manager Panel, 48RU X 7.0"W, Black	XNVLP48901
Vertical Manager Panel, 42RU X 7.0"W, CO White	XNVLP42902
Vertical Manager Panel, 45RU X 7.0"W, CO White	XNVLP45902
Vertical Manager Panel, 48RU X 7.0"W, CO White	XNVLP48902
Tool-Less PDU Mounting Panel (for XSS Seismic Enclosures)	
Cable PDU Manager Rear Panel, 44RU, Rear, Black	XSN44VRPM101
Cable PDU Manager Rear Panel, 44RU, Rear, with 6 Rings, Black	XSN44VRPM201
Cable PDU Manager Rear Panel, 44RU, Rear, CO White	XSN44VRPM102
Cable PDU Manager Rear Panel, 44RU, Rear, with 6 Rings, CO White	XSN44VRPM202
Tool-Less PDU Mounting Panel (for XSN Seismic Enclosures)	
Cable PDU Manager Rear Panel, 44RU, Rear, Black	XSN44VRPM101
Cable PDU Manager Rear Panel, 44RU, Rear, with 6 Rings, Black	XSN44VRPM201
Cable PDU Manager Rear Panel, 44RU, Rear, CO White	XSN44VRPM102
Cable PDU Manager Rear Panel, 44RU, Rear, with 6 Rings, CO White	XSN44VRPM202
Power Cord Management	
Cable Management Ring Plastic (Qty = 5) 3" x 1.5" Reversible	XMR01
Cable Management Ring Kit (Qty = 5) 2.5"W x 3"D	XMR03
Slack Management Spool Kit (includes 2 spools)	XSK020
Quick Mount Base (Qty=10) with Fastener, for 1/4" Holes	XCTM
Velcro Cable Ties, 25 per Roll, 8" L x 0.5"W	AX100783
Velcro Cable Ties, 25 per Roll, 12" L x 0.5"W	AX100784
Cord Set* (C13/C19, C19/C20 - UL - cUL Listed)	
C13 to C14 Non-Locking Cord Set - Y" Long — Black	CSC13C14**yy**BK
C13 to C14 Non-Locking - 36" Long — Black	CSC13C1436BK
C13 to C14 Non-Locking - 48" Long — Black	CSC13C1448BK
C19 to C20 Non-Locking Cord Set - Y" Long — Black	CSC19C20**yy**BK
C19 to C20 Non-Locking - 36" Long — Black	CSC19C2036BK
C19 to C20 Non-Locking - 48" Long — Black	CSC19C2048BK
C13 Locking to C14 - 20" Long — Blue	CSLC13C1420BL
C13 Locking to C14 - 20" Long — Orange	CSLC13C1420OR
C19 Locking to C20 - 20" Long — Blue	CSLC19C2020BL
C19 Locking to C20 - 20" Long — Orange	CSLC19C2020OR
C13 Locking to C14 - 39" Long — Blue	CSLC13C1439BL
C13 Locking to C14 - 39" Long — Orange	CSLC13C1439OR
C19 Locking to C20 - 39" Long — Blue	CSLC19C2039BL
C19 Locking to C20 - 39" Long — Orange	CSLC19C2039OR

7" Lacing-PDU
mounting panel

3.5" Lacing-PDU
mounting panel
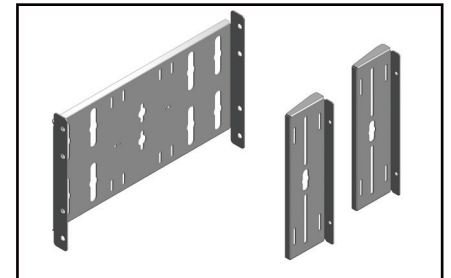
Mounting Brackets
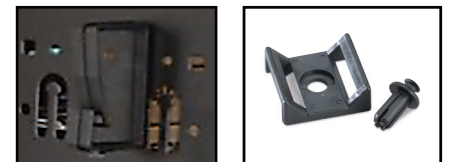
Cable Management Ring
(Plastic)

Quick Mount Base
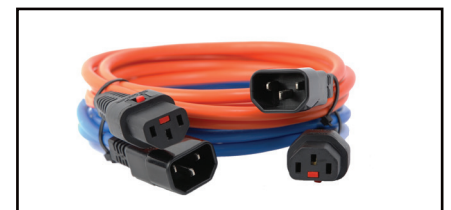
Locking Cord Set*

*Built within the plug housing on the female end (C13/C19) of the cord, the patented integrated locking mechanism is protected against vibration and external elements that can easily dislodge other plug securing solutions, like external locking clips and guides. This self-contained locking mechanism engages with any standard IEC male connector (C14/C20). The cord locking feature is only available at the device-end of the cord sets. A power strip with locking receptacles must be available to secure these cords to the PDU.

Notes: **yy** = 12, 24, 36 ... 96 = cord length 12 to 96 inches; 12 inch increments.

Power Distribution & Climate Monitoring

BELDEN

Power Distribution Unit Configuration Guide

Please select the desired configuration and specifications
and submit to Belden.

Power Availability _____   Phone _____   E-mail _____

Quantity Required _____   Target Price _____   Project Timeline _____

First Unit Required by Date _____   Comparable Competitive Unit Brand/Model# _____

Electrical Configuration

Power Input

Quantity**	Plug Type	Input AMPS	Input VOLTS
	5-15P	15	125
	L5-15P	15	125
	5-20P	20	125
	L5-20P	20	125
	6-20P	20	250
	L6-20P	20	250
	L14-20P	20	125/250
	L21-20P	20 x 3~	120/208 WYE
	L5-30P	30	125
	L6-30P	30	250
	L14-30P	30	125/250
	L15-30P	30 x 3~	250 Delta
	L21-30P	30 x 3~	120/208 WYE
	IEC C-20 Inlet (No Cord)	20/16*	125 or 250
	IEC Pin & Sleeve 2 Pole/3 Wire	20/16*	250/230*
	IEC Pin & Sleeve 3 Pole/4 Wire	20	250 3~
	IEC Pin & Sleeve 2 Pole/3 Wire	30/32*	250/230*
	IEC Pin & Sleeve 3 Pole/4 Wire	30	250 3~
	IEC Pin & Sleeve 2 Pole/3 Wire	60/63*	250/230*
	IEC Pin & Sleeve 3 Pole/4 Wire	60	250 3~
Cord Length			

Notes:
*Rating for CE Products
**Quantity = # of Circuits

Power Input

Quantity	Receptacle Type	AMPS	VOLTS
	5-15R Duplex	15	125
	5-15R Individual	15	125
	L5-15R Duplex	15	125
	5-20R Duplex	20	125
	5-20R Individual	20	125
	L5-20R	20	125
	6-20R Duplex	20	250
	L6-20R	20	250
	L5-30R	30	125
	L6-30R	30	250
	IEC C-13	15/10*	125 or 250
	IEC C-19	20/16*	125 or 250
Other - Please Specify			

Physical Configuration

Dimensional Limits		Mounting Orientation	
	Length		Horizontal
	Width		Vertical
	Height		

Hardwire Options

Quantity**	
	6" Wire Tails with Removable Plate
	Flexible Conduit
	Terminal Block

Additional Information

_____
_____
_____
_____

Power Switch		**Surge Supression**	
	No		No
	Yes		Yes
	Yes - with Cover		

Monitoring			
Current Local		**Current Remote**	
	No		No
	Yes - Current (Amps) Only		Yes - Circuit Level
	Yes - Scrolling Display (Volts, Amps, Watts, Power Factor)		Yes - Outlet Level
Environmental		**Remote Switching**	
	No		No
	Yes		Yes

Circuit Breakers		**Isolated Ground**	
	No (required by NEC in some units)		No
	Yes		Yes

3rd Party Testing - Compliance			
	UL® Listed		UR - UL® Recognized
	FCC Part 15 Class A		CE®
	None Required		Other - Please Specify

Plug and Receptacle Configuration Chart

NEMA Plugs and Receptacles

AMP	VOLTS	Straight-Blade Plug		Straight-Blade Receptacle		AMP	VOLTS	Straight-Blade Plug		Straight-Blade Receptacle	
15	125	5-15P		5-15R		20	250	6-20P		6-20R	
20	125	5-20P		5-20R							

AMP	VOLTS	Twist-Lock Plug		Twist-Lock Receptacle		AMP	VOLTS	Twist-Lock Plug		Twist-Lock Receptacle	
15	125	L5-15P		L5-15R		20	120/208 x 3~ WYE	L21-20P		L21-20R	
20	125	L5-20P		L5-20R		20	230/400 x 3~ WYE	L22-20P		L22-20R	
30	125	L5-30P		L5-30R		30	120/208 x 3~ WYE	L21-30P		L21-30R	
20	250	L6-20P		L6-20R		30	230/400 x 3~ WYE	L22-30P		L22-30R	
30	250	L6-30P		L6-30R		30	250 x 3~ Delta	L15-30P		L15-30R	
20	125/250	L14-20P		L14-20R		AMP	VOLTS	California Style			
30	125/250	L14-30P		L14-30R		50	250 x 3~ Delta	3P, 4W		3P, 4W	

IEC Plugs and Receptacles

AMP	VOLTS	Power Inlet		Power Receptacle		AMP	VOLTS	Power Inlet		Power Receptacle	
15/10*	125 or 250	C-14		C-13		20/16*	125 or 250	C-20		C-19	

AMP	VOLTS	Pin & Sleeve				AMP	VOLTS	Pin & Sleeve			
20/16*	250/230*	2P, 3W		2P, 3W		60/63*	250/230*	2P, 3W		2P, 3W	
20	250	3P, 4W		3P, 4W		60	250	3P, 4W		3P, 4W	
30/32*	250/230	2P, 3W		2P, 3W		20/16*	230/400* x 3~ WYE	4P, 5W		4P, 5W	
30	250	3P, 4W		3P, 4W		30/32*	230/400* x 3~ WYE	4P, 5W		4P, 5W	

*Rating for CE Products

What is 3-Phase Delta?

3-Phase Delta from 208V Source

L15-20P Plug
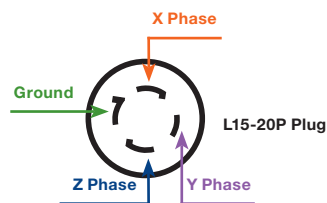
A 3-Phase Delta is a 4-wire configuration consisting of 3-Phase conductors (X, Y and Z) and a Ground. Without the neutral present, only phase-to-phase wiring is possible. The potential between any 2-Phase conductors is typically 208V.

What is 3-Phase WYE?

3-Phase Delta from 120/208V Source

L21-20P Plug
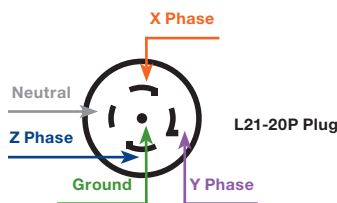
A 3-Phase Delta 120/208V WYE is a 5-wire configuration consisting of 3-Phase conductors (X, Y and Z), Neutral and Ground. The potential between any 2-Phase conductors is 208V. The potential between any phase and neutral is 120V. This configuration can be wired to provide 120V, 208V or a combination of both voltages within one PDU.
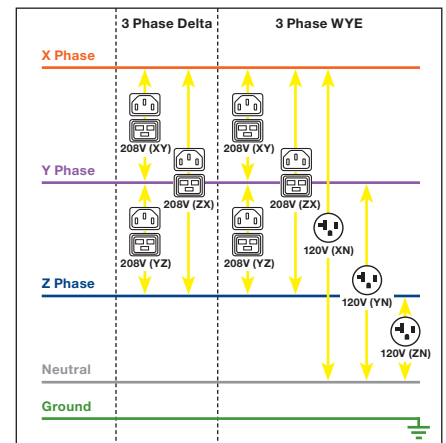
Power Distribution & Climate Monitoring

Environmental Monitors and Sensors

9318-0500

9318-0550

9318-0560

9318-0570

Applications

- Belden climate monitors and sensors allow precise monitoring/alarming of key environmental parameters for improved equipment availability in mission critical applications (Data Center, networking closet, remote locations)
- Built-in intuitive web interface for remote access via Ethernet browser
- Built-in and external sensor options (temperature, humidity, air flow, water detection, door position, smoke)
- SNMP-enabled for compatibility with leading DCIM package
- Recognize IP-based camera for space viewing
- Set alarm threshold, can be sent to up to five e-mail addresses
- Allows viewing of data graphs and analysis of historical logs
- Power supply included
- UL and cUL listed

9318-0513 Temperature Display with Thermocouple
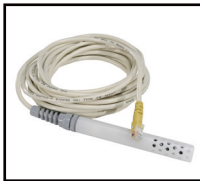
9318-0503 Temp/Air Flow/ Humidity Remote Sensor

9318-0506 Remote PDU Display

DLinks Web Camera Kit

Description	Belden Part Number
Other Accessories	
Environmental Monitors	
Compact Self-Contained Environmental Monitor (5.25"Lx1.75"Hx1.5"W); Provides Web-Based Remote Surveillance with On-Board Temperature and Humidity/Dew Point Sensors. Has Input Capacity for Two External Sensors	9318-0500
Rack Mount 1RU Environmental Monitor. Provides Web-Based Remote Surveillance for up to (16) Digital Sensors and (3) Analog Sensors. This Unit Does Not Feature Internal Sensors	9318-0550
Rack Mount 1RU Environmental Monitor. Provides Web-Based Remote Surveillance of Temperature, Relative Humidity, Dew Point, Airflow, Light, Sound. Up to (5) Additional Digital Sensors Can Be Connected to the Unit. Comes Equipped with an LCD Display with Scrolling Measurements and a Built-In Audible Alarm	9318-0560
Rack Mount 1RU Environmental Monitor. Provides Web-Based Remote Surveillance of Temperature and any Additional Sensors Connected to the Unit. Comes Equipped with (4) Digital and (6) Analog Sensor Ports, an LCD Display with Scrolling Measurements, Built-In Audible Alarm and (3) Relay Output Ports	9318-0570
Environmental Monitors Accessories	
19" Rack Mount 16-Way Splitter, 1RU for RJ12 Sensors	9318-0510
Remote PDU Display, RJ12 Connection	9318-0506
Sensors (compatible with environmental monitors and intellignet PDU)	
Remote Temperature Sensor with 12 Ft. Wire	9318-0501
Remote Temperature Sensor with 20 Ft. Wire	9318-0510
Remote Temperature Sensor with 50 Ft. Wire	9318-0511
Remote Temperature/Air Flow/Humidity and Dew Point Sensor with 12 Ft. Wire	9318-0503
Remote Temperature/Air Flow/Humidity and Dew Point Sensor with 20 Ft. Wire	9318-0515
Remote Temperature/Air Flow/Humidity and Dew Point Sensor with 50 Ft. Wire	9318-0516
Remote Door Position Analog Sensor	9318-0504
Remote Water Detection Analog Sensor	9318-0505
DLinks Web Camera Kit	9318-0509
Temperature Displays (local monitoring only)	
19" Rack Mount Temperature Display with Thermocouple; 1RU Blanking Panel Type	9318-0512
Temperature Display with Thermocouple; 1.72"H x 3.8"W x 1.1"D	9318-0513

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Warranty and Shipping Policy

Warranty

Limited Warranty

Belden warrants that, for a period of one (1) year following the date of delivery to the original customer, the products it offers for sale in the catalog are free from defects in material and workmanship. The foregoing warranty is subject to the terms, limitations and conditions set forth below.

Liability

Belden's sole liability under this warranty will be to repair or replace, at its discretion, products that do not meet the specifications and descriptions provided in the catalog or purchase order due to defects in material and workmanship. Under no circumstances shall Belden be liable for any consequential or special damages for breach of this warranty. Belden's total liability under this warranty shall be limited to the price actually paid by the customer for the product(s) covered. Except as specifically set forth above, Belden expressly disclaims any other representation or warranties of any kind, expressed or implied, arising by law or custom, with respect to products set forth in the catalog or otherwise sold by Belden, including without limitation, warranties or merchantability, fitness for a particular purpose, non-infringement or any other matter.

Conditions of Warranty

This warranty applies only to standard products set forth in the catalog. Custom products are covered by warranties stated in the Terms and Conditions of Belden's quotation at the time of the order.

Repairs or Adjustments

Belden, at its discretion, will make any repairs or adjustments to any products that are due to defects and/or workmanship. This warranty does not extend to any items that upon inspection by Belden are deemed to have been misused, neglected, improperly treated, improperly installed, or used in violation of instructions or specifications approved by Belden, or otherwise handled, installed, shipped or used in violation of industry standards for metal fabrication and solid state electronic equipment.

Powerstrip Warranty

If a BELDEN power strip product becomes defective during the warranty period listed below, BELDEN will elect to either repair or replace the unit free of charge.

Basic Power Strips – Three Years

Metered, Monitored and Managed Power Strips – Three Years

Environmental Monitoring Units – Three Years

This warranty does not include damage to the product resulting from accident or misuse, including exposure to water or any other corrosive material. This warranty excludes damage to equipment if surge or spike reaches that equipment through an unprotected source connected to it (i.e., printer, modem, phone line, etc.). It shall not apply to any product, which has been connected, installed, used or otherwise adjusted other than in accordance with written instructions furnished by BELDEN. WARRANTY WILL BE VOIDED IF THE UNITS ARE OPENED, MODIFIED OR ALTERED DURING THE WARRANTY PERIOD.

Containment and Cooling Warranty

BELDEN warrants Containment and Cooling products for a period of one (1) year following the date of delivery. If the BELDEN product becomes defective during the one (1) year warranty period, BELDEN will elect to either repair or replace the unit free of charge. This warranty does not include damage to the product resulting from accident or misuse, including exposure to water or any other corrosive material. WARRANTY WILL BE VOIDED IF THE UNITS ARE OPENED, MODIFIED OR ALTERED DURING THE WARRANTY PERIOD.

Shipping Policy

Freight Handling Charges

Third-Party Billing – Customer will specify carrier. Freight will be third-party billed other than to Belden or the customer.

The customer will supply a third-party account number or third-party billing address.

Freight Collect – Customer to specify carrier. Either a freight account number is provided or freight charges will be paid at destination upon delivery.

Prepaid and Add – Belden will specify carrier which has contractual agreements with select carriers.

All freight charges that appear on initial product invoice will be paid by the customer, and will not require any additional freight documentation. Belden's billing cycle will only indicate on the invoice a freight charge from dock to dock. Any accessorial charges (e.g., lift gate, union driver) will be billed on an additional invoice other than the initial billing that will show the accessorial charges.

Shipping Policy

Belden will provide estimated freight charges and will not be liable for charges due to problems that may occur in transit or upon delivery or not known at the time of the initial quote (accessorial charges). All shipments leaving Belden are FOB origin.

Inside Delivery – A carrier driver will make an inside delivery if an adequate loading dock is available to roll off freight to a trailer level dock. The driver will be equipped to move the freight via hand truck or pallet jack and must be able to get to the inside destination without any problem of obstacles that would cause delays. The customer must supply a freight elevator if delivery requires it. This action may result in additional freight charges.

Lift Gate Service – Usually a lift gate is needed when a loading dock is not available. The freight is lowered to ground level and delivered to the customer's door "only." Not all trailers are equipped with a lift gate and most carrier terminals have a limited number of lift gate trailers. This may cause a delay in shipment. This procedure may require an additional fee.

Notification – To coordinate delivery between the customer and the carrier, the customer must supply a phone number and contact person. This procedure may require an additional fee.

Re-Consignment – Once freight has left the Belden dock, the delivery destination address will be scheduled in the carrier dispatch system. A change of destination address is possible, depending upon the timing of delivery. This action may result in additional freight charges.

Redelivery – When a delivery is refused by a customer for any reason, other than the fault of the carrier, the freight will be returned to the carrier's dock. A redelivery charge will apply.

Damages

All damages must be reported to Belden within three (3) working days upon delivery. Failure to report any damages will release Belden from any and all claims. It is the responsibility of the customer's receiving personnel to check all shipping cartons for discrepancies (e.g., dents, punctures). All discrepancies to the shipping container should be noted on the carrier's paperwork and documented. If, after opening the container, it is found that there is damage to the product, the carton is to be examined to determine that the damage was due to shipping.

Failure to examine cartons at delivery, and signing the carrier's paperwork, releases the carrier and Belden from any and all freight claims.

Third-party billing customers will handle any and all freight claim damage with the carrier and are responsible for all freight charges.

Packaging

BELDEN enclosures are packaged in cardboard protective corner posts and protective plastic cover. The enclosures are then secured to a skid by banding prior to shipment.

Less than truck load shipments (LTL) might require additional packaging due to multiple handling locations. Belden provides full protective packaging (i.e. 3" honeycomb cardboard corner posts, honeycomb top cardboard cover, cardboard wrap, shock-watch drop spot indicator) for an additional fee to accommodate LTL shipments with special needs. Please contact your customer service or sales rep to discuss the packaging options.

Return Policy for Repair, Replacement, Modification or Credit

Prior approval must be obtained for any products being returned. Upon approval an RMA number will be assigned to the items being returned. This RMA number MUST appear on all shipping documents and on the outside of each carton. Failure to include the RMA number on the carton will result in the refusal of delivery and return to the customer, freight collect.

All products returned for reasons other than repair or replacement are subject to a 15% restocking fee and must be shipped prepaid. In addition to the 15% restocking fee, the customer is responsible for properly packaging and returning the product in reusable condition. If not, additional charges may be added to the restocking fee. If a customer holds a product for more than ten (10) days, a return for credit will be voided.

Any or all special customized products can only be returned for modifications or repair of damages.

All products being returned shall be prepaid (unless they are being returned due to defect or damage), packaged in good condition and shipped to:

Belden
2001 North Main Street
Washington, PA 15301

Part Number Index

BELDEN

1.800.BELDEN.1 (800.235.3361)

www.belden.com

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Part Number Index

Belden Rack and Enclosure Manufacturing
State-of-the-Art Manufacturing and Assembly Operation

Lean Manufacturing

Belden's lean manufacturing philosophy is exemplified in its manufacturing plant, where infrastructure solutions, including racks, enclosures, heat containment and rack power distribution units, are produced. The plant is structured for cell-based manufacturing, where automated machines, such as the CNC punch press, CNC laser-punch combination machine and CNC CO_2 lasers, work seamlessly with semi-automated metal-bending machines and assembly operations.

Packaging and Shipping

In order to provide our customers with high-performance enclosure systems and just-in-time delivery, the factory process flow is based on a value stream map, with raw materials received at a receiving dock (close to fabricating cells) and finished goods shipped from a shipping dock (close to the packaging cell). All enclosures are shipped with unique serial number tags, enabling full traceability.

Environmentally Friendly Powder Coating

Belden's powder-coating process involves industry leading five-stage wash and pre-treatment steps, ensuring a lasting and durable finish. Each enclosure is baked in compliance with ASTM standards to prevent paint from scaling or chipping, thus ensuring rust-proof enclosures. The entire process is environmentally friendly, with complete conformance to both state and federal "Clean Air Act" guidelines.

Quality Inspection

The cell-based assembly process includes stringent quality checks at each location within the cell, which are tracked in an assembly check list by each associate assembling an enclosure system. Throughout this manufacturing process, the external quality, measured in defects per million, is less than 100. Lean daily management (LDM) and continuous improvement processes drive manufacturing and design philosophy at Belden to ensure each customer's quality and delivery expectations are met in a safety conscious work environment.

Fabrication

Precision CO_2 lasers with automated loading and unloading capabilities are at the heart of our sheet metal fabrication cell, with defect-free laser cutting at speeds up to 400 inches per minute. The parts are then sent through a continuous flow of metal forming, welding, powder coating and assembly cells.

Our **modern manufacturing and assembly facility** ensures that customers receive the quality products they've come to expect.

BELDEN

GLOBAL LOCATIONS

For worldwide Sales and Technical Support, visit: www.belden.com

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UNITED STATES

Division Headquarters

401 Pennsylvania Parkway, #200
Indianapolis, IN
USA
Phone: (1)-317-818-6300
Inside Sales: 800-235-3361
Fax: (1)-317-818-6382
info@belden.com

Infrastructure Solutions
Manufacturing Operations

2001 N. Main Street
Washington, PA 15301
USA
Phone: (1)-800-793-2954
        (1)-724-228-7373
Fax: (1)-724-228-3920

CANADA

National Business Center

2280 Alfred-Nobel Boulevard
St-Laurent, Quebec
Canada
Phone: 514-822-2345
Fax: 514-822-7979
info@belden.com

BRAZIL

Regional Office

Rua Surubim, 577 - 4o andar
São Paulo, SP
Brazil
Phone: 5511-4097-2555
Fax: 5511-4097-2545
vendas@belden.com.br

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