

THREE-PHASE PDU UL

A better fit for your critical power infrastructure

TruFit™ – safe and reliable power distribution



- Configurable power distribution – 50-800kVA
- DOE 2016 high efficiency transformer.
- Compartmentalized design for improved safety.
- Reduction in required floorspace of up to 36%.

As a market leader in critical power protection, ABB developed the TruFit power distribution unit for the UL market with power ranges from 50 to 800kVA.

The TruFit PDU is equipped with a high efficiency transformer and integrated comprehensive monitoring system to better monitor the true health of your power distribution equipment.

Table of contents

004	The TruFit™ PDU offering
006	Optimal fit
007	True and proven reliability
008	Centralized health and fitness monitoring
009	Prioritizing safety
010	Tested and trusted
010	Services
011	TruFit PDU technical specifications

The TruFit™ PDU offering

Designed to provide an unmatched combination of power density, safety, and sustainability, the TruFit PDU brings highly configurable power distribution to the consumer. Its compartmentalized system architecture requires only front access for complete system operation and maintenance, allowing an easier fit into the white space. A holistic view of overall system health is supported by the PowerView™ advanced monitoring and integrated thermal monitoring package.

01



Optimal fit

- Front access only design for better fit into your floor plan.
- Installation, operation, and maintenance of any serviceable components from front.
- Eliminates need for additional side or rear clearances.

02



True and proven reliability

- Equipped with ABB's SACE Tmax XT breakers.
- True reliability through extreme breaking capacity in compact frames.
- Safe and reliable interruption of faults.

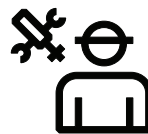
03



Centralized health/fitness monitoring

- Combines the usual metering/monitoring with optional integrated thermal monitoring solution.
- Eliminates need for expensive 3rd party metering solutions.
- Simplified communications through centralized native PDU monitoring system.

04



Prioritizing safety

- Compartmentalized design to minimize exposure to potential arc flash events.
- Isolation of consumable/serviceable components from hazardous voltages.



Improved sustainability

- Equipped with high-efficiency, DOE 2016 compliant transformers.
- Advanced metering/monitoring provides requisite visibility to optimally balance loads and maximize utilization.



Predictive maintenance

- Optional integrated thermal monitoring provides advanced visibility of system health.
- Proactively identify potential losses at bolted connections.

01

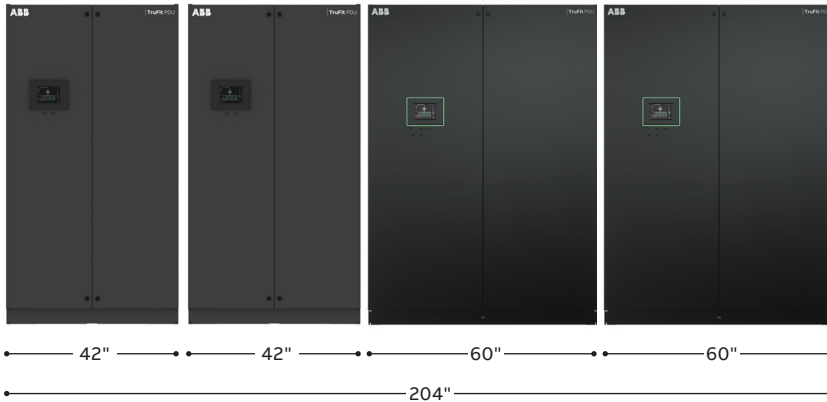
Optimal fit

Designed to optimize utilization of valuable white space, the TruFitPDU provides a wide range of configurable distribution options in a compact footprint requiring only front access.



- Highly configurable distribution options from 42-pole panelboards to sub-feed breakers.
- Front facing distribution sidecars.
- No side or rear clearance required.
- Up to 36% reduction in required floorspace gained through the elimination of rear or side clearances.

—
TruFit PDU
50–300kVA
 42" cabinet
 Front access only
 2 systems
 84" width
 up to 36%
 reduction in
 required
 floorspace.



—
TruFit PDU
400–800kVA
 60" cabinet
 Front access only
 2 systems
 120" width
 up to 31%
 reduction in
 required
 floorspace.

—
Cyberex PDU
 34" cabinet
 Front and one side
 or rear access
 3 systems 210" width.



02

True and proven reliability

Critical power distribution requires proven technology to help ensure safe and reliable interruption of faults. With an estimated mechanical life of up to 20,000 operations, ABB's SACE® Tmax® XT breaker's proven track record provides peace of mind that your critical power infrastructure is designed for a truly sustainable future.

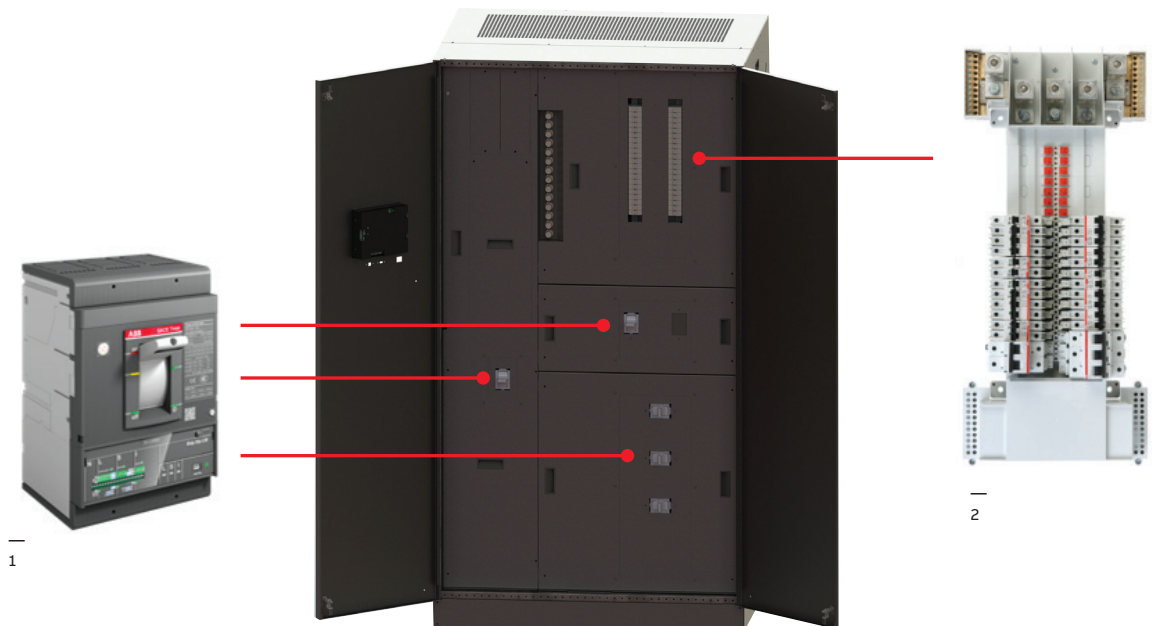


Reliable systems are built around the smallest details.

- Superior breaking capacities.
- Adjustable thermal-magnetic or electronic trip (Ekip Dip) units.
- 100,000 testing hours per year.
- The most advanced protection in the smallest of frames.

Configurable distribution options

- 1
ABB SACE Tmax XT breakers
- 2
ABB ProLine panelboard



03

Centralized health and fitness monitoring

A truly holistic monitoring system encompasses more than just basic power quality metering and monitoring. The TruFit PDU is equipped with ABB's innovative PowerView monitoring system to provide a centralized view of power quality, metering, and system health.



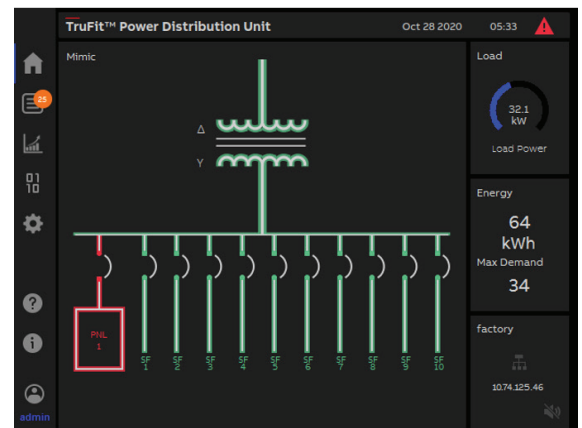
Multifunctional data acquisition

PowerView is an intelligent monitoring system that provides more than just basic circuit monitoring. The versatility of PowerView enables the combination of advanced power quality metering/monitoring with optional integrated thermal monitoring of your input and output bolted connections. This centralized monitoring solution provides a more holistic view of equipment health while simplifying communications to your BMS by eliminating the need for expensive 3rd party monitoring solutions.

PowerView is available in different offering tiers tailored for both basic and more advanced monitoring requirements. PowerView Core provide the basic metering/monitoring functionality with optional branch circuit or sub-feed circuit monitoring, while the PowerView Pro tier provides another level of features and functional card support such as breaker status monitoring and thermal monitoring.

PowerView monitoring system features

- Primary/Secondary Board (PSB) for transformer primary and secondary monitoring.
- Analog Conditioning Board (ACB) for monitoring at the individual panelboard branch circuit level or sub-feed circuit level.
- Discrete Input Board (DIB) for breaker status monitoring.
- Thermocouple Interface Board (TIB) for thermal monitoring of I/O bolted connections.
- Grouping functionality for creation of custom groups of circuits with warnings/alarms at the custom group level.
- 6.5" color, touchscreen HMI with integrated mimic diagram and LED status ring light.
- Compliant with ABB cybersecurity requirements.



04

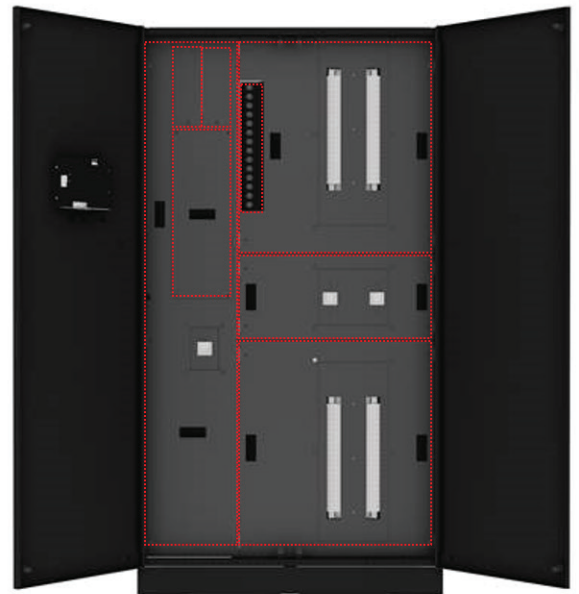
Prioritizing safety

Safety is a top design priority for every ABB product. The compartmentalized design of the TruFit PDU provides better isolation of potential arc events. The isolation of any consumable/serviceable components enables faster mean time to repair (MTTR) and further reduces risk to service technicians by isolating such components from hazardous voltages.



Helping drive standardization

Having to modify installation and maintenance practices for highly configurable products introduces unnecessary risk. The standard design of the TruFit PDU allows consistent, repeatable locations for input and output connections that are always accessible from the front of the unit, thus enabling quicker installation. Such consistency in design also eases implementation of standard work practices to minimize risk.



Tested and trusted

Comprehensive testing is crucial, which is why companies routinely test individual products before they leave the factory.

But as our customers know, there are often unexpected operating conditions once devices are integrated into a real-life system. To address this, ABB maintains extensive customer witness testing programs at its Swiss and US manufacturing facilities.

ABB's customers have facility access for:

- Infrastructure flexible testing of up to 5MW.
- PDU testing with associate equipment – like static transfer switches – for smooth system integration and transition to onsite infrastructure.
- Testing center designed to test the full range of configurable PDU options.
- Customers can oversee the entire test process in a comfortable and secure high-power testing environment.
- Factory witness testing is offered in-person and virtually.



Services

With a presence in over 100 countries, ABB's service engineers are committed to supporting you wherever you are in the world.

Our PDU service portfolio is designed to maximize your return on investment, keeping equipment operating at its highest efficiency and availability throughout its lifetime.

We work closely with our team of R&D experts to develop the most advanced service technologies that ensure proactive product life-cycle management.

Our services include:

- Installation and commissioning
- Repairs
- Spares and consumables
- Extensions, upgrades and retrofits
- Replacement
- Training
- Service agreements
- Advanced services including predictive maintenance
- Factory evaluations

TruFit PDU 50-300kVA technical specifications

General data		
Standards	ETL listed to UL 891	
Access requirements	Front only for installation, operation, and maintenance	
Cable entry/exit	Top and/or bottom	
Mechanical characteristics		
	Dimensions	Weights
Main cabinet	42"W x 36"D x 78"H	</= 2650 lbs
24"W front facing sidecar(s)	24"W x 36"D x 78"H	</= 340 lbs
Electrical characteristics		
Transformer		
kVA rating	kVA	50, 75, 125, 150, 225, 300
Input/primary voltage	480 VAC, 3-phase, 3-wire + ground	
Output/secondary voltage	208/120 VAC, 3-phase, 4-wire + ground	
Winding material	Aluminum (std.), Copper (opt.)	
Input/output frequency	Hz	60 +/-5% (57–63Hz)
Efficiency	DOE 2016 compliant	
Temperature rise	°C	150
Inrush	11x	
K-rating	K4 (std.), K13 & K20 (opt.)	
Compensation taps	(2) 5% full load compensation taps, (1) above & (1) below nominal	
Output/distribution specifications		
Panelboard distribution		
Panelboard types/brand	GE by ABB 42-pole, ABB ProLine 42-pole	
Panelboard amp rating	A	225A, 400A
Sub-feed circuit breakers		
Sub-feed types/brand	ABB XT3, ABB XT4, ABB XT5	
Sub-feed amp rating	A	225A, 250A, 400A
PowerView metering and monitoring		
Basic metering and monitoring		
Primary & secondary of transformer (PSB)	PowerView Core	PowerView Pro
Branch circuit management (BCM)	Standard	Standard
Sub-feed circuit management (SFCM)	Optional	Optional
Accuracy	Optional	Optional
Harmonics measurements	+/-2%	+/- 1%
Waveform capture	Up to 9th order	Up to 35th order
Custom circuit naming/numbering	Not Available	Standard
Custom grouping of circuits	Not Available	Standard
Global time synch via NTP	Not Available	Standard
Breaker status monitoring	Not Available	Standard
Open, closed, tripped via Discrete Input Board (DIB)	Not Available	Standard
Integrated thermal monitoring via Thermocouple Interface Board (TIB)	Not Available	Standard
Communication interfaces		
Modbus RTU (via RS485) & Modbus TCP (via Ethernet)	Standard	
Local EPO & remote EPO	Standard	
Optional – add ons		
40kA primary Surge Protective Device (SPD)	Optional	
40kA secondary Surge Protective Device (SPD)	Optional	
Isolated grounds for panelboards	Optional	

TruFit PDU 400-800kVA technical specifications

General data		
Standards	ETL listed to UL 891	
Access requirements	Front only for installation, operation, and maintenance	
Cable entry/exit	Top and/or bottom	
Mechanical characteristics		
	Dimensions	Weights
Main cabinet	60"W x 48"D x 84"H	</= 5500 lbs
30"W front facing sidecar(s)	30"W x 48"D x 84"H	</= 550 lbs
Electrical characteristics		
Transformer		
kVA rating	kVA	400, 500, 600, 750, 800
Input/primary voltage	480 VAC, 3-phase, 3-wire + ground	
Output/secondary voltage	Re-tappable dual output 415/240 VAC & 208/120 VAC Single output 415/240 VAC Single output 208/120 VAC	
Winding material	Aluminum (std.), Copper (opt.)	
Input/output frequency	Hz	60 +/-5% (57-63Hz)
Efficiency	DOE 2016 compliant	
Temperature rise	°C	150 (std.), 115 (opt.)
Inrush	11x (std.), 5x (opt.)	
K-rating	K4 (std.), K13 & K20 (opt.)	
Compensation taps	(4) 2.5% full load compensation taps, (2) above & (2) below nominal	
Output/distribution specifications		
Sub-feed circuit breakers		
Sub-feed types/brand	ABB XT4, ABB XT5, ABB XT6	
Sub-feed amp rating	A	250A, 400A, 600A, 800A
PowerView metering and monitoring		
Basic metering and monitoring	PowerView Core	PowerView Pro
Primary & secondary of transformer (PSB)	Standard	Standard
Branch circuit management (BCM)	Optional	Optional
Sub-feed circuit management (SFCM)	Optional	Optional
Accuracy	+/-2%	+/- 1%
Harmonics measurements	Up to 9th order	Up to 35th order
Waveform capture	Not Available	Standard
Custom circuit naming/numbering	Not Available	Standard
Custom grouping of circuits	Not Available	Standard
Global time synch via NTP	Not Available	Standard
Breaker status monitoring	Not Available	Standard
Open, closed, tripped via Discrete Input Board (DIB)		
Integrated thermal monitoring via Thermocouple Interface Board (TIB)	Not Available	Standard
Communication interfaces		
Modbus RTU (via RS485) & Modbus TCP (via Ethernet)	Standard	
Local EPO & remote EPO	Standard	
Optional – add ons		
100kA or 200kA primary SPD	Optional	
100kA or 200kA secondary SPD	Optional	
Solid kick-plates for raised floor installations	Optional	
Seismic rated under-floor floorstands (12"-60"H)	Optional	



—

ABB Inc.

5900 Eastport Boulevard
Richmond, VA 23231
USA

abb.com/ups/power-distribution