VERTIV.

Vertiv™ PowerBoard UL891 Switchboard

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Vertiv's UL891 Switchboard compact and efficient range has been designed to provide increased design flexibility in compliance with UL and CSA standards.

Vertiv's UL891 Switchboard range has been engineered to manage the most critical of applications and offers a fully customizable solution that improves efficiency, saves space, and enhances operator safety. Vertiv's IEC influenced design has been fully tested and certified to comply with Vertiv's UL891 Switchboard standards.

Standards and Certifications

Manufactured in a certified management system environment where Quality ISO 9001, Safety ISO 45001 and Environmental ISO 14001 standards are applied to all aspects of the manufacturing and installation processes. We meet the requirements of NEMA, CSA, IEEE, ANSI, IEC & CE.

UL Listed

Completed extensive testing at UL accredited laboratories to ensure the product we supply meets UL requirements.

Seismic Compliance

Independently certified to meet Seismic requirements of IBC 2021 and CBC 2019.
Independently tested to meet AC156 providing seismic protection in all zones including nuclear facilities.

C22.2 No. 244-05, NMX-J-118/2-ANCE-2006 – Standard for Safety Switchboards

C37.20.1 – Metal enclosed Low Voltage power circuit breaker switchgear

NEMA SG5 - Power Switchgear Assemblies

UL 50 – Enclosures for Electrical Equipment, Non-Environmental Considerations

CBC-2019 – California Building Code

IBC-2021 – International Building Code

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Compact

One of the most compact switchboard designs in the North American Market.

Vertiv™ UL891 Switchboard packs more power into a smaller footprint, this power dense design optimizes switch room space. Helping our customer to accommodate the demand for higher power capacity.

Flexible & Modular

Vertiv UL891's modular switchboard design facilitates a component agnostic solution, giving the customer more freedom to choose their preferred components from an extensive range of well-known manufacturers. Designs can be customized to fit the most challenging specifications both in terms of space and performance.

Safe & Reliable

Built and tested with IEC influence, the design of our Vertiv UL891 switchboard is focused on achieving the highest standard of performance reliability and operator safety. Internal segregation as outlined by IEC 61439-2 reduces operator risk by limiting the propagation of internal arc fault and preserves uptime during maintenance and upgrade operations.

Product Overview

Vertiv™ UL891 Switchboard range offers a fully customizable solution that improves efficiency, saves space, and enhances operator safety. Vertiv Switchboard UL891 is engineered with influence from our proven IEC 61439 technology that has been fully tested and certified to comply with Vertiv UL891 standards.

- Full customization and design flexibility
- Type tested arc proof metalwash systems
- NEMA 1 gasketed, NEMA 3R enclosures available
- Switchboard Ampacity to 6000A
- Segregation available up to Form 4 type 7 for enhanced user safety and protection
- Vertiv™ UL489, fixed-mount breakers (MCCB) or Vertiv UL489 draw-out breakers (ICCB) and Vertiv UL1066 Draw-out, power breakers from main breaker manufacturers such as Schneider, ABB and Eaton
- Integration of SPD, PQM's, Protective Relays and Controls based on site specific needs

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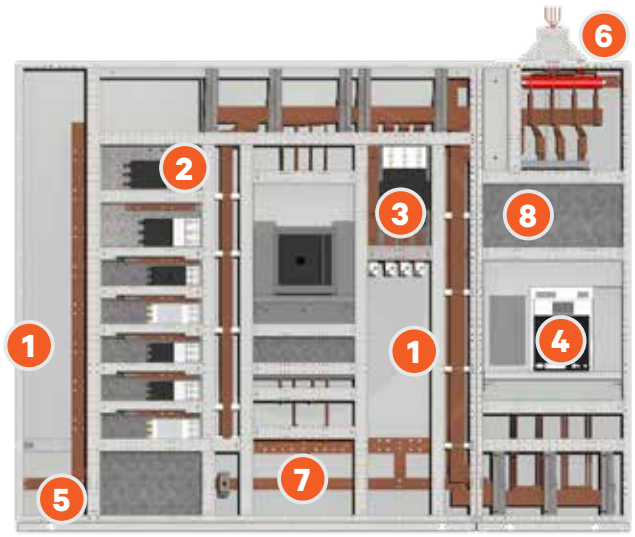
Features

1. Load Wireway Section - Designed for ease of cable termination.
2. MCCB Compartment - Isolated, barriered, individually mounted breaker with isolated run back bus.
3. MCCB - Vertiv™ UL489 individually, fixed-mounted circuit breaker equipment designed to break an electrical circuit if tripped.
4. ACB - Vertiv™ UL1066 draw-out circuit breaker Equipment.
5. Main Bus - carries the majority of the current.
6. Busduct Connection - Designed to connect to any busduct manufacturer.
7. Ground Bar
8. Instrument Compartment - designated as the metering and control section.



Front internal view

Rear internal view

Technical Specifications

Electrical Specification	
Voltage	up to 600V
Ampacity	up to 6000A
Short Circuit Rating	up to 100KAIC
Breakers	Vertiv UL1066 & Vertiv UL489 – individual or group mounted construction available
Transformer	close coupled option available

Enclosure Specification	
Access	all access switchboard – access can be designed from front/rear depending on the project specification
Paint Color	RAL 7035 as standard; custom color paint is available to match other equipment or "A" / "B" system designs
Enclosures	Type 1 or 3R NEMA available

ACB Specification - Vertiv™ UL1066 draw-out, Power Circuit Breaker Front Access Single Stack

Front Access Single Stack

Amperage (A)	Poles	ACB's	Switchboard dimensions		
			width (")	depth (")	height (")
800 - 2000	3,4	E2.2, NW/MTZ2, NRX	22.68	30.24	90.83
2500 - 3200	3,4	E4.2, NW/MTZ2, NRX	30.24	30.24	90.83
4000	3,4	NW/MTZ2	30.24	30.24	90.83
4000- 5000	3	E6.2, NW/MTZ3, Magnum	37.8	30.24	90.83
4000- 5000	4	E6.2, NW/MTZ3, Magnum	45.35	30.24	90.83
6000	3,4	E6.2, NW/MTZ3	45.35	30.24	90.83

Front Access Double Stack

Amperage (A)	Poles	ACB's	Switchboard dimensions		
			width (")	depth (")	height (")
800- 2000	3	E2.2	22.68	37.8	90.83
800- 2000	3	NW/MTZ2, NRX	22.68	45.35	90.83
800- 2000	4	E2.2	30.24	45.35	90.83
800- 2000	4	NW/MTZ2, NRX	37.8	45.35	90.83
2500 - 3200	3	E4.2, NW/MTZ2, NRX	30.24	37.8	90.83
2501 - 3200	4	E4.2, NW/MTZ2, NRX	37.8	45.35	90.83

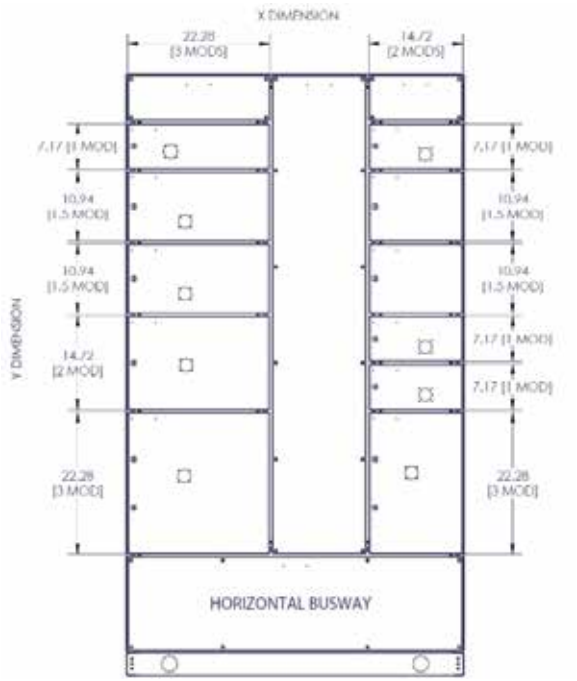
Rear Access Single Stack

Amperage (A)	Poles	ACB's	Switchboard dimensions		
			width (")	depth (")	height (")
800 - 2000	3,4	E2.2, NW/MTZ2, NRX	22.68	60.47	90.83
2500 - 3200	3,4	E4.2, NW/MTZ2, NRX	30.24	60.47	90.83
4000	3,4	NW/MTZ2	30.24	60.47	90.83
4000- 5000	3	E6.2, NW/MTZ3, Magnum	37.8	60.47	90.83
4000- 5000	4	E6.2, NW/MTZ3, Magnum	45.35	60.47	90.83
6000	3,4	E6.2, NW/MTZ3	45.35	60.47	90.83

Rear Access Double stack

Amperage (A)	Poles	ACB's	Switchboard dimensions		
			width (")	depth (")	height (")
800 - 2000	3,4	E2.2, NW/MTZ2, NRX	22.68	60.47	90.83
2500 - 3200	3,4	E4.2, NW/MTZ2, NRX	30.24	60.47	90.83

MCCB Specification - Vertiv™ UL489 fixed-mount circuit breaker



MCCB Dimensions (X,Y)	Brand	Breaker	Rating
2 MOD X 1 MOD 2 MOD X 1.5 MOD (with integral meter)	ABB	XT2	125A
		XT3	225A
	SCHNEIDER	H-FRAME	150A
		J-FRAME	250A
2 MOD X 3 MOD	ABB	XT7	1200A
	SCHNEIDER	M-FRAME	800A
		P-FRAME	1200A
3 MOD X 1 MOD	ABB	XT2	125A
		XT3	225A
		XT4	250A
		XT5 (3P ONLY)	400A
	SCHNEIDER	H-FRAME	150A
		L-FRAME (3P ONLY)	400A
3 MOD X 1.5 MOD	ABB	XT4	250A
		XT5	400A
	SCHNEIDER	L-FRAME	600A
		M-FREAME	800A
3 MOD X 2 MOD	ABB	XT6	800A
	SCHNEIDER	M-FRAME	800A
3 MOD X 3 MOD	ABB	XT7	1200A
	SCHNEIDER	M-FRAME	800A
		P-FRAME	1200A

Switchboard Segregation

Vertiv's innovative switchboard design is constructed from our IEC 61439 product that has been tested and approved to meet UL891 and CSA standards. The flexible and modular system provides the highest level of operator safety as well as equipment protection and customization in the North American market.

Forms of separation

The high level of protection and safety is achieved by separation of the components into clear modular compartments within the switchboard.

There are four key objectives of separation within the switchboard:

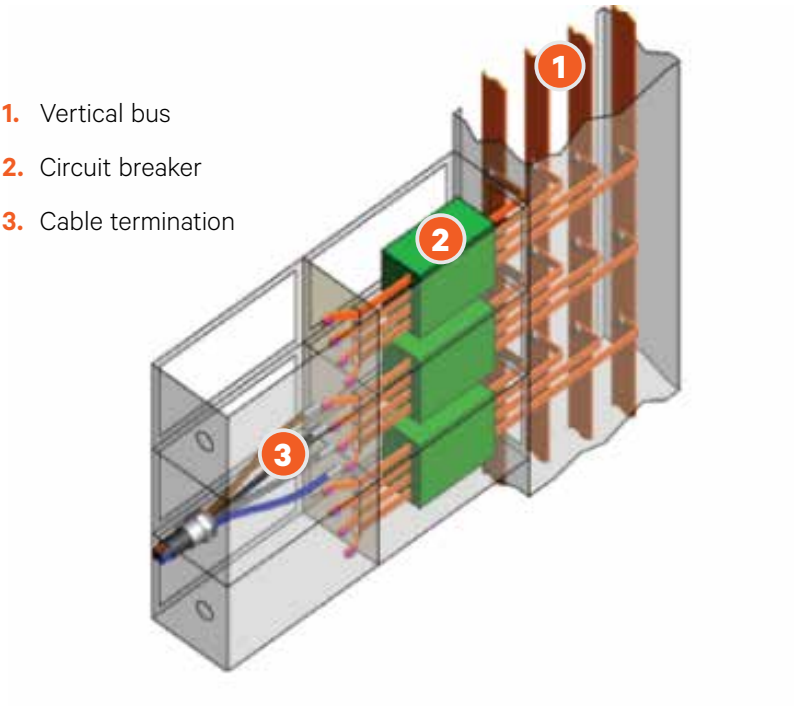
1. To protect persons against direct contact with live parts
2. To facilitate access to one part of the assembly whilst other parts remain energized, therefore facilitating maintenance work and upgrades
3. To protect the switchboards against the penetration of solid foreign bodies
4. To limit the risk of arc flash inside the switchboard by separating the busbars, connections, and equipment

The level of internal separation is agreed upon by the manufacturer and the user. It is dictated by a number of factors including rating of the panel, access required and function of the panel.

Form	Main Criteria	Sub-Criteria	Type of Construction
4a	Separation of busbars from the functional units and separation of all functional units from one another, including the terminal for external conductors which are an integral part of the functional unit	Terminals for external conductors in the same compartment as the circuit breaker	Type 1 – Busbar separation is by an insulated covering. Cables may be connected elsewhere.
			Type 2 – Busbar separation is by metallic or non-metallic rigid barriers or partitions. Cables may be glanded elsewhere.
			Type 3 - Busbar separation is by metallic or non-metallic rigid barriers or partitions. The termination for each functional unit has its own integral glanding facility.
4b		Terminals for external conductors not in the same compartment as the circuit breaker, but in individual, separate, enclosed protected spaces or compartments	Type 4 - Busbar separation is by an insulated covering. Cables may be glanded elsewhere.
			Type 5 – Busbar separation is by metallic or non-metallic rigid barriers or partitions. Terminals may be separated by insulated coverings and glanded in common cabling chambers.
			Type 6 – All separation requirements are by metallic or nonmetallic rigid barriers or partitions. Cables are glanded in common cabling chamber(s).
			Type 7 - All separation requirements are by metallic or non-metallic rigid barriers or partitions. The termination for each functional unit has its own integral glanding facility.

Form 4 type 7 – maximum internal separation

All separation requirements are by metallic or non-metallic rigid barriers or partitions. The termination for each functional unit has its own integral glanding facility.



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SL-70901 (R02/24)