Demanding more from your low voltage system?

Choose protection that delivers

Best-in-class breaking capacity for marine applications
with Compact NSX range of 100 – 630 A MCCBs

Schneider Electric

Do more with your LV network

Best-in-class protection

- The world's highest rated breaking capacity of 100 kA for 500-690 V systems
- Industry-leading breaking capacity of 200 kA at 440 V
- Type II coordination for motor applications
- Marine-ready, Ics rating meeting IACS requirements for emergency, essential, and MCC loads
- Extended breaking capacity available across the complete Compact NSX range from 100 to 630 A
- Extended breaking capacity comes in the same space-saving frame sizes as all other Compact NSX models

Fully certified

IEC

- 60947-2 for circuit breakers
- 60947-4 for motor protection

Marine

- All Compact NSX approvals apply (ABS, BV, CCS, DNV, GL, KRS, LRS, NK, RINA, RMRS)

CCC

NEMA

Progressive marine organizations look for the **smartest, safest, most cost-effective** way to transport people and cargo. Opportunities to lower capital costs and operating expenses are often buried within shipboard low voltage (LV) power distribution networks.

Schneider Electric, The Global Specialist in Energy Management™ presents an **innovative high breaking capacity** for the Compact™ NSX range of moulded case circuit breakers (MCCBs). This ground-breaking capability will help you get more from your LV infrastructure while offering a cost-effective alternative to fuses over the long term.

Class-leading performance enables the entire Compact NSX range to meet the requirements of applications that once mandated costlier, bulkier protection devices. Realize significant cost savings by safely running higher power densities on your LV platforms, or benefitting from the higher energy efficiency and reduced space requirements of a 690 V system.

>

Highest breaking capacity in its class

+

Ics = 100% Icu

Resolve your toughest LV protection challenges

Making high-density power systems safer

Critical, high demand power distribution systems operating at 440/480 V or lower need protection against extreme short-circuit fault currents. Such faults occur in systems with multiple paralleled power sources or large numbers of motor loads. The higher breaking capacity of the Compact NSX range can be used to provide **better protection and higher continuity.**

The key to enabling 600/690 V power systems

Compared to using a typical 415 V or 440 V system, 690 V systems have a smaller equipment footprint and weight, minimized cable sizes, and lower system energy losses. They also have the ability to power smaller, high-efficiency 690 V motors and provide the higher power quality needed to support reliable DOL motor starting. 690 V systems can help you **increase your power density without transitioning to an MV system**, with the higher associated cost, size, training, and maintenance requirements. High-rating Compact NSX circuit breakers enable 690 V systems by offering the extended breaking capacity required to reliably protect against high-power fault currents.

A smart alternative to high-power fuses

The high breaking capacity of the Compact NSX circuit breakers will withstand demanding fault conditions, staying reliably in service after 3 faults. After a fault is cleared, remote control reclosing functionality puts circuits back into operation quickly, enabling maximum operational continuity. **Discrimination and coordination isolate faults to avoid system-wide outages.** Over the long term, this reduces the cost impacts of downtime and avoids the labour and parts costs associated with fuse replacement, giving you a total-cost-of-ownership advantage.

"We are seeing an increasing demand on vessel electrical systems, due to complex integration and power requirements with other systems. This presents new design challenges that emphasize flexibility and [a need for] product lines that have extensive versatility."
– John Thompson, Senior Electrical Engineer, Derecktor Shipyards

Extended breaking performance is only the beginning

- Selectivity between Compact NSX MCCBs and Masterpact™ ACBs ensures maximum continuity of service by isolating the area of a circuit fault
- Small footprint: reduces panel space and weight
- Energy metering: embedded intelligence helps simultaneously maximize energy efficiency and network reliability
- Alarms, diagnosis, and communications: enables fast fault location and problem solving
- Enhanced protection for motors: well adapted to motor-starting solutions up to 315 kW at 400 V, providing protection against short circuits, overloads, phase unbalance, and phase loss

57%

Typical improvement of energy efficiency for 690 V compared to 440 V systems.

Compact NSX breaking capacity performance for R, HB1, and HB2 levels*

Circuit breakers				NSX100			NSX250			NSX400			NSX630					
													Ir = 225 – 500 A			Ir = 501 – 630 A		
Breaking capacity levels				R	HB1	HB2	R	HB1	HB2	R	HB1	HB2	R	HB1	HB2	R	HB1	HB2
Electrical characteristics as per IEC 60947-2																		
Rated current (A)	In	40 °C		100			250			400			630					
Number of poles				3,4			3,4			3,4			3,4					
Breaking capacity (kA rms)																		
	Icu	AC 50/60 Hz	220/240 V	200	-	-	200	-	-	200	-	-	200	-	-	200	-	-
			380/415 V	200	-	-	200	-	-	200	-	-	200	-	-	200	-	-
			440 V	200	-	-	200	-	-	200	-	-	200	-	-	200	-	-
			500 V	80	85	100	80	85	100	80	85	100	80	85	100	80	85	100
			525 V	65	80	100	65	80	100	65	80	100	65	80	100	65	80	100
			660/690 V	45	75	100	45	75	100	45	75	100	45	75	100	45	75	100
Service breaking capacity (kA rms)																		
	Ics	AC 50/60 Hz	220/240 V	200	-	-	200	-	-	200	-	-	200	-	-	200	-	-
			380/415 V	200	-	-	200	-	-	200	-	-	200	-	-	200	-	-
			440 V	200	-	-	200	-	-	200	-	-	200	-	-	200	-	-
			500 V	80	85	100	80	85	100	80	85	100	80	85	100	80	85	100
			525 V	65	80	100	65	80	100	65	80	100	65	80	100	16	20	25
			660/690 V	45	75	100	45	75	100	45	75	100	45	75	100	12	19	25

* Refer to catalogue for complete specifications on all models and levels.

Schneider Electric can deliver your complete, integrated 690 V solution, including:

> Complete circuit protection with Masterpact™ UR ACB or Masterpact NW ACB, and Compact NSX MCCB with high breaking capacity

> Okken™ or Blockset™ switchboards offering minimized footprint with maximized reliability

> TeSys™ protection and power control for motors

Make the most of your energy℠

To find out more, please visit: www.schneider-electric.com

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