

Direct access to energy efficiency



Compact NSX ●●● 100-630A
Next-generation circuit breakers



Energy
measurement
and control



Increased
energy
availability



Safety and
protection

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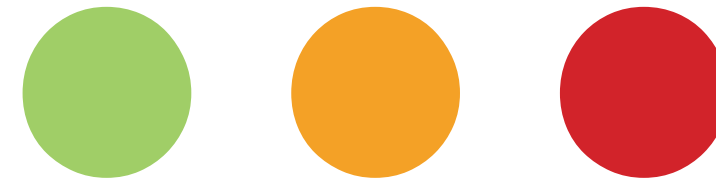
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Intelligent Outlook



Compact NSX Next-generation circuit breakers

Today, next-generation Compact NSX circuit breakers provide an intelligent outlook and anticipate the standards of tomorrow. A power monitoring unit enhances their invariably impeccable protective functions. For the first time, users monitor both energy and power, offering new performance in a remarkably compact device.



Combine safety and performance

Compact NSX innovates, incorporating monitoring and communication functions, from 40 amps upward, combined with impeccable protection.

Expert technology

A roto-active contact breaking principle provides better limitation and endurance performance:

- > very high breaking capacity in a very small device,
- > exceptional fault current limitation for extended system life.

Reduced installation costs

Achieve up to 30% savings:

- > total discrimination is ensured particularly in the case of miniature circuit breakers for considerable savings at the time of installation,
- > smaller devices mean more economical switchboards for a significant impact on overall cost of installation – no need for over-calibration.

New breaking capacities

New performance levels improve application targeting:

- > 25kA – standard low short-circuit level applications, e.g., in service businesses,
- > 36-50kA – standard applications (industrial plants, buildings and hospitals),
- > 70-100kA – high performance at controlled cost,
- > 150kA – demanding applications (marine).

Enhanced protection for motors

Compact NSX meets the requirements of IEC 60947-4-1 standards for protection of motors:

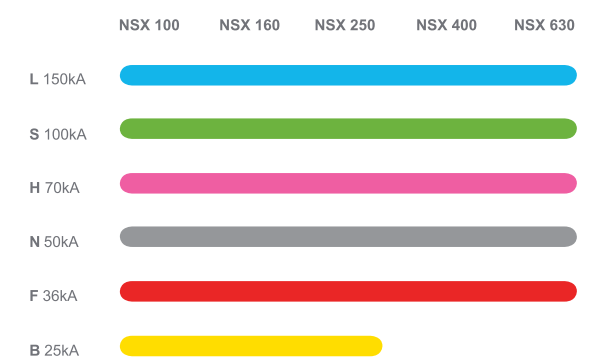
- > well adapted to motor-starting solutions up to 315kW at 400V, providing protection against short circuits, overloads, phase unbalance and loss,
- > set up additional protection systems for starting and breaking with the motor running, reverse braking, jogging or reversing in complete safety,
- > used in conjunction with a Schneider Electric contactor; Compact NSX complies with the requirements of so-called type 2 coordination.

23

new patents pending confirm the innovative character of Compact NSX



Breaking performance at 415 V





Measure the difference

Compact NSX stands out as a single device, which integrates a monitoring unit to control energy consumption and power.

Integrated monitoring

> The Micrologic electronic tripping device integrates next-generation sensors:

- an "iron" sensor for the power supply to electronics,
- an "air" sensor (Rogowski coils) for the measurement part.

> The originality lies in how Compact NSX measures, processes and displays data, either directly on screen, on the switchboard front panel, or via a monitoring system.

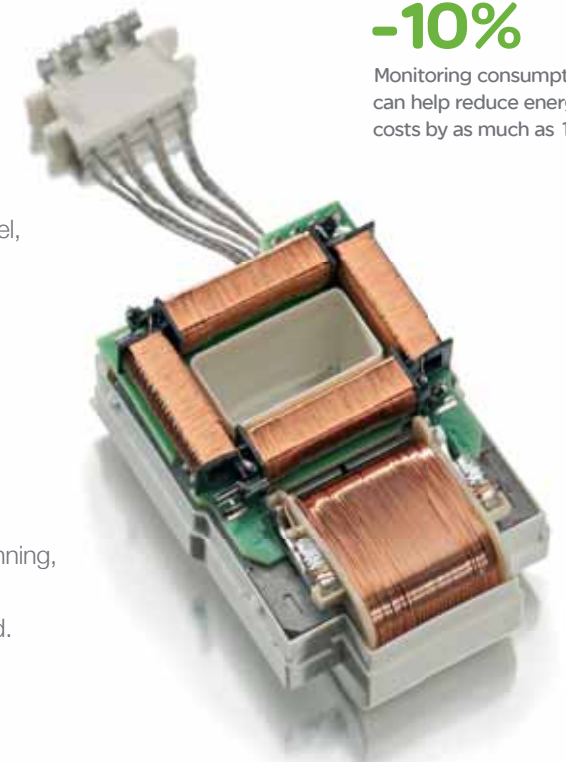
Sending information

To keep costs under control and ensure service continuity, relevant information must be available in real time:

- > a kilowatt-hour meter helps optimise costs and their allocation,
- > harmonic distortion rate shows the quality of electrical supply,
- > alarm notification secures operational control and maintenance planning,
- > event logs and tables, activated continuously, ensure the installed equipment base operates correctly, so energy efficiency is maximized.

Installation management

Used in conjunction with PowerLogic monitoring software, Compact NSX provides users with a set of parameters and tools to make it easy to monitor installations.



-10%

Monitoring consumption can help reduce energy costs by as much as 10%.



Electronics (ASIC), independent of measurement, manage protection functions. The high degree of integration in electronics guarantees protection against conducted or radiated interference.



Opt for service continuity

Compact NSX makes discrimination its main advantage in minimising the impact of short circuits, ensuring service continuity for installations.

Total discrimination

> Thanks to 30 years of experience and a complete mastery of discrimination, users can be sure of service continuity. Downstream circuit breaker trips as close as possible to the fault, so upstream circuit breaker is not overloaded.

Service continuity

Adding an SDTAM module allows remote indication of motor overloads and actuation of a contact switch, ensuring total service continuity:

- > the SDTAM switches the contact instead of tripping the circuit breaker,
- > the module allows for machine restart directly from the contact switch without having to operate circuit breakers.

Preventive maintenance

Maintenance indicators provide information on the number of operations, level of wear on contacts and total load rates. Maintenance is now preventive, avoiding faults.


100%
service continuity



Direct access to maintenance indicators



Added simplicity

Compact NSX takes the principles of easy installation and use – which made its predecessor so successful – to a higher level.

Simple in design

- > Installers mount and wire Compact NSX in the same way as Compact NS, which makes engineering for a retrofit or extension simple.
- > Integration in help software, for parameter settings and switchboard installation, eases design.

Simple to install

- > A Limited Torque Screw (LTS) system ensures proper installation of the tripping device, for added flexibility.
- > A transparent sealed flap protects access to tripping device switches and prevents settings from being changed.
- > New electrical control adjustment also has a transparent sealable cover to prevent it from being operated accidentally.
- > Pre-wired connectivity and plug-and-play interface modules allow for easy integration with communication networking.

Simple to use

- > Users customise alarms for all parameters, assign them to indicator lights, choose display priorities, and configure time delay thresholds and modes.
- > Continuously-activated event logs and tables, a wealth of information, enable users to ensure that the installed equipment base operates correctly, and to optimize settings.

65%

time savings in installation compared with a classic monitoring solution.



The green "Ready" LED flashes to show that all is well.



LTS installation system



Transparent protective cover





Choose Schneider Electric expertise

Whether in buildings, factories or mission-critical infrastructures, Schneider Electric commits to reducing energy costs and CO2 emissions for its customers. It offers products, solutions and services that integrate with all levels of the energy value chain.

Solutions adapted to all needs

Through flexible solutions for commercial and industrial buildings, Schneider Electric commits to help customers gradually move towards an active approach to their energy efficiency. It helps get more return from investments and future design solutions.

Up to **30%**
savings in energy costs

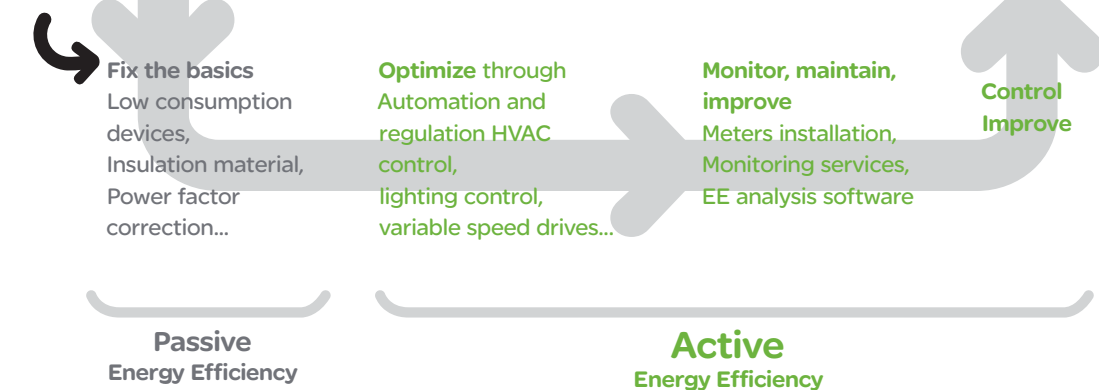
Energy performance contracts

Schneider Electric offers innovative service to modernise technical installations. Its objective: durably reduce energy costs, plus improve comfort and safety, all in a way more responsible for the environment.

4 steps

- > Diagnostics
- > Proposals
- > Implementation
- > Follow-up

Energy Audit & Measure
building,
industrial process



Environmentally responsible

Compact NSX is part and parcel of the Schneider Electric energy efficiency approach. Designed for easy disassembly and recycling at end of life, Compact NSX complies with environmental directives RoHS* and WEEE**, and with ISO 14001 standards, thanks to non-polluting factories.

* RoHS = Restriction of Hazardous Substances
** WEEE = Waste of Electrical and Electronic Equipment

Compact NSX ●●●

Characteristics



Common characteristics

Rated voltages			
Insulation voltage (V)	Ui		800
Impulse withstand voltage (kV)	Uimp		8
Operational voltage (V)	Ue	CA 50/60 Hz	690
Suitability for isolation			
		IEC/EN 60947-3	yes
Utilisation category			
			A
Pollution degree			
		IEC 60664-1	3

Control

Manual	With toggle	■
	With direct or extended rotary handle	■
Electrical	With remote control	■
Versions		
Fixed		■
Withdrawable	Plug-in base	■
	Chassis	■

Circuit breakers

		NSX100						NSX160						NSX250						NSX400						NSX630						
		B	F	N	H	S	L	B	F	N	H	S	L	B	F	N	H	S	L	F	N	H	S	L	F	N	H	S	L			
Breaking-capacity levels																																
Electrical characteristics as per CEI/IEC 60947-2																																
Rated current (A)	In 40 °C	100						160						250						400						630						
Number of poles		2, 3, 4						2, 3, 4						2, 3, 4						3, 4						3, 4						
Breaking capacity (kA rms)																																
	Icu CA 50/60 Hz	220/240 V	40	85	90	100	120	150	40	85	90	100	120	150	40	85	90	100	120	150	40	85	100	120	150	40	85	100	120	150		
		380/415 V	25	36	50	70	100	150	25	36	50	70	100	150	25	36	50	70	100	150	36	50	70	100	150	36	50	70	100	150		
		440 V	20	35	50	65	90	130	20	35	50	65	90	130	20	35	50	65	90	130	30	42	65	90	130	30	42	65	90	130		
		500 V	15	25	36	50	65	70	15	30	36	50	65	70	15	30	36	50	65	70	25	30	50	65	70	25	30	50	65	70		
		525 V	-	22	35	35	40	50	-	22	35	35	40	50	-	22	35	35	40	50	20	22	35	40	50	20	22	35	40	50		
	660/690 V	-	8	10	10	15	20	-	8	10	10	15	20	-	8	10	10	15	20	10	10	20	25	35	10	10	20	25	35			
	Ics CA 50/60 Hz	220/240 V	40	85	90	100	120	150	40	85	90	100	120	150	40	85	90	100	120	150	40	85	100	120	150	40	85	100	120	150		
		380/415 V	25	36	50	70	100	150	25	36	50	70	100	150	25	36	50	70	100	150	36	50	70	100	150	36	50	70	100	150		
		440 V	20	35	50	65	90	130	20	35	50	65	90	130	20	35	50	65	90	130	30	42	65	90	130	30	42	65	90	130		
		500 V	7,5	12,5	36	50	65	70	15	30	36	50	65	70	15	30	36	50	65	70	25	30	50	65	70	25	30	50	65	70		
		525 V	-	11	35	35	40	50	-	22	35	35	40	50	-	22	35	35	40	50	10	11	11	12	12	10	11	11	12	12		
	660/690 V	-	4	10	10	15	20	-	8	10	10	15	20	-	8	10	10	15	20	10	10	10	12	12	10	10	10	12	12			
Durability (C-O cycles)	Mechanical	50000						40000						20000						15000						15000						
		Electrical	440 V	50000						20000						20000						12000						8000				
	In/2		30000						10000						10000						6000						4000					
	690 V	20000						15000						10000						6000						6000						
	In	10000						7500						5000						3000						2000						
Characteristics as per Nema AB1																																
Breaking capacity (kA rms)	CA 50/60 Hz	240 V	40	85	90	100	120	150	40	85	90	100	120	150	40	85	90	100	120	150	40	85	100	120	150	40	85	100	120	150		
		480 V	20	35	50	65	90	130	20	35	50	65	90	130	20	35	50	65	90	130	30	42	65	90	130	30	42	65	90	130		
		600 V	-	8	20	35	40	50	-	20	20	35	40	50	-	20	20	35	40	50	-	20	35	40	50	-	20	35	40	50		
Characteristics as per UL 508																																
Breaking capacity (kA rms)	CA 50/60 Hz	240 V	-	85	85	85	-	-	-	85	85	85	-	-	-	85	85	85	-	-	85	85	85	-	-	85	85	85	-	-		
		480 V	-	25	50	65	-	-	-	35	50	65	-	-	-	35	50	65	-	-	35	50	65	-	-	35	50	65	-	-		
		600 V	-	10	10	10	-	-	-	10	10	10	-	-	-	15	15	15	-	-	20	20	20	-	-	20	20	20	-	-		

Type of protection and applications

MA magnetic	TM-D thermal-magnetic	Micrologic 2 electronic	Micrologic 5 / 6 A or E		
■ Distribution and motors	■ Distribution ■ Generators	■ Distribution ■ Service connection (public distribution) ■ Generators ■ Motors (1 only) ■ Motors	■ Distribution and generators	■ Distribution and generators	■ Motors

Circuit breakers and trip units

COMPACT NSX 100/160/250					
MA Distribution and motors	TM-D Distribution TM-G Generators	2.2 Distribution 2.2-AB Service connection (public distribution) 2.2-G Générateur 2.2-M Moteur	5.2 A Distribution and generators 5.2 E Distribution and generators	6.2 A Distribution and generators 6.2 E Distribution and generators	6.2 E-M Motors
COMPACT NSX 400/600					
1.3-M Distribution and motors	2.3 Distribution 2.3-AB Service connection (public distribution) 1.3-M Motors (1 only) 2.3-M Motors	5.3 A Distribution and generators 5.3 E Distribution and generators	6.3 A Distribution and generators 6.3 E Distribution and generators	6.3 E-M Motors	