Direct access to energy efficiency

Compact NSX ••• 100-630A

Next-generation circuit breakers

Energy measurement and control

Increased energy availability

Safety and protection

Schneider Electric

Intelligent Outlook

Compact NSX
Next-generation circuit breakers

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

Combine safety and performance

Compact NSX is innovative – it incorporates 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.

23

new patents pending confirm the innovative character of Compact NSX

Reduced installation costs

Achieve up to 30% savings:

> total discrimination is ensured particulary 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

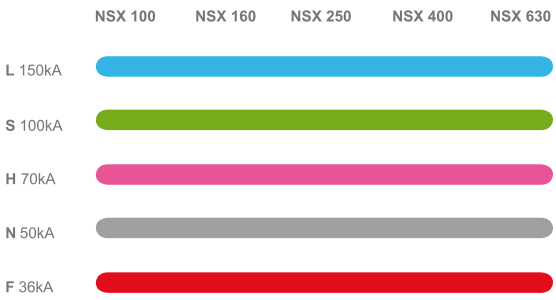
New performance levels improve application targeting:

> 36-50kA – standard applications (industrial plants, buildings and hospitals),

> 70-100kA – high performance at controlled cost,

> 150kA – demanding applications (marine).

Breaking performance at 415 V



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 braking with the motor running, reverse braking, jogging or reversing in complete safety,

> used in conjonction with a Schneider Electric contactor; Compact NSX complies with the requirements of so-called type 2 coordination.

Measure the difference

Compact NSX is a single device, which contains a monitoring unit to control energy consumption and power.

Integrated monitoring

> A Micrologic electronic tripping device with next-generation sensors:
- an "iron sensor for the power supply to the 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.

Accessibility of 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,

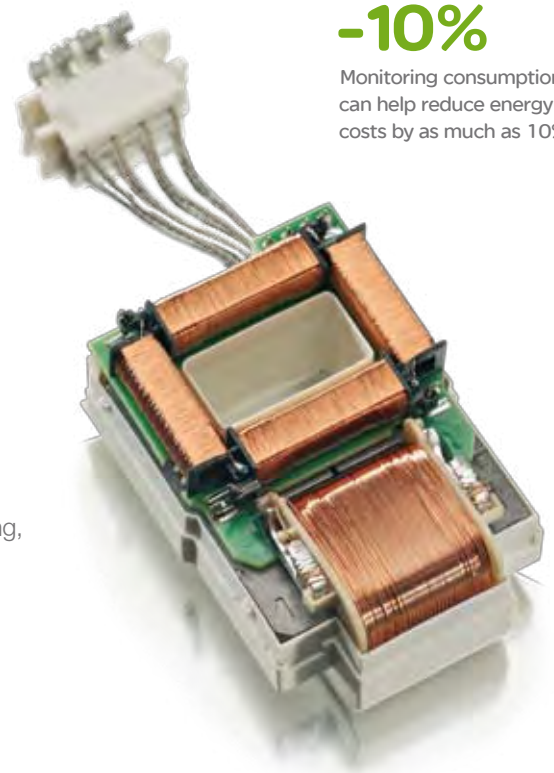
> harmonic distortion rate shows the quality of electrical supply,

> 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 supervision

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%.

ASIC

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

> With 30 years of experience and as an expert in 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.

65%

time savings in installation compared with a classic monitoring solution.

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.

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

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.

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.

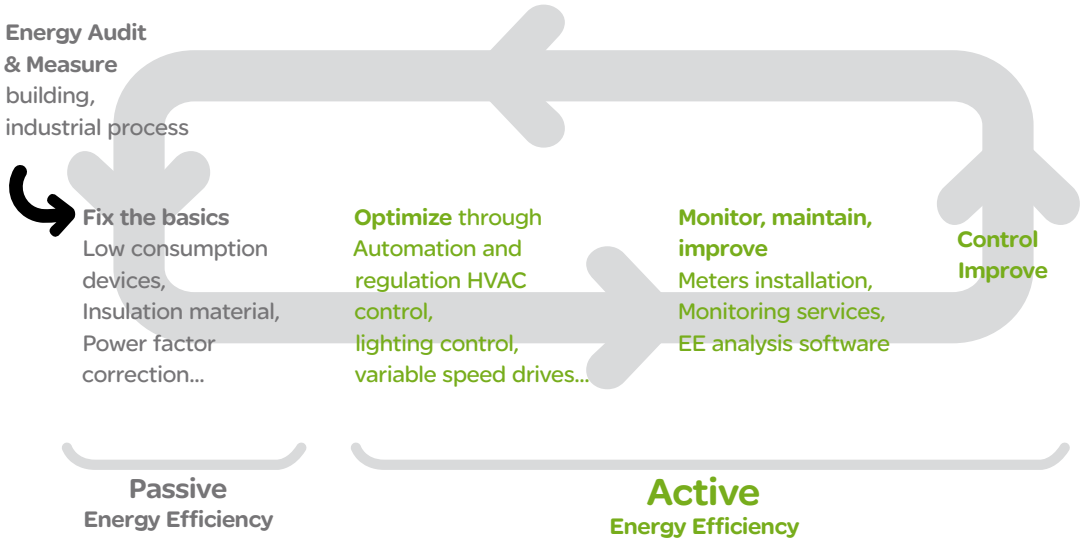
Up to **30%**
savings in energy costs

Energy performance contracts

Schneider Electric offers innovative service to modernise technical installations.
Our objective is: to dramatically reduce energy costs, whilst improving comfort and safety, all in an environmentally friendly way.

4 steps

> Diagnostics
> Proposals
> Implementation
> Follow-up



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 Electrical and Electronic Equipment

Compact NSX

Characteristics

Common characteristics

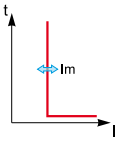
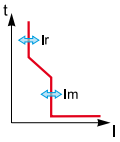
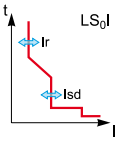
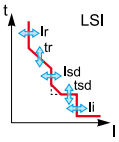
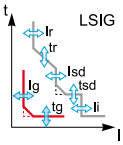
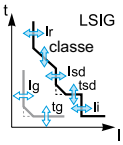
Rated voltages			
Insulation voltage (V)	Ui		800
Impulse withstand voltage (kV)	Uimp		8
Operational voltage (V)	Ue	50/60 Hz	690
Suitability for isolation		IEC/EN 60947-3	yes
Utilisation category			A
Pollution degree		IEC 60664-1	3

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

Circuit breakers

Breaking-capacity levels				
Electrical characteristics as per CEI/IEC 60947-2				
Rated current (A)	In	40 °C		
Number of poles				
Breaking capacity (kA rms)				
	Icu	50/60 Hz	220/240 V	
			380/415 V	
			440 V	
			500 V	
			525 V	
			660/690 V	
Service breaking capacity (kA rms)				
	Ics	50/60 Hz	220/240 V	
			380/415 V	
			440 V	
			500 V	
			525 V	
			660/690 V	
Durability (C-O cycles)		Mechanical		
		Electrical	440 V	In/2
				In
			690 V	In/2
				In
Characteristics as per Nema AB1				
Breaking capacity (kA rms)		50/60 Hz	240 V	
			480 V	
			600 V	
Characteristics as per UL 508				
Breaking capacity (kA rms)		50/60 Hz	240 V	
			480 V	
			600 V	

Type of protection and applications

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

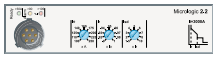
NSX100					NSX160					NSX250					NSX400				NSX630			
F	N	H	S	L	F	N	H	S	L	F	N	H	S	L	N	H	S	L	N	H	S	L
100					160					250					400				630			
2, 3, 4					2, 3, 4					2, 3, 4					3, 4				3, 4			
85	90	100	120	150	85	90	100	120	150	85	90	100	120	150	85	100	120	150	85	100	120	150
36	50	70	100	150	36	50	70	100	150	36	50	70	100	150	50	70	100	150	50	70	100	150
35	50	65	90	130	35	50	65	90	130	35	50	65	90	130	42	65	90	130	42	65	90	130
25	36	50	65	70	30	36	50	65	70	30	36	50	65	70	30	50	65	70	30	50	65	70
22	35	35	40	50	22	35	35	40	50	22	35	35	40	50	22	35	40	50	22	35	40	50
8	10	10	15	20	8	10	10	15	20	8	10	10	15	20	10	20	25	35	10	20	25	35
85	90	100	120	150	85	90	100	120	150	85	90	100	120	150	85	100	120	150	85	100	120	150
36	50	70	100	150	36	50	70	100	150	36	50	70	100	150	50	70	100	150	50	70	100	150
35	50	65	90	130	35	50	65	90	130	35	50	65	90	130	42	65	90	130	42	65	90	130
12,5	36	50	65	70	30	36	50	65	70	30	36	50	65	70	30	50	65	70	30	50	65	70
11	35	35	40	50	22	35	35	40	50	22	35	35	40	50	11	11	12	12	11	11	12	12
4	10	10	15	20	8	10	10	15	20	8	10	10	15	20	10	10	12	12	10	10	12	12
50000					40000					20000					15000				15000			
50000					20000					20000					12000				8000			
30000					10000					10000					6000				4000			
20000					15000					10000					6000				6000			
10000					7500					5000					3000				2000			
85	90	100	120	150	85	90	100	120	150	85	90	100	120	150	85	100	120	150	85	100	120	150
35	50	65	90	130	35	50	65	90	130	35	50	65	90	130	42	65	90	130	42	65	90	130
8	20	35	40	50	20	20	35	40	50	20	20	35	40	50	20	35	40	50	20	35	40	50
85	85	85	-	-	85	85	85	-	-	85	85	85	-	-	85	85	-	-	85	85	-	-
25	50	65	-	-	35	50	65	-	-	35	50	65	-	-	50	65	-	-	50	65	-	-
10	10	10	-	-	10	10	10	-	-	15	15	15	-	-	20	20	-	-	20	20	-	-

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-G Generators
2.2-M Motors

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
1.3-M Motors (I 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

Nationwide support on one number - call the Customer Information Centre on

0870 608 8 608

Fax 0870 608 8 606

Schneider Electric's local support

Schneider Electric is committed to supporting its customers at every stage of a project. Our 180 sales engineers, the largest dedicated sales force in the UK electrical industry, operate from 4 customer support centres.

Our sales engineers are skilled at assessing individual requirements and combined with the expert support of our product specialists, will develop the most effective and economical answer taking relevant regulations and standards fully into account.

To access the expertise of the Schneider Electric group, please call 0870 608 8 608. Each customer support centre includes facilities for demonstrations and training, and presentation rooms fully equipped with audio visual and video, providing excellent meeting facilities.

Merlin Gerin

Merlin Gerin is a world leader in the manufacture and supply of high, medium and low voltage products for the distribution, protection, control and management of electrical systems and is focused on the needs of both the commercial and industrial sectors. The newly launched VDI Network Solutions offer provides flexible, configurable ethernet systems for all communication needs.

Square D

Square D is a total quality organisation and its business is to put electricity to work productively and effectively, protecting people, buildings and equipment. Its low voltage electrical distribution equipment, systems and services are used extensively in residential and commercial applications.

Telemecanique

Telemecanique is a UK market leader and world expert in automation and control. It provides complete solutions, with its range of components, Modicon range of high technology programmable controllers (PLCs), multiple fieldbus and ethernet communication networks, HMI, motion control systems, variable speed drives and communications software. In addition, it offers power distribution through prefabricated busbar trunking.

Local customer support centres

Scotland
Schneider Electric Ltd
Unit 18
Claremont Centre
112a Cornwall Street South
Kinning Park
Glasgow G41 1AA

South West
Schneider Electric Ltd
PO Box 41
Langley Road
Chippenham
Wiltshire SN15 1JJ

North West
Schneider Electric Ltd
First Floor
Market House
Church Street
Wilmslow
Cheshire SK9 1AY

Product showrooms

Industrial systems and solutions showroom
Schneider Electric Ltd, University of Warwick Science Park, Sir William Lyons Road, Coventry CV4 7EZ

Building systems and solutions showroom
Schneider Electric Ltd, Stafford Park 5, Telford, Shropshire TF3 3BL

Energy and Infrastructure systems and solutions showroom
Schneider Electric Ltd, 123 Jack Lane, Hunslet, Leeds LS10 1BS

Schneider Electric

member of voltimum .co.uk