

# Direct access to energy efficiency

## Compact NSX

Next-generation LV moulded-case circuit breakers from 100 to 630 A



Energy  
measurement  
and control



Increased  
energy  
availability

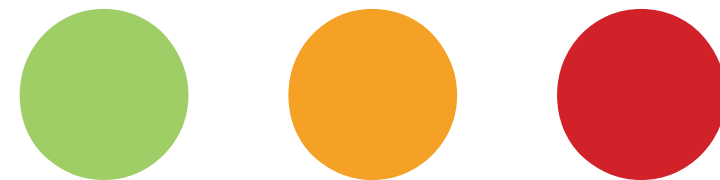


Safety and  
protection

**Schneider**  
Electric™



# Intelligent outlook



## Compact NSX Next-generation circuit breakers

The Compact™ range of circuit breakers set tomorrow's standards today and help exacting organisations achieve more from their LV infrastructure. An extended breaking capacity, the highest in its class, is available across the entire Compact NSX range.

A power monitoring unit also enhances their outstanding 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

The Compact NSX range is innovative – it incorporates monitoring and communication functions, from 40 A 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:

- > 25 kA – Standard low short-circuit level applications, e.g., in service businesses.
- > 36-50 kA – Standard applications (industrial plants, buildings, and hospitals).
- > 70-100 kA – High performance at controlled cost.
- > 150 kA – Marine ready, with an lcs rating meeting IACS requirements for emergency, essential, and MCC loads.
- > 200 kA at up to 440 V – Industry-leading breaking capacity for high-density applications in oil and gas extraction and processing, mining operations, metals and minerals production, and data centres.
- > 100 kA from 500 to 690 V – The world's highest rated breaking capacity for the most demanding electrical environments, and ideal for high-efficiency, cost-effective 690 V systems.

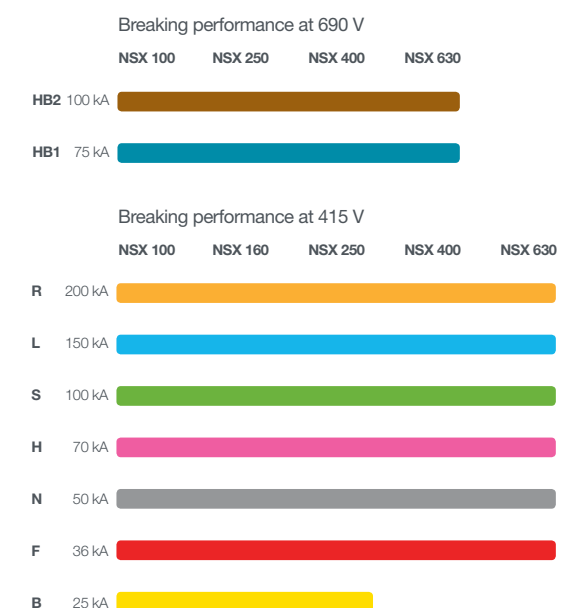
## Enhanced protection for motors

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

- > Well adapted to motor-starting solutions up to 315 kW at 400 V, 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 conjunction with a Schneider Electric contactor, the Compact NSX provides Type II coordination for motor applications.

# 23

new patents pending confirm the innovative character of Compact NSX







# Measure the difference

Compact NSX circuit breakers provide outstanding protection as well as an integrated measurement unit to help you monitor power conditions and manage energy consumption.

## 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.

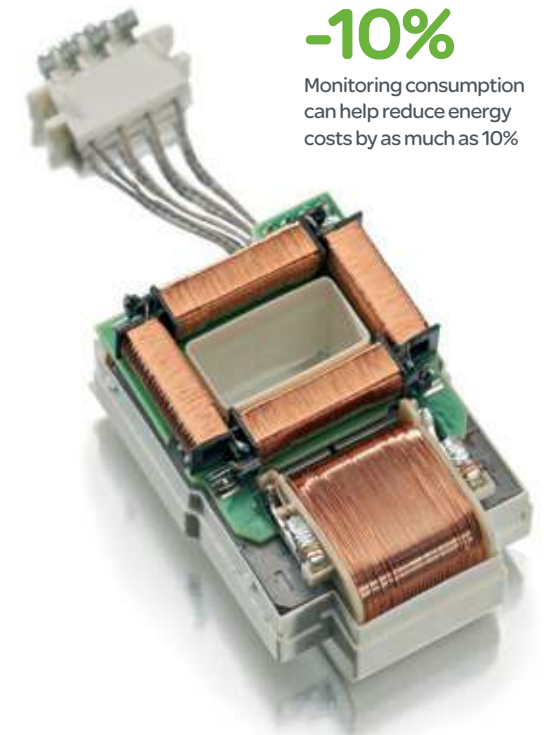
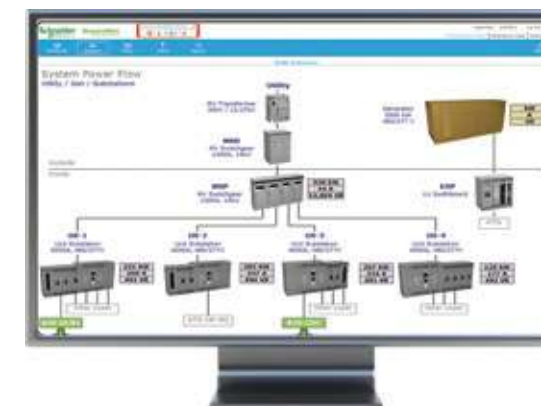
## Accessibility of information

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 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

The Compact NSX range provides exceptional discrimination that minimizes the impact of short circuits and ensures maximum service continuity.



Direct access to maintenance indicators

## Total discrimination

Schneider Electric leverages over 30 years of experience and expertise in discrimination to ensure customers of maximum service continuity:

- > The downstream circuit breaker trips as close as possible to the fault, so that the upstream circuit breaker is not overloaded.

## Total service continuity

The Compact NSX range offers innovative capabilities to ensure maximum continuity and uptime for your facilities:

- > R, HB1, and HB2 high breaking capacity levels enable the circuit breakers to 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.
- > SDTAM module allows remote indication of motor overloads and actuation of a contact switch. 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



# Added simplicity

The Compact NSX range incorporates the same principles of easy installation and use that made its predecessor so successful, and takes these to a higher level.



## 65%

time savings in installation  
compared with a classic  
monitoring solution



The green 'Ready' LED  
flashes to show that all is well

## 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.
- > Design is simplified using support software that helps you with parameter settings and planning switchboard installation.

## 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 customize alarms for all parameters, assign them to indicator lights, choose display priorities, and configure time delay thresholds and modes.
- > A wealth of information, including continuously-activated event logs and tables, helps you ensure that the installed equipment base is operating correctly and that settings are optimized.



LTS installation system



Transparent  
protective cover



# Choose the expertise of Schneider Electric

Whether in buildings, factories or mission-critical infrastructures, Schneider Electric commits to helping you reduce energy costs and CO<sub>2</sub> emissions. We offer 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. We help you get more return from investments and future design solutions.

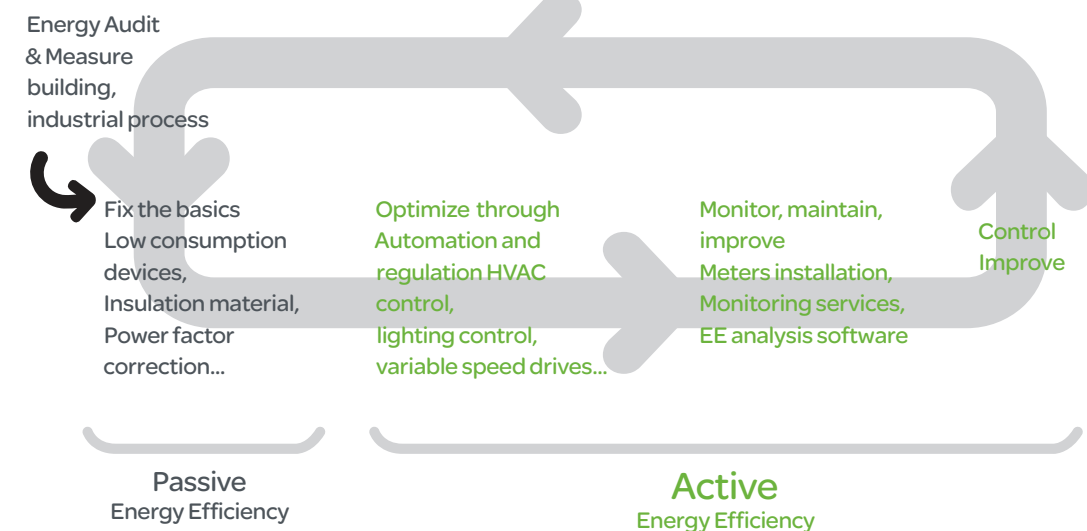
**up to  
30%**  
savings in energy costs

## 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

- > Diagnosis
- > Proposals
- > Implementation
- > Follow-up



## Environmentally responsible

Compact NSX circuit breakers are 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 table with 3 columns: Feature, Value, and Unit. Rows include Rated voltages (Insulation voltage, Impulse withstand voltage, Operational voltage), Suitability for isolation, Utilisation category, and Pollution degree.

Common characteristics table with 3 columns: Feature, Value, and Unit. Rows include Control (Manual, Electrical), Versions (Fixed, Withdrawable), and Plug-in base Chassis.

Main product specification table with columns for Circuit breakers, NSX100, NSX160, NSX250, NSX400, and NSX630. Rows include Breaking capacity levels, Electrical characteristics (In, Icu, Ics), Durability (C-O cycles), Characteristics as per Nema AB1 and UL 508, Protection and measurements, Options, Installation / connections, and Connections.

(1) OSN: Over Sized Neutral protection for neutrals carrying high currents (e.g. 3rd harmonics).
(2) ZSI: Zone Selective Interlocking using pilot wires.
(3) 2P circuit breaker in 3P case for B and F types, only with thermal-magnetic trip unit.
(4) Vigi module is not available for breaking capacity levels HB1 and HB2.



Make the most of your energy<sup>SM</sup>

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