

Powerline Plus

Sturdy, safe and extensive

Fully type tested, ready to install
MCCB Panel boards



Icw up to
50kA, 3 sec.

Make the most of your energySM

Schneider
Electric™

KEMA Quality Test Certification



ANNEX TO KEMA TEST CERTIFICATE 2144037.103

Page 1 of 2

Overview of product evaluation according to IEC 61439-2:

IEC 61439-2 Clause	Clause description	Tested ratings	Results
10.2	Strength of material and parts		
10.2.2	Resistance to corrosion	Severity test A: indoor	Pass
10.2.3	Properties of insulating materials		
10.2.3.1	Verification of thermal stability of enclosures		Pass
10.2.3.2	Verification of resistance of insulating materials to normal heat	Insulating materials retaining current-carrying parts in position: 125 °C Other insulating materials: 70 °C	Pass
10.2.3.3	Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects	Insulating materials retaining current-carrying parts in position: 960 °C Other insulating materials: 650 °C	Pass
10.3	Degree of protection of assembly	IP43 / IP54	Pass
10.4	Clearances and creepage distances	Clearances > 5,5 mm, based on Uimp = 6 kV; Creepage distances > 10 mm, based on Ui = 690 V, pollution degree 3, material group IIIa.	Pass
10.5	Protection against electric shock and integrity of protective circuits		
10.5.2	Effective earth continuity between the exposed conductive parts of the assembly and the protective circuit	Earth resistance < 0.1 Ω	Pass
10.5.3	Short-circuit withstand strength of the protective circuit	Icc 25,2 kA at 240 V	Pass
10.9	Dielectric properties		
10.9.2	Power-frequency withstand voltage	Ui 690 V	Pass
10.9.3	Impulse withstand voltage	Uimp 6 kV	Pass
10.10	Verification of temperature rise		
10.10.2.3.5	Verification of the complete assembly	Incoming: - 400 A (MCCB NSX 400N Mic 2.3, 400 A) Outgoing: - 80 A (MCCB NSX 160N, 100 A)(Q12, Q13) - 20 A (MCCB NSX 100N, 25 A)(Q1 to Q11, Q14) Rated diversity factor 1.0	Pass
10.10.2.3.5	Verification of the complete assembly @ 50 °C ambient temperature	Incoming: - 400 A (MCCB NSX 400N Mic 2.3, 400 A) Outgoing: - 75 A (MCCB NSX 160N, 100 A) (Q13) - 73 A (MCCB NSX 160N, 100 A) (Q12) - 20 A (MCCB NSX 100N, 25 A) (Q1 to Q11) - 19 A (MCCB NSX 100N, 25 A) (Q14) Rated diversity factor 1.0	Pass
10.11	Short-circuit withstand strength	Icw 42 kA / 1 s (vertical busbar) Icc 42 kA at 415 V (incoming MCCB) Icc 42 kA at 415 V (outgoing MCCBs) Icc 25,2 kA at 240 V (neutral busbar)	Pass
10.13	Mechanical operation	200 operations	Pass

Powerline Plus

Sturdy, safe and fully type tested range of MCCB Panel boards.

Powerline Plus Electrical Distribution Boards, delivered complete and integrated for high performances up to 800A for residential, tertiary and industrial environments.

Product features

Sturdy

- Sturdy enclosure designed for transportation, storage and installation demands.
- Powerline Plus Busbar system is engineered, tested and certified to provide superior performance. Busbars and connectors are electro-tin plated for corrosion resistance in all environments.
- Unique fiberglass-reinforced polycarbonate busbar supports for strength and dimensional stability.

Certified for Greater Safety

- The Powerline Plus range of MCCB panelboards are designed and built to the latest international standards IEC 61439-1 & 2/ BSEN 61439-1 & 2.
- Fully Type-Tested as per IEC 61439-1 & 2/ BSEN 61439-1 & 2 standards.
- Powerline Plus panelboards guarantee conformity, performance and reliability, for your peace of mind.

Extensive

- Flexible thanks to its accessories.
- Large interior space for ease in cabling.



Innovates and simplifies the switchboards.
Demand always the very best!

Powerline Plus

Technical Specifications

Constructional Characteristics

- Complies with IEC 61439-1 & 2 / BSEN 61439-1 & 2.
- Fully Type Tested, Certified KEMA
- Degree of protection: IP43 as per IEC 60529 (IP54 tested and available on request)
- Form of separation: Form 2b
- Enclosure constructed from rigid folded Electro Galvanized sheet metal of 1.5 mm thickness, EGI with anti-corrosion protection
- Paint shade RAL 9002, epoxy polyester based powder coating.

Busbar Systems, designed for flexibility and value

- Fully type-tested Busbar System
- Tin-plated Copper Busbars
- Ratings: 250A, 400A, 630A and 800A
- Short-Time Withstand Current:

Rating	250A	400A	630A	800A*
Icw	36kA	42kA	50kA	50kA
Time in sec	1	1	3	3

* Note: 800A with 400A outgoing is also tested for Icw 50kA, 3 sec.

- Busbar options:

Type of MCCB	NSX250 Outgoing MCCB				EZC100 Outgoing MCCB									
Incoming Rating	250A	400A	630A	800A	250A	400A	630A	800A						
Busbar Rating	250A	400A	630A	800A	250A	400A	630A	800A						
Nb of outgoing ways:	2 way up to 14 way*													
	2W	4W	6W	8W	10W	12W	14W	2W	4W	6W	8W	10W	12W	14W
1 Pole	6	12	18	24	30	36	42	6	12	18	24	30	36	42
3 Pole	2	4	6	8	10	12	14	2	4	6	8	10	12	14

* Note: 16 and 18 ways are also available on request.

Electrical Characteristics

- Rated Operational Voltage Ue up to 690V
- Rated Insulation Voltage Ui up to 690V
- Rated Frequency 50/60 Hz
- Rated Impulse withstand voltage Uimp 6kV
- Rated current In up to 800Amp
- Rated short time withstand current Icw up to 50 kA/3 sec.
- Rated peak withstand current Ipk up to 110kA

Metering Kit

Kit comprises of the following pre-wired devices:

- 1 Ammeter (72x72mm) with Selector Switch
- 1 Voltmeter (72x72mm) with Selector Switch
- 3 RYB Pilot Lamps (22.5 mm dia)

Plus current transformers, control fuses, wiring loom and enclosures.

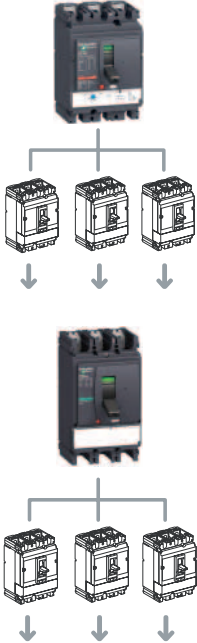
Product Environment Profile

- Type of installation: Indoors
- Operating Ambient temperature: up to 50°C without derating



Technical characteristics

Incoming Application



Incoming Devices

Compact NSX / NS range of MCCB and Switch Disconnectors (non-auto MCCB)

Rated Current $I_n = 250A \dots\dots\dots 800A$

Rated Operational Voltage $U_e =$ up to 690V

MCCB Breaker Type	NSX250			NSX400		NSX630		NS800	
	B	F	N	F	N	F	N	N	H
"Ultimate Breaking Capacity I_{cu} (KA rms) at 415V"	25	36	50	36	50	36	50	50	70
"Service Breaking Capacity I_{cs} (KA rms) at 415V"	100% I_{cu}								
Protection Trip Unit	TMD Thermal Magnetic (upto 250A) / Micrologic Trip Unit								

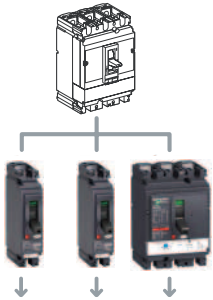
Isolator : Compact NSX / NS MCCB Type Switch Disconnectors / Isolators (Non Auto MCCB)

Rated Operational Current I_e AC22A / AC23A = 250A.....800A

Rated Operational Voltage $U_e =$ upto 690V

Isolator Type	NSX250NA	NSX400NA	NSX630NA	NS800NA
"Short circuit making capacity I_{cm} (KA peak) (with upstream circuit breaker)"	330	330	330	330

Distribution Application



*INS100/NSX160

Outgoing Devices

Compact NSX range of MCCB

Rated Current $I_n = 16A \dots\dots\dots 250A$

Rated Operational Voltage $U_e =$ upto 690V

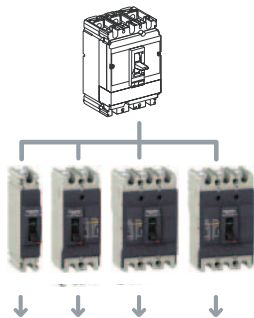
MCCB Breaker Type	NSX100	NSX100	NSX160	NSX250
	N	B	F	N
No of Poles	1P	3P		
"Ultimate Breaking Capacity I_{cu} (KA rms) at 240V"	25			
"Ultimate Breaking Capacity I_{cu} (KA rms) at 415V"	-	25	36	50
Protection Trip Unit	TMD Thermal Magnetic (upto 250A) / Micrologic Trip Unit			

Easypact EZC range of MCCB

Rated Current $I_n = 15A \dots\dots\dots 100A$

"Rated Operational Voltage $U_e =$ upto 415V - Single Pole up to 550V - Three Pole"

MCCB Breaker Type	EZC100				
	N		H		
No of Poles	1P	3P	1P	2P	3P
"Ultimate Breaking Capacity I_{cu} (KA rms) at 240V"	18	25	25	50	100
"Ultimate Breaking Capacity I_{cu} (KA rms) at 415V"	-	15	-	30	30
Protection Trip Unit	TMD Thermal Magnetic				



*50% at 240VAC

Powerline Plus

4 Step Selection Process

Step 1 Selection Process

PPN **2** **O4** **M**

Panelboard type based on outgoing MCCB's

- **PPN** : Powerline Plus Panel Board with “**Compact NSX**”
Outgoing MCCB's up to 250A
- **PPE** : Powerline Plus Panel Board with “**Easypact EZC**”
Outgoing MCCB's up to 100A

Busbar Rating

- **2** : 250A
- **4** : 400A
- **6** : 630A
- **8** : 800A

No. of outgoing ways

- **04** : 4 ways TPN
- **06** : 6 ways TPN
- **08** : 8 ways TPN
- **10** : 10 ways TPN
- **12** : 12 ways TPN
- **14** : 14 ways TPN

No. of outgoing ways (available only for 800A-NSX MCCB outgoing only)

- **42** : NSX250 MCCB (4 ways) + NSX400 MCCB (2 ways)
- **62** : NSX250 MCCB (6 ways) + NSX400 MCCB (2 ways)
- **82** : NSX250 MCCB (8 ways) + NSX400 MCCB (2 ways)

Incoming Device Provision (space only)

- **M** : MCCB, 3P, Incomer (or) Non-Auto, MCCB, 3 Pole Incomer

Outgoing MCCB's - Easycompact E2C and Compact NSX

Type	Rating (A)	No. of Outgoing ways	References	
			E2C100	NSX250
Powerline PLUS PB	250	4	PPE204M	PPN204M
		6	PPE206M	PPN206M
		8	PPE208M	PPN208M
		10	PPE210M	PPN210M
		12	PPE212M	PPN212M
		14	PPE214M	PPN214M
	400	4	PPE404M	PPN404M
		6	PPE406M	PPN406M
		8	PPE408M	PPN408M
		10	PPE410M	PPN410M
		12	PPE412M	PPN412M
		14	PPE414M	PPN414M
	630	4	PPE604M	PPN604M
		6	PPE606M	PPN606M
8		PPE608M	PPN608M	
10		PPE610M	PPN610M	
12		PPE612M	PPN612M	
14		PPE614M	PPN614M	
800	4	PPE804M	PPN804M	
	6	PPE806M	PPN806M	
	8	PPE808M	PPN808M	
	10	PPE810M	PPN810M	
	12	PPE812M	PPN812M	
	14	PPE814M	PPN814M	
800	4 + 2		PPN842M	
	6 + 2		PPN862M	
	8 + 2		PPN882M	

Powerline Plus Accessories

Type	Dimension (mm)	Reference	
Extension Box - A (250mm height)	250 x 740 x 180	PPXA250E	
	250 x 830 x 180	PPXA250N	
	250 x 740 x 180	PPXA400E	
	250 x 830 x 180	PPXA400N	
	250 x 740 x 250	PPXA630E	
	250 x 830 x 250	PPXA630N	
Extension Box - B (350mm height)	250 x 740 x 300	PPXA800E	
	250 x 830 x 300	PPXA800N	
	350 x 740 x 180	PPXB250E	
	350 x 830 x 180	PPXB250N	
	350 x 740 x 180	PPXB400E	
	350 x 830 x 180	PPXB400N	
Extension Box - B (350mm height)	350 x 740 x 250	PPXB630E	
	350 x 830 x 250	PPXB630N	
	350 x 740 x 300	PPXB800E	
	350 x 830 x 300	PPXB800N	
	Metering Kit - Complete (200mm height)	200 x 740 x 180	PPMK250E
		200 x 830 x 180	PPMK250N
200 x 740 x 180		PPMK400E	
200 x 830 x 180		PPMK400N	
200 x 740 x 250		PPMK630E	
200 x 830 x 250		PPMK630N	
Metering Kit - Complete (200mm height)	200 x 740 x 330	PPMK800E	
	200 x 830 x 330	PPMK800N	
	Metering Kit - Empty (200mm height)	200 x 740 x 180	PPMK250EMPTY
		200 x 830 x 180	PPMK250EMPTY
		200 x 740 x 180	PPMK400EMPTY
		200 x 830 x 180	PPMK400EMPTY
200 x 740 x 250		PPMK630EMPTY	
200 x 830 x 250		PPMK630EMPTY	
Metering Kit - Empty (200mm height)	200 x 740 x 330	PPMK800EMPTY	
	200 x 830 x 330	PPMK800EMPTY	

Powerline Plus

4 Step Selection Process

2

Step 2 Selection of Incoming Devices



NSX250



NSX400/630



NS800



NSX250 (Non-Auto MCCB)

Type: Compact NSX Range MCCB	Order Code
250A MCCB, 3P – Compact NSX250	
NSX250B + TM250D	LV431110
NSX250F + TM250D	LV431630
NSX250N + TMD250D	LV431830
NSX250B + Micrologic 2.3	LV431140
NSX250F + Micrologic 2.3	LV431770
NSX250N + Micrologic 2.3	LV431870
400A MCCB, 3P – Compact NSX400	
NSX400F + Micrologic 2.3	LV432676
NSX400N + Micrologic 2.3	LV432693
630A MCCB, 3P – Compact NSX630	
NSX630F + Micrologic 2.3	LV432876
NSX630N + Micrologic 2.3	LV432893

Type: Compact NSX Non-Auto MCCB	Order Code
Switch Disconnecter	
250A Switch Disconnecter 3P	LV431629
400A Switch Disconnecter 3P	LV432756
6300A Switch Disconnecter 3P	LV432956

Step 3 Selection of Outgoing Breakers



NSX 100N



EZC100N

“Compact NSX” Range Single Pole MCCB with thermal-magnetic TMD Release

Description	Current Rating	kA Rating Icu at 240V	Order Code
NSX100N 1P TM16D	16A	25	LV438572
NSX100N 1P TM20D	20A	25	LV438573
NSX100N 1P TM25D	25A	25	LV438574
NSX100N 1P TM30D	30A	25	LV438575
NSX100N 1P TM40D	40A	25	LV438576
NSX100N 1P TM50D	50A	25	LV438577
NSX100N 1P TM63D	63A	25	LV438578
NSX100N 1P TM80D	80A	25	LV438579
NSX100N 1P TM100D	100A	25	LV438580

“Easypact EZC” Range Single Pole MCCB with thermal-magnetic TMD Release

Description	Current Rating	kA Rating Icu at 240V	Order Code
EZC100N 1P TM15D	15A	18	EZC100N1015
EZC100N 1P TM20D	20A	18	EZC100N1020
EZC100N 1P TM25D	25A	18	EZC100N1025
EZC100N 1P TM30D	30A	18	EZC100N1030
EZC100N 1P TM40D	40A	18	EZC100N1040
EZC100N 1P TM50D	50A	18	EZC100N1050
EZC100N 1P TM60D	60A	18	EZC100N1060
EZC100N 1P TM75D	75A	18	EZC100N1075
EZC100N 1P TM80D	80A	18	EZC100N1080
EZC100N 1P TM100D	100A	18	EZC100N1100
EZC100H 1P TM15D	15A	25	EZC100H1015
EZC100H 1P TM20D	20A	25	EZC100H1020
EZC100H 1P TM25D	25A	25	EZC100H1025
EZC100H 1P TM30D	30A	25	EZC100H1030
EZC100H 1P TM40D	40A	25	EZC100H1040
EZC100H 1P TM50D	50A	25	EZC100H1050
EZC100H 1P TM60D	60A	25	EZC100H1060
EZC100H 1P TM75D	75A	25	EZC100H1075
EZC100H 1P TM80D	80A	25	EZC100H1080
EZC100H 1P TM100D	100A	25	EZC100H1100

“Compact NSX” Range Three Pole MCCB with thermal-magnetic TMD Release

Description	Current Rating	kA Rating Icu at 415V	Order Code
NSX100F 3P TM16D	16A	36	LV429637
NSX100F 3P TM25D	25A	36	LV429636
NSX100F 3P TM32D	32A	36	LV429635
NSX100F 3P TM40D	40A	36	LV429634
NSX100F 3P TM50D	50A	36	LV429633
NSX100F 3P TM63D	63A	36	LV429632
NSX100F 3P TM80D	80A	36	LV429631
NSX100F 3P TM100D	100A	36	LV429630
NSX100F 3P TM125D	125A	36	LV430631
NSX100F 3P TM160D	160A	36	LV430630
NSX100F 3P TM200D	200A	36	LV431651
NSX100F 3P TM250D	250A	36	LV431650
NSX100N 3P TM16	16A	50	LV429847
NSX100N 3P TM25	25A	50	LV429846
NSX100N 3P TM32	32A	50	LV429845
NSX100N 3P TM40	40A	50	LV429844
NSX100N 3P TM50	50A	50	LV429843
NSX100N 3P TM63	63A	50	LV429842
NSX100N 3P TM80	80A	50	LV429841
NSX100N 3P TM100	100A	50	LV429840
NSX100N 3P TM125	125A	50	LV430841
NSX100N 3P TM160	160A	50	LV430840
NSX100N 3P TM200	200A	50	LV431831
NSX100N 3P TM250	250A	50	LV431830

“Easypact EZC” Range Three Pole MCCB with thermal-magnetic TMD Release

Description	Current Rating	kA Rating Icu at 415V	Order Code
EZC100N 3P TM15D	15A	15	EZC100N3015
EZC100N 3P TM20D	20A	15	EZC100N3020
EZC100N 3P TM25D	25A	15	EZC100N3025
EZC100N 3P TM30D	30A	15	EZC100N3030
EZC100N 3P TM40D	40A	15	EZC100N3040
EZC100N 3P TM50D	50A	15	EZC100N3050
EZC100N 3P TM60D	60A	15	EZC100N3060
EZC100N 3P TM75D	75A	15	EZC100N3075
EZC100N 3P TM80D	80A	15	EZC100N3080
EZC100N 3P TM100D	100A	15	EZC100N3100
EZC100H 3P TM15D	15A	30	EZC100H3015
EZC100H 3P TM20D	20A	30	EZC100H3020
EZC100H 3P TM25D	25A	30	EZC100H3025
EZC100H 3P TM30D	30A	30	EZC100H3030
EZC100H 3P TM40D	40A	30	EZC100H3040
EZC100H 3P TM50D	50A	30	EZC100H3050
EZC100H 3P TM60D	60A	30	EZC100H3060
EZC100H 3P TM75D	75A	30	EZC100H3075
EZC100H 3P TM80D	80A	30	EZC100H3080
EZC100H 3P TM100D	100A	30	EZC100H3100



NSX250N



EZC100N

Step 4 Selection of Accessories



RH10



RH21



MX or MN voltage release



Changeover contactors

Accessories for Enclosure

Description	Order Code
MCCB Blanking plate for front plate (Easycompact E2C)	BPE
MCCB Blanking plate for front plate (Compact NSX)	BPN

Residual Current Protection Relays with local Manual Fault Reset Din Rail mounted

RH10 Instantaneous

Sensitivity 0.1A - Power Supply 220/240V AC	56132
Sensitivity 0.3A - Power Supply 220/240V AC	56135

RH21 with time delay to 0 or 0.06s

Sensitivity 0.03A to 30A - Power Supply 220/240V AC	56173
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Sensors for Residual Current Protection Relays

TA30, inside diameter 30mm	50437
PA50, inside diameter 50mm	50438
IA80, inside diameter 80mm	50439

Accessories for "Compact NSX" range MCCB

Remote Tripping/Shunt Opening Release

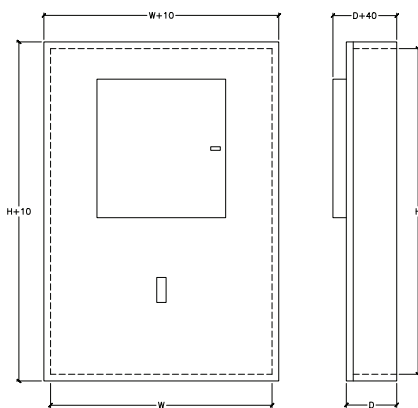
24V 50/60Hz	LV429384
48V 50/60Hz	LV429385
110-130V 50/60Hz	LV429386
220-240V 50/60Hz	LV429387
380-415V 50/60Hz	LV429388

Auxiliary Contacts

OF of SD or SDW or SDV	LV429450
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Powerline Plus

Dimensions



		Easypact EZC Outgoing			Compact NSX Outgoing		
Rating	TP ways	Height(H)	Width(W)	Depth(D)	Height(H)	Width(W)	Depth(D)
250A	4	785	740	180	845	830	180
	6	860	740	180	950	830	180
	8	1010	740	180	1160	830	180
	10	1010	740	180	1160	830	180
	12	1190	740	180	1520	830	180
400A	4	975	740	180	1040	830	180
	6	1050	740	180	1145	830	180
	8	1200	740	180	1355	830	180
	10	1200	740	180	1355	830	180
	12	1350	740	180	1565	830	180
630A	4	975	740	250	1065	830	250
	6	1050	740	250	1170	830	250
	8	1200	740	250	1380	830	250
	10	1200	740	250	1380	830	250
	12	1350	740	250	1590	830	250
800A	4	1140	740	300	1200	830	300
	6	1310	740	300	1400	830	300
	8	1450	740	300	1600	830	300
	10	1450	740	300	1600	830	300
	12	1590	740	300	1800	830	300
	14	1590	740	300	1800	830	300
	4+2				1600	1200	300
	6+2				1600	1200	300
	8+2				1800	1200	300

Extension Box - A (250mm height)							
250A		250	740	180	250	830	180
400A		250	740	180	250	830	180
630A		250	740	250	250	830	250
800A		250	740	300	250	830	300

Extension Box - B (350mm height)							
250A		350	740	180	350	830	180
400A		350	740	180	350	830	180
630A		350	740	250	350	830	250
800A		350	740	300	350	830	300

Metering Kit - Complete & Empty (200mm height)							
250A		200	740	180	200	830	180
400A		200	740	180	200	830	180
630A		200	740	250	200	830	250
800A		200	740	300	200	830	300



Schneider Electric FZE

E Wing, Level 4, Dubai Silicon Oasis, Emirates Road & Dubai-AI Ain Road Intersection
P.O. Box 341057, Dubai, United Arab Emirates
Phone: + 971 (4) 709 91 00
Fax: + 971 (4) 709 91 01
www.schneider-electric.com/ae

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Schneider Electric Gulf