

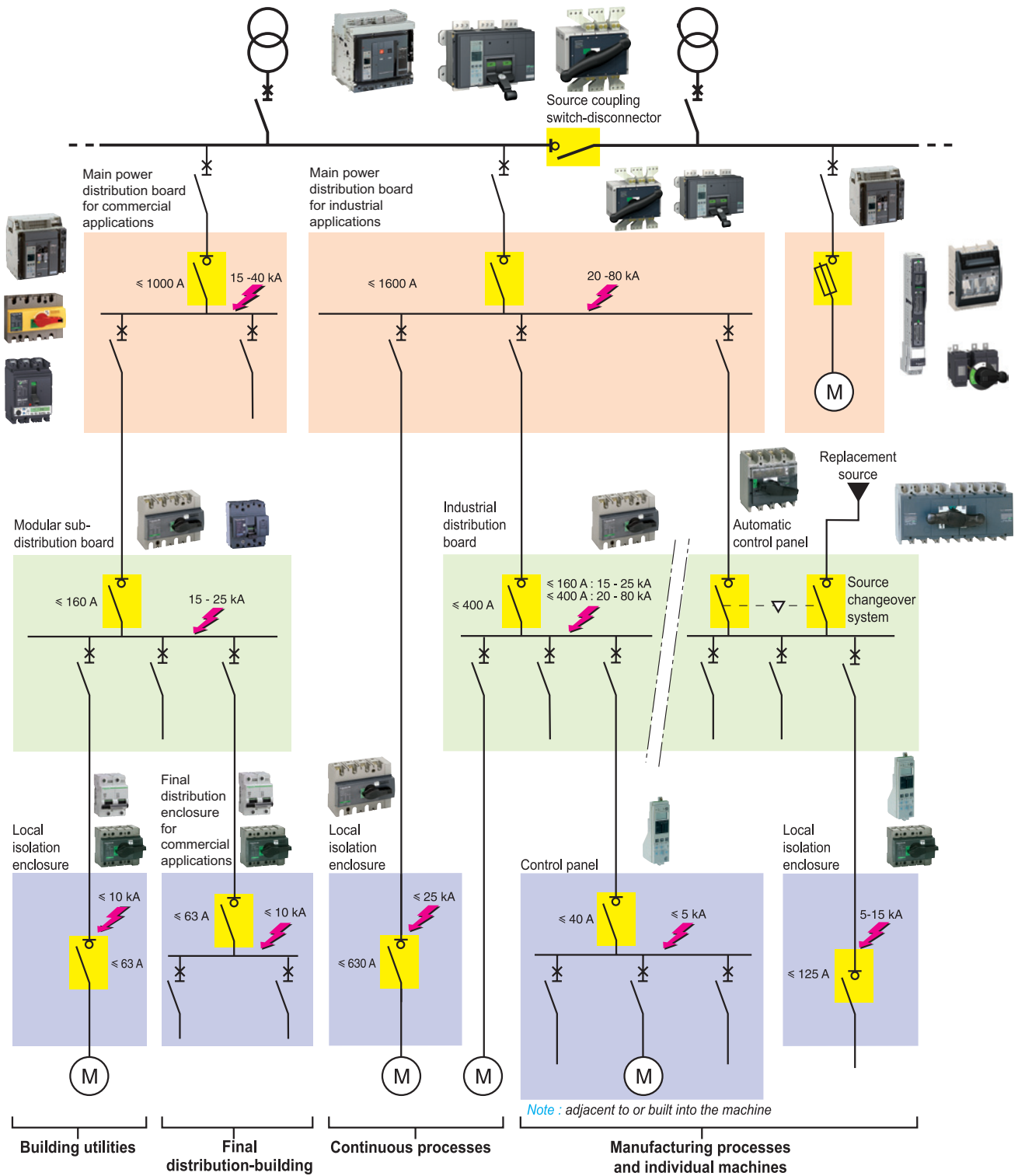
LV product characteristics

Circuit protection and control devices 0.5 to 6300 A

2012



Overview of solutions



LV devices



General contents

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Acti 9 circuit breakers from 0.5 to 125 A



PB107141_28.eps

iDPN N



PB104440_28.eps

iC60N





05890N_26_SE.eps

C120



05890N_32_SE.eps

NG125N

| Acti 9 circuit breaker | | | DPN N Vigi |
|---|---|----------------------|------------|
| Number of poles | | | 1 + N |
| Electrical characteristics | | | |
| Rated current (A) | In | | 4-40 |
| Rated insulation voltage (V) | Ui | | 400 |
| Impulse withstand voltage (kV) | Uimp | | 4 |
| Maximum operational voltage (V) | Ue | AC 50/60 Hz | 230/400 |
| Fast closing | | | ■ |
| Suitability for isolation and positive contact indication | | | ■ |
| AC breaking capacity | | | |
| IEC 60898 (EN 60898) | Icn (A) | 230/400 V | 6000 |
| Rated current (A) | In | | 4-40 |
| IEC 60947-2 (EN 60947-2) | Icu (kA) | 12...60 V | - |
| | | 12...133 V | - |
| | | 100...133 V | - |
| | | 220...240 V | - |
| | | 380...415V | - |
| | | 440 V | - |
| | Ics | (% of Icu) | - |
| Trip units (non adjustable) | | | |
| Curve type | | B (Im = 3 to 5 In) | ■ |
| | | C (Im = 5 to 10 In) | ■ |
| | | D (Im = 10 to 14 In) | - |
| | | K (Im = 10 to 14 In) | - |
| | | Z (Im = 2.4 to 3.2) | - |
| | | MA (Im = 12 In) | - |
| Earth leakage protection | | | |
| Add-on rod's (Vigi module) | | | - |
| Integrated | | | ■ |
| Sensitivity type (mA) |  | AC | 30-300 |
| | | A | 30-300 |
| |  | A si | 30-300 |
| Electrical auxiliaries | | | |
| Auxiliary and alarm switches (iOF-iSD) | | | ■ |
| Shunt trip (MX); undervoltage release (MN) | | | ■ |
| Emergency stop opening switch (MNx) | | | ■ |
| Voltage threshold release (MSU) | | | ■ |
| Connection | | | |
| Cable maxi capacity (mm ²) | | Flexible | 10 |
| | | Rigid | 16 |
| Installation | | | |
| Plug in base | | | |
| Terminal shields | | | |
| Padlocking device | | | |
| Rotary handle | | | |
| Dimensions (mm) | W | | 18 |
| | H | | |
| | D | | |

Acti 9 circuit breakers from 0.5 to 125 A

| iC60N | | | | iC60H | | | | iC60L | | | | | | | | iC60LMA | |
|-------------|-------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|
| 1-1+N | | 2-3-4 | | 1-1+N | | 2-3-4 | | 1-1+N | | 2-3-4 | | | | | | 2-3P | |
| 0.5-63 | | | | 0.5-63 | | | | 0.5-63 | | | | | | | | 1.6-40 | |
| 500 | | | | 500 | | | | 500 | | | | | | | | 500 | |
| 6 | | | | 6 | | | | 6 | | | | | | | | 6 | |
| 440 | | | | 440 | | | | 440 | | | | | | | | 440 | |
| ■ | | | | ■ | | | | ■ | | | | | | | | ■ | |
| ■ | | | | ■ | | | | ■ | | | | | | | | ■ | |
| 6000 | | | | 10000 | | | | 15000 | | | | | | | | - | |
| 0.5-4 | | 6-63 | | 0.5-4 | | 6-63 | | 0.5-6 | | 6-25 | | 32-40 | | 50-63 | | 1.6-16 | 25-40 |
| Ph/N | Ph/Ph | Ph/N | Ph/Ph | Ph/N | Ph/Ph | Ph/N | Ph/Ph | Ph/N | Ph/Ph | Ph/N | Ph/Ph | Ph/N | Ph/Ph | Ph/N | Ph/Ph | Ph/Ph | Ph/Ph |
| 50 | - | 36 | - | 70 | - | 42 | - | 100 | -100 | 70 | 80 | 70 | 80 | 70 | 80 | - | - |
| 50 | 50 | - | 36 | - | 70 | - | 42 | - | - | - | - | - | - | - | - | - | - |
| 50 | - | 20 | - | 70 | - | 30 | - | 100 | 100 | 50 | 70 | 36 | 70 | 30 | 70 | - | - |
| 50 | 50 | 10 | 20 | 70 | 70 | 15 | 30 | 100 | 100 | 25 | 50 | 20 | 36 | 15 | 30 | 40 | 30 |
| - | 50 | - | 10 | - | 50 | - | 15 | - | 100 | - | 25 | - | 20 | 6 | 15 | 20 | 15 |
| - | 25 | - | 6 | - | 25 | - | 15 | - | 70 | - | 20 | - | 15 | - | 10 | 15 | 10 |
| 100 % | | 75 % | | 100 % | | 50 % | | 100 % | | 50 % | | 50 % | | 50 % | | 50 % | |
| ■ | | | | ■ | | | | ■ | | | | | | | | | |
| ■ | | | | ■ | | | | ■ | | | | | | | | | |
| ■ | | | | ■ | | | | ■ | | | | | | | | | |
| - | | | | - | | | | ■ | | | | | | | | | |
| - | | | | - | | | | ■ | | | | | | | | | |
| - | | | | - | | | | - | | | | | | | | ■ | |
| ■ | | | | ■ | | | | ■ | | | | | | | | ■ | |
| - | | | | - | | | | - | | | | | | | | - | |
| 10-1000 | | | | 10-1000 | | | | 10-1000 | | | | | | | | 10-1000 | |
| 30-1000 | | | | 30-1000 | | | | 30-1000 | | | | | | | | 10-1000 | |
| 10-1000 | | | | 10-1000 | | | | 10-1000 | | | | | | | | 10-1000 | |
| ■ | | | | ■ | | | | ■ | | | | | | | | ■ | |
| ■ | | | | ■ | | | | ■ | | | | | | | | ■ | |
| ■ | | | | ■ | | | | ■ | | | | | | | | ■ | |
| ■ | | | | ■ | | | | ■ | | | | | | | | ■ | |
| 16 (≤ 25 A) | | 25 (> 25 A) | | 16 (≤ 25 A) | | 25 (> 25 A) | | 16 (≤ 25 A) | | 25 (> 25 A) | | 16 (≤ 25 A) | | 25 (> 25 A) | | 16 (≤ 25 A) | |
| 25 (≤ 25 A) | | 35 (> 25 A) | | 25 (≤ 25 A) | | 35 (> 25 A) | | 25 (≤ 25 A) | | 35 (> 25 A) | | 25 (≤ 25 A) | | 35 (> 25 A) | | 25 (≤ 25 A) | |
| ■ | | | | ■ | | | | ■ | | | | | | | | | |
| ■ | | | | ■ | | | | ■ | | | | | | | | | |
| ■ | | | | ■ | | | | ■ | | | | | | | | | |
| ■ | | | | ■ | | | | ■ | | | | | | | | | |
| 18 per pole | | | | 18 per pole | | | | 18 per pole | | | | | | | | | |
| 85 | | | | 85 | | | | 85 | | | | | | | | | |
| 78.5 | | | | 78.5 | | | | 78.5 | | | | | | | | | |

Acti 9 circuit breakers from 0.5 to 125 A



iDPN N



iC60N



C120



NG125N

| Acti 9 circuit breaker | | | C120N | |
|---|----------------------------|---|---------------------|-------|
| Number of poles | | | 1 | 2-3-4 |
| Electrical characteristics | | | | |
| Rated current (A) | I_n | | 63-125 | |
| Rated insulation voltage (V) | U_i | | 500 | |
| Impulse withstand voltage (kV) | U_{imp} | | 6 | |
| Maximum operational voltage (V) | U_e | AC 50/60 Hz | 440 | |
| Fast closing | | | ■ | |
| Suitability for isolation and positive contact indication | | | ■ | |
| AC breaking capacity | | | | |
| IEC 60898 (EN 60898) | I_{cn} (A) | 230/400 V | 10000 | |
| | | | Ph | Ph/Ph |
| IEC 60947-2 (EN 60947-2) | I_{cu} (kA) | 110...130 V | - | |
| | | 130 V | 20 | |
| | | 220...240 V | 10 20 | |
| | | 380...415 V | 3 ⁽¹⁾ 10 | |
| | | 400/415 | | |
| | | 440 V | - | |
| | | 500 V | - | |
| | I_{cs} | (% of I _{cu}) | 75 % | |
| Trip units (non adjustable) | | | | |
| Curve type | | B (I _m = 3 to 5 I _n) | ■ | |
| | | C (I _m = 5 to 10 I _n) | ■ | |
| | | D (I _m = 10 to 14 I _n) | | |
| | | MA (I _m = 12 I _n) | | |
| Earth leakage protection | | | | |
| Add-on rcd's (Vigi module) | | | ■ | |
| Integrated | | | - | |
| Sensitivity type (mA) | | AC | 30-1000 | |
| | | A | 30-1000 | |
| | | A si | 30-1000 | |
| | | A si E | 30-1000 | |
| Electrical auxiliaries | | | | |
| Auxiliary and alarm switches (OF-SD) | | | ■ | |
| Shunt trip (MX); undervoltage release (MN) | | | ■ | |
| Emergency stop opening switch (MNx) | | | ■ | |
| Voltage threshold release (MSU) | | | ■ | |
| Connection | | | | |
| Cable maxi capacity (mm ²) | | Flexible | 16 | |
| | | Rigid | 25 | |
| Installation | | | | |
| Plug in base | | | ■ ≤ 63 A | |
| Terminal shields | | | ■ | |
| Padlocking device | | | ■ | |
| Rotary handle | | | ■ | |
| Dimensions (mm) | | W | 27 per pole | |
| | | H | 81 | |
| | | D | 73 | |

(1) Breaking capacity under 1 pole with IT isolated neutral system (case of double fault).

| C120H | | NG125N | | NG125H | | NG125L | | NG125L MA | |
|--------------------|-------|-------------|-------|---------|-------|---------|-------|-----------|--|
| 1 | 2-3-4 | 1 | 2-3-4 | 1 | 2-3-4 | 1 | 2-3-4 | 2-3 | |
| 10-125 | | 10-125 | | 10-80 | | 10-80 | | 4-80 | |
| 500 | | 690 | | 690 | | 690 | | 500 | |
| 6 | | 8 | | 8 | | 8 | | 8 | |
| 440 | | 500 | | 500 | | 500 | | 500 | |
| ■ | | ■ | | ■ | | ■ | | ■ | |
| ■ | | ■ | | ■ | | ■ | | ■ | |
| 15000 | | - | | - | | - | | - | |
| Ph | Ph/Ph | Ph | Ph/Ph | Ph | Ph/Ph | Ph | Ph/Ph | Ph/Ph | |
| - | - | 50 | - | 70 | - | 100 | - | - | |
| 30 | - | - | - | - | - | - | - | - | |
| 15 | 30 | 25 | 50 | 36 | 70 | 50 | 100 | 100 | |
| 4.5 ⁽¹⁾ | 15 | 6 | 25 | 6 | 36 | 6 | 50 | 50 | |
| - | - | - | - | - | - | - | - | - | |
| - | 10 | - | 20 | - | 30 | - | 40 | 40 | |
| - | - | - | 10 | - | 12 | - | 15 | 15 | |
| 75 % | | 75 % | | 75 % | | 75 % | | 75 % | |
| ■ | | ■ | | - | | ■ | | | |
| ■ | | ■ | | ■ | | ■ | | | |
| | | ■ | | - | | ■ | | | |
| | | | | | | | | ■ | |
| ■ | | ■ | | ■ | | ■ | | ■ | |
| - | | - | | - | | - | | | |
| 30-1000 | | 30-300 | | 30-300 | | 30-300 | | 30-300 | |
| 30-1000 | | 30-3000 | | 30-3000 | | 30-3000 | | 30-3000 | |
| 30-1000 | | 30-3000 | | 30-3000 | | 30-3000 | | 30-3000 | |
| 30-1000 | | - | | - | | - | | - | |
| ■ | | ■ | | ■ | | ■ | | ■ | |
| ■ | | ■ | | ■ | | ■ | | ■ | |
| ■ | | ■ | | ■ | | ■ | | ■ | |
| ■ | | - | | - | | - | | - | |
| 25 | | 25 | | 35 | | 35 | | | |
| 35 | | 35 | | 50 | | 50 | | | |
| | | - | | | | | | | |
| | | ■ | | | | | | | |
| | | ■ | | | | | | | |
| | | ■ | | | | | | | |
| | | 27 per pole | | | | | | | |
| | | 103 | | | | | | | |
| | | 81 | | | | | | | |

Characteristics of NG160 circuit breakers and switch-disconnectors

Incomer for modular switchboards

3 and 4 pole circuit breakers and switch-disconnectors specially designed for use upstream of Multi 9 modular devices:

- reinforcement of breaking capacities of downstream devices by cascading up to 25 kA
- easy installation in Pragma or Prisma Plus type G enclosures:
 - standard 45 mm front cut-out
 - clip-on installation on a DIN rail
 - reduced depth (82.5 mm).

PB103512_SE_40 eps



NG160 circuit breaker.

NG160 circuit breaker

Electrical characteristics as per IEC 60947-2

| | | | |
|--------------------------------------|-------------|------------------------|----------|
| Rated current (A) | In | 40 °C | 160 |
| Rated insulation voltage (V) | Ui | | 800 |
| Rated impulse withstand voltage (kV) | Uimp | | 8 |
| Rated operational voltage (V) | Ue | AC 50/60 Hz | 500 |
| Type of circuit breaker | | | |
| Ultimate breaking capacity (kA rms) | Icu | AC 220/240 V | 25 40 50 |
| | | 50/60 380/415 V | 16 25 36 |
| | | Hz 440 V | 10 16 22 |
| | | 500 V | 8 10 15 |
| Service breaking capacity | Ics | % Icu | 75 % |
| Suitability for isolation | | | ■ |
| Durability (C-O cycles) | mechanical | | 10000 |
| | | electrical (In -440 V) | 5000 |

Protection

Built-in thermal-magnetic trip unit

| | | | | | | | | | | | |
|---------------------|-----------|-----------------|-----|-----|-----|-----|-----|-----|------|------|------|
| Ratings | In | 16 | 25 | 32 | 40 | 50 | 63 | 80 | 100 | 125 | 160 |
| Thermal protection | Ir | fixed threshold | | | | | | | | | |
| Magnetic protection | Im | 600 | 600 | 600 | 600 | 600 | 800 | 800 | 1000 | 1250 | 1250 |

NG160NA switch-disconnector

Electrical characteristics as per IEC 60947-3

| | | | |
|--------------------------------------|-------------|--|---------------------------|
| Conventional thermal current (A) | Ith | 40 °C | 160 |
| Rated insulation voltage (V) | Ui | | 800 |
| Rated impulse withstand voltage (kV) | Uimp | | 8 |
| Rated operational voltage (V) | Ue | AC 50/60 Hz | 500 |
| Rated operational current | Ie | AC 50/60 Hz | AC22A AC23A |
| | | 220/240 V | 160 160 |
| | | 380/415 V | 160 160 |
| | | 440/480 V | 160 160 |
| | | 500 V | 160 125 |
| Short-circuit making capacity | Icm | (kA peak) min. for switch-disconnector alone | 2.1 |
| | | max. with protection by upstream circuit breaker | 330 |
| Short-time withstand current | Icw | (A rms) 1 s | 1500 |
| | | 3 s | 1500 |
| Suitability for isolation | | | ■ |

Coordination between circuit breakers and switch-disconnectors

The switch-disconnector must be protected against downstream short-circuits. The choice of the right switch-disconnector therefore depends on coordination with the protective device installed upstream. The table below indicates the maximum short-circuit current in kArms for which the switch-disconnector is protected by coordination with the circuit breaker located upstream.

Important: the switch-disconnector must be protected against overloads. The rating of the switch-disconnector must be greater than or equal to that of the upstream circuit breaker.

| Upstream protection | | | NR100F | NS100 - NS160 | | |
|---------------------|-----------------|----------------|--------|---------------|-----|-----|
| NG160NA downstream | | | NR160F | N | SX | H |
| 380 - 415 V | Isc max | kA rms | 25 | 36 | 50 | 70 |
| | Making capacity | kA peak | 52 | 75 | 105 | 154 |
| 440 V | Isc max | kA rms | 20 | 35 | 50 | 65 |
| | Making capacity | kA peak | 42 | 73 | 105 | 143 |

Characteristics of NG160 circuit breakers and switch-disconnectors

Incomer for modular switchboards



NG160 in modular enclosure.

Installation and connections

| Connections | | | |
|----------------------|---|------------------|-----------------------|
| Connectors | Bare cables from 1.5 to 70 mm ² cables | | |
| Dimensions (mm) | | W x H x D | Width in 9 mm modules |
| NG160 | 3P | 90 x 120 x 82.5 | 10 |
| | 4P | 120 x 120 x 82.5 | 14 |
| NG160 with Vigi | 3P | 210 x 120 x 82.5 | 24 |
| | 4P | 240 x 120 x 82.5 | 27 |
| Weight (kg) | | | |
| Device | 3P | 1.1 | |
| | 4P | 1.4 | |
| Device + Vigi module | 3P | 2.6 | |
| | 4P | 2.9 | |

Selection table

EZC circuit breakers



PB101838_SE_10.eps

EZC100-1P.



PB101840_SE_15.eps

EZC100-2P.



PB101843_SE_22.eps

EZC100-3P.



PB102172_SE_27.eps

EZC100-4P.



PB101845_SE_29.eps

EZC250-3P.

EasyPact circuit breakers

| | | |
|--------------------------------------|-----------|-------------------|
| Fixed version | | |
| Plug-in version | | |
| Number of poles | | |
| Rated current (A) | In | at 40 °C |
| Rated insulation voltage (V) | | |
| Ui | | |
| Rated impulse withstand voltage (kV) | | |
| Uimp | | |
| Rated operational voltage (V) | | |
| Ue | | AC 50/60 Hz DC |

Electrical characteristics as per IEC 60947-2, EN 60947-2, JIS C8201-2-1

| | | | |
|--|----------------------|-------------|------------------------|
| Ultimate breaking capacity (kA rms) | Icu | AC 50/60 Hz | 110/130 V |
| | | | 220/230/240 V |
| | | | 380 V |
| | | | 400/415 V |
| | | | 440 V |
| DC | 550 V | | |
| | 125 V (1P) | | |
| | 250 V (2P in series) | | |
| Rated service breaking capacity (kA rms) | Ics | % Icu | 110-400 V 415-550 V |

| | | |
|---------------------------|------------|----------|
| Suitability for isolation | | |
| Utilisation category | | |
| Pollution degree | | |
| Endurance (C-O cycles) | Mechanical | |
| | Electrical | In/415 V |

Electrical characteristics as per NEMA-AB1

| | | | |
|----------------------------|------------|-------------|-----------|
| Breaking capacity (kA rms) | HIC | AC 50/60 Hz | 240 V |
| | | | 277/480 V |

Protection

| | | |
|--------------------------|----------|---------------|
| Overload protection | Bimetal | |
| Instantaneous protection | Magnetic | Fixed (±20 %) |

Auxiliaries

| | | |
|---------------------|----------------------|------|
| Indication contacts | Auxiliary switch | AX |
| | Alarm switch | AL |
| | Combined AX + AL | AXAL |
| Voltage releases | Shunt trip release | SHT |
| | Undervoltage release | UVR |

Installation

| | | |
|-------------|--------------------------|--------------------|
| Connection | Crimp lugs/bars | |
| Accessories | Box lugs for bare cables | |
| | Rotary handles | Direct Extended |
| | Terminal extensions | |
| | Spreaders | |
| | Phase barriers | |
| | Terminal shields | |
| | Padlocking system | |
| | DIN rail adaptor | |

Dimension and weight

| | | |
|-----------------|-------|--|
| Dimensions (mm) | D x H | |
| | W | |
| Weight (kg) | | |

Selection table

EZC circuit breakers

| | EZC100B | EZC100F | EZC100N | EZC100H | | EZC250F | EZC250N | EZC250H | |
|--|--|---|---|---|---|---|--|--|--|
| | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| | ■ | ■ | - | ■ ⁽⁴⁾ | - | ■ | ■ | ■ | |
| | 3 | 3 | 1 | 3-4 | 1 | 2-3-4 | 3 | 3 | 2-3 |
| | 15, 16, 20, 25, 30, 32, 40, 45, 50, 60 | 15, 16, 20, 25, 30, 32, 40, 45, 50, 60, 63, 75, 80, 100 | 15, 16, 20, 25, 30, 32, 40, 45, 50, 60, 63, 75, 80, 100 | 15, 16, 20, 25, 30, 32, 40, 45, 50, 60, 63, 75, 80, 100 | 15, 16, 20, 25, 30, 32, 40, 45, 50, 60, 63, 75, 80, 100 | 15, 16, 20, 25, 30, 32, 40, 45, 50, 60, 63, 75, 80, 100 | 100, 125, 150, 160, 175, 200, 225, 250 | 100, 125, 150, 160, 175, 200, 225, 250 | 100, 125, 150, 160, 175, 200, 225, 250 |
| | 690 | 690 | 690 | 690 | 690 | 690 | 690 | 690 | |
| | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| | 550 | 550 | 415 | 550 | 415 | 550 | 550 | 550 | |
| | - | 250 | 125 | 250 | 125 | 250 | 250 | 250 | |
| | 10 | 25 | 25 | 25 | 50 | 100 | 25 | 50 | 85 |
| | 10 | 25 | 18 | 25 | 25 | 100 ⁽¹⁾ | 25 | 50 | 85 |
| | 7.5 | 10 | 2.5 | 18 | 5 | 30 | 18 | 25 | 36 |
| | 7.5 | 10 | 2.5 | 15 | 5 | 30 | 18 | 25 | 36 |
| | 5 | 7.5 | - | 10 | - | 20 | 15 | 20 | 25 |
| | 2.5 | 5 | - | 5 | - | 10 | 5 | 8 | 10 |
| | - | 5 | 5 | 5 | 10 | 10 | 5 | 20 | 30 |
| | - | 5 | - | 5 | - | 10 | 5 | 20 | 30 |
| | 25 % | 50 % | 50 % | 50 % | 50 % | 50 % | 50 % | 50 % | 50 % |
| | 25 % | 50 % | 50 % | 50 % | 50 % | 25 % | 50 % | 50 % | 50 % |
| | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| | A | A | A | A | A | A | A | A | |
| | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | 8 500 | 8 500 | 8 500 | 8 500 | 8 500 | 8 500 | 10 000 | 10 000 | 10 000 |
| | 1 500 | 1 500 | 1 500 | 1 500 | 1 500 | 1 500 | 5 000 | 5 000 | 5 000 |
| | - | - | 10 | 25 | 18 | 100 | 25 | 50 | 85 |
| | - | - | 10 ⁽²⁾ | 10 | 18 ⁽²⁾ | 18 ⁽³⁾ | 15 | 18 | 25 ⁽³⁾ |
| | fixed | fixed | fixed | fixed | fixed | fixed | fixed | fixed | fixed |
| | fixed | fixed | fixed | fixed | fixed | fixed | 10 In | 10 In | 10 In |
| | ■ | ■ | - | ■ | - | ■ | ■ | ■ | ■ |
| | ■ | ■ | - | ■ | - | ■ | ■ | ■ | ■ |
| | ■ | ■ | - | ■ | - | ■ | ■ | ■ | ■ |
| | ■ | ■ | - | ■ | - | ■ | ■ | ■ | ■ |
| | ■ | ■ | - | ■ | - | ■ | ■ | ■ | ■ |
| | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| | ■ | ■ | - | ■ | - | ■ ⁽³⁾ | ■ | ■ | ■ |
| | ■ | ■ | - | ■ | - | ■ ⁽³⁾ | ■ | ■ | ■ |
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| | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| | ■ | ■ | - | ■ | - | ■ ⁽³⁾ | ■ | ■ | ■ |
| | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| | ■ | ■ | ■ | ■ | ■ | ■ | - | - | - |
| | 60 x 130 | 60 x 130 | 60 x 130 | 60 x 130 | 60 x 130 | 60 x 130 | 60 x 165 | 60 x 165 | 60 x 165 |
| | 75 | 75 | 25 | 75 (3P) 100 (4P) | 25 | 50 (2P) 75 (3P) 100 (4P) | 105 | 105 | 105 |
| | 0.78 | 0.78 | 0.28 | 0.78 (3P) 1.0 (4P) | 0.28 | 0.6 (2P) 0.78 (3P) 1.0 (4P) | 1.3 | 1.3 | 1.1 (2P) 1.3 (3P) |

(1) 50 kA for 2 poles.
 (2) For 277 V only.
 (3) For 3 and 4 poles only.
 (4) For 3P only.

Selection table

EZC circuit breakers

PB101892_SE_32.eps



EZC250.

PB101894_SE_39.eps



EZCV250-4P.

PB102114_SE_26.eps



EZC400-3P.

PB102115_SE_36.eps



EZC400-4P.

EasyPact circuit breakers

| | | |
|--|-----------|-------------------|
| Fixed version | | |
| Plug-in version | | |
| Number of poles | | |
| Rated current (A) | In | at 40 °C |
| Rated insulation voltage (V) Ui | | |
| Rated impulse withstand voltage (kV) Uimp | | |
| Rated operational voltage (V) | Ue | AC 50/60 Hz DC |

Electrical characteristics as per IEC 60947-2, EN 60947-2 and JIS C8201-2-1/C8201-2-2

| | | | |
|-------------------------------------|------------|-------------|--|
| Ultimate breaking capacity (kA rms) | Icu | AC 50/60 Hz | 220/230/240 V 380 V 400/415 V 440 V 550 V |
| | | DC | 125 V (1P) 250 V (2P in series) |

| | | |
|--|------------|----------|
| Rated service breaking capacity (kA rms) | Ics | % Icu |
| Suitability for isolation | | |
| Utilisation category | | |
| Pollution degree | | |
| Endurance (C-O cycles) | Mechanical | |
| | Electrical | In/415 V |

Electrical characteristics as per NEMA-AB1

| | | | |
|----------------------------|------------|-------------|--------------------|
| Breaking capacity (kA rms) | HIC | AC 50/60 Hz | 240 V 277/480 V |
|----------------------------|------------|-------------|--------------------|

Protection

| | | |
|--------------------------|----------|----------------|
| Overload protection | Bimetal | |
| Instantaneous protection | Magnetic | fixed (± 20 %) |

Earth-leakage protection

| | | |
|------------------------|-------------------|------------|
| Sensitivity (A) | I Δ n | adjustable |
| Time-delay (ms) | Δ t | adjustable |
| Max. breaking time (s) | at 2 I Δ n | |

Auxiliaries

| | | |
|---------------------|----------------------|------|
| Indication contacts | Auxiliary switch | AX |
| | Alarm switch | AL |
| | Combined AX + AL | AXAL |
| | Earth-alarm switch | ALV |
| Voltage releases | Shunt trip release | SHT |
| | Undervoltage release | UVR |

Installation

| | | |
|---------------------|--------------------------|--------------------|
| Connection | Crimp lugs / bars | |
| Accessories | Box lugs for bare cables | |
| | Rotary handles | Direct Extended |
| Terminal extensions | | |
| Spreaders | | |
| Phase barriers | | |
| Terminal shields | | |
| Padlocking system | | |

Dimension and weight

| | | |
|-----------------|-------|--|
| Dimensions (mm) | D x H | |
| | W | |

| | |
|-------------|--|
| Weight (kg) | |
|-------------|--|

Selection table

EZC circuit breakers

| | EZC250N | EZC250H | EZCV250N | EZCV250H | EZC400N | EZC400H |
|--|--|--|--|--|-------------------------|-------------------------|
| ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| 4 | 4 | 4 | 3-4 | 3-4 | 3-4 | 3-4 |
| 63, 80, 100, 125, 150, 160, 175, 200, 225, 250 | 63, 80, 100, 125, 150, 160, 175, 200, 225, 250 | 63, 80, 100, 125, 150, 160, 175, 200, 225, 250 | 63, 80, 100, 125, 150, 160, 175, 200, 225, 250 | 63, 80, 100, 125, 150, 160, 175, 200, 225, 250 | 250, 300, 320, 350, 400 | 250, 300, 320, 350, 400 |
| 690 | 690 | 690 | 440 | 440 | 690 | 690 |
| 6 | 6 | 6 | 6 | 6 | 8 | 8 |
| 550 | 550 | 550 | 440 | 440 | 550 | 550 |
| 250 | 250 | 250 | - | - | 250 | 250 |
| | | | | | | |
| 50 | 85 | 85 | 85 | 100 | 85 | 100 |
| 25 | 36 | 36 | 25 | 36 | 36 | 50 |
| 25 | 36 | 36 | 25 | 36 | 36 | 50 |
| 20 | 25 | 25 | 20 | 25 | 36 | 50 |
| 8 | 10 | 10 | - | - | 15 | 20 |
| 20 | 30 | 30 | - | - | - | - |
| 20 | 30 | 30 | - | - | 20 | 40 |
| 50 % | 50 % | 50 % | 50 % | 50 % | 50 % | 50 % |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| A | A | A | A | A | A | A |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 10 000 | 10 000 | 10 000 | 10 000 | 10 000 | 4 000 | 4 000 |
| 5 000 | 5 000 | 5 000 | 5 000 | 5 000 | 1 000 | 1 000 |
| | | | | | | |
| 50 | 85 | 50 | 85 | 50 | 85 | |
| 18 | 25 | - | - | 25 | 35 | |
| | | | | | | |
| fixed | fixed | fixed | fixed | fixed | fixed | |
| 10 In | 10 In | 10 In | 10 In | 10 In | 10 In | |
| | | | | | | |
| - | - | 0.1/0.3/0.5/1 | 0.1/0.3/0.5/1 | - | - | |
| - | - | 0/200/500/1000 | 0/200/500/1000 | - | - | |
| - | - | 0.15/0.4/1/2 | 0.15/0.4/1/2 | - | - | |
| | | | | | | |
| ■ | ■ | ■ | ■ | ■ | ■ | |
| ■ | ■ | ■ | ■ | ■ | ■ | |
| ■ | ■ | ■ | ■ | ■ | ■ | |
| - | - | ■ | ■ | - | - | |
| ■ | ■ | ■ | ■ | ■ | ■ | |
| ■ | ■ | ■ | ■ | ■ | ■ | |
| | | | | | | |
| ■ | ■ | ■ | ■ | ■ | ■ | |
| ■ | ■ | ■ | ■ | ■ | ■ | |
| ■ | ■ | ■ | ■ | ■ | ■ | |
| ■ | ■ | ■ | ■ | ■ | ■ | |
| ■ | ■ | ■ | ■ | ■ | ■ | |
| ■ | ■ | ■ | ■ | ■ | ■ | |
| ■ | ■ | ■ | ■ | ■ | ■ | |
| ■ | ■ | ■ | ■ | ■ | ■ | |
| | | | | | | |
| 68 x 165 | 68 x 165 | 68 x 165 | 68 x 165 | 103 x 257 | 103 x 257 | |
| 140 | 140 | 105 (3P) 140 (4P) | 105 (3P) 140 (4P) | 140 (3P) 185 (4P) | 140 (3P) 185 (4P) | |
| 1.8 | 1.8 | 1.6 (3P) 2.1 (4P) | 1.6 (3P) 2.1 (4P) | 5 (3P) 7.5 (4P) | 5 (3P) 7.5 (4P) | |

Characteristics and performance of Compact NSX circuit breakers from 100 to 630 A

PB10354-40.eps



Compact NSX100/160/250.

PB103279_44.eps



Compact NSX400/630.

Common characteristics

| Rated voltages | | | |
|--------------------------------|-------------|----------------|-----|
| Insulation voltage (V) | Ui | | 800 |
| Impulse withstand voltage (kV) | Uimp | | 8 |
| Operational voltage (V) | Ue | AC 50/60 Hz | 690 |
| Suitability for isolation | | IEC/EN 60947-2 | yes |
| Utilisation category | | | A |
| Pollution degree | | IEC 60664-1 | 3 |

Circuit breakers

Breaking capacity levels

Electrical characteristics as per IEC 60947-2

| Rated current (A) | In | 40 °C | | |
|-----------------------------------|------------|-------------|-----------|--|
| Number of poles | | | | |
| Breaking capacity (kA rms) | | | | |
| | Icu | AC 50/60 Hz | 220/240 V | |
| | | | 380/415 V | |
| | | | 440 V | |
| | | | 500 V | |
| | | | 525 V | |
| | | | 660/690 V | |

Service breaking capacity (kA rms)

| | | | | |
|--|------------|-------------|-----------|--|
| | Ics | AC 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) | AC 50/60 Hz | 240 V |
| | | 480 V |
| | | 600 V |

Characteristics as per UL 508

| | | |
|----------------------------|-------------|-------|
| Breaking capacity (kA rms) | AC 50/60 Hz | 240 V |
| | | 480 V |
| | | 600 V |

Protection and measurements

| | |
|-------------------------------------|--|
| Short-circuit protection | Magnetic only |
| Overload / short-circuit protection | Thermal magnetic |
| | Electronic |
| | with neutral protection (Off-0.5-1-OSN) ⁽¹⁾ |
| | with ground-fault protection |
| | with zone selective interlocking (ZSI) ⁽²⁾ |

Display / I, U, f, P, E, THD measurements / interrupted-current measurement

| | |
|---------|-----------------------------|
| Options | Power Meter display on door |
| | Operating assistance |
| | Counters |
| | Histories and alarms |
| | Metering Com |
| | Device status/control Com |

| | |
|--------------------------|------------------|
| Earth-leakage protection | By Vigi module |
| | By Vigirex relay |

Installation / connections

Dimensions and weights

| | | |
|-----------------|--------------------------|------|
| Dimensions (mm) | Fixed, front connections | 2/3P |
| W x H x D | | 4P |
| Weight (kg) | Fixed, front connections | 2/3P |
| | | 4P |

Connections

| | | |
|----------------------|-------|------------------------|
| Connection terminals | Pitch | With/without spreaders |
|----------------------|-------|------------------------|

| | | |
|-----------------------|---------------|-----------------|
| Large Cu or Al cables | Cross-section | mm ² |
|-----------------------|---------------|-----------------|

⁽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.

Characteristics and performance of Compact NSX circuit breakers from 100 to 630 A

Common characteristics

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

| 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 | | |
| 100 | | | | | | 160 | | | | | | 250 | | | | | | 400 | | | | | | 630 | | | | | |
| 2 ⁽³⁾ , 3, 4 | | | | | | 2 ⁽³⁾ , 3, 4 | | | | | | 2 ⁽³⁾ , 3, 4 | | | | | | 3, 4 | | | | | | 3, 4 | | | | | |
| 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 | | |
| 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 | | |
| 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 | | |
| 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 | | |
| - | 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 | | |
| - | 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 | | |
| 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 | | |
| 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 | | |
| 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 | | |
| 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 | | |
| - | 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 | | |
| - | 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 | | |
| 50000 | | | | | | 40000 | | | | | | 20000 | | | | | | 15000 | | | | | | 15000 | | | | | |
| 50000 | | | | | | 40000 | | | | | | 20000 | | | | | | 12000 | | | | | | 8000 | | | | | |
| 30000 | | | | | | 20000 | | | | | | 10000 | | | | | | 6000 | | | | | | 4000 | | | | | |
| 20000 | | | | | | 15000 | | | | | | 10000 | | | | | | 6000 | | | | | | 6000 | | | | | |
| 10000 | | | | | | 7500 | | | | | | 5000 | | | | | | 3000 | | | | | | 2000 | | | | | |
| 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 | | |
| 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 | | |
| - | 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 | 85 | 85 | - | - | | |
| - | 25 | 50 | 65 | - | - | - | 35 | 50 | 65 | - | - | - | 35 | 50 | 65 | - | - | 35 | 50 | 65 | - | - | 35 | 50 | 65 | - | - | | |
| - | 10 | 10 | 10 | - | - | - | 10 | 10 | 10 | - | - | - | 15 | 15 | 15 | - | - | 20 | 20 | 20 | - | - | 20 | 20 | 20 | - | - | | |
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| 105 x 161 x 86 | | | | | | 105 x 161 x 86 | | | | | | 105 x 161 x 86 | | | | | | 140 x 255 x 110 | | | | | | 140 x 255 x 110 | | | | | |
| 140 x 161 x 86 | | | | | | 140 x 161 x 86 | | | | | | 140 x 161 x 86 | | | | | | 185 x 255 x 110 | | | | | | 185 x 255 x 110 | | | | | |
| 2.05 | | | | | | 2.2 | | | | | | 2.4 | | | | | | 6.05 | | | | | | 6.2 | | | | | |
| 2.4 | | | | | | 2.6 | | | | | | 2.8 | | | | | | 7.90 | | | | | | 8.13 | | | | | |
| 35/45 mm | | | | | | 35/45 mm | | | | | | 35/45 mm | | | | | | 45/52.5 mm | | | | | | 45/52.5 mm | | | | | |
| | | | | | | | | | | | | | | | | | | 45/70 mm | | | | | | 45/70 mm | | | | | |
| 300 | | | | | | 300 | | | | | | 300 | | | | | | 4 x 240 | | | | | | 4 x 240 | | | | | |

Protection of distribution systems

Compact NS circuit breakers from 630 up to 3200 A

PB10452.eps



Compact NS800L.

PB10453.eps



Compact NS2000H.

Compact circuit breakers

| | | | | |
|---|---------------------------|-----------------------------------|-----------|-----------|
| Number of poles | | | | |
| Control | manual | toggle | | |
| | electric | direct or extended rotary handle | | |
| Type of circuit breaker | | | | |
| Connections | fixed | front connection | | |
| | | rear connection | | |
| | | front connection with bare cables | | |
| | withdrawable (on chassis) | front connection | | |
| | | rear connection | | |
| Electrical characteristics as per Nema AB1 | | | | |
| Breaking capacity at 60 Hz (kA) | | 240 V | | |
| | | 480 V | | |
| | | 600 V | | |
| Electrical characteristics as per IEC 60947-2 and EN 60947-2 | | | | |
| Rated current (A) | In | 50 °C | | |
| | | 65 °C ⁽¹⁾ | | |
| Rated insulation voltage (V) | Ui | | | |
| Rated impulse withstand voltage (kV) | Uimp | | | |
| Rated operational voltage (V) | Ue | AC 50/60 Hz | | |
| Type of circuit breaker | | | | |
| Ultimate breaking capacity (kA rms) | Manual | Icu | AC | 220/240 V |
| | | | 50/60 Hz | 380/415 V |
| | | | | 440 V |
| | Ics | AC | 220/240 V | |
| | | 50/60 Hz | 380/415 V | |
| | | | 440 V | |
| Electrical | Icu | AC | 220/240 V | |
| | | 50/60 Hz | 380/415 V | |
| | | | 440 V | |
| | Ics | AC | 220/240 V | |
| | | 50/60 Hz | 380/415 V | |
| | | | 440 V | |
| Short-time withstand current (kArms) | Icw | AC | 1 s | |
| | | 50/60 Hz | 3 s | |
| | | | | |
| Integrated instantaneous protection | | kA peak ±10 % | | |
| Suitability for isolation | | | | |
| Utilisation category | | | | |
| Durability (C-O cycles) | mechanical | | | |
| | | electrical | 440 V | In/2 |
| | | | 690 V | In |
| Pollution degree | | | | |

(1) 65 °C with vertical connections. See the temperature derating tables for other types of connections.

(2) Ics: 100 % Icu for breaking capacity 440V/500V/660V
Ics: 75 % Icu for breaking capacity 220V/380V.

Protection of distribution systems

Compact NS circuit breakers from 630 up to 3200 A

| NS630b | | | | NS800 | | | | NS1000 | | | | NS1250 | | | | NS1600 | | | | NS1600b | | | | NS2000 | | | | NS2500 | | | | NS3200 | | | | | | | |
|---------------|--|------|--|-------|--|------|--|--------|--|------|--|--------|--|------|--|--------|--|------|--|---------|--|------|--|--------|--|------|--|--------|--|------|--|--------|--|------|--|------|--|--|--|
| 3, 4 | | | | 3, 4 | | | | 3, 4 | | | | 3, 4 | | | | 3, 4 | | | | 3, 4 | | | | 3, 4 | | | | 3, 4 | | | | 3, 4 | | | | | | | |
| ■ | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | |
| ■ | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | |
| ■ (except LB) | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | |
| N | | H | | L | | LB | | N | | H | | L | | N | | H | | N | | H | | N | | H | | N | | H | | N | | H | | N | | H | | | |
| ■ | | ■ | | ■ | | - | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | | |
| ■ | | ■ | | ■ | | - | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | | |
| ■ | | ■ | | - | | - | | ■ | | ■ | | - | | - | | - | | - | | - | | - | | - | | - | | - | | - | | - | | - | | - | | | |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | | |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | | |
| N | | H | | L | | LB | | N | | H | | L | | N | | H | | N | | H | | N | | H | | N | | H | | N | | H | | N | | H | | | |
| 50 | | 65 | | 125 | | 200 | | 50 | | 65 | | 125 | | 50 | | 65 | | 50 | | 65 | | 85 | | 125 | | 50 | | 65 | | 85 | | 50 | | - | | - | | | |
| 35 | | 50 | | 100 | | 200 | | 35 | | 50 | | 100 | | 35 | | 50 | | 35 | | 50 | | 65 | | 85 | | 65 | | 85 | | 65 | | 85 | | 65 | | 85 | | | |
| 25 | | 50 | | - | | 100 | | 25 | | 50 | | - | | 25 | | 50 | | 25 | | 50 | | 50 | | - | | 50 | | - | | - | | - | | - | | - | | | |
| 630 | | | | 800 | | | | 1000 | | | | 1250 | | | | 1600 | | | | 1600 | | | | 2000 | | | | 2500 | | | | 3200 | | | | | | | |
| 630 | | | | 800 | | | | 1000 | | | | 1250 | | | | 1510 | | | | 1550 | | | | 1900 | | | | 2500 | | | | 2970 | | | | | | | |
| 800 | | | | 800 | | | | 800 | | | | 800 | | | | 800 | | | | 800 | | | | 800 | | | | 800 | | | | 800 | | | | | | | |
| 8 | | | | 8 | | | | 8 | | | | 8 | | | | 8 | | | | 8 | | | | 8 | | | | 8 | | | | 8 | | | | | | | |
| 690 | | | | 690 | | | | 690 | | | | 690 | | | | 690 | | | | 690 | | | | 690 | | | | 690 | | | | 690 | | | | | | | |
| N | | H | | L | | LB | | N | | H | | L | | N | | H | | N | | H | | N | | H | | N | | H | | N | | H | | N | | H | | | |
| 85 | | 85 | | 150 | | 200 | | 85 | | 85 | | 150 | | 85 | | 85 | | 85 | | 85 | | 85 | | 125 | | 85 | | 125 | | 85 | | 125 | | 85 | | 125 | | | |
| 50 | | 70 | | 150 | | 200 | | 50 | | 70 | | 150 | | 50 | | 70 | | 50 | | 70 | | 70 | | 85 | | 70 | | 85 | | 70 | | 85 | | 70 | | 85 | | | |
| 50 | | 65 | | 130 | | 200 | | 50 | | 65 | | 130 | | 50 | | 65 | | 50 | | 65 | | 65 | | 85 | | 65 | | 85 | | 65 | | 85 | | 65 | | 85 | | | |
| 40 | | 50 | | 100 | | 100 | | 40 | | 50 | | 100 | | 40 | | 50 | | 40 | | 50 | | 65 | | - | | 65 | | - | | 65 | | - | | 65 | | - | | | |
| 30 | | 42 | | - | | 75 | | 30 | | 42 | | - | | 30 | | 42 | | 30 | | 42 | | 65 | | - | | 65 | | - | | 65 | | - | | 65 | | - | | | |
| 50 | | 52 | | 150 | | 200 | | 50 | | 52 | | 150 | | 50 | | 52 | | 37 | | 35 | | 65 | | 94 | | 65 | | 94 | | 65 | | 94 | | 65 | | 94 | | | |
| 50 | | 52 | | 150 | | 200 | | 50 | | 52 | | 150 | | 50 | | 52 | | 37 | | 35 | | 52 | | 64 | | 52 | | 64 | | 52 | | 64 | | 52 | | 64 | | | |
| 50 | | 48 | | 130 | | 200 | | 50 | | 48 | | 130 | | 50 | | 48 | | 37 | | 32 | | 65 | | 64 | | 65 | | 64 | | 65 | | 64 | | 65 | | 64 | | | |
| 40 | | 37 | | 100 | | 100 | | 40 | | 37 | | 100 | | 40 | | 37 | | 30 | | 25 | | 65 | | - | | 65 | | - | | 65 | | - | | 65 | | - | | | |
| 30 | | 31 | | - | | 75 | | 30 | | 31 | | - | | 30 | | 31 | | 22 | | 21 | | 65 | | - | | 65 | | - | | 65 | | - | | 65 | | - | | | |
| 50 | | 70 | | 150 | | - | | 50 | | 70 | | 150 | | 50 | | 70 | | 50 | | 70 | | - | | - | | - | | - | | - | | - | | - | | - | | | |
| 50 | | 70 | | 150 | | - | | 50 | | 70 | | 150 | | 50 | | 70 | | 50 | | 70 | | - | | - | | - | | - | | - | | - | | - | | - | | | |
| 50 | | 65 | | 130 | | - | | 50 | | 65 | | 130 | | 50 | | 65 | | 50 | | 65 | | - | | - | | - | | - | | - | | - | | - | | - | | | |
| 40 | | 50 | | 100 | | - | | 40 | | 50 | | 100 | | 40 | | 50 | | 40 | | 50 | | - | | - | | - | | - | | - | | - | | - | | - | | | |
| 30 | | 42 | | - | | - | | 30 | | 42 | | - | | 30 | | 42 | | 30 | | 42 | | - | | - | | - | | - | | - | | - | | - | | - | | | |
| 37 | | 35 | | 150 | | - | | 37 | | 35 | | 150 | | 37 | | 35 | | 37 | | 35 | | - | | - | | - | | - | | - | | - | | - | | - | | | |
| 37 | | 35 | | 150 | | - | | 37 | | 35 | | 150 | | 37 | | 35 | | 37 | | 35 | | - | | - | | - | | - | | - | | - | | - | | - | | | |
| 37 | | 32 | | 130 | | - | | 37 | | 32 | | 130 | | 37 | | 32 | | 37 | | 32 | | - | | - | | - | | - | | - | | - | | - | | - | | | |
| 30 | | 25 | | 100 | | - | | 30 | | 25 | | 100 | | 30 | | 25 | | 30 | | 25 | | - | | - | | - | | - | | - | | - | | - | | - | | | |
| 22 | | 21 | | - | | - | | 22 | | 21 | | - | | 22 | | 21 | | 22 | | 21 | | - | | - | | - | | - | | - | | - | | - | | - | | | |
| 19.2 | | 19.2 | | - | | - | | 19.2 | | 19.2 | | - | | 19.2 | | 19.2 | | 19.2 | | 19.2 | | - | | - | | - | | - | | - | | - | | - | | - | | | |
| - | | - | | - | | - | | - | | - | | - | | - | | - | | - | | - | | 32 | | - | | - | | - | | - | | - | | - | | - | | | |
| 40 | | 40 | | - | | - | | 40 | | 40 | | - | | 40 | | 40 | | 40 | | 40 | | 130 | | - | | - | | - | | - | | - | | - | | - | | | |
| ■ | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | | ■ | | | | | | | | | | | |
| B | | B | | A | | A | | B | | B | | A | | B | | B | | B | | B | | B | | B | | B | | B | | B | | B | | B | | B | | | |
| 10000 | | | | 10000 | | | | 10000 | | | | 10000 | | | | 10000 | | | | 10000 | | | | 10000 | | | | 10000 | | | | | | | | | | | |
| 6000 | | 6000 | | 4000 | | 4000 | | 6000 | | 6000 | | 4000 | | 5000 | | 5000 | | 5000 | | 5000 | | 3000 | | 3000 | | 3000 | | 3000 | | 3000 | | 3000 | | 3000 | | 3000 | | | |
| 5000 | | 5000 | | 3000 | | 3000 | | 5000 | | 5000 | | 3000 | | 4000 | | 4000 | | 2000 | | 2000 | | 2000 | | 2000 | | 2000 | | 2000 | | 2000 | | 2000 | | 2000 | | 2000 | | | |
| 4000 | | 4000 | | 3000 | | 3000 | | 4000 | | 4000 | | 3000 | | 3000 | | 3000 | | 2000 | | 2000 | | 2000 | | 2000 | | 2000 | | 2000 | | 2000 | | 2000 | | 2000 | | 2000 | | | |
| 2000 | | 2000 | | 2000 | | 2000 | | 2000 | | 2000 | | 2000 | | 2000 | | 2000 | | 1000 | | 1000 | | 1000 | | 1000 | | 1000 | | 1000 | | 1000 | | 1000 | | 1000 | | 1000 | | | |
| 3 | | | | 3 | | | | 3 | | | | 3 | | | | 3 | | | | 3 | | | | 3 | | | | 3 | | | | | | | | | | | |

Protection of distribution systems

Compact NS circuit breakers from 630 up to 3200 A

Protection and measurements

Interchangeable control units

Overload protection long time **I_r** (I_n x ...)Short-circuit protection short time **I_{sd}** (I_r x ...)instantaneous **I_i** (I_n x ...)Earth-fault protection **I_g** (I_n x ...)Residual earth-leakage protection **I_{Δn}**Zone selective interlocking **ZSI**

Protection of the fourth pole

Current measurements

Power measurements

Advanced protection

Quick view

Remote communication by bus

Device-status indication

Device remote operation ⁽²⁾

Transmission of settings

Indication and identification of protection devices and alarms

Transmission of measured current values

Compact circuit breakers

Additional indication and control auxiliaries

Indication contacts

Voltage releases MX shunt release/MN undervoltage release

Installation

Accessories terminal extensions and spreaders
terminal shields and interphase barriers
escutcheons

Dimensions fixed devices, front connections (mm) 3P

H x W x D 4P

Weight fixed devices, front connections (kg) 3P

4P

Source changeover system (see section on "source changeover systems")

Manual, remote-operated and automatic source changeover systems

⁽¹⁾ Except 1600b-3200.⁽²⁾ With NS630b...NS1600, remote operation is possible with electrically operated device.
With NS1600...NS3200, remote operation is not possible.

DC circuit breakers characteristics

Compact NSX100 DC to NSX630 DC

PB107518_13_1.eps



PB107524_10_1.eps



PB107547_32_1.eps



PB107528_31_1.eps



Compact circuit breaker

Number of poles

Electrical characteristics as per IEC 60947-1/ 60947-2 and EN 60947-1 / 60947-2

| | | |
|---------------------------------|-------------|-----------|
| Rated current at 40 °C | In | (A) |
| Rated insulation voltage | Ui | (V) |
| Rated impulse withstand voltage | Uimp | (kV peak) |
| Rated operational voltage | Ue | (V DC) |

Type of circuit breaker

| | | | | |
|--|------------|----------|------|------------------------------|
| Ultimate breaking capacity (L/R = 5 ms and L/R = 15 ms) | Icu | (kA rms) | V DC | 48-125 V (1P) ⁽¹⁾ |
| | | | | 250 V (1P) ⁽¹⁾ |
| | | | | 500 V (2P) ⁽¹⁾ |
| | | | | 750 V (3P) ⁽¹⁾ |

| | | |
|---------------------------|------------|-------|
| Service breaking capacity | Ics | % Icu |
| Rated making capacity | Icm | % Icu |
| Utilisation category | | |
| Breaking time | | (ms) |

Suitability for isolation
Pollution degree (as per IEC 60664-1)

Protection against overcurrents (see trip-unit table page A-9)

| | |
|------------|-----------------------------|
| Trip units | Built-in Interchangeable |
| Protection | Overloads Short-circuits |

Durability

| | | |
|--------------|------------|------------|
| (O/C cycles) | Mechanical | |
| | | Electrical |
| | | 250 V In |
| | | 250 V In/2 |
| | | 500 V In |
| | | 500 V In/2 |
| | 750 V In | |
| | 750 V In/2 | |

Indication and control auxiliaries

| | |
|--------------------|---|
| Auxiliary contacts | |
| Voltage release | MX shunt release MN undervoltage release |

Installation and connections

| | |
|------------------------|--|
| Fixed | Front connection |
| | Rear connection |
| Plug-in (base) | Front connection |
| | Rear connection |
| Withdrawable (chassis) | Front connection |
| | Rear connection |
| Control | Manual |
| | Electrical |
| | with toggle with direct or extended rotary handle |
| | with remote control |

Dimensions and weight

| | | |
|--|-------|----|
| Dimensions H x W x D (mm) connected in series | Fixed | 1P |
| | | 2P |
| | | 3P |
| | | 4P |
| Weight (kg) connected in series | Fixed | 1P |
| | | 2P |
| | | 3P |
| | | 4P |

⁽¹⁾ Number of poles taking part in current interruption.

Example. The NSX100N DC circuit breaker exists in the following versions:

- 1 pole with an Icu of 50 kA, for systems ≤ 250 V

- 2 poles with an Icu of 85 kA, for systems ≤ 500 V; 1 pole can be used in a 250 V system.

DC circuit breaker characteristics

Compact NSX100 DC to NSX630 DC

| NSX100 DC | | | | | | NSX160 DC | | | | | | NSX250 DC | | NSX400 DC | | NSX630 DC | |
|---------------|----|-----|-----|-----|-----|---------------|----|-----|-----|-----|-----|---------------|-----|----------------|-----|-----------------|-----|
| 1 | | 2 | | 3/4 | | 1 | | 2 | | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 100 | | | | | | 160 | | | | | | 250 | | 400 | | 550 | |
| 750 | | | | | | 750 | | | | | | 750 | | 750 | | 750 | |
| 8 | | | | | | 8 | | | | | | 8 | | 8 | | 8 | |
| 250 | | 500 | | 750 | | 250 | | 500 | | 750 | | 750 | | 750 | | 750 | |
| N | H | N | H | F | S | N | H | N | H | F | S | F | S | F | S | F | S |
| 50 | 85 | 85 | 100 | 36 | 100 | 50 | 85 | 85 | 100 | 36 | 100 | 36 | 100 | 36 | 100 | 36 | 100 |
| 50 | 85 | 85 | 100 | 36 | 100 | 50 | 85 | 85 | 100 | 36 | 100 | 36 | 100 | 36 | 100 | 36 | 100 |
| - | - | 85 | 100 | 36 | 100 | - | - | 85 | 100 | 36 | 100 | 36 | 100 | 36 | 100 | 36 | 100 |
| - | - | - | - | 36 | 100 | - | - | - | - | 36 | 100 | 36 | 100 | 36 | 100 | 36 | 100 |
| 100 % | | | | | | 100 % | | | | | | 100 % | | 100 % | | 100 % | |
| 100 % | | | | | | 100 % | | | | | | 100 % | | 100 % | | 100 % | |
| A | | | | | | A | | | | | | A | | A | | A | |
| < 10 ms | | | | | | < 10 ms | | | | | | < 10 ms | | < 10 ms | | < 10 ms | |
| ■ | | | | | | ■ | | | | | | ■ | | ■ | | ■ | |
| 3 | | | | | | 3 | | | | | | 3 | | 3 | | 3 | |
| ■ | ■ | ■ | ■ | - | - | ■ | ■ | ■ | ■ | - | - | - | - | ■ | ■ | ■ | ■ |
| - | - | - | - | ■ | - | - | - | - | - | ■ | - | ■ | - | - | - | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| 10000 | | | | | | 10000 | | | | | | 5000 | | 5000 | | 5000 | |
| 5000 | | | | | | 5000 | | | | | | 1000 | | 1000 | | 1000 | |
| 10000 | | | | | | 10000 | | | | | | 2000 | | 2000 | | 2000 | |
| 5000 | | | | | | 5000 | | | | | | 1000 | | 1000 | | 1000 | |
| 10000 | | | | | | 10000 | | | | | | 2000 | | 2000 | | 2000 | |
| 5000 | | | | | | 5000 | | | | | | 1000 | | 1000 | | 1000 | |
| 10000 | | | | | | 10000 | | | | | | 2000 | | 2000 | | 2000 | |
| ■ | | | | | | ■ | | | | | | ■ | | ■ | | ■ | |
| ■ | | | | | | ■ | | | | | | ■ | | ■ | | ■ | |
| ■ | | | | | | ■ | | | | | | ■ | | ■ | | ■ | |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| 161 x 35 x 86 | | | | | | 161 x 35 x 86 | | | | | | - | | - | | - | |
| - | | | | | | - | | | | | | 161 x 70 x 86 | | - | | - | |
| - | | | | | | - | | | | | | - | | 161 x 105 x 86 | | 255 x 140 x 110 | |
| - | | | | | | - | | | | | | - | | 161 x 140 x 86 | | 225 x 185 x 110 | |
| 0.7 | | | | | | 0.7 | | | | | | - | | - | | - | |
| - | | | | | | - | | | | | | 1.2 | | - | | - | |
| - | | | | | | - | | | | | | - | | 1.6 to 1.9 | | 6.0 | |
| - | | | | | | - | | | | | | - | | - | | 2.1 to 2.3 | |
| - | | | | | | - | | | | | | - | | - | | 7.8 | |

Circuit breakers and switch-disconnectors

NT06 to NT16

PB106365A49 eps



Common characteristics

| | | |
|---|-------------|------|
| Number of poles | | 3/4 |
| Rated insulation voltage (V) | Ui | 1000 |
| Impulse withstand voltage (kV) | Uimp | 12 |
| Rated operational voltage (V AC 50/60 Hz) | Ue | 690 |
| Suitability for isolation | IEC 60947-2 | |
| Degree of pollution | IEC 60664-1 | 3 |

Basic switchgear

Circuit-breaker as per IEC 60947-2

| | | |
|--|------------|--------------------------------------|
| Rated current (A) | In | at 40 °C/50 °C ⁽¹⁾ |
| Rating of 4th pole (A) | | |
| Sensor ratings (A) | | |
| Type of circuit breaker | | |
| Ultimate breaking capacity (kArms) V AC 50/60 Hz | Icu | 220/415 V 440 V 525 V 690 V |
| Rated service breaking capacity (kA rms) | Ics | % Icu |
| Utilisation category | | |
| Rated short-time withstand current (kA rms) V AC 50/60 Hz | Icw | 0.5 s 1 s 3 s |
| Integrated instantaneous protection (kA peak ±10 %) | | |
| Rated making capacity (kA peak) V AC 50/60 Hz | Icm | 220/415 V 440 V 525 V 690 V |
| Break time (ms) between tripping order and arc extinction | | |
| Closing time (ms) | | |

Circuit-breaker as per NEMA AB1

| | | |
|---|--|-------------------------|
| Breaking capacity (kA) V AC 50/60 Hz | | 240 V 480 V 600 V |
|---|--|-------------------------|

Switch-disconnector as per IEC 60947-3 and Annex A

| | | |
|---|------------|-----------------------------|
| Type of switch-disconnector | | |
| Rated making capacity (kA peak) AC23A/AC3 category V AC 50/60 Hz | Icm | 220 V 440 V 525/690 V |
| Rated short-time withstand current (kA rms) AC23A/AC3 category V AC 50/60 Hz | Icw | 0.5 s 1 s 3 s |
| Ultimate breaking capacity Icu (kA rms) with an external protection relay Maximum time delay: 350 ms | | 690 V |

Mechanical and electrical durability as per IEC 60947-2/3 at In/Ie

| | | | |
|---|-----------------------------------|---------------------|------------------------------|
| Service life | Mechanical | without maintenance | |
| C/O cycles x 1000 | | | |
| Type of circuit breaker | | | |
| Rated current | | | In (A) |
| C/O cycles x 1000 | Electrical | without maintenance | 440 V ⁽⁴⁾ |
| | IEC 60947-2 | | 690 V |
| Type of circuit breaker or switch-disconnector | | | |
| Rated operational current | | | Ie (A) |
| C/O cycles x 1000 | Electrical | without maintenance | 440 V ⁽⁴⁾ |
| | IEC 60947-3 | | 690V |
| Type of circuit breaker or switch-disconnector | | | |
| Rated operational current | | | Ie (A) |
| Motor power | | | 380/415 V (kW) 440 V (kW) |
| C/O cycles x 1000 | Electrical | without maintenance | 440 V ⁽⁴⁾ |
| | IEC 60947-3 Annex M/IEC 60947-4-1 | | 690 V |

⁽¹⁾ 50 °C: rear vertical connected. Refer to temperature derating tables for other connection types.

⁽²⁾ See the current-limiting curves in the "additional characteristics" section.

⁽³⁾ SELLIM system.

⁽⁴⁾ Available for 480 V NEMA.

⁽⁵⁾ Suitable for motor control (direct-on-line starting).

Circuit breakers and switch-disconnectors

NT06 to NT16

Sensor selection

| | | | | | | | |
|-------------------------|--------------------|------------|------------|------------|-------------|-------------|-------------|
| Sensor rating (A) | 250 ⁽¹⁾ | 400 | 630 | 800 | 1000 | 1250 | 1600 |
| Ir threshold setting(A) | 100 to 250 | 160 to 400 | 250 to 630 | 320 to 800 | 400 to 1000 | 500 to 1250 | 640 to 1600 |

⁽¹⁾ For circuit-breaker NT02, please consult us.

| NT06 | | | NT08 | | | NT10 | | | NT12 | | NT16 | |
|-----------------|-----------|--------------------------|------------|-----------|-----------|-------------|-----------|-----------|-------------|-----------|-------------|-------------|
| 630 | | | 800 | | | 1000 | | | 1250 | | 1600 | |
| 630 | | | 800 | | | 1000 | | | 1250 | | 1600 | |
| 400 to 630 | | | 400 to 800 | | | 400 to 1000 | | | 630 to 1250 | | 800 to 1600 | |
| H1 | H2 | L1 ⁽²⁾ | | | | | | | H1 | H2 | | |
| 42 | 50 | 150 | | | | | | | 42 | 50 | | |
| 42 | 50 | 130 | | | | | | | 42 | 50 | | |
| 42 | 42 | 100 | | | | | | | 42 | 42 | | |
| 42 | 42 | 25 | | | | | | | 42 | 42 | | |
| 100 % | | | | | | | | | 100 % | | | |
| B | B | A | | | | | | | B | B | | |
| 42 | 36 | 10 | | | | | | | 42 | 36 | | |
| 42 | 36 | - | | | | | | | 42 | 36 | | |
| 24 | 20 | - | | | | | | | 24 | 20 | | |
| - | 90 | 10 x In ⁽³⁾ | | | | | | | - | 90 | | |
| 88 | 105 | 330 | | | | | | | 88 | 105 | | |
| 88 | 105 | 286 | | | | | | | 88 | 105 | | |
| 88 | 88 | 220 | | | | | | | 88 | 88 | | |
| 88 | 88 | 52 | | | | | | | 88 | 88 | | |
| 25 | 25 | 9 | | | | | | | 25 | 25 | | |
| < 50 | | | | | | | | | < 50 | | | |
| 42 50 150 | | | | | | | | | 42 50 | | | |
| 42 50 100 | | | | | | | | | 42 50 | | | |
| 42 42 25 | | | | | | | | | 42 42 | | | |
| HA | | | | | | | | | HA | | | |
| 75 | | | | | | | | | 75 | | | |
| 75 | | | | | | | | | 75 | | | |
| 75 | | | | | | | | | 75 | | | |
| 36 | | | | | | | | | 36 | | | |
| 36 | | | | | | | | | 36 | | | |
| 20 | | | | | | | | | 20 | | | |
| 36 | | | | | | | | | 36 | | | |
| 12.5 | | | | | | | | | | | | |
| H1 | H2 | L1 | H1 | H2 | L1 | H1 | H2 | L1 | H1 | H2 | H1 | H2 |
| 630 | | | 800 | | | 1000 | | | 1250 | | | |
| 6 | 6 | 3 | 6 | 6 | 3 | 6 | 6 | 3 | 6 | 6 | 3 | 3 |
| 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 1 | 1 |
| H1/H2/HA | | | | | | | | | | | | |
| 630 | | | 800 | | | 1000 | | | 1250 | | | 1600 |
| 6 | | | 6 | | | 6 | | | 6 | | | 3 |
| 3 | | | 3 | | | 3 | | | 3 | | | 1 |
| H1/H2/HA | | | | | | | | | | | | |
| 500 | | | 630 | | | 800 | | | 1000 | | | 1000 |
| ≤ 250 | | | 250 to 335 | | | 335 to 450 | | | 450 to 560 | | | 450 to 560 |
| ≤ 300 | | | 300 to 400 | | | 400 to 500 | | | 500 to 630 | | | 500 to 630 |
| 6 | | | | | | | | | | | | |
| - | | | | | | | | | | | | |

Circuit breakers and switch-disconnectors

NW08 to NW63

PB106362/A65.eps



PB106362/A65.eps



Common characteristics

| | | | |
|---|-------------|-------------------------|--------------------|
| Number of poles | 3/4 | | |
| Rated insulation voltage (V) | Ui | 1000 | 1250 for H10, HA10 |
| Impulse withstand voltage (kV) | Uimp | 12 | 12 |
| Rated operational voltage (V AC 50/60 Hz) | Ue | 690 | 1150 for H10, HA10 |
| Suitability for isolation | IEC 60947-2 | | |
| Degree of pollution | IEC 60664-1 | 4 (1000 V) / 3 (1250 V) | |

Basic circuit-breaker

Circuit-breaker as per IEC 60947-2

| | | | |
|------------------------|---------------------------------|--|--|
| Rated current (A) | at 40 °C / 50 °C ⁽¹⁾ | | |
| Rating of 4th pole (A) | | | |
| Sensor ratings (A) | | | |

Type of circuit breaker

| | | |
|--|------------|---|
| Ultimate breaking capacity (kA rms) V AC 50/60 Hz | Icu | 220/415/440 V 525 V 690 V 1150 V |
| Rated service breaking capacity (kA rms) | Ics | % Icu |

| | | |
|--|------------|------------|
| Utilisation category | | |
| Rated short-time withstand current (kA rms) V AC 50/60 Hz | Icw | 1 s 3 s |

| | | |
|---|------------|---|
| Integrated instantaneous protection (kA peak ±10 %) | | |
| Rated making capacity (kA peak) V AC 50/60 Hz | Icm | 220/415/440 V 525 V 690 V 1150 V |

Break time (ms) between tripping order and arc extinction

Closing time (ms)

Circuit-breaker as per NEMA AB1

| | |
|---|--------------------|
| Breaking capacity (kA) V AC 50/60 Hz | 240/480 V 600 V |
|---|--------------------|

Unprotected circuit-breaker

Tripping by shunt trip as per IEC 60947-2

Type of circuit breaker

| | | |
|---|------------|-------------|
| Ultimate breaking capacity (kA rms) V AC 50/60 Hz | Icu | 220...690 V |
| Rated service breaking capacity (kA rms) | Ics | % Icu |
| Rated short-time withstand current (kA rms) | Icw | 1 s 3 s |

Overload and short-circuit protection

External protection relay: short-circuit protection, maximum delay: 350 ms ⁽⁴⁾

| | | |
|---|------------|-------------|
| Rated making capacity (kA peak) V AC 50/60 Hz | Icm | 220...690 V |
|---|------------|-------------|

Switch-disconnector as per IEC 60947-3 and Annex A

Type of switch-disconnector

| | | |
|--|------------|-----------------------|
| Rated making capacity (kA peak) AC23A/AC3 category V AC 50/60 Hz | Icm | 220...690 V 1150 V |
| Rated short-time withstand current (kA rms) AC23A/AC3 category V AC 50/60 Hz | Icw | 1 s 3 s |

Earthing switch

| | |
|--------------------------------------|-----------------------|
| Latching capacity (kA peak) | 135 |
| Rating short time withstand (kA rms) | Icw 1 s 3 s |

Mechanical and electrical durability as per IEC 60947-2/3 at In/Ie

| | | | |
|-------------------|------------|---------------------|--|
| Service life | Mechanical | with maintenance | |
| C/O cycles x 1000 | | without maintenance | |

Type of circuit breaker

| | | | |
|-------------------|---------------|---------------------|----------------------|
| Rated current | In (A) | | |
| C/O cycles x 1000 | Electrical | without maintenance | 440 V ⁽⁵⁾ |
| IEC 60947-2 | | | 690 V 1150 V |

Type of circuit breaker or switch-disconnector

| | | | |
|---------------------------|---------------|---------------------|----------------------|
| Rated operational current | Ie (A) | | AC23A |
| C/O cycles x 1000 | Electrical | without maintenance | 440 V ⁽⁵⁾ |
| IEC 60947-3 | | | 690 V |

Type of circuit breaker or switch-disconnector

| | | | |
|---------------------------|---------------|--|---|
| Rated operational current | Ie (A) | | AC3 ⁽⁶⁾ |
| Motor power | | | 380/415 V (kW) 440 V ⁽⁵⁾ (kW) 690 V (kW) |

| | | | |
|-----------------------------------|------------|---------------------|--------------------------|
| C/O cycles x 1000 | Electrical | without maintenance | 440/690 V ⁽⁵⁾ |
| IEC 60947-3 Annex M/IEC 60947-4-1 | | | |

(1) 50 °C: rear vertical connected. Refer to temperature derating tables for other connection types.

(2) See the current-limiting curves in the "additional characteristics" section.

(3) Equipped with a trip unit with a making current of 90 kA peak.

(4) External protection must comply with permissible thermal constraints of the circuit breaker (please consult us). No fault-trip indication by the SDE or the reset button.

(5) Available for 480 V NEMA.

(6) Suitable for motor control (direct-on-line starting).

(7) The use of NW08 to NW20 H1 in IT systems is limited to 500 V network voltage.

Circuit breakers and switch-disconnectors NW08 to NW63

| Sensor selection | | | | | | | | | | | | | |
|-------------------------|--------------------|------------|------------|------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Sensor rating (A) | 250 ⁽¹⁾ | 400 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 | 4000 | 5000 | 6300 |
| Ir threshold setting(A) | 100 to 250 | 160 to 400 | 250 to 630 | 320 to 800 | 400 to 1000 | 500 to 1250 | 630 to 1600 | 800 to 2000 | 1000 to 2500 | 1250 to 3200 | 1600 to 4000 | 2000 to 5000 | 2500 to 6300 |

(1) For circuit-breaker NW02, please consult us.

| NW08 | NW10 | NW12 | NW16 | | NW20 | | | | | NW25 | NW32 | NW40 | | NW40b | NW50 | NW63 |
|------------|-------------------------|-------------|-------------------------|------------|-------------------------|-----------|-----------|-------------------------|------------|--------------|--------------|--------------|------------|--------------|--------------|--------------|
| 800 | 1000 | 1250 | 1600 | | 2000 | | | | | 2500 | 3200 | 4000 | | 4000 | 5000 | 6300 |
| 800 | 1000 | 1250 | 1600 | | 2000 | | | | | 2500 | 3200 | 4000 | | 4000 | 5000 | 6300 |
| 400 to 800 | 400 to 1000 | 630 to 1250 | 800 to 1600 | | 1000 to 2000 | | | | | 1250 to 2500 | 1600 to 3200 | 2000 to 4000 | | 2000 to 4000 | 2500 to 5000 | 3200 to 6300 |
| N1 | H1⁽⁷⁾ | H2 | L1⁽²⁾ | H10 | H1⁽⁷⁾ | H2 | H3 | L1⁽²⁾ | H10 | H1 | H2 | H3 | H10 | H1 | H2 | |
| 42 | 65 | 100 | 150 | - | 65 | 100 | 150 | 150 | - | 65 | 100 | 150 | - | 100 | 150 | |
| 42 | 65 | 85 | 130 | - | 65 | 85 | 130 | 130 | - | 65 | 85 | 130 | - | 100 | 130 | |
| 42 | 65 | 85 | 100 | - | 65 | 85 | 100 | 100 | - | 65 | 85 | 100 | - | 100 | 100 | |
| - | - | - | - | 50 | - | - | - | - | 50 | - | - | - | 50 | - | - | |
| 100 % | | | | | 100 % | | | | | 100 % | | | | 100 % | | |
| B | | | | | B | | | | | B | | | | B | | |
| 42 | 65 | 85 | 30 | 50 | 65 | 85 | 65 | 30 | 50 | 65 | 85 | 65 | 50 | 100 | 100 | |
| 22 | 36 | 50 | 30 | 50 | 36 | 75 | 65 | 30 | 50 | 65 | 75 | 65 | 50 | 100 | 100 | |
| - | - | 190 | 80 | - | - | 190 | 150 | 80 | - | - | 190 | 150 | - | - | 270 | |
| 88 | 143 | 220 | 330 | - | 143 | 220 | 330 | 330 | - | 143 | 220 | 330 | - | 220 | 330 | |
| 88 | 143 | 187 | 286 | - | 143 | 187 | 286 | 286 | - | 143 | 187 | 286 | - | 220 | 286 | |
| 88 | 143 | 187 | 220 | - | 143 | 187 | 220 | 220 | - | 143 | 187 | 220 | - | 220 | 220 | |
| - | - | - | - | 105 | - | - | - | - | 105 | - | - | - | 105 | - | - | |
| 25 | 25 | 25 | 10 | 25 | 25 | 25 | 25 | 10 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | |
| < 70 | | | | | < 70 | | | | | < 70 | | | | < 80 | | |

| | | | | | | | | | | | | | | | |
|----|----|-----|-----|---|----|-----|-----|-----|---|----|-----|-----|---|-----|-----|
| 42 | 65 | 100 | 150 | - | 65 | 100 | 150 | 150 | - | 65 | 100 | 150 | - | 100 | 150 |
| 42 | 65 | 85 | 100 | - | 65 | 85 | 100 | 100 | - | 65 | 85 | 100 | - | 100 | 100 |

| | HA | HF ⁽³⁾ | | HA | HF ⁽³⁾ | | HA | HF ⁽³⁾ | | HA |
|--|-------|-------------------|--|-------|-------------------|--|-------|-------------------|--|-------|
| | 50 | 85 | | 50 | 85 | | 55 | 85 | | 85 |
| | 100 % | | | 100 % | | | 100 % | | | 100 % |
| | 50 | 85 | | 50 | 85 | | 55 | 85 | | 85 |
| | 36 | 50 | | 36 | 75 | | 55 | 75 | | 85 |
| | - | - | | - | - | | - | - | | - |
| | 105 | 187 | | 105 | 187 | | 121 | 187 | | 187 |

| NW08/NW10/NW12/NW16 | | | | NW20 | | | | NW25/NW32/NW40 | | | NW40b/NW50/NW63 |
|---------------------|-----------|-----------|-------------|-----------|-----------|-------------|-----------|----------------|-------------|-----------|-----------------|
| NA | HA | HF | HA10 | HA | HF | HA10 | HA | HF | HA10 | HA | |
| 88 | 105 | 187 | - | 105 | 187 | - | 121 | 187 | - | 187 | |
| - | - | - | 105 | - | - | 105 | - | - | 105 | - | |
| 42 | 50 | 85 | 50 | 50 | 85 | 50 | 55 | 85 | 50 | 85 | |
| - | 36 | 50 | 50 | 36 | 75 | 50 | 55 | 75 | 50 | 85 | |

60 Hz
50 Hz

| | | | | | | | | | | | | | | |
|---------------------------|-----------|-------------|--|-----------------------|--|--------------|-----------|-----------------------|------------|--------------|-----------|------------------------|-----------|-----------|
| 25 | | | | | | 20 | | | | | | 10 | | |
| 12.5 | | | | | | 10 | | | | | | 5 | | |
| N1/H1/H2 | L1 | H10 | | | | H1/H2 | H3 | L1 | H10 | H1/H2 | H3 | H10 | H1 | H2 |
| 800/1000/1250/1600 | | | | 2000 | | | | 2500/3200/4000 | | | | 4000b/5000/6300 | | |
| 10 | 3 | - | | | | 8 | 2 | 3 | - | 5 | 1.25 | - | 1.5 | 1.5 |
| 10 | 3 | - | | | | 6 | 2 | 3 | - | 2.5 | 1.25 | - | 1.5 | 1.5 |
| - | - | 0.5 | | | | - | - | - | 0.5 | - | - | 0.5 | - | - |
| H1/H2/NA/HA/HF | | | | H1/H2/H3/HA/HF | | | | H1/H2/H3/HA/HF | | | | H1/H2/HA | | |
| 800/1000/1250/1600 | | | | 2000 | | | | 2500/3200/4000 | | | | 4000b/5000/6300 | | |
| 10 | | | | 8 | | | | 5 | | | | 1.5 | | |
| 10 | | | | 6 | | | | 2.5 | | | | 1.5 | | |
| H1/H2/NA/HA/HF | | | | H1/H2/H3/HA/HF | | | | | | | | | | |
| 800 | | | | 1000 | | | | 1250 | | | | 1600 | | |
| 335 to 450 | | 450 to 560 | | 560 to 670 | | 670 to 900 | | 900 to 1150 | | | | | | |
| 400 to 500 | | 500 to 630 | | 500 to 800 | | 800 to 1000 | | 1000 to 1300 | | | | | | |
| ≤ 800 | | 800 to 1000 | | 1000 to 1250 | | 1250 to 1600 | | 1600 to 2000 | | | | | | |

6

All Compact NS and Masterpact circuit breakers are equipped with a Micrologic control unit that can be changed on site.

Control units are designed to protect Power circuits and loads. Alarms may be programmed for remote indications.

Measurements of current, voltage, frequency, power and power quality optimise continuity of service and energy management.

Dependability

Integration of protection functions in an ASIC electronic component used in all Micrologic control units guarantees a high degree of reliability and immunity to conducted or radiated disturbances.

On Micrologic A, E, P and H control units, advanced functions are managed by an independent microprocessor.

Accessories

Certain functions require the addition of Micrologic control unit accessories, described on catalogues LVPED211021EN and LVPED208008EN.

The rules governing the various possible combinations can be found in the documentation accessible via the Products and services menu of the www.schneider-electric.com web site.

Micrologic name codes

2.0 E
X Y Z

X: type of protection

- 2 for basic protection
- 5 for selective protection
- 6 for selective + earth-fault protection
- 7 for selective + earth-leakage protection.

Y: control-unit generation

Identification of the control-unit generation. "0" signifies the first generation.

Z: type of measurement

- A for "ammeter"
- E for "energy"
- P for "power meter"
- H for "harmonic meter".

PB104994.eps

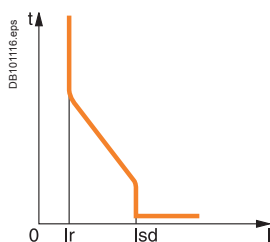


PB106351A32.eps



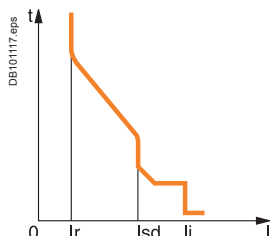
Current protection

Micrologic 2: basic protection



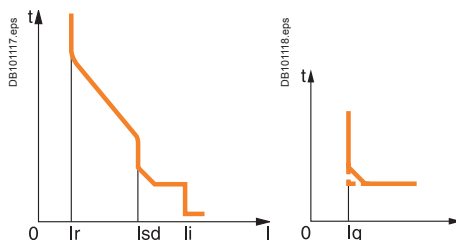
Protection:
long time
+ instantaneous

Micrologic 5: selective protection



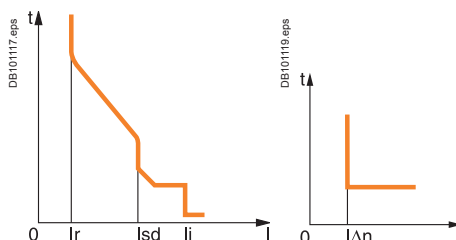
Protection:
long time
+ short time
+ instantaneous

Micrologic 6: selective + earth-fault protection



Protection:
long time
+ short time
+ instantaneous
+ earth fault

Micrologic 7: selective + earth-leakage protection



Protection:
long time
+ short time
+ instantaneous
+ earth leakage up to 3200A

Measurements and programmable protection

A: ammeter

- I₁, I₂, I₃, N, earth-fault, earth-leakage and maximeter for these measurements
- fault indications
- settings in amperes and in seconds.

E: Energy

- incorporates all the rms measurements of Micrologic A, plus voltage, power factor, power and energy metering measurements.
- calculates the current demand value
- "Quickview" function for the automatic cyclical display of the most useful values (as standard or by selection).

P: A + power meter + programmable protection

- measurements of V, A, W, VAR, VA, Wh, VARh, VAh, Hz, V_{peak}, A_{peak}, power factor and maximeters and minimeters
- IDMTL long-time protection, minimum and maximum voltage and frequency, voltage and current imbalance, phase sequence, reverse power
- load shedding and reconnection depending on power or current
- measurements of interrupted currents, differentiated fault indications, maintenance indications, event histories and time-stamping, etc.

H: P + harmonics

- power quality: fundamentals, distortion, amplitude and phase of harmonics up to the 31st order
- waveform capture after fault, alarm or on request
- enhanced alarm programming: thresholds and actions.

2.0 A



2.0 E



5.0 A



5.0 E



5.0 P



5.0 H



6.0 A



6.0 E



6.0 P



6.0 H



7.0 A



7.0 P



7.0 H



DC circuit breakers characteristics

Masterpact NW10 to NW40 DC

PB104917.eps



PB104428-42SE.eps



NW10DC 4P

Masterpact DC circuit breaker

Poles coupling version

C or D (3 poles)
E (4 poles)

Electrical characteristics as per IEC 60947-1/ 60947-2 and EN 60947-1 / 60947-2

| | | |
|---|------------------------|-----------|
| Rated current at 40 °C / 50 °C ⁽¹⁾ | I_n | (A) |
| Rated insulation voltage | U_i | (V) |
| Rated impulse withstand voltage | U_{imp} | (kV peak) |
| Rated operational voltage | U_e | (V DC) |

Type of circuit breaker

| | | | | | |
|----------------------------|-------------|-----------------------|------|------|-----|
| Ultimate breaking capacity | L/R = 5 ms | I_{cu} | (kA) | V DC | 500 |
| | | | | | 750 |
| | | | | | 900 |
| | L/R = 15 ms | I_{cu} | | | 500 |
| | | | | | 750 |
| | | | | | 900 |
| | L/R = 30 ms | I_{cu} | | | 500 |
| | | | | | 750 |
| | | | | | 900 |

| | | |
|------------------------------|-----------------------|-------------------|
| Service breaking capacity | I_{cs} | % I _{cu} |
| Rated making capacity | I_{cm} | % I _{cu} |
| Short-time withstand current | I_{cw} | 1 s |

Utilisation category

Breaking time (ms)

Making time (ms)

Suitability for isolation

Pollution degree (as per IEC 60664-1)

Protection against overcurrents (see trip-unit table page A-40)

| | |
|------------|-----------------------------|
| Trip units | Built-in |
| Protection | Overloads Short-circuits |

Durability

| | | | |
|--------------|------------|---------------------|----------------------|
| (O/C cycles) | Mechanical | With maintenance | |
| | | Without maintenance | |
| | Electrical | Without maintenance | 500 V DC 900 V DC |

Indication and control auxiliaries

Auxiliary contacts

| | |
|-----------------|---|
| Voltage release | MX shunt release MN undervoltage release |
|-----------------|---|

Characteristics of switch-disconnectors as per IEC 60947-3 and EN 60947-3

Type of switch-disconnector

| | | |
|------------------------------------|-----------------------|----------|
| Rated making capacity | I_{cm} | (kA) |
| Rated short-time withstand current | I_{cw} | (kA) 1 s |

Installation and connections

| | | | | |
|------------|---------|----|----|------------|
| Connection | Drawout | 3P | RC | Horizontal |
| | | 4P | | Vertical |
| | Fixed | 3P | RC | Horizontal |
| | | 4P | | Vertical |

Dimensions and weight

| | | |
|---|---------|----|
| Dimensions H x W x D (mm) connected in series | Drawout | 3P |
| | | 4P |
| | Fixed | 3P |
| | | 4P |
| Weight (kg) connected in series (approximate values) | Drawout | 3P |
| | | 4P |
| | Fixed | 3P |
| | | 4P |

⁽¹⁾ 50 °C - see the derating table for the NW40 DC.

DC circuit breakers characteristics

Masterpact NW10 to NW40 DC

| NW10 DC | | NW20 DC | | NW40 DC | |
|-----------------|------|---------|------|-----------------|------|
| ■ | | ■ | | ■ | |
| ■ | | ■ | | ■ | |
| 1000 | | 2000 | | 4000 | |
| 1000 | | 1000 | | 1000 | |
| 12 | | 12 | | 12 | |
| 500/900 | | 500/900 | | 500/900 | |
| N | H | N | H | N | H |
| 85 | 100 | 85 | 100 | 85 | 100 |
| - | 85 | - | 85 | - | 85 |
| - | 85 | - | 85 | - | 85 |
| 35 | 85 | 35 | 85 | 35 | 85 |
| - | 50 | - | 50 | - | 50 |
| - | 35 | - | 35 | - | 35 |
| 25 | 50 | 25 | 50 | 25 | 50 |
| - | 50 | - | 50 | - | 50 |
| - | 25 | - | 25 | - | 25 |
| 100 % | | | | | |
| 100 % | | | | | |
| 50 | 85 | 50 | 85 | 50 | 85 |
| B | | | | | |
| 30 to 75 | | | | | |
| < 70 | | | | | |
| ■ | ■ | ■ | ■ | ■ | ■ |
| 4 | | | | | |
| ■ | ■ | ■ | ■ | ■ | ■ |
| - | - | - | - | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ |
| 20000 | | | | | |
| 10000 | | | | | |
| 8500 | | 5000 | | 2000 | |
| - | 2000 | - | 2000 | - | 1000 |
| ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ |
| | HA | | HA | | HA |
| - | 85 | - | 85 | - | 85 |
| - | 85 | - | 85 | - | 85 |
| ■ | ■ | ■ | ■ | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ |
| 439 x 441 x 494 | | | | 439 x 441 x 594 | |
| 439 x 556 x 494 | | | | 439 x 556 x 594 | |
| 352 x 422 x 427 | | | | 352 x 422 x 527 | |
| 352 x 537 x 427 | | | | 352 x 537 x 527 | |
| 90 to 116 | | | | | |
| 125 to 146 | | | | | |
| 60 to 86 | | | | | |
| 85 to 106 | | | | | |

Switch-disconnector selection

Interpact INS40 to 160

052164b_08_SE.eps



Interpact INS80 switch-disconnector.

052020_L45_SE.eps



Interpact INS40 emergency-off switch-disconnector.

052168_L160_SE.eps



Interpact INS160 switch-disconnector.

052020_L160_SE.eps



Interpact INS160 emergency-off switch-disconnector.

Interpact INS switch-disconnectors

Number of poles

Electrical characteristics as defined by IEC 60947-1 / 60947-3 and EN 60947-1 / 60947-3

| | | |
|---|------------------------|-------------------------------|
| Conventional thermal current (A) | I_{th} | at 60 °C |
| Conventional thermal current in enclosure | I_{the} | at 60 °C |
| Rated insulation level (V) | Ui | AC 50/60 Hz |
| Impulse-withstand voltage (kV) | U_{imp} | |
| Rated operational voltage (V) | U_e | AC 50/60 Hz DC |
| Rated operational voltage AC20 and DC20 (V) | | AC 50/60 Hz |
| Rated operational current (A) | I_e | Electrical AC 50/60 Hz |

220-240 V
380-415 V
440-480 V ⁽¹⁾
500 V
660-690 V

Electrical DC

125 V (2P in series)
250 V (4P in series)

Rated operational power AC23 (kW)

Electrical AC 50/60 Hz

220-240 V
230 V (NEMA)
380-415 V
440 V
480 V (NEMA)
500-525 V
660-690 V

Rated duties

Uninterrupted duty
Intermittent duty

Short-circuit making capacity (kA peak)

I_{cm}

Min. (switch-disconnector alone)
Max. (with upstream protection circuit breaker)

Short-time withstand current (A rms)

I_{cw}

1 s
3 s
20 s
30 s

Suitability for isolation
Durability (O-C cycles)

Mechanical

Electrical AC 50/60 Hz

220-240 V
380-415 V
440 V
500 V
690 V

Electrical DC

250 V

Positive contact indication

Visible break

Emergency-off switch disconnector

Degree of pollution

Upstream protection

See catalogue LVPEP208015EN.

⁽¹⁾ Suitable for 480 V NEMA.

Switch-disconnector selection

Interpact INS40 to 160

| INS40 | | INS63 | | INS80 | | INS100 | | INS125 | | INS160 | |
|------------------|--------------|------------------|--------------|------------------|--------------|------------------|--------------|------------------|--------------|------------------|--------------|
| 3-4 | | 3-4 | | 3-4 | | 3-4 | | 3-4 | | 3-4 | |
| 40 | | 63 | | 80 | | 100 | | 125 | | 160 | |
| 40 | | 63 | | 80 | | 100 | | 125 | | 160 | |
| 690 | | 690 | | 690 | | 750 | | 750 | | 750 | |
| 8 | | 8 | | 8 | | 8 | | 8 | | 8 | |
| 500 | | 500 | | 500 | | 690 | | 690 | | 690 | |
| 250 | | 250 | | 250 | | 250 | | 250 | | 250 | |
| 690 | | 690 | | 690 | | 750 | | 750 | | 750 | |
| AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A |
| 40 | 40 | 63 | 63 | 80 | 80 | 100 | 100 | 125 | 125 | 160 | 160 |
| 40 | 40 | 63 | 63 | 80 | 72 | 100 | 100 | 125 | 125 | 160 | 160 |
| 40 | 40 | 63 | 63 | 80 | 63 | 100 | 100 | 125 | 125 | 160 | 160 |
| 40 | 32 | 63 | 40 | 80 | 40 | 100 | 100 | 125 | 125 | 160 | 160 |
| - | - | - | - | - | - | 100 | 63 | 125 | 80 | 160 | 100 |
| DC22A | DC23A | DC22A | DC23A | DC22A | DC23A | DC22A | DC23A | DC22A | DC23A | DC22A | DC23A |
| 40 | 40 | 63 | 63 | 80 | 80 | 100 | 100 | 125 | 125 | 160 | 160 |
| 40 | 40 | 63 | 63 | 80 | 80 | 100 | 100 | 125 | 125 | 160 | 160 |
| 11 | 15 | 22 | 22 | 37 | 45 | 55 | 55 | 75 | 75 | 90 | 90 |
| 7,5 | 15 | 15 | 22 | 37 | 45 | 55 | 55 | 75 | 75 | 90 | 90 |
| 20 | 30 | 37 | 45 | 55 | 55 | 75 | 75 | 90 | 90 | 110 | 110 |
| 22 | 30 | 37 | 45 | 55 | 55 | 75 | 75 | 90 | 90 | 110 | 110 |
| 22 | 30 | 37 | 45 | 55 | 55 | 75 | 75 | 90 | 90 | 110 | 110 |
| 18,5 | 22 | 22 | 22 | 37 | 45 | 55 | 55 | 75 | 75 | 90 | 90 |
| - | - | - | - | - | - | 55 | 55 | 75 | 75 | 90 | 90 |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Class 120 - 60 % | | Class 120 - 60 % | | Class 120 - 60 % | | Class 120 - 60 % | | Class 120 - 60 % | | Class 120 - 60 % | |
| 15 | | 15 | | 15 | | 20 | | 20 | | 20 | |
| 75 | | 75 | | 75 | | 154 | | 154 | | 154 | |
| 3000 | | 3000 | | 3000 | | 5500 | | 5500 | | 5500 | |
| 1730 | | 1730 | | 1730 | | 3175 | | 3175 | | 3175 | |
| 670 | | 670 | | 670 | | 1230 | | 1230 | | 1230 | |
| 550 | | 550 | | 550 | | 1000 | | 1000 | | 1000 | |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | |
| 20000 | | 20000 | | 20000 | | 15000 | | 15000 | | 15000 | |
| AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A |
| 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 |
| 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 |
| 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 |
| 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 |
| - | - | - | - | - | - | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 |
| DC22A | DC23A | DC22A | DC23A | DC22A | DC23A | DC22A | DC23A | DC22A | DC23A | DC22A | DC23A |
| 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| - | - | - | - | - | - | - | - | - | - | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| - | - | - | - | - | - | - | - | - | - | - | - |

Switch-disconnector selection

Interpact INS40 to 160

Interpact INS switch-disconnectors

Installation

Fixed, front connection
 Fixed, rear connection
 On symmetrical rails
 On a backplate

Connection

| | |
|---------------------|--|
| By cables | To bare cable connectors |
| By cables with lugs | Directly to terminals |
| | To spreaders |
| | To vertical-connection adapters via cable-lug adapters |
| Flat-facing bars | Directly to terminals |
| | To spreaders |
| Edgewise bars | To vertical-connection adapters |

Indication and measurement auxiliaries

Auxiliary contacts
 Voltage-presence indicator
 Current-transformer module
 Ammeter module

Control, locking and interlocking

| | |
|--------------|--------------------------------|
| Control | Direct front rotary handle |
| | Extended front rotary handle |
| | Direct lateral rotary handle |
| | Extended lateral rotary handle |
| Locking | By keylock |
| | By padlocks |
| Interlocking | By keylock |
| | Mechanical |

Complete source-changeover assembly
 Operating torque (Nm) (typical value for 3-4 poles with front handle)

Installation and connection accessories

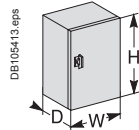
Bare cable connectors
 Rear connectors
 Terminal extensions
 Spreader
 One-piece spreader
 Terminal shrouds
 Terminal shields
 Interphase-barrier
 Front panel escutcheons
 Coupling accessories
 Tightening torque for electrical connections (Nm)

Dimensions and weights

| | |
|-----------------------------------|---------|
| Overall dimensions H x W x D (mm) | 3 poles |
| | 4 poles |
| Approximate weight (kg) | 3 poles |
| | 4 poles |

Enclosure dimensions for lthe

H x W x D (mm)



DB105413.eps

Switch-disconnector selection

Interpact INS40 to 160

| | INS40 | INS63 | INS80 | INS100 | INS125 | INS160 |
|----------------|----------------|----------------|------------------|------------------|------------------|--------|
| ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| - | - | - | - | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | - | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| - | - | - | - | - | - | - |
| - | - | - | - | - | - | - |
| - | - | - | - | - | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| - | - | - | - | - | - | - |
| - | - | - | - | - | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| - | - | - | - | - | - | - |
| - | - | - | - | - | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| - | - | - | - | - | - | - |
| - | - | - | - | - | - | - |
| 0.7 < Nm < 1.3 | 0.7 < Nm < 1.3 | 0.7 < Nm < 1.3 | 1.4 < Nm < 2 | 1.4 < Nm < 2 | 1.4 < Nm < 2 | |
| ■ | ■ | ■ | ■ | ■ | ■ | |
| - | - | - | - | - | - | |
| - | - | - | - | - | - | |
| - | - | - | - | - | - | |
| - | - | - | - | - | - | |
| ■ | ■ | ■ | ■ | ■ | ■ | |
| ■ | ■ | ■ | ■ | ■ | ■ | |
| ■ | ■ | ■ | ■ | ■ | ■ | |
| - | - | - | - | - | - | |
| - | - | - | - | - | - | |
| 5 | 5 | 5 | 8 | 8 | 8 | |
| 85 x 90 x 62.5 | 85 x 90 x 62.5 | 85 x 90 x 62.5 | 100 x 135 x 62.5 | 100 x 135 x 62.5 | 100 x 135 x 62.5 | |
| 85 x 90 x 62.5 | 85 x 90 x 62.5 | 85 x 90 x 62.5 | 100 x 135 x 62.5 | 100 x 135 x 62.5 | 100 x 135 x 62.5 | |
| 0.5 | 0.5 | 0.5 | 0.8 | 0.8 | 0.8 | |
| 0.6 | 0.6 | 0.6 | 0.9 | 0.9 | 0.9 | |
| 190 x 115 x 55 | 190 x 115 x 55 | 190 x 115 x 55 | 260 x 160 x 55 | 260 x 160 x 55 | 260 x 160 x 55 | |

Switch-disconnector selection

Interpact INS250-100 to 630

05646_L38_SE.eps



Interpact INS250 switch-disconnector.

056652_L42_SE.eps



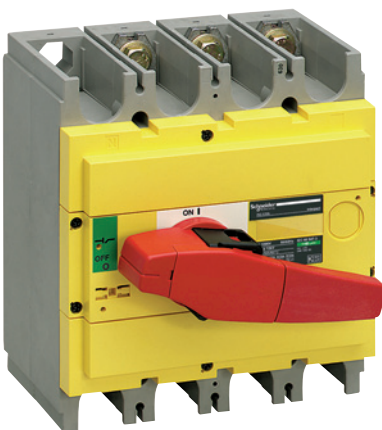
Interpact INS250 emergency-off switch-disconnector.

056487_L54_SE.eps



Interpact INS400 switch-disconnector.

056488_L54_SE.eps



Interpact INS400 emergency-off switch-disconnector.

Interpact INS switch-disconnectors

Number of poles

Electrical characteristics as defined by IEC 60947-1 / 60947-3 and EN 60947-1 / 60947-3

| | | |
|---|------------------------|-------------------------------|
| Conventional thermal current (A) | I_{th} | at 60 °C |
| Conventional thermal current in enclosure | I_{the} | at 60 °C |
| Rated insulation level (V) | Ui | AC 50/60 Hz |
| Impulse-withstand voltage (kV) | U_{imp} | |
| Rated operational voltage (V) | U_e | AC 50/60 Hz DC |
| Rated operational voltage AC20 and DC20 (V) | | AC 50/60 Hz |
| Rated operational current (A) | I_e | Electrical AC 50/60 Hz |

220-240 V
380-415 V
440-480 V⁽¹⁾
500-525 V
660-690 V

Electrical DC

125 V (2P in series)
250 V (4P in series)

| | |
|-----------------------------------|---|
| Rated operational power AC23 (kW) | Electrical AC 50/60 Hz |
| | 220-240 V 230 V (NEMA) 380-415 V 440 V 480 V (NEMA) 500-525 V 660-690 V |

| | |
|---|--|
| Rated duties | Uninterrupted duty Intermittent duty |
| Short-circuit making capacity (kA peak) | I_{cm} Min. (switch-disconnector alone) Max. (with upstream protection circuit breaker) |
| Short-time withstand current (A rms) | I_{cw} 1 s 3 s 20 s 30 s |

| | |
|---------------------------|-------------------------------|
| Suitability for isolation | |
| Durability (O-C cycles) | Mechanical |
| | Electrical AC 50/60 Hz |
| | 440 V 500 V 690 V |
| | Electrical DC |
| | 250 V |

| | |
|-----------------------------------|--|
| Positive contact indication | |
| Visible break | |
| Emergency-off switch disconnector | |
| Degree of pollution | |

Upstream protection

See catalogue LVPED208015EN.

(1) Suitable for 480 V NEMA.

(2) 550 A (DC).

Switch-disconnector selection

Interpact INS250-100 to 630

| INS250-100 | | INS250-160 | | INS250-200 | | INS250 | | INS320 | | INS400 | | INS500 | | INS630 | |
|------------------|-------|------------------|-------|------------------|-------|------------------|-------|------------------|-------|------------------|-------|------------------|-------|--------------------|-------|
| 3-4 | | 3-4 | | 3-4 | | 3-4 | | 3-4 | | 3-4 | | 3-4 | | 3-4 | |
| 100 | | 160 | | 200 | | 250 | | 320 | | 400 | | 500 | | 630 | |
| 100 | | 160 | | 200 | | 250 | | 320 | | 400 | | 500 | | 630 ⁽²⁾ | |
| 750 | | 750 | | 750 | | 750 | | 750 | | 750 | | 750 | | 750 | |
| 8 | | 8 | | 8 | | 8 | | 8 | | 8 | | 8 | | 8 | |
| 690 | | 690 | | 690 | | 690 | | 690 | | 690 | | 690 | | 690 | |
| 250 | | 250 | | 250 | | 250 | | 250 | | 250 | | 250 | | 250 | |
| 750 | | 750 | | 750 | | 750 | | 750 | | 750 | | 750 | | 750 | |
| AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A |
| 100 | 100 | 160 | 160 | 200 | 200 | 250 | 250 | 320 | 320 | 400 | 400 | 500 | 500 | 630 | 630 |
| 100 | 100 | 160 | 160 | 200 | 200 | 250 | 250 | 320 | 320 | 400 | 400 | 500 | 500 | 630 | 630 |
| 100 | 100 | 160 | 160 | 200 | 200 | 250 | 250 | 320 | 320 | 400 | 400 | 500 | 500 | 630 | 630 |
| 100 | 100 | 160 | 160 | 200 | 200 | 250 | 250 | 320 | 320 | 400 | 400 | 500 | 500 | 630 | 630 |
| 100 | 100 | 160 | 160 | 200 | 200 | 250 | 250 | 320 | 320 | 400 | 400 | 500 | 500 | 630 | 630 |
| DC22A | DC23A | DC22A | DC23A | DC22A | DC23A | DC22A | DC23A | DC22A | DC23A | DC22A | DC23A | DC22A | DC23A | DC22A | DC23B |
| 100 | 100 | 160 | 160 | 200 | 200 | 250 | 250 | 320 | 320 | 400 | 400 | 500 | 500 | 550 | 550 |
| 100 | 100 | 160 | 160 | 200 | 200 | 250 | 250 | 320 | 320 | 400 | 400 | 500 | 500 | 550 | 630 |
| 22 | | 45 | | 55 | | 75 | | 90 | | 110 | | 132 | | 200 | |
| 22 | | 45 | | 55 | | 75 | | 90 | | 110 | | 150 | | 200 | |
| 45 | | 75 | | 90 | | 132 | | 160 | | 200 | | 250 | | 315 | |
| 55 | | 90 | | 110 | | 150 | | 185 | | 220 | | 250 | | 400 | |
| 55 | | 90 | | 110 | | 150 | | 185 | | 220 | | 250 | | 375 | |
| 55 | | 110 | | 132 | | 160 | | 220 | | 250 | | 355 | | 400 | |
| 55 | | 90 | | 160 | | 210 | | 250 | | 400 | | 500 | | 560 | |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | |
| Class 120 - 60 % | | Class 120 - 60 % | | Class 120 - 60 % | | Class 120 - 60 % | | Class 120 - 60 % | | Class 120 - 60 % | | Class 120 - 60 % | | Class 120 - 60 % | |
| 30 | | 30 | | 30 | | 30 | | 50 | | 50 | | 50 | | 50 | |
| 330 | | 330 | | 330 | | 330 | | 330 | | 330 | | 330 | | 330 | |
| 8500 | | 8500 | | 8500 | | 8500 | | 20000 | | 20000 | | 20000 | | 20000 | |
| 4900 | | 4900 | | 4900 | | 4900 | | 11500 | | 11500 | | 11500 | | 11500 | |
| 2200 | | 2200 | | 2200 | | 2200 | | 4900 | | 4900 | | 4900 | | 4900 | |
| 1800 | | 1800 | | 1800 | | 1800 | | 4000 | | 4000 | | 4000 | | 4000 | |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | |
| 15000 | | 15000 | | 15000 | | 15000 | | 10000 | | 10000 | | 10000 | | 10000 | |
| AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A |
| 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 |
| 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 |
| 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 |
| DC22A | DC23A | DC22A | DC23A | DC22A | DC23A | DC22A | DC23A | DC23A | DC23B | DC23A | DC23B | DC23A | DC23B | DC23A | DC23B |
| 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1000 | - | 1000 | - | 1000 | - | 1000 | 200 |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | |
| - | | - | | - | | - | | - | | - | | - | | - | |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | | ■ | |
| 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | |
| - | | - | | - | | - | | - | | - | | - | | - | |

Switch-disconnector selection

Interpact INS250-100 to 630

Interpact INS switch-disconnectors

Installation

Fixed, front connection
 Fixed, rear connection
 On symmetrical rails
 On a backplate

Connection

| | |
|---------------------|--|
| By cables | To bare cable connectors |
| By cables with lugs | Directly to terminals |
| | To spreaders |
| | To vertical-connection adapters via cable-lug adapters |
| Flat-facing bars | Directly to terminals |
| | To spreaders |
| Edgewise bars | To vertical-connection adapters |

Indication and measurement auxiliaries

Auxiliary contacts

Voltage-presence indicator

Current-transformer module

Ammeter module

Control, locking and interlocking

| | |
|---------|--------------------------------|
| Control | Direct front rotary handle |
| | Extended front rotary handle |
| | Direct lateral rotary handle |
| | Extended lateral rotary handle |

| | |
|---------|-------------|
| Locking | By keylock |
| | By padlocks |

| | |
|--------------|------------|
| Interlocking | By keylock |
| | Mechanical |

Complete source-changeover assembly

Operating torque (Nm) (typical value for 3-4 poles with front handle)

Installation and connection accessories

Bare cable connectors

Rear connectors

Terminal extensions

Spreaders

One-piece spreader

Terminal shrouds

Terminal shields

Interphase-barrier

Front panel escutcheons

Coupling accessories

Tightening torque for electrical connections (Nm)

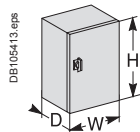
Dimensions and weights

| | |
|-----------------------------------|---------|
| Overall dimensions H x W x D (mm) | 3 poles |
| | 4 poles |

| | |
|-------------------------|---------|
| Approximate weight (kg) | 3 poles |
| | 4 poles |

Enclosure dimensions for lthe

H x W x D (mm)



| | INS250-100 | INS250-160 | INS250-200 | INS250 | INS320 | INS400 | INS500 | INS630 |
|-----------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| - | - | - | - | - | - | - | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
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| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
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| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
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| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| 5 < Nm < 6.2 | 5 < Nm < 6.2 | 5 < Nm < 6.2 | 5 < Nm < 6.2 | 13.5 < Nm < 16.5 | 13.5 < Nm < 16.5 | 13.5 < Nm < 16.5 | 13.5 < Nm < 16.5 | 13.5 < Nm < 16.5 |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| 15 | 15 | 15 | 15 | 50 | 50 | 50 | 50 | 50 |
| 136 x 140 x 96 | 136 x 140 x 96 | 136 x 140 x 96 | 136 x 140 x 96 | 205 x 185 x 130 | 205 x 185 x 130 | 205 x 185 x 130 | 205 x 185 x 130 | 205 x 185 x 130 |
| 136 x 140 x 96 | 136 x 140 x 96 | 136 x 140 x 96 | 136 x 140 x 96 | 205 x 185 x 130 | 205 x 185 x 130 | 205 x 185 x 130 | 205 x 185 x 130 | 205 x 185 x 130 |
| 2 | 2 | 2 | 2 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 |
| 2.2 | 2.2 | 2.2 | 2.2 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 |
| 400 x 300 x 200 | 400 x 300 x 200 | 400 x 300 x 200 | 400 x 300 x 200 | 600 x 400 x 200 | 600 x 400 x 200 | 600 x 400 x 200 | 600 x 400 x 200 | 600 x 400 x 200 |

Switch-disconnector selection

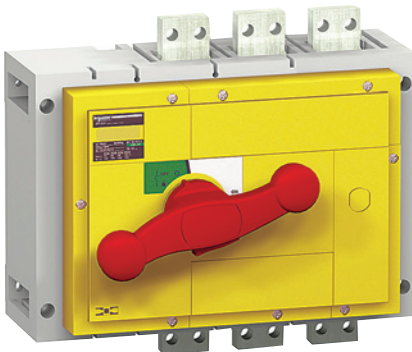
Interpact INS630b to 2500

PB100016b-65_SE.eps



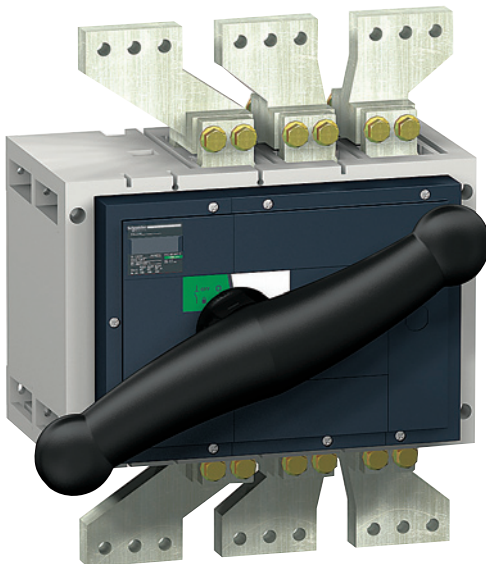
Interpact INS630b...1600 switch-disconnector.

PB100016b-65_SE.eps



Interpact INS630b...1600 emergency-off switch-disconnector.

PB100020b-65_SE.eps



Interpact INS2000...2500 switch-disconnector.

Interpact INS switch-disconnectors

Number of poles

Electrical characteristics as defined by IEC 60947-1 / 60947-3 and EN 60947-1 / 60947-3

| | | |
|---|------------------------|-------------------------------|
| Conventional thermal current (A) | I_{th} | at 60 °C |
| Conventional thermal current in enclosure | I_{the} | at 60 °C |
| Rated insulation level (V) | U_i | AC 50/60 Hz |
| Impulse-withstand voltage (kV) | U_{imp} | |
| Rated operational voltage (V) | U_e | AC 50/60 Hz DC |
| Rated operational voltage AC20 and DC20 (V) | | AC 50/60 Hz |
| Rated operational current (A) | I_e | Electrical AC 50/60 Hz |

220-240 V

380-415 V

440-480 V⁽¹⁾

500-525 V

660-690 V

Electrical DC

125 V (2P in series)

250 V (4P in series)

Rated operational power AC23 (kW)

Electrical AC 50/60 Hz

220-240 V

380-400 V

415 V

500-525 V

660-690 V

Rated duties

Uninterrupted duty

Intermittent duty

Short-circuit making capacity (kA peak)

I_{cm}

Min. (switch-disconnector alone)

Max. (with upstream protection circuit breaker)

Short-time withstand current (kA rms)

I_{cw}

0.5 s

0.8 s

1 s

3 s

20 s

30 s

Suitability for isolation

Durability (O-C cycles)

Mechanical

Electrical AC 50/60 Hz

220-240 V

380-415 V

440-480 V⁽¹⁾

500-525 V

660-690 V

Electrical DC

125 V (2P)

250 V (4P)

Positive contact indication

Visible break

Emergency-off switch disconnector

Degree of pollution

Upstream protection

See catalogue LVPED208015EN.

⁽¹⁾ Suitable for 480 V NEMA.

⁽²⁾ For vertical connection busbars only. For horizontal connection busbars, see catalogue LVPED208015EN.

Switch-disconnector selection

Interpact INS630b to 2500

| INS630b | | | INS800 | | | INS1000 | | | INS1250 | | | INS1600 | | | INS2000 | | | INS2500 | | |
|------------------|-------|-------|------------------|-------|-------|------------------|--------|--------|------------------|--------|--------|---------------------|--------|--------|------------------|--------|-------|------------------|--------|-------|
| 3-4 | | | 3-4 | | | 3-4 | | | 3-4 | | | 3-4 | | | 3-4 | | | 3-4 | | |
| 630 | | | 800 | | | 1000 | | | 1250 | | | 1600 ⁽²⁾ | | | 2000 | | | 2500 | | |
| 630 | | | 800 | | | 1000 | | | 1250 | | | 1600 ⁽²⁾ | | | 2000 | | | 2500 | | |
| 1000 | | | 1000 | | | 1000 | | | 1000 | | | 1000 | | | 1000 | | | 1000 | | |
| 12 | | | 12 | | | 12 | | | 12 | | | 12 | | | 12 | | | 12 | | |
| 690 | | | 690 | | | 690 | | | 690 | | | 690 | | | 690 | | | 690 | | |
| 250 | | | 250 | | | 250 | | | 250 | | | 250 | | | 250 | | | 250 | | |
| 800 | | | 800 | | | 800 | | | 800 | | | 800 | | | 800 | | | 800 | | |
| AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21B | AC22B | AC23A | AC21B | AC22B | AC23B | AC21B | AC22B | AC23B |
| 630 | 630 | 630 | 800 | 800 | 800 | 1000 | 1000 | 1000 | 1250 | 1250 | 1250 | 1600 | 1600 | 1250 | 2000 | 2000 | - | 2500 | 2500 | - |
| 630 | 630 | 630 | 800 | 800 | 800 | 1000 | 1000 | 1000 | 1250 | 1250 | 1250 | 1600 | 1600 | 1250 | 2000 | 2000 | - | 2500 | 2500 | - |
| 630 | 630 | 630 | 800 | 800 | 800 | 1000 | 1000 | 1000 | 1250 | 1250 | 1250 | 1600 | 1600 | 1250 | 2000 | 2000 | - | 2500 | 2500 | - |
| 630 | 630 | 630 | 800 | 800 | 800 | 1000 | 1000 | 1000 | 1250 | 1250 | 1250 | 1600 | 1600 | 1250 | 2000 | 2000 | - | 2500 | 2500 | - |
| 630 | 630 | 630 | 800 | 800 | 800 | 1000 | 1000 | 1000 | 1250 | 1250 | 1250 | 1600 | 1600 | 1250 | 2000 | 2000 | - | 2500 | 2500 | - |
| DC21A | DC22A | DC23A | DC21A | DC22A | DC23A | DC21A | DC22A | DC23A | DC21A | DC22A | DC23A | DC21A | DC22A | DC23A | DC21B | DC22B | DC23B | DC21B | DC22B | DC23B |
| 630/2 | 630/2 | 630/2 | 800/2 | 800/2 | 800/2 | 1000/2 | 1000/2 | 1000/2 | 1250/2 | 1250/2 | 1250/2 | 1600/2 | 1600/2 | 1600/2 | 2000/2 | 2000/2 | - | 2500/2 | 2500/2 | - |
| 630/4 | 630/4 | 630/4 | 800/4 | 800/4 | 800/4 | 1000/4 | 1000/4 | 1000/4 | 1250/4 | 1250/4 | 1250/4 | 1600/4 | 1600/4 | 1600/4 | 2000/4 | 2000/4 | - | 2500/4 | 2500/4 | - |
| 250 | | | 250 | | | 315 | | | 400 | | | 400 | | | - | | | - | | |
| 400 | | | 400 | | | 560 | | | 710 | | | 710 | | | - | | | - | | |
| 500 | | | 500 | | | 630 | | | 800 | | | 800 | | | - | | | - | | |
| 560 | | | 560 | | | 710 | | | 900 | | | 900 | | | - | | | - | | |
| 710 | | | 710 | | | 900 | | | - | | | - | | | - | | | - | | |
| ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | |
| Class 120 - 60 % | | | Class 120 - 60 % | | | Class 120 - 60 % | | | Class 120 - 60 % | | | Class 120 - 60 % | | | Class 120 - 60 % | | | Class 120 - 60 % | | |
| 75 | | | 75 | | | 75 | | | 75 | | | 75 | | | 105 | | | 105 | | |
| 330 | | | 330 | | | 330 | | | 330 | | | 330 | | | 330 | | | 330 | | |
| 50 | | | 50 | | | 50 | | | 50 | | | 50 | | | 50 | | | 50 | | |
| 42 | | | 42 | | | 42 | | | 42 | | | 42 | | | 50 | | | 50 | | |
| 35 | | | 35 | | | 35 | | | 35 | | | 35 | | | 50 | | | 50 | | |
| 20 | | | 20 | | | 20 | | | 20 | | | 20 | | | 30 | | | 30 | | |
| 10 | | | 10 | | | 10 | | | 10 | | | 10 | | | 13 | | | 13 | | |
| 8 | | | 8 | | | 8 | | | 8 | | | 8 | | | 11 | | | 11 | | |
| ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | |
| 5000 | | | 3000 | | | 3000 | | | 3000 | | | 3000 | | | 3000 | | | 3000 | | |
| AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21B | AC22B | AC23A | AC21B | AC22B | AC23B | AC21B | AC22B | AC23B |
| 1000 | 1000 | 1000 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 100 | 100 | 500 | 100 | 100 | - | 100 | 100 | - |
| 1000 | 1000 | 1000 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 100 | 100 | 500 | 100 | 100 | - | 100 | 100 | - |
| 1000 | 1000 | 1000 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 100 | 100 | 500 | 100 | 100 | - | 100 | 100 | - |
| 1000 | 1000 | 1000 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 100 | 100 | 500 | 100 | 100 | - | 100 | 100 | - |
| 1000 | 1000 | 1000 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 100 | 100 | 500 | 100 | 100 | - | 100 | 100 | - |
| DC21A | DC22A | DC23A | DC21A | DC22A | DC23A | DC21A | DC22A | DC23A | DC21A | DC22A | DC23A | DC21A | DC22A | DC23B | DC21B | DC22B | DC23B | DC21B | DC22B | DC23B |
| 1000 | 1000 | 1000 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 100 | 100 | - | 100 | 100 | - |
| 1000 | 1000 | 1000 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 100 | 100 | - | 100 | 100 | - |
| ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | |
| - | | | - | | | - | | | - | | | - | | | - | | | - | | |
| ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | |
| 3 | | | 3 | | | 3 | | | 3 | | | 3 | | | 3 | | | 3 | | |
| - | | | - | | | - | | | - | | | - | | | - | | | - | | |

Switch-disconnector selection

Interpact INS630b to 2500

Interpact INS switch-disconnectors

Installation

Fixed, front connection
 Fixed, rear connection
 On symmetrical rails
 On a backplate

Connection

| | |
|---------------------|--|
| By cables | To bare cable connectors |
| By cables with lugs | Directly to terminals |
| | To spreaders |
| | To vertical-connection adapters via cable-lug adapters |
| Flat-facing bars | Directly to terminals |
| | To spreaders |
| Edgewise bars | To vertical-connection adapters |

Indication and measurement auxiliaries

Auxiliary contacts
 Voltage-presence indicator
 Current-transformer module
 Ammeter module

Control, locking and interlocking

| | |
|--------------|--------------------------------|
| Control | Direct front rotary handle |
| | Extended front rotary handle |
| | Direct lateral rotary handle |
| | Extended lateral rotary handle |
| Locking | By keylock |
| | By padlocks |
| Interlocking | By keylock |
| | Mechanical |

Complete source-changeover assembly

Operating torque (Nm) (typical value for 3-4 poles with front handle)

Installation and connection accessories

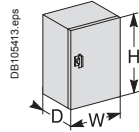
Bare cable connectors
 Rear connectors
 Terminal extensions
 Spreader
 One-piece spreader
 Terminal shrouds
 Terminal shields
 Interphase-barrier
 Front panel escutcheons
 Coupling accessories
 Tightening torque for electrical connections (Nm)

Dimensions and weights

| | |
|-----------------------------------|---------|
| Overall dimensions H x W x D (mm) | 3 poles |
| | 4 poles |
| Approximate weight (kg) | 3 poles |
| | 4 poles |

Enclosure dimensions for the

H x W x D (mm)



Switch-disconnector selection

Interpact INS630b to 2500

| | INS630b | INS800 | INS1000 | INS1250 | INS1600 | INS2000 | INS2500 |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|---------------------|---------------------|
| | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
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| | - | - | - | - | - | - | - |
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| | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| | ■ | ■ | ■ | ■ | ■ | - | - |
| | ■ | ■ | ■ | ■ | ■ | - | - |
| | ■ | ■ | ■ | ■ | ■ | - | - |
| | ■ | ■ | ■ | ■ | ■ | - | - |
| | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - |
| | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - |
| | 30 | 30 | 30 | 30 | 30 | 60 | 60 |
| | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - |
| | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - |
| | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| | - | - | - | - | - | - | - |
| | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| | 300 x 340 x 146.5 | 300 x 340 x 146.5 | 300 x 340 x 146.5 | 300 x 340 x 146.5 | 300 x 340 x 146.5 | 440 x 347.5 x 227.5 | 440 x 347.5 x 227.5 |
| | 300 x 410 x 146.5 | 300 x 410 x 146.5 | 300 x 410 x 146.5 | 300 x 410 x 146.5 | 300 x 410 x 146.5 | 440 x 462.5 x 227.5 | 440 x 462.5 x 227.5 |
| | 14 | 14 | 14 | 14 | 14 | 35 | 35 |
| | 18 | 18 | 18 | 18 | 18 | 45 | 45 |
| | - | - | - | - | - | - | - |

Switch-disconnector selection

Interpact INV100 to 630

056850_L41_SE.eps



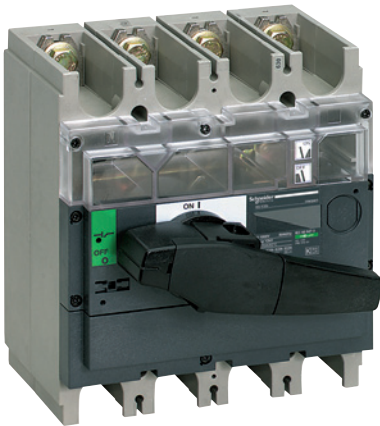
Interpact INV250 switch-disconnector.

056854_L41_SE.eps



Interpact INV250 emergency-off switch-disconnector.

056491_L54_SE.eps



Interpact INV400 Std.

056493_L52_SE.eps



Interpact INV400 emergency-off switch-disconnector.

Interpact INV switch-disconnectors

Number of poles

Electrical characteristics as defined by IEC 60947-1 / 60947-3 and EN 60947-1 / 60947-3

| | | |
|---|------------------------|-------------------------------|
| Conventional thermal current (A) | I_{th} | at 60 °C |
| Conventional thermal current in enclosure | I_{the} | at 60 °C |
| Rated insulation level (V) | Ui | AC 50/60 Hz |
| Impulse-withstand voltage (kV) | U_{imp} | |
| Rated operational voltage (V) | U_e | AC 50/60 Hz DC |
| Rated operational voltage AC20 and DC20 (V) | | AC 50/60 Hz |
| Rated operational current (A) | I_e | Electrical AC 50/60 Hz |

220-240 V
380-415 V
440-480 V ⁽¹⁾
500-525 V
660-690 V

Electrical DC

125 V (2P in series)
250 V (4P in series)

| | |
|-----------------------------------|---|
| Rated operational power AC23 (kW) | Electrical AC 50/60 Hz |
| | 220-240 V 230 V (NEMA) 380-415 V 440 V 480 V (NEMA) 500-525 V 660-690 V |

| | |
|---|--|
| Rated duties | Uninterrupted duty Intermittent duty |
| Short-circuit making capacity (kA peak) | I_{cm} Min. (switch-disconnector alone) Max. (with upstream protection circuit breaker) |
| Short-time withstand current (A rms) | I_{cw} 1 s 3 s 20 s 30 s |

| | |
|---------------------------|--|
| Suitability for isolation | Mechanical |
| Durability (O-C cycles) | Electrical AC 50/60 Hz 440 V 500 V 690 V |
| | Electrical DC 250 V |

Positive contact indication
Visible break
Emergency-off switch disconnector
Degree of pollution

Upstream protection

See catalogue LVPED208015EN.

⁽¹⁾ Suitable for 480 V NEMA.

⁽²⁾ 550 A (DC).

Switch-disconnector selection

Interpact INV100 to 630

| INV100 | | | INV160 | | | INV200 | | | INV250 | | | INV320 | | | INV400 | | | INV500 | | | INV630 | | | | | |
|------------------|-------|-------|------------------|-------|-------|------------------|-------|-------|------------------|-------|-------|------------------|-------|-------|------------------|-------|-------|------------------|-------|-------|--------------------|-------|-------|------------------|-------|-------------|
| 3-4 | | | 3-4 | | | 3-4 | | | 3-4 | | | 3-4 | | | 3-4 | | | 3-4 | | | 3-4 | | | | | |
| 100 | | | 160 | | | 200 | | | 250 | | | 320 | | | 400 | | | 500 | | | 630 | | | | | |
| 100 | | | 160 | | | 200 | | | 250 | | | 320 | | | 400 | | | 500 | | | 630 ⁽²⁾ | | | | | |
| 750 | | | 750 | | | 750 | | | 750 | | | 750 | | | 750 | | | 750 | | | 750 | | | | | |
| 8 | | | 8 | | | 8 | | | 8 | | | 8 | | | 8 | | | 8 | | | 8 | | | | | |
| 690 | | | 690 | | | 690 | | | 690 | | | 690 | | | 690 | | | 690 | | | 690 | | | | | |
| 250 | | | 250 | | | 250 | | | 250 | | | 250 | | | 250 | | | 250 | | | 250 | | | | | |
| 750 | | | 750 | | | 750 | | | 750 | | | 750 | | | 750 | | | 750 | | | 750 | | | | | |
| AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21A | AC22A | AC23A/AC23B |
| 100 | 100 | 100 | 160 | 160 | 160 | 200 | 200 | 200 | 250 | 250 | 250 | 320 | 320 | 320 | 400 | 400 | 400 | 500 | 500 | 500 | 630 | 630 | 630 | 630 | 630 | 630/630 |
| 100 | 100 | 100 | 160 | 160 | 160 | 200 | 200 | 200 | 250 | 250 | 250 | 320 | 320 | 320 | 400 | 400 | 400 | 500 | 500 | 500 | 630 | 630 | 630 | 630 | 630 | 630/630 |
| 100 | 100 | 100 | 160 | 160 | 160 | 200 | 200 | 200 | 250 | 250 | 200 | 320 | 320 | 320 | 400 | 400 | 400 | 500 | 500 | 500 | 630 | 630 | 630 | 630 | 630 | 500/630 |
| 100 | 100 | 100 | 160 | 160 | 160 | 200 | 200 | 200 | 250 | 250 | 200 | 320 | 320 | 320 | 400 | 400 | 400 | 500 | 500 | 500 | 630 | 630 | 630 | 630 | 550 | 500/630 |
| DC21A | DC22A | DC23B | DC21A | DC22A | DC23B | DC21A | DC22A | DC23B | DC21A | DC22A | DC23B | DC21A | DC22A | DC23A | DC21A | DC22A | DC23A | DC21A | DC22A | DC23A | DC21A | DC22A | DC23A | DC21A | DC22A | DC23A/DC23B |
| 100 | 100 | 100 | 160 | 160 | 160 | 200 | 200 | 200 | 250 | 250 | 200 | 320 | 320 | 320 | 400 | 400 | 400 | 500 | 500 | 500 | 550 | 550 | 550 | 550 | 550 | 550/630 |
| 100 | 100 | 100 | 160 | 160 | 160 | 200 | 200 | 200 | 250 | 250 | 200 | 320 | 320 | 320 | 400 | 400 | 400 | 500 | 500 | 500 | 550 | 550 | 550 | 550 | 550 | 550/630 |
| 22 | | | 45 | | | 55 | | | 75 | | | 90 | | | 110 | | | 132 | | | 200 | | | | | |
| 22 | | | 45 | | | 55 | | | 75 | | | 90 | | | 110 | | | 150 | | | 200 | | | | | |
| 45 | | | 75 | | | 90 | | | 132 | | | 160 | | | 200 | | | 250 | | | 315 | | | | | |
| 55 | | | 90 | | | 110 | | | 150 | | | 185 | | | 220 | | | 250 | | | 400 | | | | | |
| 55 | | | 50 | | | 110 | | | 150 | | | 185 | | | 220 | | | 250 | | | 375 | | | | | |
| 55 | | | 110 | | | 132 | | | 132 | | | 220 | | | 250 | | | 355 | | | 400 | | | | | |
| 55 | | | 90 | | | 160 | | | 160 | | | 250 | | | 400 | | | 500 | | | 560 | | | | | |
| ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | |
| Class 120 - 60 % | | | Class 120 - 60 % | | | Class 120 - 60 % | | | Class 120 - 60 % | | | Class 120 - 60 % | | | Class 120 - 60 % | | | Class 120 - 60 % | | | Class 120 - 60 % | | | Class 120 - 60 % | | |
| 30 | | | 30 | | | 30 | | | 30 | | | 50 | | | 50 | | | 50 | | | 50 | | | 50 | | |
| 330 | | | 330 | | | 330 | | | 330 | | | 330 | | | 330 | | | 330 | | | 330 | | | 330 | | |
| 8500 | | | 8500 | | | 8500 | | | 8500 | | | 20000 | | | 20000 | | | 20000 | | | 20000 | | | 20000 | | |
| 4900 | | | 4900 | | | 4900 | | | 4900 | | | 11500 | | | 11500 | | | 11500 | | | 11500 | | | 11500 | | |
| 2200 | | | 2200 | | | 2200 | | | 2200 | | | 4900 | | | 4900 | | | 4900 | | | 4900 | | | 4900 | | |
| 1800 | | | 1800 | | | 1800 | | | 1800 | | | 4000 | | | 4000 | | | 4000 | | | 4000 | | | 4000 | | |
| ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | |
| 15000 | | | 15000 | | | 15000 | | | 15000 | | | 10000 | | | 10000 | | | 10000 | | | 10000 | | | 10000 | | |
| AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21A | AC22A | AC23A/AC23B | | |
| 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | |
| 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000/200 | | |
| DC22A | DC23A | DC22A | DC23A | DC22A | DC23A | DC22A | DC23A | DC22A | DC23A | DC21A | DC22A | DC23A | DC21A | DC22A | DC23A | DC21A | DC22A | DC23A | DC21A | DC22A | DC23A | DC21A | DC22A | DC23A/DC23B | | |
| 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000/200 | | |
| ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | |
| ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | |
| ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | |
| 3 | | | 3 | | | 3 | | | 3 | | | 3 | | | 3 | | | 3 | | | 3 | | | 3 | | |
| - | | | - | | | - | | | - | | | - | | | - | | | - | | | - | | | - | | |

Switch-disconnector selection

Interpact INV100 to 630

Interpact INV switch-disconnectors

Installation

Fixed, front connection
 Fixed, rear connection
 On symmetrical rails
 On a backplate

Connection

| | |
|---------------------|--|
| By cables | To bare cable connectors |
| By cables with lugs | Directly to terminals |
| | To spreaders |
| | To vertical-connection adapters via cable-lug adapters |
| Flat-facing bars | Directly to terminals |
| | To spreaders |
| Edgewise bars | To vertical-connection adapters |

Indication and measurement auxiliaries

Auxiliary contacts
 Voltage-presence indicator
 Current-transformer module
 Ammeter module

Control, locking and interlocking

| | |
|--------------|--------------------------------|
| Control | Direct front rotary handle |
| | Extended front rotary handle |
| | Direct lateral rotary handle |
| | Extended lateral rotary handle |
| Locking | By keylock |
| | By padlocks |
| Interlocking | By keylock |
| | Mechanical |

Complete source-changeover assembly
 Operating torque (Nm) (typical value for 3-4 poles with front handle)

Installation and connection accessories

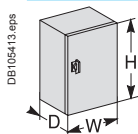
Bare cable connectors
 Rear connectors
 Terminal extensions
 Spreader
 One-piece spreader
 Terminal shrouds
 Terminal shields
 Interphase-barrier
 Front panel escutcheons
 Coupling accessories
 Tightening torque for electrical connections (Nm)

Dimensions and weights

| | |
|-----------------------------------|---------|
| Overall dimensions H x W x D (mm) | 3 poles |
| | 4 poles |
| Approximate weight (kg) | 3 poles |
| | 4 poles |

Enclosure dimensions for lthe

H x W x D (mm)



DB1054.13.eps

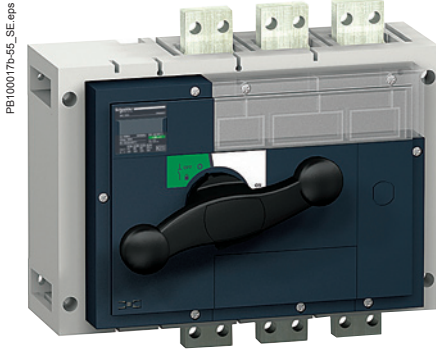
Switch-disconnector selection

Interpact INV100 to 630

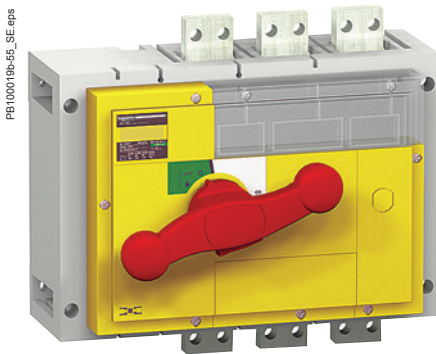
| | INV100 | INV160 | INV200 | INV250 | INV320 | INV400 | INV500 | INV630 |
|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|
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| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
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| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| - | - | - | - | - | - | - | - | - |
| 5 < Nm < 6.2 | 5 < Nm < 6.2 | 5 < Nm < 6.2 | 5 < Nm < 6.2 | 5 < Nm < 6.2 | 13.5 < Nm < 16.5 | 13.5 < Nm < 16.5 | 13.5 < Nm < 16.5 | 13.5 < Nm < 16.5 |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | - | - | - | - |
| ■ | ■ | ■ | ■ | ■ | - | - | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| - | - | - | - | - | - | - | - | - |
| 15 | 15 | 15 | 15 | 15 | 50 | 50 | 50 | 50 |
| 136 x 140 x 96 | 136 x 140 x 96 | 136 x 140 x 96 | 136 x 140 x 96 | 136 x 140 x 96 | 205 x 185 x 130 | 205 x 185 x 130 | 205 x 185 x 130 | 205 x 185 x 130 |
| 136 x 140 x 96 | 136 x 140 x 96 | 136 x 140 x 96 | 136 x 140 x 96 | 136 x 140 x 96 | 205 x 185 x 130 | 205 x 185 x 130 | 205 x 185 x 130 | 205 x 185 x 130 |
| 2 | 2 | 2 | 2 | 2 | 4.6 | 4.6 | 4.6 | 4.6 |
| 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 4.9 | 4.9 | 4.9 | 4.9 |
| 400 x 300 x 200 | 400 x 300 x 200 | 400 x 300 x 200 | 400 x 300 x 200 | 400 x 300 x 200 | 600 x 400 x 200 | 600 x 400 x 200 | 600 x 400 x 200 | 600 x 400 x 200 |

Switch-disconnector selection

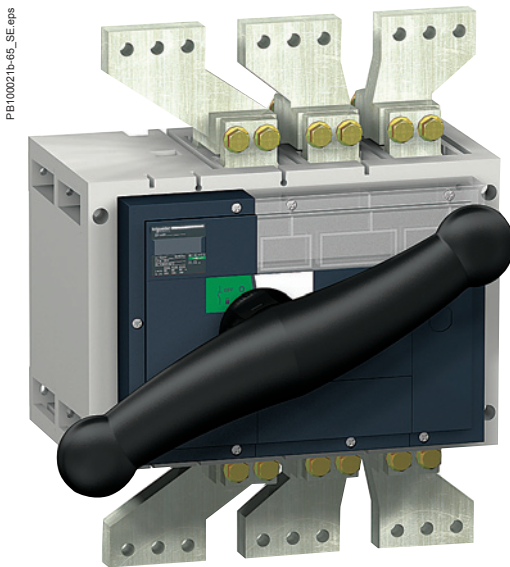
Interpact INV630b to 2500



Interpact INS250 switch-disconnector.



Interpact INS250 emergency-off switch-disconnector.



Interpact INS400 switch-disconnector.

Interpact INV switch-disconnectors

Number of poles

Electrical characteristics as defined by IEC 60947-1 / 60947-3 and EN 60947-1 / 60947-3

| | | |
|---|------------------------|-------------------------------|
| Conventional thermal current (A) | I_{th} | at 60 °C |
| Conventional thermal current in enclosure | I_{the} | at 60 °C |
| Rated insulation level (V) | U_i | AC 50/60 Hz |
| Impulse-withstand voltage (kV) | U_{imp} | |
| Rated operational voltage (V) | U_e | AC 50/60 Hz DC |
| Rated operational voltage AC20 and DC20 (V) | | AC 50/60 Hz |
| Rated operational current (A) | I_e | Electrical AC 50/60 Hz |

220-240 V

380-415 V

440-480 V⁽¹⁾

500-525 V

660-690 V

Electrical DC

125 V (2P in series)

250 V (4P in series)

Rated operational power AC23 (kW)

Electrical AC 50/60 Hz

220-240 V

380-400 V

415 V

500-525 V

660-690 V

Rated duties

Uninterrupted duty

Intermittent duty

Short-circuit making capacity (kA peak)

I_{cm}

Min. (switch-disconnector alone)

Max. (with upstream protection circuit breaker)

Short-time withstand current (kA rms)

I_{cw}

0.5 s

0.8 s

1 s

3 s

20 s

30 s

Suitability for isolation

Durability (O-C cycles)

Mechanical

Electrical AC 50/60 Hz

220-240 V

380-415 V

440-480 V⁽¹⁾

500-525 V

660-690 V

Electrical DC

125 V (2P)

250 V (4P)

Positive contact indication

Visible break

Emergency-off switch disconnector

Degree of pollution

Upstream protection

See catalogue LVPED208015EN.

⁽¹⁾ Suitable for 480 V NEMA.

⁽²⁾ For vertical connection busbars only. For horizontal connection busbars, see

Switch-disconnector selection

Interpact INV630b to 2500

| INV630b | | | INV800 | | | INV1000 | | | INV1250 | | | INV1600 | | | INV2000 | | | INV2500 | | |
|------------------|-------|-------|------------------|-------|-------|------------------|--------|--------|------------------|--------|--------|---------------------|--------|--------|------------------|--------|-------|------------------|--------|-------|
| 3-4 | | | 3-4 | | | 3-4 | | | 3-4 | | | 3-4 | | | 3-4 | | | 3-4 | | |
| 630 | | | 800 | | | 1000 | | | 1250 | | | 1600 ⁽²⁾ | | | 2000 | | | 2500 | | |
| 630 | | | 800 | | | 1000 | | | 1250 | | | 1600 ⁽²⁾ | | | 2000 | | | 2500 | | |
| 1000 | | | 1000 | | | 1000 | | | 1000 | | | 1000 | | | 1000 | | | 1000 | | |
| 12 | | | 12 | | | 12 | | | 12 | | | 12 | | | 12 | | | 12 | | |
| 690 | | | 690 | | | 690 | | | 690 | | | 690 | | | 690 | | | 690 | | |
| 250 | | | 250 | | | 250 | | | 250 | | | 250 | | | 250 | | | 250 | | |
| 800 | | | 800 | | | 800 | | | 800 | | | 800 | | | 800 | | | 800 | | |
| AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21B | AC22B | AC23A | AC21B | AC22B | AC23B | AC21B | AC22B | AC23B |
| 630 | 630 | 630 | 800 | 800 | 800 | 1000 | 1000 | 1000 | 1250 | 1250 | 1250 | 1600 | 1600 | 1250 | 2000 | 2000 | - | 2500 | 2500 | - |
| 630 | 630 | 630 | 800 | 800 | 800 | 1000 | 1000 | 1000 | 1250 | 1250 | 1250 | 1600 | 1600 | 1250 | 2000 | 2000 | - | 2500 | 2500 | - |
| 630 | 630 | 630 | 800 | 800 | 800 | 1000 | 1000 | 1000 | 1250 | 1250 | 1250 | 1600 | 1600 | 1250 | 2000 | 2000 | - | 2500 | 2500 | - |
| 630 | 630 | 630 | 800 | 800 | 800 | 1000 | 1000 | 1000 | 1250 | 1250 | 1250 | 1600 | 1600 | 1250 | 2000 | 2000 | - | 2500 | 2500 | - |
| 630 | 630 | 630 | 800 | 800 | 800 | 1000 | 1000 | 1000 | 1250 | 1250 | 1250 | 1600 | 1600 | 1250 | 2000 | 2000 | - | 2500 | 2500 | - |
| DC21A | DC22A | DC23A | DC21A | DC22A | DC23A | DC21A | DC22A | DC23A | DC21A | DC22A | DC23A | DC21A | DC22A | DC23A | DC21B | DC22B | DC23B | DC21B | DC22B | DC23B |
| 630/2 | 630/2 | 630/2 | 800/2 | 800/2 | 800/2 | 1000/2 | 1000/2 | 1000/2 | 1250/2 | 1250/2 | 1250/2 | 1600/2 | 1600/2 | 1600/2 | 2000/2 | 2000/2 | - | 2500/2 | 2500/2 | - |
| 630/4 | 630/4 | 630/4 | 800/4 | 800/4 | 800/4 | 1000/4 | 1000/4 | 1000/4 | 1250/4 | 1250/4 | 1250/4 | 1600/4 | 1600/4 | 1600/4 | 2000/4 | 2000/4 | - | 2500/4 | 2500/4 | - |
| 250 | | | 250 | | | 315 | | | 400 | | | 400 | | | - | | | - | | |
| 400 | | | 400 | | | 560 | | | 710 | | | 710 | | | - | | | - | | |
| 500 | | | 500 | | | 630 | | | 800 | | | 800 | | | - | | | - | | |
| 560 | | | 560 | | | 710 | | | 900 | | | 900 | | | - | | | - | | |
| 710 | | | 710 | | | 900 | | | - | | | - | | | - | | | - | | |
| ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | |
| Class 120 - 60 % | | | Class 120 - 60 % | | | Class 120 - 60 % | | | Class 120 - 60 % | | | Class 120 - 60 % | | | Class 120 - 60 % | | | Class 120 - 60 % | | |
| 75 | | | 75 | | | 75 | | | 75 | | | 75 | | | 105 | | | 105 | | |
| 330 | | | 330 | | | 330 | | | 330 | | | 330 | | | 330 | | | 330 | | |
| 50 | | | 50 | | | 50 | | | 50 | | | 50 | | | 50 | | | 50 | | |
| 42 | | | 42 | | | 42 | | | 42 | | | 42 | | | 50 | | | 50 | | |
| 35 | | | 35 | | | 35 | | | 35 | | | 35 | | | 50 | | | 50 | | |
| 20 | | | 20 | | | 20 | | | 20 | | | 20 | | | 30 | | | 30 | | |
| 10 | | | 10 | | | 10 | | | 10 | | | 10 | | | 13 | | | 13 | | |
| 8 | | | 8 | | | 8 | | | 8 | | | 8 | | | 11 | | | 11 | | |
| ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | |
| 5000 | | | 3000 | | | 3000 | | | 3000 | | | 3000 | | | 3000 | | | 3000 | | |
| AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21A | AC22A | AC23A | AC21B | AC22B | AC23A | AC21B | AC22B | AC23B | AC21B | AC22B | AC23B |
| 1000 | 1000 | 1000 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 100 | 100 | 500 | 100 | 100 | - | 100 | 100 | - |
| 1000 | 1000 | 1000 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 100 | 100 | 500 | 100 | 100 | - | 100 | 100 | - |
| 1000 | 1000 | 1000 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 100 | 100 | 500 | 100 | 100 | - | 100 | 100 | - |
| 1000 | 1000 | 1000 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 100 | 100 | 500 | 100 | 100 | - | 100 | 100 | - |
| 1000 | 1000 | 1000 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 100 | 100 | 500 | 100 | 100 | - | 100 | 100 | - |
| DC21A | DC22A | DC23A | DC21A | DC22A | DC23A | DC21A | DC22A | DC23A | DC21A | DC22A | DC23A | DC21A | DC22A | DC23B | DC21B | DC22B | DC23B | DC21B | DC22B | DC23B |
| 1000 | 1000 | 1000 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 100 | 100 | - | 100 | 100 | - |
| 1000 | 1000 | 1000 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 100 | 100 | - | 100 | 100 | - |
| ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | |
| ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | |
| ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | | ■ | | |
| 3 | | | 3 | | | 3 | | | 3 | | | 3 | | | 3 | | | 3 | | |
| - | | | - | | | - | | | - | | | - | | | - | | | - | | |

Switch-disconnector selection

Interpact INV630b to 2500

Interpact INV switch-disconnectors

Installation

Fixed, front connection
 Fixed, rear connection
 On symmetrical rails
 On a backplate

Connection

| | |
|---------------------|--|
| By cables | To bare cable connectors |
| By cables with lugs | Directly to terminals |
| | To spreaders |
| | To vertical-connection adapters via cable-lug adapters |
| Flat-facing bars | Directly to terminals |
| | To spreaders |
| Edgewise bars | To vertical-connection adapters |

Indication and measurement auxiliaries

Auxiliary contacts
 Voltage-presence indicator
 Current-transformer module
 Ammeter module

Control, locking and interlocking

| | |
|--------------|--------------------------------|
| Control | Direct front rotary handle |
| | Extended front rotary handle |
| | Direct lateral rotary handle |
| | Extended lateral rotary handle |
| Locking | By keylock |
| | By padlocks |
| Interlocking | By keylock |
| | Mechanical |

Complete source-changeover assembly

Operating torque (Nm) (typical value for 3-4 poles with front handle)

Installation and connection accessories

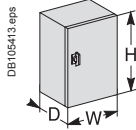
Bare cable connectors
 Rear connectors
 Terminal extensions
 Spreader
 One-piece spreader
 Terminal shrouds
 Terminal shields
 Interphase-barrier
 Front panel escutcheons
 Coupling accessories
 Tightening torque for electrical connections (Nm)

Dimensions and weights

| | |
|-----------------------------------|---------|
| Overall dimensions H x W x D (mm) | 3 poles |
| | 4 poles |
| Approximate weight (kg) | 3 poles |
| | 4 poles |

Enclosure dimensions for the

H x W x D (mm)



Switch-disconnector selection

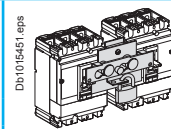
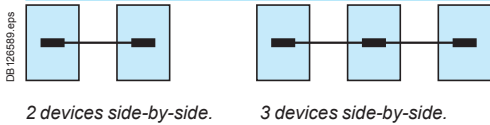
Interpact INV630b to 2500

| | INV630b | INV800 | INV1000 | INV1250 | INV1600 | INV2000 | INV2500 |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------------|---------------------|
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| - | - | - | - | - | - | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | ■ | ■ |
| - | - | - | - | - | - | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ | - | - |
| - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - |
| 30 | 30 | 30 | 30 | 30 | 30 | 60 | 60 |
| - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| - | - | - | - | - | - | - | - |
| 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| 300 x 340 x 146.5 | 300 x 340 x 146.5 | 300 x 340 x 146.5 | 300 x 340 x 146.5 | 300 x 340 x 146.5 | 300 x 340 x 146.5 | 440 x 347.5 x 227.5 | 440 x 347.5 x 227.5 |
| 300 x 410 x 146.5 | 300 x 410 x 146.5 | 300 x 410 x 146.5 | 300 x 410 x 146.5 | 300 x 410 x 146.5 | 300 x 410 x 146.5 | 440 x 462.5 x 227.5 | 440 x 462.5 x 227.5 |
| 14 | 14 | 14 | 14 | 14 | 14 | 35 | 35 |
| 18 | 18 | 18 | 18 | 18 | 18 | 45 | 45 |
| - | - | - | - | - | - | - | - |

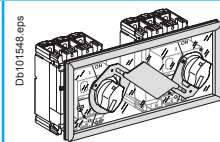
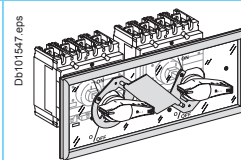
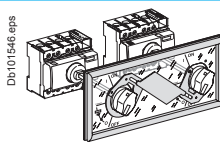
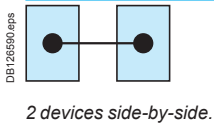
| Range | Interpact | | Compact |
|----------------|--|--------------------------------------|---|
| Models | INS40 to INS80 INS100 to INS160 | INS250 to INS630 INV250 to INV630 | NSX100 to NSX250 NSX400 to NSX630 |
| Rating (A) | 40 to 160 | 100 to 630 | 100 to 630 |
| Type of device | Switch-disconnectors with extended handles | Switch-disconnectors | N/H/L circuit breakers NA switch-disconnectors |

Manual source-changeover systems

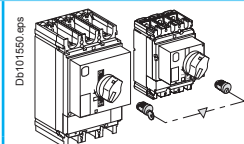
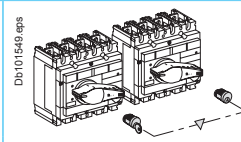
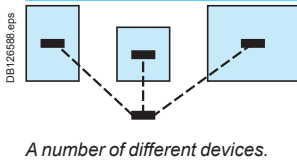
Interlocking via toggles



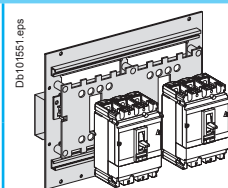
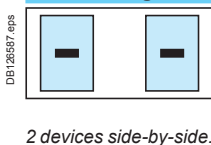
Interlocking via rotary handles



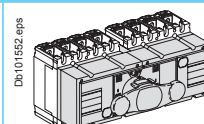
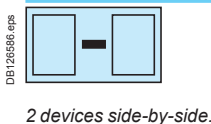
Interlocking via keylocks with captive keys



Interlocking on a base plate



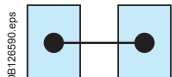
Complete source-changeover assemblies



| Range | Compact | Masterpact | |
|----------------|---|---|--|
| Models | NS630b to NS1600 | NT06 to NT16 | NW08 to NW63 |
| Rating (A) | 630 to 1600 | 630 to 1600 | 800 to 6300 |
| Type of device | N/H/L circuit breakers NA switch-disconnectors | H1/L1 circuit breakers HA switch-disconnectors | N1/H1/H2/H3/L1 circuit breakers NA/HA/HF switch-disconnectors |

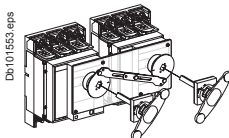
Manual source-changeover systems

Interlocking via extended rotary handles



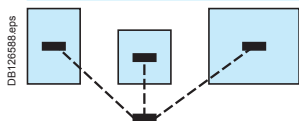
DB120590.eps

2 devices side-by-side.



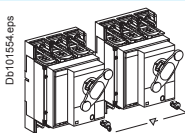
Dd101553.eps

Interlocking via keylocks with captive keys

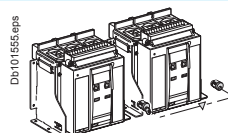


DB120598.eps

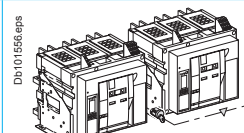
A number of different devices.



Dd101554.eps

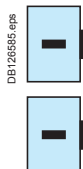


Dd101555.eps



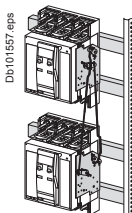
Dd101556.eps

Mechanical interlocking using connecting rods



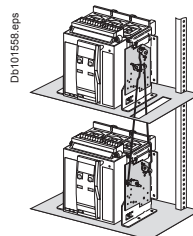
DB120585.eps

2 devices one above the other.

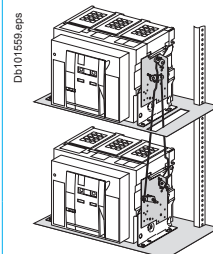


Dd101557.eps

(1)

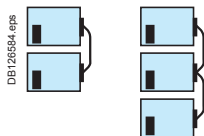


Dd101558.eps



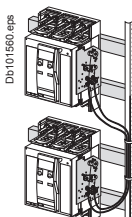
Dd101559.eps

Mechanical interlocking using cables



DB120584.eps

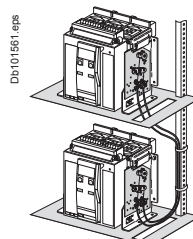
2 or 3 devices one above the other.



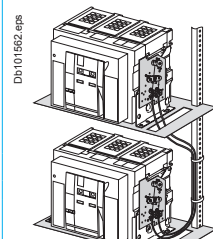
Dd101560.eps

(1)

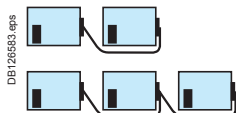
(2)



Dd101561.eps



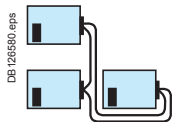
Dd101562.eps



DB120583.eps

2 or 3 devices side-by-side.

For this case and other cases, please consult us



DB120580.eps

(1) Implemented with NS630b to NS1600 electrically-operated devices only.

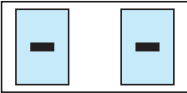
(2) For source-changeover systems using cables, always respect the installation conditions specified on catalogue LVPED211022EN.

| Range | Compact | |
|----------------|---|---|
| Models | NSX100 to NSX630 | NS630b to NS1600 |
| Rating (A) | 100 to 630 | 630 to 1600 |
| Type of device | N/H/L circuit breakers NA switch-disconnectors | N/H/L circuit breakers NA switch-disconnectors |

Remote-operated source-changeover system

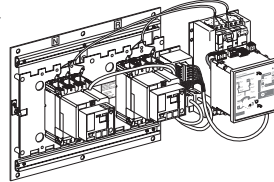
Mechanical interlocking on base plate + electrical interlocking

DB126587.eps



2 electrically-operated devices side-by-side combined with an electrical interlocking system.

DB101653.eps



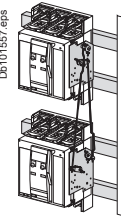
Mechanical interlocking using connecting rods + electrical interlocking

DB126585.eps



2 electrically-operated devices one above the other combined with an electrical interlocking system.

DB101657.eps



Mechanical interlocking using cables + electrical interlocking

DB126581.eps



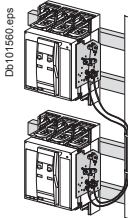
2 electrically-operated devices one above the other combined with an electrical interlocking system.

DB126582.eps



2 electrically-operated devices side-by-side combined with an electrical interlocking system.

DB101660.eps



(2)

Automatic source-changeover systems

Remote-operated source-changeover system combined with an automatic-control system

DB126581.eps



The automatic controller operates the devices depending on external parameters.

DB126582.eps

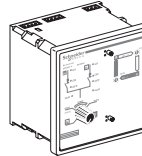


BA: Simple controller that manages the changeover function.

UA: Controller that also manages engine generator sets.

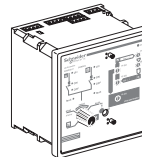
UA150: UA controller with a communication option.

DB125972.eps



BA controller

DB125963.eps



UA and UA150 controller

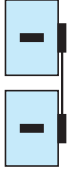
(2) For source-changeover systems using cables, always respect the installation conditions specified on catalogue LVPED211022EN.

| Range | Masterpact | |
|----------------|---|--|
| Models | NT06 to NT16 | NW08 to NW63 |
| Rating (A) | 630 to 1600 | 800 to 6300 |
| Type of device | H1/L1 circuit breakers HA switch-disconnectors | N1/H1/H2/H3/L1 circuit breakers NA/HA/HF switch-disconnectors |

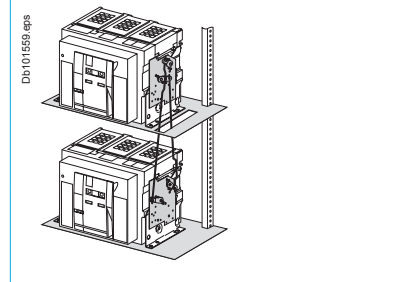
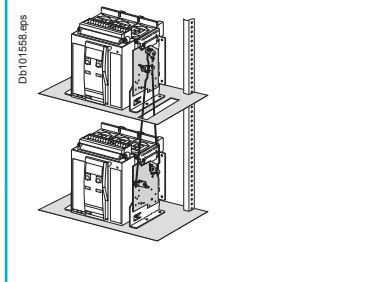
Remote-operated source-changeover system

Mechanical interlocking using connecting rods + electrical interlocking

DB126655.eps

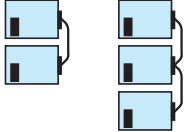


2 electrically-operated devices side-by-side combined with an electrical interlocking system.



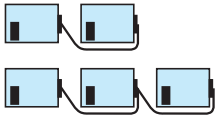
Mechanical interlocking using cables + electrical interlocking

DB126584.eps

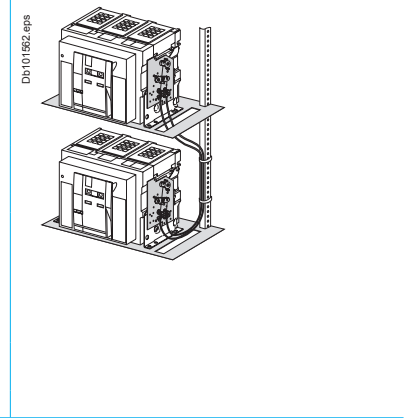
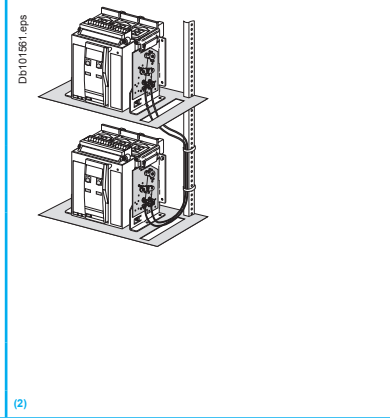


2 or 3 electrically-operated devices one above the other combined with an electrical interlocking system ⁽¹⁾.

DB126583.eps




2 or 3 electrically-operated devices side-by-side combined with an electrical interlocking system ⁽¹⁾.



Automatic source-changeover systems

Remote-operated source-changeover system combined with an automatic-control system

DB126581.eps




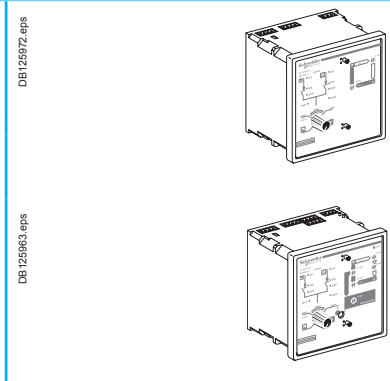
The automatic controller operates the devices depending on external parameters.

BA: Simple controller that manages the changeover function.

UA: Controller that also manages engine generator sets.

UA150: UA controller with a communication option.

DB126582.eps

BA controller

UA and UA150 controller

(1) Three devices with Masterpact NW only.

(2) For source-changeover systems using cables, always respect the installation conditions specified on catalogue LVPED211022EN. For other cases, please consult us.

Switch-disconnector fuses selection

Fupact INF.32 to INF.160

059000a_24_eps



INF32.

PB107591_60_eps



INF63.

PB107593_60_eps



INF160.

Switch-disconnector fuses

| | |
|-------------------------------------|---|
| Number of poles / type of fuse-link | 3 poles / 3 fuse-links |
| | 4 poles / 3 fuse-links + switched neutral |
| | 4 poles / 4 fuse-links |

Electrical characteristics as defined by IEC 60947-1 / IEC 60947-3 and EN 60947-1 / EN 60947-3

| | | | |
|---|--|--------------------------|------------------------------------|
| Conventional thermal current (A) | In free air | I_{th} | at 40 °C |
| | Maximum fuse power dissipation (W) | | |
| | In enclosure | I_{the} | at 40 °C |
| | | | Maximum fuse power dissipation (W) |
| Rated insulation voltage (V) | U_i | AC 50/60 Hz / DC | |
| Rated impulse withstand voltage (kV) | U_{imp} | | |
| Rated operational voltage (V) | U_e | AC 50/60 Hz | |
| | | DC | |
| Rated operational voltage AC20 and DC20 (V) | U_e | | |
| Rated operational current (A) | I_e | AC 50/60 Hz | |
| | | 220/240 V | |
| | | 380/415 V | |
| | | 440/480 V ⁽¹⁾ | |
| | | 500/525 V | |
| | | 660/690 V | |
| | | DC/poles in series | |
| 250 V/nbr of poles | | | |
| 440 V/nbr of poles | | | |
| 750 V/nbr of poles | | | |
| Rated operational power (kW) ⁽³⁾ (motor power given for direct on-line starting) | AC | 220/240 V | |
| | | 380/400 V | |
| | | 415 V | |
| | | 500/525 V | |
| | | 660/690 V | |
| | | | |
| Rated duties | Uninterrupted duty | | |
| | Intermittent duty | | |
| Rated short-circuit making capacity (kA peak) Switch-disconnector without fuse (refer to single-phase fuse limitation curves) | I_{cm} | 415 V | |
| | | 500 V | |
| | | 690 V | |
| Rated short-circuit breaking capacity (kA rms) / Rated short-circuit making capacity (kA peak) ⁽⁴⁾ | I_{cn} / I_{cm} | 415 V (BS) | |
| | | 500 V (DIN) | |
| | | 690 V (DIN) | |
| Rated short-time withstand current (A rms) | I_{cw} | 1 s | |
| | | 3 s | |
| | | 20 s | |
| | | 30 s | |
| | | | |
| Endurance (category A) (CO cycles) | Mechanical | | |
| | Electrical AC | AC22A 500 V | |
| | | AC22A 690 V | |
| | | AC23A 500 V | |
| | | AC23A 690 V | |

Suitability for isolation

Positive contact indication

Pollution degree

Control

Direct front rotary handle

Extended front rotary handle

Extended lateral rotary handle

Locking by padlocks

Operating torque (typical for 3-pole switch-disconnector fuses) (Nm)

Indication auxiliaries

Auxiliary contacts

Blown-fuse indicator

Fuse monitor

Auxiliary contact test position

⁽¹⁾ Suitable for 480 V NEMA.

⁽²⁾ AC23B.

⁽³⁾ Some fuse-links limit these values. Motor starting current must be considered separately.

⁽⁴⁾ Switch-disconnector combined with fuses.

Switch-disconnector fuses selection

Fupact INF.32 to INF.160

| INF.32 | | INF.40 | | INF.63 | | INF.100 | | INF.125 | | INF.160 | |
|----------------|--------------|----------------|--------------|----------------|-------------------|----------------|--------------------|----------------|--------------------|----------------|--------------------|
| NFC-BS | | DIN | | NFC-DIN-BS | | BS | | NFC | | DIN-BS | |
| NFC-BS | | DIN | | NFC-DIN-BS | | BS | | NFC | | DIN-BS | |
| NFC | | DIN | | NFC-DIN | | - | | NFC | | DIN | |
| 32 | | 40 | | 63 | | 100 | | 125 | | 160 | |
| 3.5 | | 7.5 | | 7.5 | | 12 | | 12 | | 12 | |
| 32 | | 40 | | 63 | | 100 | | 125 | | 160 | 135 |
| 3.5 | | 7.5 | | 7.5 | | 12 | | 12 | | 10 | 12 |
| 1000 | | 1000 | | 1000 | | 1000 | | 1000 | | 1000 | |
| 12 | | 12 | | 12 | | 12 | | 12 | | 12 | |
| 690 | | 690 | | 690 | | 690 | | 690 | | 690 | |
| 250 | | 440 | | 440 | | 440 | | 440 | | 440 | |
| 690 | | 1000 | | 1000 | | 1000 | | 1000 | | 1000 | |
| AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A |
| 32 | 32 | 40 | 40 | 63 | 63 | 100 | 100 | 125 | 125 | 160 | 160 |
| 32 | 32 | 40 | 40 | 63 | 63 | 100 | 100 | 125 | 125 | 160 | 160 |
| 32 | 32 | 40 | 40 | 63 | 63 | 100 | 100 | 125 | 125 | 160 | 160 |
| 32 | 32 | 40 | 40 | 63 | 63 | 100 | 100 | 125 | 125 | 160 | 160 |
| 32 | 32 | 40 | 40 | 63 | 63 ⁽²⁾ | 100 | 100 ⁽²⁾ | 125 | 125 ⁽²⁾ | 160 | 160 ⁽²⁾ |
| DC22A | DC23A | DC21B | DC23B | DC21B | DC23B | DC21B | DC23B | DC21B | DC23B | DC21B | DC23B |
| 32/2 | 32/2 | 40/2 | 40/2 | 63/2 | 63/2 | 100/2 | 100/2 | 125/2 | 125/2 | 125/2 | 125/2 |
| 32/4 | 32/4 | 40/4 | - | 50/4 | - | 100/4 | - | 125/2 | - | 125/2 | - |
| - | - | - | - | - | - | - | - | - | - | - | - |
| 8 | | 18.5 | | 18.5 | | 30 | | 37 | | 45 | |
| 14 | | 30 | | 30 | | 55 | | 55 | | 75 | |
| 15 | | 30 | | 30 | | 55 | | 55 | | 75 | |
| 18 | | 37 | | 37 | | 55 | | 55 | | 90 | |
| 25 | | 55 | | 55 | | 90 | | 90 | | 132 | |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | |
| class 120-60 % | | class 120-60 % | | class 120-60 % | | class 120-60 % | | class 120-60 % | | class 120-60 % | |
| 9 | | 17 | | 17 | | 23 | | 29 | | 29 | |
| 7.5 | | 17 | | 17 | | 22 | | 22 | | 22 | |
| 6 | | 13 | | 13 | | 16 | | 16 | | 16 | |
| 80/176 | | 80/176 | | 80/176 | | 80/176 | | 80/176 | | 80/176 | |
| 100/220 | | 100/220 | | 100/220 | | 100/220 | | 100/220 | | 100/220 | |
| 50/105 | | 50/105 | | 50/105 | | 50/105 | | 50/105 | | 50/105 | |
| 1000 | | 2500 | | 2500 | | 5000 | | 5000 | | 5000 | |
| 570 | | 1440 | | 1440 | | 2900 | | 2900 | | 2900 | |
| 220 | | 560 | | 560 | | 1150 | | 1150 | | 1150 | |
| 180 | | 460 | | 460 | | 950 | | 950 | | 950 | |
| 10000 | | 10000 | | 10000 | | 10000 | | 10000 | | 10000 | |
| 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | |
| 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | |
| 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | |
| ■ | | yes | | yes | | yes | | yes | | yes | |
| 3 | | 3 | | 3 | | 3 | | 3 | | 3 | |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | |
| 3 | | 5 | | 5 | | 7 | | 7 | | 7 | |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | |

Switch-disconnector fuses selection

Fupact INF.32 to INF.160

055000a_24_eps



INF32.

PB107591_00_eps



INF63

PB107593_00_eps



INF160

Switch-disconnector fuses

Type of fuse-link

| | |
|--|-----------|
| NFC | 10 x 38 |
| | 14 x 51 |
| | 22 x 58 |
| DIN (NH) | NH000 |
| | NH00 |
| BS (fixing centres in mm) ⁽²⁾ | A1 (44.5) |
| | F1 |
| | A2 (73.0) |
| | A3 (73.0) |
| | A4 (93.7) |

Installation and connection

| |
|---------------------------------------|
| Fixed front connection |
| Terminal tightening torque (Nm) |
| Fuse-link bolt tightening torque (Nm) |

Installation and connection accessories

| |
|-----------------------|
| Bare cable connectors |
| Terminals |
| Neutral link |
| Terminal shields |

Dimensions and weight

| | |
|--|----|
| Overall dimensions H x W x D (mm) | 3P |
| Front DIN/NFC version | 4P |
| Overall dimensions H x W x D (mm) | 3P |
| Lateral DIN/NFC version | 4P |
| Overall dimensions H x W x D (mm) | 3P |
| Front BS version | 4P |
| Overall dimensions H x W x D (mm) | 3P |
| Lateral BS version | 4P |
| Approximate weight without fuse and without accessory (kg) | 3P |
| | 4P |

Enclosure dimensions for lthe

H x W x D (mm)

Temperature derating⁽³⁾⁽⁴⁾

| | | |
|--|----------|-------|
| "Vertical mounting" fuse-links in vertical position | lth (A) | 40 °C |
| | | 45 °C |
| | | 50 °C |
| | | 55 °C |
| | | 60 °C |
| | | 65 °C |
| | | 70 °C |
| "Horizontal mounting" fuse-links in horizontal position | lthe (A) | 35 °C |
| | | 40 °C |
| | | 45 °C |
| | | 50 °C |
| | | 55 °C |
| | | 60 °C |
| | | 65 °C |
| | | 70 °C |

(1) Maximum fuse body diameter: Ø32 mm.

(2) A: fuse-link with centre bolted tags.

(3) Derating data is based on:

- the maximum rating for fuse-links intended for the device,
- maximum power dissipation.

(4) For installation on a ceiling, derate an additional 10 %.

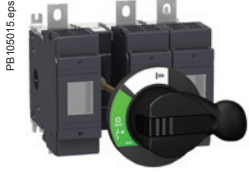
Switch-disconnector fuses selection

Fupact INF.32 to INF.160

| INF.32 | INF.40 | INF.63 | INF.100 | INF.125 | INF.160 |
|-----------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| ■ | - | - | - | - | - |
| ■ | - | ■ (50 A) | - | - | - |
| - | - | - | - | ■ | ■ (63 A) |
| - | ■ | ■ | - | - | ■ |
| - | - | ■ | - | - | ■ |
| ■ | - | - | - | - | - |
| ■ | - | - | - | - | - |
| ■ | - | ■ | ■ | - | ■ |
| - | - | ■ | ■ | - | ■ |
| - | - | - | ■ ⁽¹⁾ | - | ■ ⁽¹⁾ |
| ■ | ■ | ■ | ■ | ■ | ■ |
| 2 | 4 | 4 | M8 x 25 | M8 x 25 | M8 x 25 |
| 2 | 3.5 | 3.5 | M5: 3.5 M8: 5 | M5: 3.5 M8: 5 | M5: 3.5 M8: 5 |
| ■ (standard) | ■ (standard) | ■ (standard) | ■ (optional) | ■ (optional) | ■ (optional) |
| - | - | - | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ |
| - | ■ | ■ | ■ | ■ | ■ |
| 97 x 106 x 105 | 100 x 114.5 x 120.5 | 100 x 114.5 x 120.5 | 140 x 148 x 130 | 140 x 148 x 130 | 140 x 148 x 130 |
| 97 x 142 x 105 | 100 x 138 x 120.5 | 100 x 138 x 120.5 | 140 x 183 x 130 | 140 x 183 x 130 | 140 x 183 x 130 |
| 97 x 129 x 105 | 100 x 146.5 x 132.5 | 100 x 146.5 x 132.5 | 140 x 181.5 x 142 | 140 x 181.5 x 142 | 140 x 181.5 x 142 |
| 97 x 165 x 105 | 100 x 170 x 132.5 | 100 x 170 x 132.5 | 140 x 216.5 x 142 | 140 x 216.5 x 142 | 140 x 216.5 x 142 |
| 97 x 106 x 105 | 100 x 114.5 x 105.5 | 100 x 114.5 x 105.5 | 140 x 148 x 114.5 | 140 x 148 x 114.5 | 140 x 148 x 114.5 |
| 97 x 142 x 105 | 100 x 138 x 105.5 | 100 x 138 x 105.5 | 140 x 183 x 114.5 | 140 x 183 x 114.5 | 140 x 183 x 114.5 |
| 97 x 129 x 105 | 100 x 146.5 x 120.5 | 100 x 146.5 x 120.5 | 140 x 181.5 x 126.5 | 140 x 181.5 x 126.5 | 140 x 181.5 x 126.5 |
| 97 x 165 x 105 | 100 x 170 x 120.5 | 100 x 170 x 120.5 | 140 x 216.5 x 126.5 | 140 x 216.5 x 126.5 | 140 x 216.5 x 126.5 |
| 0.7 | 1.1 | 1.1 | 1.4 | 1.4 | 1.4 |
| 0.9 | 1.3 | 1.3 | 1.8 | 1.8 | 1.8 |
| 300 x 350 x 200 | | | | | |
| NFC-BS | DIN | NFC-DIN-BS | BS | NFC | DIN-BS |
| 32 | 63 | 63 | 100 | 125 | 160 |
| 30.4 | 58 | 58 | 93 | 116 | 148 |
| 28.8 | 56 | 56 | 89 | 111 | 142 |
| 27.2 | 53 | 53 | 85 | 106 | 135 |
| 25.6 | 51 | 51 | 80 | 100 | 128 |
| 25 | 48 | 48 | 76 | 95 | 121 |
| 24.4 | 45 | 45 | 71 | 88 | 113 |
| 31 | 63 | 63 | 100 | 125 | 160 |
| 29.5 | 61 | 61 | 96 | 120 | 154 |
| 28 | 58 | 58 | 93 | 116 | 148 |
| 26.5 | 56 | 56 | 89 | 111 | 142 |
| 25 | 53 | 53 | 85 | 106 | 135 |
| 23.5 | 51 | 51 | 80 | 100 | 128 |
| 22 | 48 | 48 | 76 | 94 | 121 |
| 20.5 | 45 | 45 | 71 | 88 | 113 |

Switch-disconnector fuses selection

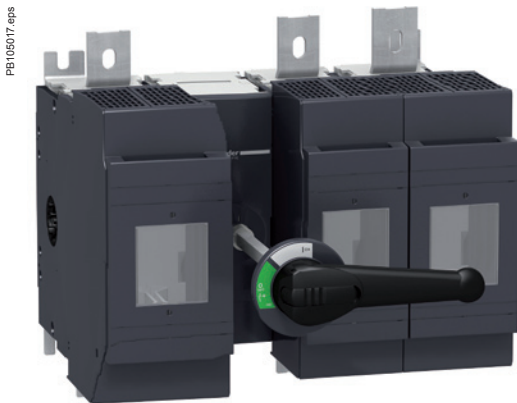
Fupact INF.200 to INF.800



INF200.



INF400.



INF800.

Switch-disconnector fuses

| | |
|-------------------------------------|---|
| Number of poles / type of fuse-link | 3 poles / 3 fuse-links |
| | 4 poles / 3 fuse-links + switched neutral |
| | 4 poles / 4 fuse-links |

Electrical characteristics as defined by IEC 60947-1 / IEC 60947-3 and EN 60947-1 / EN 60947-3

| | | | |
|--|--|------------------------|------------------------------------|
| Conventional thermal current (A) | In free air | I_{th} | at 40 °C |
| | | | Maximum fuse power dissipation (W) |
| | In enclosure | I_{the} | at 40 °C |
| | | | Maximum fuse power dissipation (W) |
| Rated insulation voltage (V) | | U_i | AC 50/60 Hz / DC |
| Rated impulse withstand voltage (kV) | | U_{imp} | |
| Rated operational voltage (V) | | U_e | AC 50/60 Hz |
| | | | DC |
| Rated operational voltage AC20 and DC20 (V) | | U_e | |
| Rated operational current (A) | | I_e | AC 50/60 Hz |
| | | | 220/240 V |
| | | | 380/415 V |
| | | | 440/480 V ⁽¹⁾ |
| | | | 500/525 V |
| | | | 660/690 V |
| Rated operational power (kW) ⁽²⁾ (motor power given for direct on-line starting) | AC | | 220/240 V |
| | | | 380/400 V |
| | | | 415 V |
| | | | 500/525 V |
| | | | 660/690 V |
| Rated duties | | | Uninterrupted duty |
| | | | Intermittent duty |
| Rated short-circuit making capacity (kA peak) Switch-disconnector without fuse (refer to single-phase fuse limitation curves) | I_{cm} | | 415 V |
| | | | 500 V |
| | | | 690 V |
| Rated short-circuit breaking capacity (kA rms) / Rated short-circuit making capacity (kA peak) ⁽³⁾ | I_{cn} / I_{cm} | | 415 V (BS) |
| | | | 500 V (DIN) |
| | | | 690 V (DIN) |
| Rated short-time withstand current (A rms) | I_{cw} | | 1 s |
| | | | 3 s |
| | | | 20 s |
| | | | 30 s |
| | | | |
| Endurance (category A) (CO cycles) | | | Mechanical |
| | | | Electrical AC |
| | | | AC22A 500 V |
| | | | AC22A 690 V |
| | | | AC23A 500 V |
| | | AC23A 690 V | |

Suitability for isolation

Positive contact indication

Pollution degree

Control

Direct front rotary handle

Extended front rotary handle

Extended lateral rotary handle

Locking by padlocks

Operating torque (typical for 3-pole switch-disconnector fuses) (Nm)

Indication auxiliaries

Auxiliary contacts

Blown-fuse indicator

Fuse monitor

Auxiliary contact test position

⁽¹⁾ Suitable for 480 V NEMA.

⁽²⁾ Some fuse-links limit these values.

Motor starting current must be considered separately.

⁽³⁾ Switch-disconnector combined with fuses.

⁽⁴⁾ Category B.

⁽⁵⁾ Only for DIN fuse-links.

Switch-disconnector fuses selection

Fupact INF.200 to INF.800

| INF.200 | | INF.250 | | INF.400 | | INF.630 | | INF.800 | |
|------------------|--------------|------------------|--------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| DIN-BS | | DIN-BS | | DIN-BS | | DIN-BS | | DIN-BS | |
| DIN | | DIN | | DIN | | DIN | | DIN | |
| 200 | | 250 | | 400 | | 630 | | 800 | |
| 17 | | 23 | | 45 | | 60 | | 65 | |
| 200 | 180 | 250 | 230 | 400 | 360 | 570 | | 720 | |
| 15 | 18 | 20 | 27 | 30 | 37 | 50 | | 55 | |
| 1000 | | 1000 | | 1000 | | 1000 | | 1000 | |
| 12 | | 12 | | 12 | | 12 | | 12 | |
| 690 | | 690 | | 690 | | 690 | | 690 | |
| 750 | | 750 | | 750 | | 750 | | 750 | |
| 1000 | | 1000 | | 1000 | | 1000 | | 1000 | |
| AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A | AC22A | AC23A |
| 200 | 200 | 250 | 250 | 400 | 400 | 630 | 630 | 800 | 800 |
| 200 | 200 | 250 | 250 | 400 | 400 | 630 | 630 | 800 | 800 |
| 200 | 200 | 250 | 250 | 400 | 400 | 630 | 630 | 800 | 800 |
| 200 | 200 | 250 | 250 | 400 | 400 | 630 | 630 | 800 | 800 |
| 200 | 200 | 250 | 250 | 400 | 400 | 630 | 630 | 800 | 800 |
| DC22A | DC23A | DC22A | DC23A | DC22A | DC23A | DC22A | DC23A | DC22A | DC23A |
| 200/1 | 200/1 | 250/1 | 250/1 | 400/2 | 400/2 | 630/1 | 630/1 | 800/1 | 800/1 |
| 200/2 | 200/2 | 250/2 | 250/2 | 400/3 | 400/3 | 630/2 ⁽⁴⁾ | 630/2 ⁽⁴⁾ | 800/2 ⁽⁴⁾ | 800/2 ⁽⁴⁾ |
| 200/3 | 200/3 | 250/3 | 250/3 | 400/4 ⁽⁴⁾ | 400/4 ⁽⁴⁾ | 630/3 ⁽⁴⁾ | 630/3 ⁽⁴⁾ | 720/3 ⁽⁴⁾ | 720/3 ⁽⁴⁾ |
| 180/4 | 180/4 | 230/4 | 230/4 | 400/4 ⁽⁴⁾ | 400/4 ⁽⁴⁾ | 630/4 ⁽⁴⁾ | 630/4 ⁽⁴⁾ | 720/4 ⁽⁴⁾ | 720/4 ⁽⁴⁾ |
| 60 | | 75 | | 132 | | 200 | | 250 | |
| 110 | | 140 | | 220 | | 355 | | 450 | |
| 110 | | 145 | | 230 | | 355 | | 450 | |
| 132 | | 170 | | 280 | | 450 | | 560 | |
| 200 | | 250 | | 400 | | 630 | | 710 | |
| ■ | | ■ | | ■ | | ■ | | ■ | |
| class 120-60 % | | class 120-60 % | | class 120-60 % | | class 120-60 % | | class 120-60 % | |
| 35 | | 40.5 | | 59 | | 77 | | 77 | |
| 37.5 | | 37.5 | | 63.5 | | 83 | | 83 | |
| 28 | | 28 | | 48 | | 55 | | 55 | |
| 80/176 | | 80/176 | | 80/176 | | 80/176 | | 80/176 | |
| 100/220 | | 100/220 | | 100/220 | | 100/220 | | 100/220 | |
| 80/176 | | 80/176 | | 80/176 | | 80/176 | | 80/176 | |
| 8000 | | 8000 | | 14000 | | 18000 | | 18000 | |
| 4620 | | 4620 | | 8080 | | 10400 | | 10400 | |
| 1790 | | 1790 | | 3130 | | 4000 | | 4000 | |
| 1460 | | 1460 | | 2550 | | 3300 | | 3300 | |
| 10000 | | 10000 | | 8000 | | 5000 | | 5000 | |
| 1000 | | 1000 | | 1000 | | 1000 | | 500 | |
| 1000 | | 1000 | | 1000 | | 1000 | | 500 | |
| 1000 | | 1000 | | 1000 | | 1000 | | 500 | |
| 1000 | | 1000 | | 1000 | | 1000 | | 500 | |
| ■ | | ■ | | ■ | | ■ | | ■ | |
| ■ | | ■ | | ■ | | ■ | | ■ | |
| 3 | | 3 | | 3 | | 3 | | 3 | |
| ■ | | ■ | | ■ | | ■ | | ■ | |
| ■ | | ■ | | ■ | | ■ | | ■ | |
| - | | - | | - | | - | | - | |
| ■ | | ■ | | ■ | | ■ | | ■ | |
| 7 | | 7 | | 19 | | 38 | | 38 | |
| ■ | | ■ | | ■ | | ■ | | ■ | |
| ■ ⁽⁵⁾ | | ■ ⁽⁵⁾ | | ■ ⁽⁵⁾ | | ■ ⁽⁵⁾ | | ■ ⁽⁵⁾ | |
| ■ | | ■ | | ■ | | ■ | | ■ | |
| ■ | | ■ | | ■ | | ■ | | ■ | |

Switch-disconnector fuses selection

Fupact INF.200 to INF.800



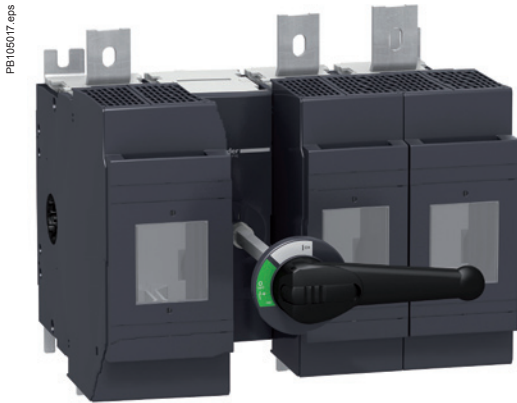
PE105015.eps

INF200.



PE105016.eps

INF400.



PE105017.eps

INF800.

Switch-disconnector fuses

Type of fuse-link

| | |
|--|--------------|
| DIN (NH) | NH (0) |
| | NH (0, 1) |
| | NH (0, 1, 2) |
| | NH (3) |
| BS (fixing centres in mm) ⁽¹⁾ | B1 (111) |
| | B2 (111) |
| | B3 (111) |
| | B4 (111) |
| | C1 (133) |
| | C2 (133) |
| | C3 (133) |

Installation and connection

| |
|---------------------------------------|
| Fixed front connection |
| Terminal tightening torque (Nm) |
| Fuse-link bolt tightening torque (Nm) |

Installation and connection accessories

| |
|-----------------------|
| Bare cable connectors |
| Terminals |
| Neutral link |
| Terminal shields |

Dimensions and weight

| | |
|---------------------------------------|----------|
| Overall dimensions H x W x D (mm) | 3P (DIN) |
| | 3P (BS) |
| | 4P (DIN) |
| | 4P (BS) |
| Approximate weight without fuses (kg) | 3P |
| | 4P |

Enclosure dimensions for lthe

H x W x D (mm)

Temperature derating⁽²⁾⁽³⁾

| "Vertical mounting" fuse-links in vertical position | lth (A) | 40 °C |
|--|---------|-------|
| | | 45 °C |
| "Horizontal mounting" fuse-links in horizontal position | lth (A) | 50 °C |
| | | 55 °C |
| | | 60 °C |
| | | 65 °C |
| | | 60 °C |
| | | 70 °C |

(1) B: fuse-link with offset bolted tags.

(2) Derating data is based on:
- the maximum rating for fuse-links intended for the device,
- maximum power dissipation.

(3) For installation on a ceiling, derate an additional 10 %.

(4) Maximum fuse body diameter: Ø52 mm.

(5) Maximum fuse body diameter: Ø62 mm.

Switch-disconnector fuses selection

Fupact INF.200 to INF.800

| | INF.200 | INF.250 | INF.400 | INF.630 | INF.800 |
|-------------------|------------------|------------------|-------------------|-------------------|--------------|
| ■ | - | - | - | - | - |
| - | ■ | - | - | - | - |
| - | - | - | ■ | - | - |
| - | - | - | - | ■ | ■ |
| ■ | ■ | ■ | ■ | - | - |
| ■ | ■ | ■ | ■ | - | - |
| - | ■ ⁽⁴⁾ | ■ | ■ | - | - |
| - | - | ■ ⁽⁵⁾ | - | - | - |
| - | - | - | - | ■ | ■ |
| - | - | - | - | ■ | ■ |
| - | - | - | - | - | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ |
| 15-22 | 30-44 | 30-44 | 50-75 | 50-75 | |
| 4 | 5 | 20 | M10 : 30 M12 : 40 | M10 : 30 M12 : 40 | |
| ■ (optional) | ■ (optional) | ■ (optional) | ■ (optional) | ■ (optional) | ■ (optional) |
| ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ |
| 199 x 175.5 x 149 | 193 x 206 x 154 | 230 x 254 x 193 | 306 x 341 x 233 | 306 x 341 x 233 | |
| 199 x 175.5 x 130 | | 230 x 254 x 176 | | | |
| 199 x 219 x 149 | 193 x 260 x 154 | 230 x 318 x 193 | 306 x 429 x 233 | 306 x 429 x 233 | |
| 199 x 219 x 130 | | 230 x 318 x 176 | | | |
| 2.6 | 3.1 | 5.7 | 11.5 | 11.5 | |
| 3.6 | 4.1 | 7.7 | 14.4 | 14.4 | |
| 600 x 350 x 300 | 800 x 400 x 330 | 610 x 508 x 254 | 800 x 1000 x 330 | 800 x 1000 x 330 | |
| DIN-BS | DIN-BS | DIN-BS | DIN-BS | DIN-BS | |
| 200 | 250 | 400 | 630 | 800 | |
| 185 | 232 | 370 | 583 | 741 | |
| 177 | 222 | 355 | 558 | 709 | |
| 169 | 211 | 338 | 532 | 676 | |
| 160 | 200 | 321 | 505 | 641 | |
| 151 | 189 | 302 | 476 | 605 | |
| 141 | 177 | 283 | 446 | 566 | |
| 200 | 250 | 400 | 570 | 720 | |
| 193 | 241 | 385 | 549 | 694 | |
| 185 | 231 | 370 | 528 | 667 | |
| 177 | 222 | 355 | 505 | 638 | |
| 169 | 211 | 338 | 482 | 609 | |
| 160 | 200 | 321 | 457 | 577 | |
| 151 | 189 | 302 | 431 | 544 | |
| 141 | 177 | 283 | 403 | 509 | |

Fuse-switch disconnectors selection

Fupact ISFT100N to ISFT630

PB104311.eps



ISFT100N.

62159A_SE.eps



ISFT100.

62194A_SE.eps



ISFT160.

62165A_SE.eps



ISFT630.

Fuse-switch disconnectors

Number of poles / type of fuse-link IEC60 269-2-1 Section 1
Electrical characteristics as defined by IEC 60947-1 / IEC 60947-3 and EN 60947-1 / EN 60947-3

| | | | |
|--|--|------------------------|------------------------------------|
| Conventional thermal current (A) | In free air | I_{th} | at 40 °C |
| | Maximum fuse power dissipation (W) | | |
| | In enclosure | I_{the} | at 40 °C |
| | | | Maximum fuse power dissipation (W) |
| Rated insulation voltage (V) | U_i AC 50/60 Hz / DC | | |
| Rated impulse withstand voltage (kV) | U_{imp} | | |
| Rated operational voltage (V) | U_e AC 50/60 Hz | | |
| | DC | | |
| Rated operational voltage AC20 and DC20 (V) | U_e | | |
| Rated operational current (A) | I_e AC 50/60 Hz | | |
| | 220/240 V | | |
| | 380/415 V | | |
| | 440/480 V ⁽²⁾ | | |
| | 500 V | | |
| | 660/690 V | | |
| | | | DC/poles in series |
| | | | 125 V /nbr of poles |
| | | | 220 V /nbr of poles |
| | | | 440 V /nbr of poles |
| Rated duties | Uninterrupted duty | | |
| Rated short-circuit breaking capacity (kA rms)/Rated short-circuit making capacity (kA peak)/Fuse-link I _n (A) ⁽³⁾ | I_{cn}/I_{cm}/I_n | | 415 V |
| | | | 500 V |
| | | | 690 V |
| Endurance (category B) (CO cycles) | Mechanical | | |
| | Electrical AC | | |
| | AC22B 415 V | | |
| | | | AC23B 415 V |
| | | | AC21B 690 V |

Suitability for isolation
 Positive contact indication
 Pollution degree

Control

Direct front rotary handle (operator-dependent opening and closing)
 Locking Padlocks
 Lead seal

Indication auxiliaries

Auxiliary contacts
 Fuse monitor
 Blown-fuse indicator

Installation and connection accessories

Possible mounting positions Horizontal
 Vertical
 Bare cable connectors
 Other connectors For bare Cu/Al cables
 For flexible bars

Distribution connectors
 Lugs for copper cables
 Insulated comb busbar covers
 Insulated comb covers
 Incoming connector for comb busbars
 Terminal shields

Dimensions and weight

Overall dimensions H x W x D (mm) 3P
 Approximate weight without fuse-links (kg) 3P

⁽¹⁾ With 95 mm² connector.
⁽²⁾ Suitable for 480 V NEMA.
⁽³⁾ Fuse-switch disconnectors with fuse-links.
⁽⁴⁾ AC23B: 100 A.

Fuse-switch disconnectors selection

Fupact ISFT100N to ISFT630

| ISFT100N | | ISFT100 | | ISFT160 | | ISFT250 | | ISFT400 | | ISFT630 | |
|----------------|--------------------|------------------------|-------|----------------|-------|-----------------|-------|-----------------|-------|-----------------|-------|
| 3P/DIN (NH) | | 3P/DIN (NH) | | 3P/DIN (NH) | | 3P/DIN (NH) | | 3P/DIN (NH) | | 3P/DIN (NH) | |
| 100 | | 100/160 ⁽¹⁾ | | 160 | | 250 | | 400 | | 630 | |
| 7.5 | | 9 | | 12 | | 23 | | 34 | | 48 | |
| 100 | | 100/160 ⁽¹⁾ | | 160 | | 250 | | 400 | | 630 | |
| 7.5 | | 9 | | 12 | | 23 | | 34 | | 48 | |
| 800 | | 690 | | 800 | | 800 | | 800 | | 800 | |
| 8 | | 6 | | 8 | | 8 | | 8 | | 8 | |
| 690 | | 690 | | 690 | | 690 | | 690 | | 690 | |
| 440 | | 440 | | 440 | | 440 | | 440 | | 440 | |
| 690 | | 690 | | 800 | | 800 | | 800 | | 800 | |
| AC21B | AC22B | AC21B | AC22B | AC21B | AC22B | AC21B | AC22B | AC21B | AC22B | AC21B | AC22B |
| 100 | 100 ⁽⁴⁾ | 160 | 160 | 160 | 160 | 250 | 250 | 400 | 400 | 630 | 630 |
| 100 | 100 ⁽⁴⁾ | 160 | 160 | 160 | 160 | 250 | 250 | 400 | 400 | 630 | 630 |
| 100 | 100 | 100 | - | 160 | - | 250 | - | 400 | - | 630 | - |
| 100 | 100 | 100 | - | 160 | - | 250 | - | 400 | - | 630 | - |
| 100 | - | 100 | - | 100 | - | 250 | - | 400 | - | 630 | - |
| DC21B | DC22B | DC21B | DC22B | DC21B | DC22B | DC21B | DC22B | DC21B | DC22B | DC21B | DC22B |
| 100/3 | 100/3 | 100/1 | - | 160/1 | - | 250/1 | - | 400/1 | - | 630/1 | - |
| 100/3 | 100/3 | 100/1 | - | 160/1 | - | 250/1 | - | 400/1 | - | 630/1 | - |
| 100/3 | 100/3 | 100/1 | - | 160/2 | - | 250/2 | - | 400/2 | - | 630/2 | - |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | |
| 80 / 176 / 100 | | 80 / 176 / 100 | | 50 / 105 / 160 | | 50 / 105 / 250 | | 50 / 105 / 400 | | 50 / 105 / 630 | |
| 50 / 105 / 100 | | 50 / 105 / 100 | | 50 / 105 / 160 | | 50 / 105 / 250 | | 50 / 105 / 400 | | 50 / 105 / 630 | |
| 50 / 105 / 100 | | 50 / 105 / 100 | | 50 / 105 / 100 | | 50 / 105 / 200 | | 50 / 105 / 315 | | 50 / 105 / 500 | |
| 2000 | | 2000 | | 1600 | | 1600 | | 1000 | | 1000 | |
| 300 | | 300 | | 200 | | 200 | | 200 | | 200 | |
| 300 | | - | | - | | - | | - | | - | |
| 300 | | 300 | | 200 | | 200 | | 200 | | 200 | |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | |
| 3 | | 3 | | 3 | | 3 | | 3 | | 3 | |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | |
| - | | - | | - | | - | | - | | - | |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | |
| ■ | | ■ | | ■ | | ■ | | ■ | | ■ | |
| - | | - | | ■ | | ■ | | ■ | | ■ | |
| - | | - | | ■ | | ■ | | ■ | | ■ | |
| - | | - | | ■ | | ■ | | ■ | | ■ | |
| - | | - | | - | | - | | - | | - | |
| - | | - | | - | | - | | - | | - | |
| - | | - | | - | | - | | - | | - | |
| - | | - | | - | | - | | - | | - | |
| - | | - | | - | | - | | - | | - | |
| - | | - | | - | | - | | - | | - | |
| - | | - | | ■ | | ■ | | ■ | | ■ | |
| 216 x 53 x 82 | | 141 x 89 x 71 | | 163 x 107 x 80 | | 246 x 186 x 110 | | 271 x 210 x 127 | | 271 x 250 x 132 | |
| 0.54 | | 0.46 | | 0.64 | | 2.06 | | 2.96 | | 4.00 | |

Fuse-switch disconnectors selection

Fupact ISFT100N to ISFT630

PB104311.eps



ISFT100N.

62183A_SE.eps



ISFT100.

62194A_SE.eps



ISFT160.

62195A_SE.eps



ISFT630.

Fuse-switch disconnectors

Type of fuse-link

- DIN NH000
- DIN NH00
- DIN NH1
- DIN NH2
- DIN NH3

Installation and connection

- Symmetrical rail
- Direct connection on backplate
- Push-on connection to 60 mm busbars
- Hook-on connection to 60 mm busbars
- Hook-on connection to 100 mm busbars
- Tightening torque (Nm)

Temperature derating (with gG fuse-link) ^{(1) (2)}

| | | |
|--|---------|-------|
| "Vertical mounting" fuse-links in vertical position | Ith (A) | 40 °C |
| | | 45 °C |
| | | 50 °C |
| | | 55 °C |
| | | 60 °C |
| | | 65 °C |
| "Horizontal mounting" fuse-links in horizontal position | Ith (A) | 70 °C |
| | | 40 °C |
| | | 45 °C |
| | | 50 °C |
| | | 55 °C |
| | | 60 °C |
| | | 65 °C |
| | | 70 °C |

(1) Derating data is based on:

- the maximum rating for fuse-links intended for the device,
- maximum power dissipation.

(2) For installation on a ceiling, derate an additional 10 %.

(3) With 100/160 A fuse-link.

Fuse-switch disconnectors selection

Fupact ISFT100N to ISFT630

| | ISFT100N | ISFT100 | ISFT160 | ISFT250 | ISFT400 | ISFT630 |
|--|-----------------------------|------------------------|---------|---------|---------|---------|
| | ■ | ■ | ■ | - | - | - |
| | - | - | ■ | - | - | - |
| | - | - | - | ■ | - | - |
| | - | - | - | - | ■ | - |
| | - | - | - | - | - | ■ |
| | ■ | ■ | - | - | - | - |
| | ■ | ■ | ■ | ■ | ■ | ■ |
| | - | - | ■ | ■ | - | - |
| | ■ | - | ■ | ■ | ■ | ■ |
| | - | - | - | ■ | ■ | ■ |
| | see catalogue LVPED208014EN | | | | | |
| | 100 | 100/160 ⁽³⁾ | 160 | 250 | 400 | 630 |
| | 95 | 95/152 | 152 | 238 | 380 | 599 |
| | 90 | 90/144 | 144 | 225 | 360 | 567 |
| | 85 | 85/136 | 136 | 213 | 340 | 536 |
| | 80 | 80/128 | 128 | 200 | 320 | 504 |
| | 75 | 75/120 | 120 | 188 | 300 | 473 |
| | 70 | 70/112 | 112 | 175 | 280 | 441 |
| | 100 | 100/160 ⁽³⁾ | 160 | 250 | 400 | 630 |
| | 95 | 95/152 | 152 | 238 | 380 | 599 |
| | 90 | 90/144 | 144 | 225 | 360 | 567 |
| | 85 | 85/136 | 136 | 213 | 340 | 536 |
| | 80 | 80/128 | 128 | 200 | 320 | 504 |
| | 75 | 75/120 | 120 | 188 | 300 | 473 |
| | 70 | 70/112 | 112 | 175 | 280 | 441 |

Fuse-switch disconnectors selection

Fupact ISFL160 to ISFL630

PB107274_17_eps



ISFL160.

PB107275_20_eps



ISFL250.

Fuse-switch disconnectors

Number of poles / type of fuse-link IEC60 269-2-1 Section 1

Electrical characteristics as defined by IEC 60947-1 / IEC 60947-3 and EN 60947-1 / EN 60947-3

| | | | |
|----------------------------------|------------------------------------|------------------------|------------------------------------|
| Conventional thermal current (A) | In free air | I_{th} | at 40 °C |
| | Maximum fuse power dissipation (W) | | |
| | In enclosure | I_{the} | at 40 °C |
| | | | Maximum fuse power dissipation (W) |

| | | |
|------------------------------|----------------------|------------------|
| Rated insulation voltage (V) | U_i | AC 50/60 Hz / DC |
|------------------------------|----------------------|------------------|

| | | |
|--------------------------------------|------------------------|--|
| Rated impulse withstand voltage (kV) | U_{imp} | |
|--------------------------------------|------------------------|--|

| | | |
|-------------------------------|----------------------|-------------|
| Rated operational voltage (V) | U_e | AC 50/60 Hz |
|-------------------------------|----------------------|-------------|

| | | |
|---|----------------------|--|
| Rated operational voltage AC20 and DC20 (V) | U_e | |
|---|----------------------|--|

| | | |
|-------------------------------|----------------------|--------------------------|
| Rated operational current (A) | I_e | AC 50/60 Hz |
| | | 220/240 V |
| | | 380/415 V |
| | | 440/480 V ⁽¹⁾ |
| | | 500 V |

| | |
|--------------------|--|
| DC/poles in series | |
|--------------------|--|

| | |
|--|---------------------|
| | 125 V /nbr of poles |
|--|---------------------|

| | |
|--|---------------------|
| | 220 V /nbr of poles |
|--|---------------------|

| | |
|--|---------------------|
| | 440 V /nbr of poles |
|--|---------------------|

| | | |
|--------------|--------------------|--|
| Rated duties | Uninterrupted duty | |
|--------------|--------------------|--|

| | | |
|--|--|-------|
| Rated short-circuit breaking capacity (kA rms)/Rated short-circuit making capacity (kA peak)/Fuse-link I _n (A) ⁽²⁾ | I_{cn}/I_{cm}/I_n | 415 V |
| | | 500 V |
| | | 690 V |

| | | |
|------------------------------------|------------|--|
| Endurance (category B) (CO cycles) | Mechanical | |
|------------------------------------|------------|--|

| | |
|---------------|-------------|
| Electrical AC | AC23B 415 V |
|---------------|-------------|

| | |
|--|-------------|
| | AC22B 500 V |
|--|-------------|

| | |
|--|-------------|
| | AC21B 690 V |
|--|-------------|

| | |
|---------------------------|--|
| Suitability for isolation | |
|---------------------------|--|

| | |
|-----------------------------|--|
| Positive contact indication | |
|-----------------------------|--|

| | |
|------------------|--|
| Pollution degree | |
|------------------|--|

Control

| | |
|---|--|
| Direct front rotary handle (operator-dependent opening and closing) | |
|---|--|

| | |
|---------|----------|
| Locking | Padlocks |
|---------|----------|

| |
|-----------|
| Lead seal |
|-----------|

Indication auxiliaries

| | |
|--------------------|--|
| Auxiliary contacts | |
|--------------------|--|

| | |
|---------------------|--|
| Current transformer | |
|---------------------|--|

Installation and connection accessories

| | |
|----------------------------|------------|
| Possible mounting position | Horizontal |
|----------------------------|------------|

| |
|----------|
| Vertical |
|----------|

| | |
|-----------|-----------------------|
| Connector | For bare Cu/Al cables |
|-----------|-----------------------|

| |
|-------------------|
| For flexible bars |
|-------------------|

| | |
|-----------------------|--|
| Lugs for Cu/Al cables | |
|-----------------------|--|

| | |
|------------------|--|
| Terminal shields | |
|------------------|--|

| | |
|----------------------|--|
| Coupling accessories | |
|----------------------|--|

Dimensions and weight

| | |
|-----------------------------------|----|
| Overall dimensions H x W x D (mm) | 3P |
|-----------------------------------|----|

| | |
|--|----|
| Approximate weight without fuse-links (kg) | 3P |
|--|----|

⁽¹⁾ Suitable for 480 V NEMA.

⁽²⁾ Fuse-switch disconnectors with fuse-links.

⁽³⁾ Only for ISF160 with direct connection to the busbars.

⁽⁴⁾ AC22B 690 V.

Fuse-switch disconnectors selection

Fupact ISFL 160 to ISFL630

| ISFL160 | | ISFL250 | | | ISFL400 | | | ISFL630 | | |
|--------------------|--------------|-----------------|--------------|--------------|-----------------|--------------|--------------|-----------------|--------------|--------------|
| 3P/DIN (NH) | | 3P/DIN (NH) | | | 3P/DIN (NH) | | | 3P/DIN (NH) | | |
| 160 | | 250 | | | 400 | | | 630 | | |
| 12 | | 23 | | | 34 | | | 48 | | |
| 160 | | 250 | | | 400 | | | 630 | | |
| 12 | | 23 | | | 34 | | | 48 | | |
| 1000 | | 1000 | | | 1000 | | | 1000 | | |
| 8 | | 12 | | | 12 | | | 12 | | |
| 690 | | 690 | | | 690 | | | 690 | | |
| 800 | | 800 | | | 800 | | | 800 | | |
| AC22B | AC23B | AC21B | AC22B | AC23B | AC21B | AC22B | AC23B | AC21B | AC22B | AC23B |
| 160 | 160 | 250 | 250 | 250 | 400 | 400 | 400 | 630 | 630 | 630 |
| 160 | 160 | 250 | 250 | 250 | 400 | 400 | 400 | 630 | 630 | 630 |
| 160 | - | 250 | 250 | - | 400 | 400 | - | 630 | 630 | - |
| 160 | - | 250 | 250 | - | 400 | 400 | - | 630 | 630 | - |
| 100 | - | 250 | - | - | 400 | - | - | 630 | - | - |
| DC21B | DC22B | DC21B | DC22B | | DC21B | DC22B | | DC21B | DC22B | |
| - | - | - | - | | - | - | | - | - | |
| - | - | - | - | | - | - | | - | - | |
| - | - | - | - | | - | - | | - | - | |
| ■ | | ■ | | | ■ | | | ■ | | |
| 100 / 210 / 160 | | 120 / 250 / 250 | | | 120 / 250 / 400 | | | 120 / 250 / 630 | | |
| 101 / 210 / 160 | | 120 / 250 / 250 | | | 120 / 250 / 400 | | | 120 / 250 / 630 | | |
| 100 / 210 / 160 | | 100 / 210 / 200 | | | 100 / 210 / 315 | | | 100 / 210 / 500 | | |
| 1400 | | 1400 | | | 800 | | | 800 | | |
| 200 | | 200 | | | 200 | | | 200 | | |
| 200 ⁽⁴⁾ | | 200 | | | 200 | | | 200 | | |
| 200 | | 200 | | | 200 | | | 200 | | |
| ■ | | ■ | | | ■ | | | ■ | | |
| ■ | | ■ | | | ■ | | | ■ | | |
| 3 | | 3 | | | 3 | | | 3 | | |
| ■ | | ■ | | | ■ | | | ■ | | |
| ■ | | ■ | | | ■ | | | ■ | | |
| - | | - | | | - | | | - | | |
| ■ | | ■ | | | ■ | | | ■ | | |
| ■ ⁽³⁾ | | ■ | | | ■ | | | ■ | | |
| ■ | | - | | | - | | | - | | |
| ■ | | ■ | | | ■ | | | ■ | | |
| ■ | | ■ | | | ■ | | | ■ | | |
| ■ | | - | | | - | | | - | | |
| ■ | | - | | | - | | | - | | |
| included | | included | | | included | | | included | | |
| ■ | | ■ | | | ■ | | | ■ | | |
| 405 x 50 x 123 | | 672 x 100 x 123 | | | 672 x 100 x 123 | | | 672 x 100 x 123 | | |
| 1.30 | | 4.70 | | | 5.00 | | | 5.60 | | |

Fuse-switch disconnectors selection

Fupact ISFL160 to ISFL630

PB107274_17.eps



ISFL160.

PB107275_20.eps



ISFL250.

Fuse-switch disconnectors

Type of fuse-link

- DIN NH000
- DIN NH00
- DIN NH1
- DIN NH2
- DIN NH3

Installation and connection

- ISFL160 for 60 mm busbar hook-on contact mounting with multiple use terminal (screw M8)
- ISFL160 for 60 mm busbar hook-on contact mounting with box terminal 95 mm²
- ISFL160 for 100 mm busbar hook-on contact mounting with multiple use terminal (screw M8)
- ISFL160 for 100 mm busbar hook-on contact mounting with box terminal 95 mm²
- Conversion kit for 185 mm busbar direct contact mounting (for 1 or 2 x ISFL160)
- ISFL250-630 for 185 mm busbar direct contact mounting with multiple use terminal (screw M12)
- Terminal tightening torque (Nm)

Temperature derating (with gG fuse-link) ⁽¹⁾

| Mounting position | I _{th} (A) | Temperature (°C) |
|--|---------------------|------------------|
| "Vertical mounting" fuse-links in vertical position | | 40 °C |
| | | 45 °C |
| | | 50 °C |
| | | 55 °C |
| | | 60 °C |
| | | 65 °C |
| | | 70 °C |
| "Horizontal mounting" fuse-links in horizontal position | | 40 °C |
| | | 45 °C |
| | | 50 °C |
| | | 55 °C |
| | | 60 °C |
| | | 65 °C |
| | | 70 °C |

⁽¹⁾ Derating data is based on:
 - the maximum rating for fuse-links intended for the device
 - maximum power dissipation.

Fuse-switch disconnectors selection

Fupact ISFL160 to ISFL630

| ISFL160 | ISFL250 | ISFL400 | ISFL630 |
|-----------------------------|---------|---------|---------|
| ■ | - | - | - |
| ■ | - | - | - |
| - | ■ | - | - |
| - | - | ■ | - |
| - | - | - | ■ |
| ■ | - | - | - |
| ■ | - | - | - |
| ■ | - | - | - |
| ■ | - | - | - |
| ■ | - | - | - |
| ■ | ■ | ■ | ■ |
| see catalogue LVPED208014EN | | | |
| 160 | 250 | 400 | 630 |
| 160 | 250 | 400 | 630 |
| 152 | 238 | 380 | 599 |
| 144 | 225 | 360 | 567 |
| 136 | 213 | 340 | 536 |
| 128 | 200 | 320 | 504 |
| 120 | 188 | 300 | 473 |
| 160 | - | - | - |
| 160 | - | - | - |
| 152 | - | - | - |
| 144 | - | - | - |
| 136 | - | - | - |
| 128 | - | - | - |
| 120 | - | - | - |

Selection guide

Protection and monitoring relays

| | | Protection relays ⁽²⁾ | | |
|---|---------------------------|---|---|--|
| | | RH10 | RH21 | RH99 |
| All Vigirex products are type A ⁽¹⁾ devices, also covering the requirements of type AC devices. | | | | |
| Functions | | | | |
| Protection | | ■ | ■ | ■ |
| Local indications | | ■ | ■ | ■ |
| Remote indications (hard-wired) | | - | - | - |
| Remote indications (via communication) | | - | - | - |
| Display of measurements | | - | - | - |
| Wiring | | | | |
| Optimum continuity of service | | ■ | ■ | ■ |
| Optimum safety (failsafe) | | ■ | ■ | ■ |
| Mounting | | | | |
| DIN rail | | ■ | ■ | ■ |
| Front-panel mount | | ■ | ■ | ■ |
| Rated operational voltage | | | | |
| 1 DC voltage range from 12 to 48 V | | ■ | ■ | ■ |
| 1 DC voltage range from 24 to 130 V and AC 48 V | | - | - | - |
| 6 AC voltage ranges from 12 to 525 V | | ■ | ■ | ■ |
| 4 AC voltage ranges from 48 to 415 V | | - | - | - |
| Thresholds | | | | |
| Fault (I Δ n) | | 1 fixed instantaneous threshold choose from 0.03 A to 1 A | 2 user-selectable thresholds 0.03 A or 0.3 A | 9 user-selectable thresholds from 0.03 A to 30 A |
| Alarm | | - | - | - |
| Pre-alarm | | - | - | - |
| Time delays | | | | |
| Fault | | Instantaneous | 1 user-selectable time delay instantaneous or 0.06 s for I Δ n = 0.3 A | Instantaneous for I Δ n = 0.03 A 9 user-selectable time delays instantaneous to 4.5 s |
| Alarm | | - | - | - |
| Pre-alarm | | - | - | - |
| Display and indications | | | | |
| Voltage presence (LED and/or relay) ⁽⁶⁾ | | ■ | ■ | ■ |
| Threshold overrun | fault (LED) | ■ | ■ | ■ |
| | alarm (LED and relay) | - | - | - |
| | pre-alarm (LED and relay) | - | - | - |
| Leakage current (digital) | | - | - | - |
| Settings (digital) | | - | - | - |
| Test with or without actuation of output contacts | | | | |
| Local | | ■ | ■ | ■ |
| Remote (hard-wired) | | ■ | ■ | ■ |
| Remote (hard-wired for several relays) | | ■ | ■ | ■ |
| Remote (via communication) | | - | - | - |
| Communication | | | | |
| Suitable for supervision (internal bus) | | - | - | - |
| Characteristics | | | | |
| | | See catalogue LVPED208009EN | See catalogue LVPED208009EN | See catalogue LVPED208009EN |
| Sensors | | | | |
| Schneider Electric A, up to 630 A OA, E toroids ⁽⁷⁾ | | ■ | ■ | ■ |
| Schneider Electric rectangular sensors up to 3200 A | | ■ | ■ | ■ |

(1) Type A relay up to I Δ n = 5 A.

(2) Relay with output contact requiring local, manual reset after fault clearance.




(3) Relay with output contact that automatically resets after fault clearance.

(4) Mandatory with an RMH (multiplexing for the 12 toroids).

(5) Mandatory with an RM12T (multiplexing for the 12 toroids).

Selection guide

Protection and monitoring relays

| | | | Monitoring relays ⁽³⁾ | | |
|---|---|---|---|---|---|
| RH197M | RH197P | RHUs or RHU | RH99 | RMH | |
|  |  |  |  |  |  |
| PB104914-R.eps | PB100715-19_SE.eps | 059463-19_SE.eps | PB100429-19_SE.eps | PB100432-19_SE.eps | 059484-19_SE.eps + 059485-20_SE.eps |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | - | - | - |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| - | - | <input type="checkbox"/> except RHUs | - | - | <input type="checkbox"/> |
| <input type="checkbox"/> ⁽⁸⁾ | <input type="checkbox"/> ⁽⁸⁾ | <input type="checkbox"/> | - | - | <input type="checkbox"/> 12 measurement channels ⁽⁵⁾ |
| - | <input type="checkbox"/> | <input type="checkbox"/> | - | - | - |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | - | - | - |
| <input type="checkbox"/> | - | - | <input type="checkbox"/> | - | - |
| - | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| - | - | - | <input type="checkbox"/> | - | - |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | - | - | - |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | - | - | 220 to 240 V AC |
| 19 user-selectable thresholds from 0.03 A to 30 A | 19 user-selectable thresholds from 0.03 A to 30 A | 1 adjustable threshold from 0.03 A to 30 A | - | - | - |
| Fixed: 50 % I _{Δn} or 100 % I _{Δn} | Fixed: 50 % I _{Δn} or 100 % I _{Δn} | 1 adjustable threshold from 0.015 A to 30 A | 9 user-selectable thresholds from 0.03 A to 30 A | 1 adjustable threshold/channel from 0.03 A to 30 A | 1 adjustable threshold/channel from 0.015 A to 30 A |
| - | - | - | - | - | - |
| 7 user-selectable time delays instantaneous to 4.5 s | 7 user-selectable time delays instantaneous to 4.5 s | 1 adjustable threshold instantaneous to 4.5 s | - | - | - |
| instantaneous | instantaneous | 1 adjustable threshold instantaneous to 4.5 s | 9 user-selectable time delays instantaneous to 4.5 s | 1 adjustable threshold/channel instantaneous to 5 s | 1 adjustable threshold/channel instantaneous to 5 s |
| - | - | - | - | - | - |
| <input type="checkbox"/> ⁽⁹⁾ | <input type="checkbox"/> ⁽⁹⁾ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | - | - | - |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| - | - | - | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| by bargraph | by bargraph | <input type="checkbox"/> | - | - | <input type="checkbox"/> |
| - | - | <input type="checkbox"/> | - | - | <input type="checkbox"/> |
| ⁽¹⁰⁾ | | | | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | - | - |
| - | - | <input type="checkbox"/> except RHUs | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| - | - | <input type="checkbox"/> except RHUs | - | - | <input type="checkbox"/> |
| See catalogue LVPED208009EN | See catalogue LVPED208009EN | See catalogue LVPED208009EN | See catalogue LVPED208009EN | See catalogue LVPED208009EN | See catalogue LVPED208009EN |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

⁽⁶⁾ Depending on the type of wiring (optimum continuity of service or optimum safety).
⁽⁷⁾ See catalogue LVPED208009EN.

⁽⁸⁾ On a bargraph.
⁽⁹⁾ No voltage presence relay.
⁽¹⁰⁾ With actuation of contacts only.

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MEMO

Listed below the bases and printed catalogues concerning all the product ranges of the 2012 LV product characteristics.

Original source files and printed catalogues of the above documents are available on Shopping Kiosk and Pl@net area.

All modules and printed catalogues can be downloaded.

| Range | Bases | Catalogues |
|--------------------------|--------------------|---------------------|
| Acti 9 | Final Distribution | No printed document |
| NG160 | 556E | No printed document |
| Easypact | 545E | LVEPD208003EN |
| Compact NSX | 559E | LVEPD208001EN |
| Compact NS630b-1600 | 554E | LVEPD211021EN |
| Compact NSX - DC | 220E | LVEPD208006EN |
| Masterpact NT/NW - AC | 207E | LVEPD208008EN |
| Masterpact NW - DC | 220E | LVEPD208006EN |
| Interpact | 308E | LVEPD208015EN |
| Source-changeover System | 313E | LVEPD211022EN |
| Fupact | 306E | LVEPD208014EN |
| Vigirex | 433E | LVEPD208009EN |

