Pact Series
TransferPact
Catalog 2020
Source-changeover systems
se.com
**Resource Performance**
Green Premium brings improved resource efficiency throughout an asset’s lifecycle. This includes efficient use of energy and natural resources, along with the minimization of CO₂ emissions.

**Circular Performance**
We’re helping our customers optimize the total cost of ownership of their assets. To do this, we provide IoT-enabled solutions, as well as upgrade, repair, retrofit, and remanufacture services.

**Well-being Performance**
Green Premium products are RoHS and REACh compliant. We’re going beyond regulatory compliance with step-by-step substitution of certain materials and substances from our products.

**Differentiation**
Green Premium delivers strong value propositions through third-party labels and services. By collaborating with third-party organizations we can support our customers in meeting their sustainability goals such as green building certifications.

The Green Premium program stands for our commitment to deliver customer valued sustainable performance. It has been upgraded with recognized environmental claims and extended to cover all offers including Products, Services and Solutions.

**CO₂ and P&L impact through…**

**Cost of ownership optimization through…**

**Peace of mind through…**

**Improved sales through…**

*PEP: Product Environmental Profile (i.e. Environmental Product Declaration)*
A source-changeover system is indispensable:

For critical applications in particular

For all others in general

A source-changeover system is indispensable for applications that need a continuous supply of electric power (hospitals, airports, banks, government facilities, etc.). But a source-changeover system is also suitable for all LV electrical installations exposed to:

> Nominal voltage loss or dip (when there is high demand for electric power)
> Unpredictable power quality

> Frequent power cuts.
These factors, and many others, can damage the continuity of service of your electrical installation.

For infrastructure managers, a source-changeover system gives direct economic benefits: it is possible to select your source based on power cost. In this case, the replacement source is used as an alternative, more economical source.
Where backup supply must be reliable: now that is everywhere.

Electricity is the fuel that feeds economic activity. Very few operations can withstand the financial impact of an electrical stoppage.

For occupant comfort, business continuity, and worker/visitor safety, dependability levels which used to apply to hospitals or airports are now becoming required in shopping malls and offices.

Additionally, utility companies make their contracts more sophisticated to deal with energy concerns: for example, by including time restrictions to total accessible power.

For these reasons, backup power sources expand across all types of buildings, and require high performance connection and management.

Enabling you to meet these challenges, TransferPact comes as the natural continuation of the world leading low voltage distribution system developed by Schneider Electric.
$1\text{ M/hr}

average loss ratio for data centers without power
3 ways to switch the load to meet your needs

1. Manual source-changeover system
   (or MTSE: Manual Transfer Switching Equipment)
   The simplest way to switch the load. It is controlled manually by an operator. The time required to switch from the ‘N’ source to ‘R’ source can vary.
   
   **System**
   2 or 3 mechanically interlocked manually-operated circuit breakers or 2 switch-disconnectors.

2. Remote-operated source-changeover system
   (or RTSE: Remote Transfer Switching Equipment)
   The most commonly used system for devices with high ratings. No direct human intervention is required. Source-changeover is controlled electrically.
   
   **System**
   2 or 3 circuit breakers that may have different configurations, linked by an electrical interlocking system. In addition, a mechanical interlocking system protects against electrical malfunctions or incorrect manual operations.

3. Automatic source-changeover system
   (or ATSE: Automatic Transfer Switching Equipment)
   An automatic controller may be added to a remote-operated source-changeover system. It is possible to automatically control source transfer according to programmed (dedicated controllers) or programmable (PLC) operating modes. These solutions ensure optimum energy management.
   
   **System**
   2 or 3 circuit breakers that may have different configurations, linked by an electrical interlocking system. A mechanical interlocking system protects against electrical malfunctions or incorrect manual operations, with an automatic control system (dedicated controllers or PLC).
Applications

Buildings and infrastructure where the need for continuity of service is significant but not a priority: offices, small and medium-sized businesses.

Applications

Industry (assembly lines, engine rooms on ships, critical auxiliaries in thermal powerstations, etc.);
Infrastructure (port and railway installations, runway lighting systems, control systems on military sites, etc.).

Applications

Commercial and service sector (operating rooms in hospitals, safety systems for buildings, computer rooms for banks and insurance companies, lighting and emergency lighting systems in malls, etc.), industry and infrastructure.
For many years Schneider Electric’s source changeover system have proved their reliability everywhere around the world, in most power dependable buildings. Switching is performed by ComPact or MasterPact circuit breakers, the ultimate references in industrial switchgear.

Maximum continuity of service

> Energy availability is ensured whatever the external requirements (e.g. high power demand).
> Maintenance and replacement of the sources (N or R) can be done with no interruption of service.
You can maintain a continuous level of service and customer satisfaction.

Maximum safety

For LV electrical installations where safety and continuity of service are critical for people and/or equipment such as hospitals, airports, banks, malls, etc.

Optimized energy management

> Transfer the load to a replacement source according to external requirements.
> Manage power sources according to power quality and power costs.
> Perform system regulation.
> Switch to an emergency replacement source.
You are no longer dependent on your power supply (and supplier)!

Simplicity and reliability

> Simple installation on LV switchboard.
> Optimized size of the switchboard.
> System based on pre-tested components.
> Compliance with IEC 60947-6-1.
TransferPact
(Source-changeover systems)

Presentation

Functions and characteristics

Dimensions

Electrical diagrams

Catalog numbers and order forms
For maximum continuity of service...

Incoming feeders and main LV switchboards

- Normal source
- Replacement source
- Sources with coupler on busbars

Currents
From 630 to 6300 A.

Power distribution

- Generator or permanent source

Currents
From 250 to 3200 A.

Loads

- Generator or permanent source

Currents
From 40 to 400 A.

Typical applications:
- Continuous production processes
- Operating rooms
- Computer rooms
- Large electrical installations (e.g. airports)
- Refrigeration units
- Special electricity tariffs
- Pumping stations
... in a wide range of applications

1 normal source
1 replacement source

2 sources with coupler on busbars

2 normal sources
1 replacement source

QN QR
0 0
1 0
0 1

(1) possible by forcing operation.

Typical applications:
- continuous production processes
- operating rooms
- computer rooms...

Typical applications:
- large electrical installations (e.g. airports)
- refrigeration units
- special electricity tariffs
- pumping stations...
Other informations

ComPact NSXm - NSX
> LVPED217032EN

ComPact INS/INV
> LVPED213024EN

ComPact NS
> LVPED211021EN

MasterPact MTZ
> LVPED216026EN
Functions and characteristics

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TransferPact
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and automatic operation ................................................ A-29
UA/BA controller ................................................................ A-30
Schneider Electric offers source change-over systems based on ComPact and MasterPact devices. They are made of up to 3 circuit breakers or switch-disconnectors linked by an electrical interlocking system that may have different configurations. Moreover, a mechanical interlocking system must be added to protect against electrical malfunctions or incorrect manual operations. In addition, a controller can be used for automatically control the source transfer.

The following pages present the different solutions for mechanical and electrical interlocking and associated controllers.

**Manual source-changeover system**
(or MTSE: Manual Transfer Switching Equipment)

- Switching devices (2 or 3)
- Mechanical interlocking

**Remote-operated source-changeover system**
(or RTSE: Remote Transfer Switching Equipment)

- Base plate
- Mechanical interlocking
- Downstream coupling accessory
- Controller
- UA/BA controller
- Electrical interlocking
- IVE unit
- Switching devices
- Indication auxiliaries
- Remote control unit

**Automatic source-changeover system**
(or ATSE: Automatic Transfer Switching Equipment)

- Controller
- UA/BA controller
- Electrical interlocking
- IVE unit
- Switching devices
- Indication auxiliaries
- Remote control unit
Informations

IEC 60947-6-1 applies to transfer switching equipment (TSE) to be used in power systems for transferring a load supply between a normal and an alternate source (other power supply or generator).

TSE is classified according to:
- the method of controlling the transfer
- manually transfer switching equipment (MTSE)
- automatic transfer switching equipment (ATSE)
- their short circuit capability
- Class PC: TSE that is capable of making and withstanding, but not intended for breaking short-circuit currents. Switch and switch-disconnectors are the most useful products used.
- Class CB: TSE that is capable of making, withstanding, and breaking short-circuit currents and is provided with overcurrent releases. Circuit breakers (air circuit breaker or moulded-case circuit breaker) are the most useful products used.
# Functions and characteristics

## Switching devices

### Class PC

<table>
<thead>
<tr>
<th>Range</th>
<th>ComPact INS</th>
<th>ComPact INS/INV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Types of devices</td>
<td>INS40 to INS80</td>
<td>INS250 to INS830</td>
</tr>
<tr>
<td></td>
<td>INS100 to INS160</td>
<td>INV100 to INV630</td>
</tr>
<tr>
<td>Mixing possibilities</td>
<td>All devices, not possible with a complete assembly source-changeover</td>
<td>All devices, not possible with a complete assembly source-changeover</td>
</tr>
</tbody>
</table>

### Electrical characteristics

<table>
<thead>
<tr>
<th></th>
<th>ComPact INS</th>
<th>ComPact INS/INV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current rating</td>
<td>40 to 160 A</td>
<td>100 to 630 A</td>
</tr>
<tr>
<td>Insulating voltage Ui (V AC)</td>
<td>750</td>
<td>800</td>
</tr>
<tr>
<td>Rated operational voltage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive break indication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of poles</td>
<td>3, 4</td>
<td>3, 4</td>
</tr>
<tr>
<td>(N and R devices must have the same number of poles)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-25 °C and +70 °C</td>
<td>-25 °C and +70 °C</td>
</tr>
</tbody>
</table>

### Additional indication and control auxiliaries

<table>
<thead>
<tr>
<th></th>
<th>ComPact INS</th>
<th>ComPact INS/INV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indication contacts</td>
<td>OF</td>
<td>OF</td>
</tr>
<tr>
<td>Voltage releases</td>
<td>MX shunt</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MN undervoltage</td>
<td></td>
</tr>
<tr>
<td>Voltage presence indicator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voltage transformer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ammeter module</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insulation monitoring module</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Installation and connection

<table>
<thead>
<tr>
<th></th>
<th>ComPact INS</th>
<th>ComPact INS/INV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed front connected</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed rear connected</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Withdrawable, plug-in or drawout</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Installation and connection accessories

<table>
<thead>
<tr>
<th></th>
<th>ComPact INS</th>
<th>ComPact INS/INV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downstream coupling accessory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bare-cable connectors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terminal extensions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terminal shields and inter-phase barriers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Front panel escutcheons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Locking</td>
<td>by padlock</td>
<td></td>
</tr>
<tr>
<td></td>
<td>by keylock</td>
<td></td>
</tr>
</tbody>
</table>

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## Functions and characteristics

### Switching devices

#### Class PC

<table>
<thead>
<tr>
<th>Range</th>
<th>ComPact NSX</th>
<th>ComPact NS</th>
<th>MasterPact</th>
<th>MTZ1 06 to 16</th>
<th>MTZ2 08 to 40</th>
<th>MTZ3 40 to 63</th>
</tr>
</thead>
<tbody>
<tr>
<td>Types of devices</td>
<td>NSX100 to NSX250</td>
<td>NSX400 to NSX630</td>
<td>NS630b to NS1600</td>
<td>MTZ1 06 to 16</td>
<td>MTZ2 08 to 40</td>
<td>MTZ3 40 to 63</td>
</tr>
<tr>
<td>Mixing possibilities</td>
<td>all devices</td>
<td>all devices</td>
<td>all devices</td>
<td>all mixing possibilities</td>
<td>all mixing possibilities</td>
<td>all mixing possibilities</td>
</tr>
<tr>
<td></td>
<td>NSX100NA to NSX250NA</td>
<td>NSX100NA to NSX630NA</td>
<td>NS630bNA to NSX1600NA</td>
<td>(fixed, drawout or fixed + drawout) HA</td>
<td>(fixed, drawout or fixed + drawout) NA/HA/HA10</td>
<td>(fixed, drawout or fixed + drawout) NA/HA/HA10</td>
</tr>
<tr>
<td></td>
<td>fixed/fixed or plug-in/plug-in</td>
<td>fixed/fixed or plug-in/plug-in</td>
<td>fixed/fixed or plug-in/plug-in</td>
<td>fixed/fixed or plug-in/plug-in</td>
<td>fixed/fixed or plug-in/plug-in</td>
<td>fixed/fixed or plug-in/plug-in</td>
</tr>
</tbody>
</table>

#### Electrical characteristics

- **Current rating**
  - 15 to 250 A
  - 15 to 630 A
  - 250 to 1600 A
  - 600 to 1600 A
  - 800 to 6300 A
- **Insulating voltage Ui (V AC)**
  - 750
  - 750
  - 750
  - 1000
  - 1000
- **Rated operational voltage**
  - 48 V - 50 Hz
  - 110/130, 220/240, 380/440 V - 50/60 Hz
  - 48 V - 50 Hz
  - 110/130, 220/240, 380/440 V - 50/60 Hz
  - 48 V - 50 Hz
  - 110/130, 220/240, 380/440 V - 50/60 Hz
  - 48 V - 50 Hz
  - 110/130, 220/240, 380/440 V - 50/60 Hz
- **Positive break indication**
  - No indication
  - No indication
  - No indication
  - No indication
  - No indication
- **Number of poles (N and R devices must have the same number of poles)**
  - 3, 4
  - 3, 4
  - 3, 4
  - 3, 4
  - 3, 4
- **Operating temperature**
  - -25 °C to +70 °C (50 °C for 440 V - 60 Hz)
  - -25 °C to +70 °C (50 °C for 440 V - 60 Hz)
  - -25 °C to +70 °C (50 °C for 440 V - 60 Hz)

#### Control characteristics

- **Control voltage**
  - AC 48 V - 50 Hz
  - AC 48 V - 50 Hz
  - AC 48 V - 50 Hz
  - AC 48 V - 50 Hz
  - AC 48 V - 50 Hz
  - DC 24-250 V
  - DC 24-250 V
  - DC 24-250 V
  - DC 24-250 V
  - DC 24-250 V
- **Maximum consumption**
  - AC 500 VA
  - AC 500 VA
  - AC 180 VA
  - AC 180 VA
  - AC 180 VA
  - DC 500 W
  - DC 500 W
  - DC 180 W
  - DC 180 W
  - DC 180 W
- **Minimum switching time**
  - 800 ms
  - 800 ms
  - 800 ms
  - 800 ms
  - 800 ms

#### Protection and measurement

- **Earth-leakage protection**
  - by Vigi module
  - by VigiPact relay
  - by control unit
  - by control unit
  - by control unit
- **Current measurements**
  - Voltage, frequency, power measurements, etc.
  - Voltage, frequency, power measurements, etc.
  - Voltage, frequency, power measurements, etc.
  - Voltage, frequency, power measurements, etc.
  - Voltage, frequency, power measurements, etc.

#### Additional indication and control auxiliaries

- **Indication contacts**
  - OF + SDE (+ SDV)
  - 3 OF + SDE (+ SDV)
  - 2 OF + SDE
  - 2 OF + SDE
  - 2 OF + SDE
- **Voltage releases**
  - MX shunt
  - MN undervoltage
  - Voltage presence indicator
  - Voltage transformer
  - Ammeter module
  - Insulation monitoring module

#### Installation and connection

- **Fixed front connected**
  - (long rear connections)
  - (long rear connections)
  - (vertical or horizontal)
  - (vertical or horizontal)
  - (vertical or horizontal)
- **Fixed rear connected**
  - (plug-in on base)
  - (plug-in on base)
  - (drawout)
  - (drawout)
  - (drawout)
- **Withdrawable, plug-in or drawout**
  - (plug-in on base)
  - (plug-in on base)
  - (drawout)
  - (drawout)
  - (drawout)

### Installation and connection accessories

- **Downstream coupling accessory**
  - Bare-cable connectors
  - Terminal extensions
  - Terminal shields and inter-phase barriers
  - Front panel escutcheons
  - Locking by padlock
  - Locking by keylock
  - Locking by keylock
  - Locking by keylock
  - Locking by keylock
## Functions and characteristics

### Switching devices

#### Complete source changeover assembly

<table>
<thead>
<tr>
<th></th>
<th>TransferPact FXM100 to 250</th>
<th>TransferPact FXM320 to 630</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Locking by padlocks</strong></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td><strong>Locking by keylock</strong></td>
<td>-</td>
<td>○</td>
</tr>
<tr>
<td><strong>Door locking</strong></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td><strong>Door lock defeat</strong></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td><strong>Door locking device padlocked</strong></td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td><strong>Lead-sealable handle</strong></td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

○ Standard. ○ By simple modification of the standard rotary handle.

### Functions and characteristics

#### Switching devices

<table>
<thead>
<tr>
<th>ComPact NSX and ComPact NS class PC and CB</th>
<th>NSX100 to 250</th>
<th>NSX400 to NSX630</th>
<th>NS630b to NS1600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of poles</td>
<td>3, 4</td>
<td>3, 4</td>
<td>3, 4</td>
</tr>
<tr>
<td>Rated current In (A)</td>
<td>100 to 250</td>
<td>400 to 630</td>
<td>630 to 1600</td>
</tr>
<tr>
<td>Mechanical durability</td>
<td>20000 - 40000 - 50000</td>
<td>15000</td>
<td>8000</td>
</tr>
<tr>
<td>Electrical durability at In (O,R,N,C cycles)</td>
<td>10000 - 20000 - 30000</td>
<td>4000 - 6000</td>
<td>2000</td>
</tr>
<tr>
<td>for U = 440 V to 480 V NEMA</td>
<td>5000 - 7500 - 10000</td>
<td>2000 - 3000</td>
<td>1500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MasterPact class PC and CB</th>
<th>MTZ1 06 to 10</th>
<th>MTZ1 12 to 16</th>
<th>MTZ2 08 to 16</th>
<th>MTZ2 20</th>
<th>MTZ2 25 to 40</th>
<th>MTZ3 40 to 63</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of poles</td>
<td>3, 4</td>
<td>3, 4</td>
<td>3, 4</td>
<td>3, 4</td>
<td>3, 4</td>
<td>3, 4</td>
</tr>
<tr>
<td>Rated current In (A)</td>
<td>630 to 1600</td>
<td>8000</td>
<td>8000</td>
<td>2000</td>
<td>10000</td>
<td>4000 to 6300</td>
</tr>
<tr>
<td>Mechanical durability</td>
<td>8000</td>
<td>1250 to 1600</td>
<td>800 to 1600</td>
<td>2500</td>
<td>10000</td>
<td>5000</td>
</tr>
<tr>
<td>Electrical durability at In (O,R,N,C cycles)</td>
<td>6000</td>
<td>6000</td>
<td>10000</td>
<td>8000</td>
<td>10000</td>
<td>1500</td>
</tr>
<tr>
<td>for U = 440 V and 480 V NEMA</td>
<td>3000</td>
<td>MTZ1 16: 3000</td>
<td>MTZ1 16: 3000</td>
<td>6000</td>
<td>MTZ1 16: 1000</td>
<td>2500</td>
</tr>
<tr>
<td>Electrical durability at In (O,R,N,C cycles)</td>
<td>3000</td>
<td>2000</td>
<td>10000</td>
<td>5000</td>
<td>6000</td>
<td>1500</td>
</tr>
<tr>
<td>for U = 440 V to 690 V</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Mechanical and electrical durability not applicable to MasterPact H3 and L versions.
2. Electrical durability tests carried out with a power factor of 0.8 as per IEC 947-2.

**Note:**
- ON: opening of N source
- CR: closing of R source
- OR: opening of R source
- CN: closing of N source
Functions and characteristics

TransferPact FXM100 to 630
(complete source-changeover assembly)

FXM

Number of poles

Electrical characteristics as defined by IEC 60947-1 / 60947-6-1 and EN 60947-1 / 60947-6-1

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional thermal current (A)</td>
<td>Ith</td>
</tr>
<tr>
<td>Conventional thermal current in enclosure</td>
<td>Ithe</td>
</tr>
<tr>
<td>Rated insulation level (V)</td>
<td>U_{i}</td>
</tr>
<tr>
<td>Impulse-withstand voltage (kV)</td>
<td>U_{imp}</td>
</tr>
<tr>
<td>Rated operational voltage (V)</td>
<td>U_e</td>
</tr>
<tr>
<td>Rated operational voltage AC20 and DC20 (V)</td>
<td>U_{e, AC 50/60 Hz}</td>
</tr>
<tr>
<td>Rated operational current (A)</td>
<td>I_e</td>
</tr>
<tr>
<td>Short-circuit making capacity (kA peak)</td>
<td>I_{cm, min. (switch-disconnector alone)}</td>
</tr>
<tr>
<td>Short-time withstand current (A rms)</td>
<td>I_{cw} 1 s</td>
</tr>
<tr>
<td>Suitability for isolation</td>
<td>Mechanical</td>
</tr>
<tr>
<td>Durability (category A) (O - C-O cycles)</td>
<td>Electrical AC 50/60 Hz</td>
</tr>
<tr>
<td>Positive contact indication</td>
<td>Visible break</td>
</tr>
</tbody>
</table>
| Upstream protection                                 | See the "Complementary technical information".

Note: All values are for 60 °C unless specified otherwise.
## Functions and characteristics

**TransferPact FXM100 to 630**

*(complete source-changeover assembly)*

<table>
<thead>
<tr>
<th>FXM100</th>
<th>FXM160</th>
<th>FXM200</th>
<th>FXM250</th>
<th>FXM320</th>
<th>FXM400</th>
<th>FXM500</th>
<th>FXM630</th>
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<tbody>
<tr>
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</table>

### Number of poles

- FXM100: 3-4
- FXM160: 3-4
- FXM200: 3-4
- FXM250: 3-4
- FXM320: 3-4
- FXM400: 3-4
- FXM500: 3-4
- FXM630: 3-4

### Electrical characteristics as defined by IEC 60947-1 / 60947-6-1 and EN 60947-1 / 60947-6-1

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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<tbody>
<tr>
<td>Conventional thermal current (A) at 60 °C</td>
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<tr>
<td>Conventional thermal current in enclosure (A) at 60 °C</td>
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</tr>
<tr>
<td>Rated insulation level (V) AC 50/60 Hz</td>
<td>750</td>
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<tr>
<td>Impulse-withstand voltage (kV)</td>
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<tr>
<td>Rated operational voltage (V) AC 50/60 Hz</td>
<td>690</td>
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<tr>
<td>Rated operational voltage DC</td>
<td>250</td>
</tr>
<tr>
<td>Rated operational voltage AC20 and DC20 (V) AC 50/60 Hz</td>
<td>750</td>
</tr>
<tr>
<td>Rated operational current (A) Electrical AC 50/60 Hz</td>
<td>AC22A</td>
</tr>
<tr>
<td>220-240 V</td>
<td>100</td>
</tr>
<tr>
<td>380-415 V</td>
<td>100</td>
</tr>
<tr>
<td>440-480 V</td>
<td>100</td>
</tr>
<tr>
<td>500-525 V</td>
<td>100</td>
</tr>
<tr>
<td>660-690 V</td>
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<tr>
<td>Rated operational current (A) Electrical DC</td>
<td>DC22A</td>
</tr>
<tr>
<td>125 V (2P in series)</td>
<td>100</td>
</tr>
<tr>
<td>250 V (4P in series)</td>
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</tr>
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</table>

<table>
<thead>
<tr>
<th>Class 120 - 60 %</th>
<th>Class 120 - 60 %</th>
<th>Class 120 - 60 %</th>
<th>Class 120 - 60 %</th>
<th>Class 120 - 60 %</th>
<th>Class 120 - 60 %</th>
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<td>DC23B</td>
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</tr>
</tbody>
</table>

- **Positive contact indication**: Visible break, Emergency-off switch-disconnector
- **Degree of pollution**: 3
- **Upstream protection**: See the “Complementary technical information”

*TransferPact FXM100 to 630 (complete source-changeover assembly)*
## Functions and characteristics

**TransferPact FXM100 to 630 (complete source-changeover assembly)**

### FXM

#### 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
- **Interlocking**
  - By keylock
  - Mechanical

#### 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)
- 15 Nm
- 50 Nm

#### Dimensions and weights
- **Overall dimensions H x W x D (mm)**
  - 3 poles
  - 4 poles
- **Approximate weight (kg)**
  - 3 poles
  - 4 poles

---

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

- 5 < Nm < 6.2
- 13.5 < Nm < 16.5
### Functions and characteristics

**TransferPact FXM100 to 630**

*(complete source-changeover assembly)*

<table>
<thead>
<tr>
<th>FXM100</th>
<th>FXM160</th>
<th>FXM200</th>
<th>FXM250</th>
<th>FXM320</th>
<th>FXM400</th>
<th>FXM500</th>
<th>FXM630</th>
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<tbody>
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<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
</tbody>
</table>

### Connection and Indication

- Connection by cables
  - To bare cable connectors
  - By cables with lugs
  - Directly to terminals
- Connection to spreaders
- Connection to vertical-connection adapters via cable-lug adapters
- Connection to flat-facing bars
  - Directly to terminals
  - To spreaders
- Connection to edgewise bars
  - To vertical-connection adapters

### Indication and Measurement

- 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
  - Interlocking
    - By keylock
  - Mechanical
    - Complete source-changeover assembly

### Operating Torque

- Operating torque (Nm)
  - Typical value for 3-4 poles with front handle:
    - 5 < Nm < 6.2
    - 13.5 < Nm < 16.5

### Installation and Connection Accessories

- Bare cable connectors
- Rear connectors
- Terminal extensions
- Spreaders
  - One-piece spreader
- Terminal shrouds
- Terminal shields
- Interphase-barrier
- Front panel escutcheons

### Tightening Torque

- Tightening torque for electrical connections (Nm)
  - 15
  - 50

### Dimensions and Weights

- Overall dimensions H x W x D (mm)
  - 3 poles
    - 136 x 295 x 131
  - 4 poles
    - 136 x 295 x 131
  - Approximate weight (kg)
    - 3 poles
      - 6.4
    - 4 poles
      - 6.4

### Specifications

- TransferPact FXM100 to 630
- (complete source-changeover assembly)
Functions and characteristics

Switching devices

Class CB

<table>
<thead>
<tr>
<th>Range</th>
<th>ComPact NSX</th>
<th>ComPact NS MasterPact MTZ1/MTZ2/MTZ3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Types of devices</td>
<td>NSX100 to NSX250</td>
<td>all devices</td>
</tr>
<tr>
<td>Mixing possibilities</td>
<td>NSX100 to NSX250</td>
<td>all devices</td>
</tr>
<tr>
<td></td>
<td>NSX100 to NSX250</td>
<td>N/H/L</td>
</tr>
<tr>
<td></td>
<td>fixed/plug-in</td>
<td>fixed/plug-in</td>
</tr>
<tr>
<td>Current rating</td>
<td>15 to 250 A</td>
<td>15 to 630 A</td>
</tr>
<tr>
<td>Insulating voltage Ui (V AC)</td>
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<td>750</td>
</tr>
<tr>
<td>Rated operational voltage</td>
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<td></td>
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<tr>
<td>Positive break indication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of poles</td>
<td>3, 4</td>
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<tr>
<td>Operating temperature</td>
<td>-25 °C to +70 °C (50 °C for 440 V - 60 Hz)</td>
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</tr>
<tr>
<td>Control voltage</td>
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<td></td>
</tr>
<tr>
<td>AC</td>
<td>48 V - 50 Hz</td>
<td>48 V - 50 Hz</td>
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<tr>
<td></td>
<td>110/130, 220/240, 380/440 V - 50/60 Hz</td>
<td>110/130, 220/240, 380/440 V - 50/60 Hz</td>
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<tr>
<td>DC</td>
<td>24-250 V</td>
<td>24-250 V</td>
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<td>Maximum consumption</td>
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<tr>
<td>AC</td>
<td>500 VA</td>
<td>500 VA</td>
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<tr>
<td>DC</td>
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<tr>
<td>Earth-leakage protection</td>
<td>by Vigi module</td>
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<tr>
<td></td>
<td>by control unit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>by add-on VigiPact relay</td>
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<tr>
<td>Current measurements</td>
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<tr>
<td>Voltage, frequency, power measurements, etc.</td>
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<tr>
<td>Additional indication and control auxiliaries</td>
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<tr>
<td>Indication contacts</td>
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<td>3 OF + SDE (+ SDV)</td>
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<td>Voltage releases</td>
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<tr>
<td>Voltage presence indicator</td>
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<td>Voltage transformer</td>
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<tr>
<td>Ammeter module</td>
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<td>Insulation monitoring module</td>
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<td>Installation and connection</td>
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<td>(long rear connections)</td>
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<td>(plug-in on base)</td>
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<td>Terminal shields and inter-phase barriers</td>
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<td>Front panel escutcheons</td>
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<tr>
<td>Locking</td>
<td>by padlock</td>
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<tr>
<td></td>
<td>by keylock</td>
<td></td>
</tr>
</tbody>
</table>

Electrical durability at In (ON-CR-OR-CN cycles) for U = 500 V to 690 V:

- 5000 - 7500 - 10000
- 1500 - 3000
- 1000 - 2000
- 500 - 1000

Electrical durability at In (ON-CR-OR-CN cycles) for U = 500 V to 690 V:

- 5000 - 10000
- 500 - 1000

Note:
O: opening of N source
C: closing of R source
OR: opening of R source
CN: closing of N source

[1] Mechanical and electrical durability not applicable to MasterPact H3 and L1 versions, please refer to the MasterPact NT/NW catalog.
[2] Electrical durability tests carried out with a power factor of 0.8 as per IEC 947-2.
## Functions and characteristics

### Switching devices

**Class CB**

#### ComPact NS

- **NS630b to NS1600**
  - all devices
  - NS630b to 1600
  - N/H/L
  - fixed/fixed or plug-in/plug-in

#### MasterPact MTZ1

- **MTZ1 06 to 16**
  - all mixing possibilities
  - (fixed, drawout or fixed + drawout)
  - H1/H2/H3/L1

#### MasterPact MTZ2/MTZ3

- **MTZ2 08 to 40 and MTZ3 40 to 63**
  - all mixing possibilities
  - (fixed, drawout or fixed + drawout)
  - N1/H1/H2/H3/L1/H10 for MTZ2
  - H1/H2 for MTZ3

<table>
<thead>
<tr>
<th>ComPact NS</th>
<th>MasterPact MTZ1</th>
<th>MasterPact MTZ2/MTZ3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NS630b to NS1600</strong></td>
<td><strong>MTZ1 06 to 16</strong></td>
<td><strong>MTZ2 08 to 40 and MTZ3 40 to 63</strong></td>
</tr>
<tr>
<td>all devices</td>
<td>all mixing possibilities</td>
<td>all mixing possibilities</td>
</tr>
<tr>
<td>NS630b to 1600</td>
<td>(fixed, drawout or fixed + drawout)</td>
<td>(fixed, drawout or fixed + drawout)</td>
</tr>
<tr>
<td>N/H/L</td>
<td>H1/H2/H3/L1</td>
<td>N1/H1/H2/H3/L1/H10 for MTZ2</td>
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<tr>
<td>fixed/fixed or plug-in/plug-in</td>
<td>fixed/fixed or plug-in/plug-in</td>
<td>H1/H2 for MTZ3</td>
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</table>

<table>
<thead>
<tr>
<th><strong>Rated current In (A)</strong></th>
<th><strong>Mechanical durability (ON-CR-OR-CN cycles)</strong></th>
<th><strong>Electrical durability (ON-CR-OR-CN cycles)</strong></th>
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</thead>
<tbody>
<tr>
<td>250 to 1600 A</td>
<td>600 to 1600 A</td>
<td>800 to 6300 A</td>
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<tr>
<td>750</td>
<td>1000</td>
<td>1000</td>
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<tr>
<td>24-250 V</td>
<td>48 to 415 V - 50/60 Hz</td>
<td>48 to 415 V - 50/60 Hz</td>
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<tr>
<td>180 VA</td>
<td>24-250 V</td>
<td>440 V - 60 Hz</td>
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<tr>
<td>180 W</td>
<td>180 VA</td>
<td>4000 to 6300</td>
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<tr>
<td>800 ms</td>
<td>180 W</td>
<td>8000</td>
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</tbody>
</table>

**Note:**
- **ON:** opening of N source
- **CR:** closing of R source
- **OR:** opening of R source
- **CN:** closing of N source

**Mechanical and electrical durability not applicable to MasterPact H3 and L1 versions, please refer to the MasterPact NT/NW catalog.**

**Electrical durability tests carried out with a power factor of 0.8 as per IEC 947-2.**

ComPact NS | MasterPact MTZ1/MTZ2/MTZ3
---|---
**NS630b to NS1600** | MTZ2 08 to 16 |
| MTZ2 08 to 16 | MTZ2 25 to 40 |
| MTZ3 40 to 63 | MTZ3 40 to 63 |
| 630 to 1600 | 800 to 1600 |
| 8000 | 10000 |
| 2000 | 8000 |
| 1500 | 6000 |

<table>
<thead>
<tr>
<th><strong>MTZ1 06 to 10</strong></th>
<th><strong>MTZ1 12 to 16</strong></th>
<th><strong>MTZ2 08 to 16</strong></th>
<th><strong>MTZ2 20</strong></th>
<th><strong>MTZ2 25 to 40</strong></th>
<th><strong>MTZ3 40 to 63</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>630 to 1600</td>
<td>1250 to 1600</td>
<td>800 to 1600</td>
<td>2000</td>
<td>2500 to 4000</td>
<td>4000 to 6300</td>
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<tr>
<td>8000</td>
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<td>10000</td>
<td>10000</td>
<td>5000</td>
<td>1500</td>
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<tr>
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<td>1500</td>
<td>3000</td>
<td>10000</td>
<td>6000</td>
<td>2500</td>
<td>1500</td>
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</table>

| **ComPact NS** | **MasterPact MTZ1/MTZ2/MTZ3** |
|----------------|----------------|----------------|----------------|-------------|------------------|
| **NS630b to NS1600** | **MTZ1 06 to 10** | **MTZ1 12 to 16** | **MTZ2 08 to 16** | **MTZ2 20** | **MTZ2 25 to 40** | **MTZ3 40 to 63** |
| 630 to 1600 | 1250 to 1600 | 800 to 1600 | 2000 | 2500 to 4000 | 4000 to 6300 |
| 8000 | 8000 | 10000 | 10000 | 5000 | 1500 |
| 2000 | 6000 | 10000 | 8000 | 5000 | 1500 |
| 1500 | 3000 | 10000 | 6000 | 2500 | 1500 |
# Functions and characteristics

## TransferPact

### Mechanical interlocking

<table>
<thead>
<tr>
<th>Range</th>
<th>ComPact</th>
<th>ComPact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Models</td>
<td>INS40 to INS80</td>
<td>INS250 to INS630</td>
</tr>
<tr>
<td></td>
<td>INS100 to INS160</td>
<td>INV250 to INV630</td>
</tr>
<tr>
<td>Current rating (A)</td>
<td>40 to 160</td>
<td>100 to 630</td>
</tr>
<tr>
<td>Type of device</td>
<td>Class PC</td>
<td>Class PC and Class CB</td>
</tr>
</tbody>
</table>

**Interlocking by toggles**

**Interlocking by rotary handles**

**Interlocking by keylocks with captive keys**

**Interlocking by a base plate**

**Range**

<table>
<thead>
<tr>
<th><strong>TransferPact FXM complete source - changeover assembly</strong></th>
</tr>
</thead>
</table>
Functions and characteristics

TransferPact

Mechanical interlocking

<table>
<thead>
<tr>
<th>Range</th>
<th>ComPact</th>
<th>MasterPact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Models</td>
<td>NS630b to NS1600</td>
<td>MTZ1 06 to 16</td>
</tr>
<tr>
<td>Current rating (A)</td>
<td>630b to 1600</td>
<td>630 to 1600</td>
</tr>
<tr>
<td>Type of device</td>
<td>Class PC and Class CB</td>
<td>Class PC and Class CB</td>
</tr>
</tbody>
</table>

Interlocking by extended rotary handles

Interlocking via device keylocks by captive keys

Mechanical interlocking using connecting rods

Mechanical interlocking by cables

Mechanical interlocking by cables

[1] Implemented with NS630b to NS1600 electrically-operated devices only.

Note: for other cases, please consult us.
Functions and characteristics

TransferPact
Mechanical interlocking

Interlocking of two or three toggle-controlled devices

Interlocking system
Two devices can be interlocked using this system. Two identical interlocking systems can be used to interlock three devices installed side by side.

Authorized positions:
- one device closed (ON), the others open (OFF)
- all devices open (OFF).

The system is locked using one or two padlocks (Ø5 to 8 mm).

This system can be expanded to more than three devices.

There are two interlocking-system models:
- one for ComPact INS/INV
- one for ComPact NSX100 to NSX250
- one for ComPact NSX400 to NSX630.

Combinations of Normal and Replacement devices
All toggle-controlled fixed or plug-in ComPact NSX100 to NSX630 circuit breakers and switch-disconnectors of the same frame size can be interlocked. The devices must be either all fixed or all plug-in versions.

Interlocking of two devices by rotary handles

Interlocking system
Interlocking involves padlocking the rotary handles on two devices which may be either circuit breakers or switch-disconnectors.

Authorized positions:
- one device closed (ON), the other open (OFF)
- both devices open (OFF).

The system is locked using up to three padlocks (Ø5 to 8 mm).

There are two interlocking-system models:
- one for ComPact INS/INV
- one for ComPact NSX100 to NSX250
- one for ComPact NSX400 to NSX630.

Combinations of Normal and Replacement devices
All rotary-handle fixed or plug-in ComPact NSX100 to NSX630 circuit breakers and switch-disconnectors of the same frame size can be interlocked. The devices must be either all fixed or all plug-in versions.

Interlocking of devices by keylocks (captive keys)

Interlocking using keylocks is very simple and makes it possible to interlock two or more devices that are physically distant or that have very different characteristics, for example medium-voltage and low-voltage devices or a ComPact NSX100 to NSX630 switch-disconnector and circuit breaker.

Interlocking system
Each device is equipped with an identical keylock and the key is captive on the closed (ON) device. A single key is available for all devices. It is necessary to first open (OFF position) the device with the key before the key can be withdrawn and used to close another device.

A system of wall-mounted captive key boxes makes a large number of combinations possible between many devices.

Combinations of Normal and Replacement devices
All rotary-handle fixed or plug-in ComPact NSX100 to NSX630 circuit breakers and switch-disconnectors can be interlocked between each other or with any other device equipped with the same type of keylock.

TransferPact FXM
(complete manual source-changeover assembly)

These assemblies provide an easy way to implement source changeover functions with:
- a single 3-position rotary handle that controls the two switch-disconnectors (Normal source ON, OFF, Replacement source ON)
- a smaller size, taking up less room in the switchboard.

A complete source changeover assembly can be ordered with a single catalog number.
Interlocking of two devices by base plate

Interlocking system
A base plate designed for two ComPact NSX devices can be installed horizontally or vertically on a mounting rail. Interlocking is carried out on the base plate by a mechanism located behind the devices. In this way, access to the device controls and trip units is not blocked.

Combinations of Normal and Replacement devices
All rotary-handle and toggle-controlled ComPact NSX100 to NSX630 circuit breakers and switch-disconnectors can be interlocked. Devices must be either all fixed or all plug-in versions, with or without earth-leakage protection or measurement modules. An adaptation kit is required to interlock:
- two plug-in devices
- a ComPact NSX100 to NSX250 with an NSX400 to NSX630.

Connection to the downstream installation can be made easier using a coupling accessory.

Downstream coupling accessory
This accessory simplifies connection to bars and cables with lugs. It may be used to couple two switch-disconnectors and circuit breakers of the same size, ComPact INS/INV100 to 630 and ComPact NSX100 to 630.

Pitch between outgoing terminals:
- ComPact INS250 and INV100 to 250: 35 mm
- ComPact INS/INV320 to INS/INV630: 45 mm
- ComPact NSX400 to NSX630: 45 mm.

For ComPact NSX circuit breakers, the downstream coupling accessory can be used only with fixed versions.

Connection and insulation accessories
The coupling accessory can be fitted with the same connection and insulation accessories as the circuit breakers and switch-disconnectors.

Possible uses

<table>
<thead>
<tr>
<th>Possible uses</th>
<th>Downstream coupling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual source-changeover systems</td>
<td>Possible</td>
</tr>
<tr>
<td>INS250 (100 to 250 A) with rotary handle</td>
<td>—</td>
</tr>
<tr>
<td>NSX100 to NSX250 with rotary handle</td>
<td>—</td>
</tr>
<tr>
<td>NSX100 to NSX250 on base plate with toggle control</td>
<td>—</td>
</tr>
<tr>
<td>INS400 to INS630 (320 to 630 A) with rotary handle</td>
<td>—</td>
</tr>
<tr>
<td>NSX400 to NSX630 with rotary handle</td>
<td>—</td>
</tr>
<tr>
<td>NSX400 to NSX630 on base plate with toggle control</td>
<td>—</td>
</tr>
<tr>
<td>TransferPact FXM (complete source-changeover assembly)</td>
<td>—</td>
</tr>
<tr>
<td>FXM100 to 250</td>
<td>—</td>
</tr>
<tr>
<td>FXM320 to 630</td>
<td>—</td>
</tr>
</tbody>
</table>

Note: for usage of PowerTag NSX on NSX mounted on interlocking plate, please consult us.
Functions and characteristics

TransferPact

Mechanical interlocking

For implementing the mechanical interlocking, two different possibilities are offered:
- interlocking with rods
- interlocking with cables.

Interlocking with rods

Interlocking of two ComPact NS630b to 1600 devices using connecting rods

Both devices must be installed one above the other. For ComPact NS, only associations between similar type devices are allowed (2 fixed or 2 drawout devices).

Installation

This function requires:
- an adaptation fixture on the right side of each circuit breaker or switch-disconnector
- a set of connecting rods with no-slip adjustments.

The adaptation fixtures, connecting rods and circuit breakers or switch-disconnectors are supplied separately, ready for assembly.

The maximum vertical distance between the fixing plates is 900 mm.

Possible combinations of “S1” and “S2” source circuit breakers

Combinations are possible between ComPact NS devices and between ComPact NS devices with MasterPact MTZ1 devices (either 2 fixed or 2 withdrawable/drawout devices).

Interlocking of two MasterPact MTZ using connecting rods

Both devices must be installed one above the other. For MasterPact MTZ1 only associations between similar type devices are allowed (2 fixed or 2 drawout devices). For MasterPact MTZ2 and MTZ3, all mixed associations between fixed type and drawout type devices are possible.

<table>
<thead>
<tr>
<th>Source 1</th>
<th>Source 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fixed</td>
</tr>
<tr>
<td>NS630b to NS1600</td>
<td>MTZ1</td>
</tr>
<tr>
<td>MTZ1</td>
<td>( )</td>
</tr>
<tr>
<td>MTZ2</td>
<td>( )</td>
</tr>
<tr>
<td>MTZ3</td>
<td>( )</td>
</tr>
</tbody>
</table>

Installation

This function requires:
- an adaptation fixture on the right side of each circuit breaker or switch-disconnector
- a set of connecting rods with no-slip adjustments
- a mechanical operation counter CDM (mandatory).

The adaptation fixtures, connecting rods, circuit breakers and switch-disconnectors are supplied separately, ready for assembly.

The maximum vertical distance between the fixing plates is 900 mm.
Functions and characteristics

TransferPact

Mechanical interlocking

Interlocking with cables

Interlocking of two ComPact NS630b to 1600 devices using cables
For cable interlocking, the circuit breakers may be mounted one above the other or side-by-side. The interlocked devices may be fixed or drawout, three-pole or four-pole, and have different ratings and sizes.

Installation
This function requires:
- An adaptation fixture on the right side of each device
- A set of cables with no-slip adjustments.
The maximum distance between the fixing plates (vertical or horizontal) is 2000 mm.

Possible combinations of "S1" and "S2" source circuit breakers
All mixed associations between ComPact NS 630b to 1600 and MasterPact MTZ1 or MTZ2 or MTZ3 fixed type and drawout type devices are possible.

Interlocking of two or three MasterPact MTZ using cables
For cable interlocking, the circuit breakers can be installed either one above the other or side-by-side. All mixed associations between MasterPact MTZ1, MTZ2, MTZ3 fixed type and drawout type devices are possible.

Note: mechanical interlocking for 3 devices is only possible with MTZ2 and MTZ3.

Interlocking between two MasterPact MTZ1, MTZ2, MTZ3 devices
This function requires:
- An adaptation fixture on the right side of each device
- A set of cables without slip adjustments
- A mechanical operation counter CDM (mandatory).
The maximum distance between the fixing plates (vertical or horizontal) is 2000 mm.

Interlocking between three MasterPact MTZ2, MTZ3 devices
This function requires:
- A specific adaptation fixture installed on the right side of each device
- Two sets of cables without slip adjustments
- A mechanical operation counter CDM (mandatory).
The maximum distance between the fixing plates (vertical or horizontal) is 1000 mm.

Installation
The adaptation fixtures, sets of cables and circuit breakers or switch-disconnectors are supplied separately, ready for assembly.

Installation conditions for cable interlocking systems:
- Cable length: 2.5 m
- Cable bending radius: greater than 100 mm
- Maximum number of curves: 3.

Note: for cable length higher than 2.5 m please consult us before ordering the circuit breakers for a customized solution.

Choice criteria
In applications where the continuity of service is critical (data centers, airports, hospitals, marine, oil&gas, process industry, etc.), mechanical interlocking by rods and drawout devices are strongly recommended.
Mechanical interlocking by rods is preferred as less energy is consumed by friction, so it has less effect on the circuit breaker closing energy.
In terms of breaker mounting type, the drawout version is preferred as:
- It provides mechanical isolation of the circuit breaker from possible external stress on the terminals by having a flexible connection at cluster level
- It allows simple and total access for periodic maintenance
- It allows quick replacement of the device if necessary.
When not possible, cable interlocking or fixed versions can be used, but the installation rules detailed in the 2 sections below must be strictly respected and mainly:
- The busbars or the cables used for power connection must apply no stress on the circuit breaker terminals.
Their weight must be supported by the switchboard frame.

[1] For more details please contact your local support.
Note: for more details on installation rules, please also refer to “MasterPact MTZ User Guide”.
Electrical interlocking is used with a mechanical interlocking system. Moreover, the relays controlling the closing order to the "N" and "R" circuit breakers must be mechanically and/or electrically interlocked to prevent them from giving simultaneous closing commands.

Electrical interlocking is carried out by an electrical control device.

For ComPact NSX up to 630 A, electrical interlocking is implemented by the IVE unit integrating control circuits and an external terminal block in accordance with the page C-4 of the chapter "Electric diagrams" of this catalog. The integrated control circuits implement the time delays required for correct source transfer.

For ComPact NS630b to NS1600 and MasterPact, this function can be implemented in one of two ways:

- using the IVE unit
- by an electrician based on the diagrams in accordance with the pages C-8 to C-13 of the chapter "Electric diagrams" of this catalog.

**Characteristics of the IVE unit**

- **External connection terminal block:**
  - inputs: circuit breaker control signals
  - outputs: status of the SDE contacts on the "N" and "R" source circuit breakers.
- **2 connectors for the two "N" and "R" source circuit breakers:**
  - inputs:
    - status of the OF contacts on each circuit breaker (ON or OFF)
    - status of the SDE contacts on the "N" and "R" source circuit breakers
  - outputs: power supply for operating mechanisms.
- **Control voltage:**
  - 24 to 250 V DC
  - 48 to 415 V 50/60 Hz - 440 V 60 Hz.

The IVE unit control voltage must be same as that of the circuit breaker operating mechanisms.

**Symbols**

- QN: "Normal" ComPact circuit breaker equipped for remote operation (motor mechanism)
- QR: "Replacement" ComPact circuit breaker equipped for remote operation (motor mechanism)
- ON: Circuit breaker QN opening order
- OR: Circuit breaker QR opening order
- IN: Circuit breaker QN closing order
- IR: Circuit breaker QR closing order
- L1: Faulty "Normal" indication LED
- L2: Faulty "Replacement" indication LED

**Key**

- Q: OFF (circuit open)
- I: ON (circuit closed)
- : either ON or OFF.

**Note:** following all trips (overload, short-circuit, earth-leakage fault, voluntary trip), a manual reset on the front of the motor mechanism is required.
Necessary equipment

For ComPact NSX100 to NSX630, each circuit breaker must be equipped with:
- a motor mechanism
- an OF contact
- an SDE contact.
The components are supplied ready for assembly and the circuit breakers prewired. The prewiring must not be modified.

For ComPact NS630b to NS1600, each circuit breaker must be equipped with:
- a motor mechanism
- an available OF contact
- a CE connected-position contact (carriage switch) on withdrawable circuit breakers
- an SDE contact.

For MasterPact MTZ, each circuit breaker must be equipped with:
- a remote-operation system made up of:
  - MCH gear motor
  - MX or MN opening release
  - XF closing release
  - PF "ready to close" contact
  - CDM mechanical operation counter (mandatory)
  - an available OF contact
  - one to three CE connected-position contacts (carriage switches) on drawout circuit breakers (depending on the installation).
Functions and characteristics

TransferPact controllers

Controller selection

By combining a remote-operated source-changeover system with an integrated BA or UA automatic controller, it is possible to automatically control source transfer according to user-selected sequences. These controllers can be used on source-changeover systems comprising 2 circuit breakers. For source-changeover systems comprising 3 circuit breakers, the automatic control diagram must be prepared by the installer as a complement to diagrams provided in the “electrical diagrams” section of this catalog.

### Controller

Compatible circuit breakers

- All ComPact NS, ComPact NSX and MasterPact circuit breakers

### 4-position switch

- Automatic operation
- Forced operation on “Normal” source
- Forced operation on “Replacement” source
- Stop (both “Normal” and “Replacement” sources off)

### Automatic operation

- Monitoring of the “Normal” source and automatic transfer
- Generator set startup control
- Delayed shutdown (adjustable) of generator set
- Load shedding and reconnection of non-priority circuits
- Transfer to the “Replacement” source if one of the phases of the “Normal” phase is absent

### Test

- By opening the P25M circuit breaker supplying the controller
- By pressing the test button on the front of the controller

### Indications

- Circuit breaker status indication on the front of the controller: on, off, fault trip
- Automatic mode indicating contact

### Other functions

- Selection of type of “Normal” source: single-phase or three-phase (for example, 220 V single-phase or 220 V three-phase)
- Voluntary transfer to “Replacement” source (e.g. energy management commands)
- During peak-tariff periods (energy management commands) forced operation on “Normal” source if “Replacement” source not operational
- Additional contact (not part of controller). Transfer to “Replacement” source only if contact is closed (e.g. used to test the frequency of UR)
- Setting of maximum startup time for the replacement source

### Power supply

Control voltages

- 110 V
- 220 to 240 V 50/60 Hz
- 380 to 415 V 50/60 Hz and 440 V 60 Hz

### Operating thresholds

- Undervoltage 0.35 Un ≤ voltage ≤ 0.7 Un
- Phase failure 0.5 Un ≤ voltage ≤ 0.7 Un
- Voltage presence voltage ≥ 0.85 Un

### IP degree of protection (EN 60529)

- Front IP40
- Side IP30
- Connectors IP20
- Front IK07

### Characteristics of output contacts (dry, volt-free contacts)

- Rated thermal current (A) 8
- Minimum load 10 mA at 12 V
- Output contacts:
  - Position of the Auto/Stop switch
  - Load shedding and reconnection order
  - Generator set start order.

### Utilisation category (IEC 947-5-1)

<table>
<thead>
<tr>
<th>Voltage</th>
<th>AC12</th>
<th>AC13</th>
<th>AC14</th>
<th>AC15</th>
<th>DC12</th>
<th>DC13</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 V</td>
<td>8</td>
<td>7</td>
<td>5</td>
<td>5</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>48 V</td>
<td>8</td>
<td>7</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>110 V</td>
<td>8</td>
<td>6</td>
<td>4</td>
<td>4</td>
<td>0.6</td>
<td>-</td>
</tr>
<tr>
<td>220/240 V</td>
<td>8</td>
<td>6</td>
<td>4</td>
<td>4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>250 V</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.4</td>
<td>-</td>
</tr>
<tr>
<td>380/415 V</td>
<td>5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>440 V</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>660/690 V</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

[1] The controller is powered by the ACP control plate. The same voltage must be used for the ACP plate, the IVE unit and the circuit breaker operating mechanisms. If this voltage is the same as the source voltage, then the “Normal” and “Replacement” sources can be used directly for the power supply. If not, an isolation transformer must be used.
TransferPact ACP control plate

The control plate provides in a single unit:
- protection for the BA or UA controller with two highly limiting P25M circuit breakers (infinite breaking capacity) for power drawn from the AC source
- control of circuit breaker ON and OFF functions via two relay contactors
- connection of the circuit breakers to the BA or UA controller via a built-in terminal block.

Control voltages
- 110 V 50/60 Hz.
- 220 to 240 V 50/60 Hz.
- 380 to 415 V 50/60 Hz and 440 V 60 Hz.

The same voltage must be used for the TransferPact ACP control plate, the controller and the circuit breaker operating mechanisms.

Installation
Connection between the TransferPact ACP control plate and the IVE unit may use:
- wiring done by the installer
- prefabricated wiring (optional).

Installation of the BA and UA controllers
The BA and UA controllers may be installed in one of two manners:
- directly mounted on the TransferPact ACP control plate
- mounted on the front panel of the switchboard
- if the length of the connection between the controller and the control plate (ACP) is less than or equal to 1 m, the connecting cable ref. 29368 can be ordered as an optional extra. Cables longer than 1 m, but not longer than 2 m will be the responsibility of the installer.

Mounting on the TransferPact ACP control plate.

Mounting on the front panel of the switchboard.
The BA controller is used to create simple source-changeover systems that switch from one source to another depending on the presence of voltage UN on the “Normal” source. It is generally used to manage two permanent sources and can control ComPact NS, ComPact NSX and MasterPact MTZ circuit breakers and switch-disconnectors.

Operating modes
A four-position switch may be used to select:
- automatic operation
- forced operation on the “Normal” source
- forced operation on the “Replacement” source
- stop (both “Normal” and “Replacement” sources off).

Setting the time delays
Time delays are set on the front of the controller.

- \( t_1 \): delay between detection that the “Normal” source has failed and the transmission of the order to open the “Normal” source circuit breaker (adjustable from 0.1 to 30 seconds).
- \( t_2 \): delay between detection that the “Normal” source has returned and the transmission of the order to open the “Replacement” source circuit breaker (adjustable from 0.1 to 240 seconds).

Circuit breaker commands and status indications
The status of the circuit breakers is indicated on the front of the controller.
- ON, OFF, fault.

A built-in terminal block may be used to connect the following input/output signals:
- inputs:
  - voluntary order to transfer to source R (e.g. for special tariffs, etc.)
  - additional control contact (not part of the controller). Transfer to the “Replacement” source takes place only if the contact is closed (e.g. used to test the frequency of UR, etc.)
- outputs:
  - indication of operation in automatic or stop mode via changeover contacts.

Test
It is possible to test the operation of the BA controller by turning OFF (opening) the P25M circuit breaker for the “Normal” source and thus simulating a failure of voltage UN.
Functions and characteristics

TransferPact controllers
BA controller
Operating sequences

Switch set to Auto (automatic operation and special-tariff mode)

Switch set to the “N” position (forced operation on the “Normal” source)

Switch set to the “R” position (forced operation on the “Replacement” source)

Switch set to the “Stop” position

Key
UN: “Normal” source voltage
UR: “Replacement” source voltage
N: “Normal” source circuit breaker
R: “Replacement” source circuit breaker
1 The number sends to the indicated step when the condition is true.

WAITING
The system exits this mode when the operating mode is modified or when an external event occurs (e.g. failure or return of UN).
TransferPact controllers
UA controller

The UA controller is used to create a source-changeover system integrating the following automatic functions:
- transfer from one source to another depending on the presence of voltage UN on the “Normal” source
- startup of an engine generator set
- shedding and reconnection of non-priority circuits
- transfer to the “Replacement” source if one of the phases on the “Normal” source fails.

The UA controller can control ComPact NS, ComPact NSX and MasterPact MTZ devices.

Operating modes
A four-position switch may be used to select:
- automatic operation
- forced operation on the “Normal” source
- forced operation on the “Replacement” source
- stop (both “Normal” and “Replacement” sources off, then manual operation).

Setting the time delays
Time delays are set on the front of the controller.
- t1. delay between detection that the “Normal” source has failed and the transmission of the order to open the “Normal” source circuit breaker (adjustable from 0.1 to 30 seconds).
- t2. delay between detection that the “Normal” source has returned and the transmission of the order to open the “Replacement” source circuit breaker (adjustable from 0.1 to 240 seconds).
- t3. delay following opening of QN with load shedding and before closing of QR (adjustable from 0.5 to 30 seconds).
- t4. delay following opening of QR with load reconnection and before closing of QN (adjustable from 0.5 to 30 seconds).
- t5. delay for confirmation that UN is present before shutting down the engine generator set (adjustable from 60 to 600 seconds).
- t6. delay before startup of the engine generator set (120 or 180 seconds).

Commands and indications
Circuit breaker status indications on the front of the controller:
- ON, OFF, fault.

A built-in terminal block may be used to connect the following input/output signals:
- inputs:
  - voluntary order to transfer to source R (e.g. for special tariffs, etc.)
  - additional control contact (not part of the controller). Transfer to the “Replacement” source takes place only if the contact is closed (e.g. used to test the frequency of UR, etc.)
- outputs:
  - control of an engine generator set (ON / OFF)
  - shedding of non-priority circuits
  - indication of operation in automatic mode via changeover contacts.

Distribution-system settings
Three switches are used to:
- select the type of “Normal” source, whether single-phase or three-phase (e.g. 240 V single-phase or 240 V three-phase)
- select whether to remain (or not) on the “Normal” source if the “Replacement” source is not operational during operation on special tariffs
- select the maximum permissible startup time for the engine generator set during operation on special tariffs (120 or 180 seconds).

Test
A pushbutton on the front of the controller may be used to test transfer from the “Normal” source to the “Replacement” source, then the return to the “Normal” source. The test lasts approximately three minutes.

COM communications option
Using the internal bus protocol, this option may be used to remote the following information:
- circuit breaker status (ON, OFF, fault trip)
- presence of the “Normal” and “Replacement” voltages
- presence of an order for forced operation (e.g. special tariffs)
- settings and configuration information
- status of non-priority circuits (loads shed or not)
- position of the switch (stop, auto, forced operation on the “Normal” source, forced operation on the “Replacement” source).
Functions and characteristics

TransferPact controllers

UA controller

Operating sequences, forced operation mode

Switch set to the “R” position
(forced operation on the “Replacement” source)

Switch set to the “N” position
(forced operation on the “Normal” source)

Key
- UN: “Normal” source voltage
- UR: “Replacement” source voltage
- N: “Normal” source circuit breaker
- R: “Replacement” source circuit breaker

The system exits this mode when the operating mode is modified or when an external event occurs (e.g. failure or return of UN).

When the UA controller is not energized, the output for generator set startup is activated.

WAITING

When the UA controller is not energized, the output for generator set startup is activated.

WAITING
Functions and characteristics

TransferPact controllers

UA controller

Operating sequences, special-tariff mode

Switch set to the “Auto” position (special-tariff mode)

WAITING

The system exits this mode when the operating mode is modified or when an external event occurs (e.g. failure or return of UN).

When the UA controller is not energized, the output for generator set startup is activated.

Key
UN: “Normal” source voltage
UR: “Replacement” source voltage
N: “Normal” source circuit breaker
R: “Replacement” source circuit breaker
B: Penalties accepted (N ON), i.e. B = 1

The number sends to the indicated step when the condition is true.
Switch set to the “Auto” position (automatic operation and test mode).

**Key**
- UN: “Normal” source voltage
- UR: “Replacement” source voltage
- N: “Normal” source circuit breaker
- R: “Replacement” source circuit breaker
- B: Penalties accepted (N ON), i.e. B = 1


[1] The number sends to the indicated step when the condition is true.
Functions and characteristics

TransferPact controllers

UA/BA controller

**BA controller**

**Inputs**
- UN: "Normal" source voltage
- UR: "Replacement" source voltage
- KT: order for forced-operation on R
- KR: additional check before transfer

**Outputs**
- QN: "Normal" source circuit breaker
- QR: "Replacement" source circuit breaker

**UA controller**

**Inputs**
- UN: "Normal" source voltage
- UR: "Replacement" source voltage
- KT: order for forced-operation on R
- KR: additional check before transfer

**Outputs**
- KG: order to the genset
- SH: load-shedding order
- QN: "Normal" source circuit breaker
- QR: "Replacement" source circuit breaker

**Key**
- O: OFF (circuit open)
- I: ON (circuit closed)
- : either ON or OFF.

**Important**
If UR is not ON when the transfer order is issued (KT or UN), the sequence is not carried out. If KR status is not ON when the transfer order is issued (KT or UN), the transfer sequence is carried out later when KR status becomes I.
Dimensions of the TransferPact Switch Equipment

Manual source-changeover systems
ComPact INS/INV ................................................................. B-2
TransferPact FXM ............................................................... B-3
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Source-changeover systems
Mechanical interlocking using connecting rods ............ B-12
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Dimensions of the TransferSwitch Equipment

Manual source-changeover systems

ComPact INS/INV

Interlocking of direct rotary handles
(ComPact INS/INV250 - 100 to 250 A / ComPact INS/INV320/400/500/630)

Dimensions

Front-panel cutout

Dimensions (mm)

<table>
<thead>
<tr>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>K</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>INS/INV250 - 100 to 250 A</td>
<td>325</td>
<td>90</td>
<td>87.5</td>
<td>175</td>
<td>156</td>
<td>106</td>
<td>17.5</td>
<td>295</td>
<td>75.5</td>
<td>150</td>
<td>75</td>
<td>131</td>
</tr>
<tr>
<td>INS/INV320/400/500/630</td>
<td>416</td>
<td>115</td>
<td>100</td>
<td>200</td>
<td>210</td>
<td>130</td>
<td>22.5</td>
<td>386</td>
<td>100</td>
<td>175</td>
<td>74.5</td>
<td>160.4</td>
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</table>

Note: X and Y are the symmetry planes for a 3-pole device.

Interlocking of extended rotary handles
(ComPact INS40/63/80/100/125/160 / ComPact INS/INV250 - 100 to 250 A / ComPact INS/INV320/400/500/630)

Dimensions

Front-panel cutout

Dimensions (mm)

<table>
<thead>
<tr>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>F</th>
<th>G</th>
<th>H</th>
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<th>L</th>
<th>M</th>
<th>N</th>
<th>P</th>
</tr>
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<tbody>
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<td>175</td>
<td>156</td>
<td>155</td>
<td>396</td>
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<td>25.5</td>
<td>25.5</td>
<td></td>
<td></td>
</tr>
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<td>156</td>
<td>200</td>
<td>441</td>
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<td>25.5</td>
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<tr>
<td>INS/INV250 - 100 to 250 A</td>
<td>325</td>
<td>90</td>
<td>87.5</td>
<td>175</td>
<td>156</td>
<td>185</td>
<td>600</td>
<td>17.5</td>
<td>25.5</td>
<td>25.5</td>
<td></td>
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</tr>
<tr>
<td>INS320/400/500/630</td>
<td>416</td>
<td>115</td>
<td>100</td>
<td>200</td>
<td>210</td>
<td>204</td>
<td>600</td>
<td>22.5</td>
<td>30.8</td>
<td>30.8</td>
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</table>
Complete manual source-changeover assembly
TransferPact FXM with direct rotary handle

Dimensions (mm)

<table>
<thead>
<tr>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>FXM 100 to 250 A</td>
<td>60.4</td>
<td>130.4</td>
<td>296</td>
<td>88</td>
<td>136</td>
<td>131</td>
<td>61.8</td>
<td>279.3</td>
<td>42</td>
<td>84</td>
<td>156</td>
<td>186.5</td>
<td>5.5</td>
<td>50</td>
</tr>
<tr>
<td>FXM 320 to 630 A</td>
<td>82.5</td>
<td>175</td>
<td>395</td>
<td>102.5</td>
<td>205</td>
<td>155</td>
<td>87</td>
<td>383.7</td>
<td>64</td>
<td>128</td>
<td>210</td>
<td>213</td>
<td>8</td>
<td>50</td>
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</table>

TransferPact FXM with extended handle

Dimensions (mm)

<table>
<thead>
<tr>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>E</th>
<th>K</th>
<th>L</th>
<th>M</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>FXM 100 to 250 A</td>
<td>60.4</td>
<td>130.4</td>
<td>295</td>
<td>136</td>
<td>156</td>
<td>138.5</td>
<td>631</td>
<td>50</td>
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<tr>
<td>FXM 320 to 630 A</td>
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<td>175</td>
<td>395</td>
<td>205</td>
<td>210</td>
<td>162.5</td>
<td>658</td>
<td>75</td>
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</tbody>
</table>

Note: lines X and Y indicate the axes of symmetry of the switch-disconnector. Reference plane Z corresponds to the back of the switch-disconnector.
Dimensions of the TransferPact Switch Equipment

Manual source-changeover systems
ComPact NSX

Class PC and CB

Interlocking of direct rotary handles
(ComPact NSX100 to NSX630 and ComPact NSX100 NA to NSX630 NA)

Dimensions

Interlocking of extended rotary handles
(ComPact NSX100 to NSX630 and ComPact NSX100 NA to NSX630 NA)

Dimensions

Dimensions (mm)

<table>
<thead>
<tr>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSX100/160/250 and NA</td>
<td>325</td>
<td>90</td>
<td>87.5</td>
<td>175</td>
<td>156</td>
<td>133</td>
<td>9.25</td>
<td>9</td>
<td>295</td>
<td>75.5</td>
<td>150</td>
<td>75</td>
<td>155</td>
<td></td>
</tr>
<tr>
<td>NSX400/630 and NA</td>
<td>416</td>
<td>115</td>
<td>100</td>
<td>200</td>
<td>210</td>
<td>157</td>
<td>5</td>
<td>24.6</td>
<td>386</td>
<td>175</td>
<td>74.5</td>
<td>179</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Interlocking of direct rotary handles
(ComPact NSX100 to NSX630 and ComPact NSX100 NA to NSX630 NA)

Dimensions

Dimensions (mm)

<table>
<thead>
<tr>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
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<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSX100/160/250 and NA</td>
<td>325</td>
<td>90</td>
<td>87.5</td>
<td>175</td>
<td>156</td>
<td>133</td>
<td>9.25</td>
<td>9</td>
<td>295</td>
<td>75.5</td>
<td>150</td>
<td>75</td>
<td>155</td>
<td></td>
</tr>
<tr>
<td>NSX400/630 and NA</td>
<td>416</td>
<td>115</td>
<td>100</td>
<td>200</td>
<td>210</td>
<td>157</td>
<td>5</td>
<td>24.6</td>
<td>386</td>
<td>175</td>
<td>74.5</td>
<td>179</td>
<td></td>
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</table>
Class PC and CB

Interlocking of toggles
(ComPact NSX100 to NSX630 and ComPact NSX100 NA to NSX630 NA)

Dimensions

<table>
<thead>
<tr>
<th>Type</th>
<th>C2</th>
<th>C3</th>
<th>L</th>
<th>L16</th>
<th>L17</th>
<th>L18</th>
<th>R2</th>
<th>R18</th>
<th>R19</th>
<th>P5</th>
<th>P</th>
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<tbody>
<tr>
<td>NSX100/160/250 and NA</td>
<td>54</td>
<td>108</td>
<td>52.5</td>
<td>140</td>
<td>245</td>
<td>280</td>
<td>54</td>
<td>89</td>
<td>140</td>
<td>83</td>
<td>120</td>
</tr>
<tr>
<td>NSX400/630 and NA</td>
<td>92.5</td>
<td>182</td>
<td>70</td>
<td>185</td>
<td>325</td>
<td>370</td>
<td>71.5</td>
<td>116.5</td>
<td>185</td>
<td>107</td>
<td>150</td>
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</table>

Front-panel cutout

Dimensions (mm)
Manual source-changeover systems

**ComPact NSX - Interlocking on a base plate**

Class PC and CB

### Dimensions of the Transfer **Pact** Switch Equipment

**ComPact NSX100 to NSX250 and ComPact NSX100 NA to NSX250 NA**

Dimensions, 3 or 4 poles

<table>
<thead>
<tr>
<th>Type</th>
<th>G50</th>
<th>G51</th>
<th>H20</th>
<th>H21</th>
<th>H22</th>
<th>H23</th>
<th>H42</th>
<th>H43</th>
<th>H44</th>
<th>H45</th>
<th>H46</th>
<th>K25</th>
<th>K35</th>
<th>K36</th>
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<tbody>
<tr>
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<td>137.5</td>
<td>285</td>
<td>62.5</td>
<td>97</td>
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<td>73</td>
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<td>120</td>
<td>144.5</td>
<td>300</td>
<td>37</td>
<td>156</td>
<td>210.5</td>
<td>300</td>
</tr>
<tr>
<td>NSX400/630 and NA</td>
<td>180</td>
<td>360</td>
<td>100</td>
<td>152</td>
<td>83</td>
<td>123</td>
<td>60</td>
<td>120</td>
<td>189</td>
<td>378</td>
<td>77</td>
<td>210</td>
<td>282.5</td>
<td>400</td>
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</table>

Dimensions (mm)

<table>
<thead>
<tr>
<th>Type</th>
<th>L31</th>
<th>L32</th>
<th>P7</th>
<th>P8</th>
<th>P9</th>
<th>P32</th>
<th>P33</th>
<th>P50</th>
<th>P52</th>
<th>P54</th>
<th>ØT9</th>
<th>ØT10</th>
<th>U</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSX100/160/250 and NA</td>
<td>110.5</td>
<td>354</td>
<td>25</td>
<td>45</td>
<td>75</td>
<td>182</td>
<td>143</td>
<td>25</td>
<td>99.5</td>
<td>21</td>
<td>9</td>
<td>6</td>
<td>&lt; 32</td>
</tr>
<tr>
<td>NSX400/630 and NA</td>
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<td>466</td>
<td>25</td>
<td>45</td>
<td>100</td>
<td>256</td>
<td>215</td>
<td>25</td>
<td>123</td>
<td>21</td>
<td>9</td>
<td>6</td>
<td>&lt; 32</td>
</tr>
</tbody>
</table>

**Note:** coupling accessory: only for changeover systems using fixed versions of ComPact NSX circuit breakers.

[1] Short terminal shields are mandatory.
Class PC and CB

ComPact NSX400 to NSX630 and ComPact NSX400 NA to NSX630 NA
Dimensions, 3 or 4 poles

Fixed device

Note: coupling accessory: only for changeover systems using fixed versions of ComPact NSX circuit breakers.

Vertical mounting

Withdrawable device

Note: for dimensions see page B-6.

[1] Short terminal shields are mandatory.
Dimensions of the TransferPact Switch Equipment

Manual source-changeover systems

ComPact NSX - Interlocking on a base plate

Class PC and CB

“Normal” and “Replacement” source devices: NSX100 to NSX250

Dimensions

Front-panel cutout

“Normal” and “Replacement” source devices: NSX400 to NSX630

Dimensions

Front-panel cutout

Note for ComPact NSX: For dimensions with the accessories (IP40 escutcheons and Vigi escutcheon protection collars), see Catalog ComPact.
Dimensions of the TransferPact Switch Equipment

Manual source-changeover systems
ComPact NSX - Interlocking on a base plate

Class PC and CB

NSX400 to NSX630 as the “Normal” device, NSX100 to NSX250 as the “Replacement” device

Dimensions

Front-panel cutout
Dimensions of the TransferPact Switch Equipment

Downstream coupling accessory

ComPact NSX100 to NSX630, ComPact NSX100 NA to NSX630 NA and ComPact INS/INV


Class PC and CB

Dimensions for ComPact NSX

Dimensions for ComPact INS/INV

### Dimensions (mm)

<table>
<thead>
<tr>
<th>Type</th>
<th>G2</th>
<th>G3</th>
<th>G28</th>
<th>G29</th>
<th>G30</th>
<th>G52</th>
<th>K1</th>
<th>K2</th>
<th>K3</th>
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<th>K5</th>
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<td>152.5</td>
<td>178</td>
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<td>51</td>
<td>156</td>
<td>70</td>
<td>170</td>
<td>8</td>
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<tr>
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<td>264.7</td>
<td>337.5</td>
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<td>220.5</td>
<td>264.7</td>
<td>45</td>
<td>45</td>
<td>75</td>
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<td>169</td>
<td>232</td>
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<td>140</td>
<td>165.5</td>
<td>35</td>
<td>35</td>
<td>51</td>
<td>156</td>
<td>57.5</td>
<td>157.5</td>
<td>25.5</td>
</tr>
<tr>
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<td>45</td>
<td>75</td>
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<td>88.5</td>
<td>225.7</td>
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### Dimensions (mm)

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<th>L30</th>
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<th>L34</th>
<th>L35</th>
<th>L36</th>
<th>L37</th>
<th>L39</th>
<th>L40</th>
<th>ØT</th>
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</thead>
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<tr>
<td>NSX400/630 and NA</td>
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<td>130</td>
<td>400</td>
<td>117.5</td>
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<td>72</td>
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<td>21.5</td>
<td>70</td>
<td>8.5</td>
<td>140</td>
<td>6</td>
</tr>
<tr>
<td>INS320/400/500/630</td>
<td>425</td>
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<td>400</td>
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<td>17.35</td>
<td>175.3</td>
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<td>98.5</td>
<td>26</td>
<td>92.5</td>
<td>12.65</td>
<td>184.7</td>
<td>6</td>
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</table>
Dimensions of the TransferPact Switch Equipment

Manual source-changeover systems

ComPact NS - Interlocking on a base plate

Class PC and CB

Interlocking of extended rotary handles

ComPact NS630b to 1600 and ComPact NS630b NA to NS1600 NA

Dimensions

Front-panel cutout

Dimensions (mm)

<table>
<thead>
<tr>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>F</th>
<th>G min</th>
<th>G max</th>
<th>H</th>
<th>J</th>
<th>P</th>
<th>Q</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>NS630b/800/1000/1200/1600</td>
<td>411</td>
<td>63.5</td>
<td>98</td>
<td>175</td>
<td>280</td>
<td>218</td>
<td>605</td>
<td>25</td>
<td>24</td>
<td>25.5</td>
<td>25.5</td>
<td>64</td>
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Dimensions of the TransferPact Switch Equipment

Source-changeover systems
Mechanical interlocking using connecting rods
ComPact NS and MasterPact MTZ1

ComPact NS630b to NS1600 and ComPact NS630b NA to NS1600 NA devices one above the other

<table>
<thead>
<tr>
<th>Fixed devices</th>
<th>Withdrawable devices</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

Two MasterPact MTZ1 devices (switch-disconnectors or circuit breakers) one above the other

<table>
<thead>
<tr>
<th>Fixed devices</th>
<th>Withdrawable devices</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Dimensions of the TransferPact Switch Equipment

Source-changeover systems
Mechanical interlocking using connecting rods

MasterPact MTZ2/MTZ3

Class PC and CB

Two MasterPact MTZ2/MTZ3 devices (switch-disconnectors or circuit breakers)
one above the other

Fixed devices

Withdrawable devices

Source-changeover systems
Mechanical interlocking using connecting rods

MasterPact MTZ2/MTZ3
Dimensions of the TransferPact Switch Equipment

Source-changeover systems
Mechanical interlocking using connecting cables
ComPact NS and MasterPact MTZ1/MTZ2/MTZ3

ComPact NS630b to NS1600 and ComPact NS630b NA to NS1600 NA devices side-by-side

Fixed devices

Withdrawable devices

Two MasterPact MTZ1 devices (switch-disconnectors or circuit breakers) side-by-side

Fixed devices

Drawout devices

Combination of two MasterPact MTZ1 and MTZ2/MTZ3 devices (switch-disconnectors or circuit breakers) side-by-side

Fixed devices

Drawout devices
Dimensions of the TransferPact Switch Equipment

Source-changeover systems

Mechanical interlocking using connecting cables

ComPact NS and MasterPact MTZ1

Class PC and CB

Two ComPact NS630b to NS1600 and ComPact NS630b NA to NS1600 NA devices one above the other

Fixed devices

Withdrawable devices

Two MasterPact MTZ1 devices (switch-disconnectors or circuit breakers) one above the other

Fixed devices

Drawout devices
Dimensions of the TransferPact Switch Equipment

Source-changeover systems
Mechanical interlocking using connecting cables
MasterPact MTZ

Class PC and CB

Two MasterPact MTZ2/MTZ3 devices (switch-disconnectors or circuit breakers)
one above the other

<table>
<thead>
<tr>
<th>Fixed devices</th>
<th>Drawout devices</th>
</tr>
</thead>
</table>

[Diagram images showing dimensions and configurations for fixed and drawout devices for MasterPact MTZ1 and MTZ2/MTZ3 devices.]

Two MasterPact MTZ1 and MTZ2/MTZ3 devices (switch-disconnectors or circuit breakers)
one above the other

[Diagram images showing dimensions and configurations for fixed and drawout devices for MasterPact MTZ1 and MTZ2/MTZ3 devices.]
Dimensions of the TransferPact Switch Equipment

Source-changeover systems
Mechanical interlocking using connecting cables

MasterPact MTZ2/MTZ3

Class PC and CB

Two MasterPact MTZ2/MTZ3 devices side-by-side

Fixed devices

Drawout devices

Three MasterPact MTZ2/MTZ3 devices (switch-disconnectors or circuit breakers) side-by-side

Fixed devices

Drawout devices
Dimensions of the TransferPact Switch Equipment

Source-changeover systems
Mechanical interlocking using connecting cables
MasterPact MTZ2/MTZ3

Three MasterPact MTZ2/MTZ3 devices (switch-disconnectors or circuit breakers) one above the other

Class PC and CB

Fixed devices

Drawout devices
Dimensions of the TransferPact Switch Equipment

TransferPact

IVE unit, UA/BA controllers

### IVE unit

![Diagram of IVE unit dimensions]

### UA/BA controllers

![Diagram of UA/BA controllers dimensions]

### ACP control plate and UA/BA controllers

![Diagram of ACP control plate and UA/BA controllers dimensions]

### Door cutout for UA/BA controllers

![Diagram of door cutout dimensions]

[1] Cutout according to DIN 43700 standard.
Dimensions of the TransferPact Switch Equipment
Electrical diagrams

Standard configurations.................................................................C-2

Remote-operated source-changeover systems
2 ComPact NSX100/630, NS630b/1600
or MasterPact MTZ1/MTZ2/MTZ3 devices .........................................C-4
2 ComPact NSX100/630 devices .........................................................C-5
2 ComPact NS630b/1600 devices .......................................................C-8
2 MasterPact MTZ1 or MTZ2/MTZ3 devices .......................................C-11

Source-changeover systems with UA controllers
2 ComPact NSX100/630, NS630b/1600
or MasterPact MTZ1/MTZ2/MTZ3 devices .........................................C-16
Controller settings ........................................................................C-17

Source-changeover systems with BA controllers
2 ComPact NSX100/630, NS630b/1600
or MasterPact MTZ1/MTZ2/MTZ3 devices .........................................C-18

Remote-operated source-changeover systems
3 MasterPact MTZ2/MTZ3 devices .....................................................C-19
### ComPact NS, MasterPact MTZ1 and MTZ2/MTZ3

<table>
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<tr>
<th>Types of mechanical interlocking</th>
<th>Possible combinations</th>
<th>Typical electrical diagrams</th>
<th>Diagram no.</th>
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<td>ComPact NSX100 to 630:</td>
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<td>- electrical interlocking without emergency power off (EPO) auxiliaries: 51201177</td>
<td>C-5</td>
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<td>- with EPO by MN: 51201178</td>
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<td>- with EPO by MX: 51201179</td>
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<td>ComPact NS630b to 1600:</td>
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<td>- electrical interlocking with lockout after fault:永久电源替换 (with IVE)</td>
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<tr>
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<td>- with emergency off by shunt release MX (with IVE) 51201184</td>
<td>C-9</td>
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<tr>
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<td>- with emergency off by undervoltage release MN (with IVE) 51201185</td>
<td>C-10</td>
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<td>MasterPact MTZ1 and MTZ2/3:</td>
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<td>- electrical interlocking with lockout after fault:永久电源替换 (with IVE)</td>
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<td>- with permanent replacement source (with IVE) 51201183</td>
<td>C-8</td>
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<td>- with EPO by MX (with IVE) 51201184</td>
<td>C-9</td>
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<td>- with EPO by MN (with IVE) 51201185</td>
<td>C-10</td>
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<tr>
<td></td>
<td></td>
<td>automatic control with lockout after fault:永久电源替换 (with IVE)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- with permanent replacement source (with IVE) 51201183</td>
<td>C-8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- with engine generator set (with IVE) 51201185</td>
<td>C-10</td>
<td></td>
</tr>
</tbody>
</table>

```
QN QR
0 0
1 0
0 1
```
### MasterPact MTZ2/MTZ3 only

#### Types of mechanical interlocking

<table>
<thead>
<tr>
<th>Possible combinations</th>
<th>Typical electrical diagrams</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 devices: 2 &quot;Normal&quot; sources and 1 &quot;Replacement&quot; source</td>
<td>Page</td>
</tr>
<tr>
<td>QN1 QN2 QR</td>
<td>0 0 0</td>
</tr>
<tr>
<td></td>
<td>1 1 0</td>
</tr>
<tr>
<td></td>
<td>0 0 1</td>
</tr>
</tbody>
</table>

#### 3 devices: 2 "Normal" sources and 1 "Replacement" source with source selection

<table>
<thead>
<tr>
<th>QN1 QN2 QR</th>
<th>automatic control with engine generator set:</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 0 0</td>
<td>□ without lockout after fault (with MN)</td>
</tr>
<tr>
<td>1 0 0</td>
<td>□ with lockout after fault (with MN)</td>
</tr>
</tbody>
</table>

#### 3 devices: 3 sources, only one device

<table>
<thead>
<tr>
<th>QS1 QS2 QS3</th>
<th>electrical interlocking:</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 0 0</td>
<td>□ without lockout after fault</td>
</tr>
<tr>
<td>1 0 0</td>
<td>□ with lockout after fault</td>
</tr>
</tbody>
</table>

#### 3 devices: 2 sources + 1 coupling

<table>
<thead>
<tr>
<th>QS1 QC QS2</th>
<th>electrical interlocking:</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 0 0</td>
<td>□ without lockout after fault</td>
</tr>
<tr>
<td>1 0 1</td>
<td>□ with lockout after fault</td>
</tr>
<tr>
<td>1 1 0</td>
<td>□ automatic control with lockout after fault</td>
</tr>
</tbody>
</table>

---

*Lockout after fault* option. This option makes it necessary to manually reset the device following fault tripping.
Remote-operated source-changeover systems

2 ComPact NSX100/630, NS630b/1600 or MasterPact MTZ1/MTZ2/MTZ3 devices

Electrical interlocking by the IVE unit

**Independent order to Normal/Replacement source**

- Closure order to "Replacement" source
- Closure order to "Normal" source
- Opening order to "Replacement" source
- Opening order to "Normal" source

**Simultaneous order to Normal/Replacement source**

- Order for transfer to "Replacement" source
- Order for transfer to "Normal" source

**Legends**

- ON: "Normal" source opening order
- OR: "Replacement" source opening order
- CN: "Normal" source closing order
- CR: "Replacement" source closing order
- KA1: auxiliary relay
- KA2: auxiliary relay
- KA3: auxiliary relay
- KA4: auxiliary relay
- L1: "Normal" source "fault-trip" signal
- L2: "Replacement" source "fault-trip" signal
- N: "Normal" source auxiliary wiring connector
- R: "Replacement" source auxiliary wiring connector

**Note:** Diagram shown with circuits de-energized, circuit breakers open and relays in normal position.

**IMPORTANT**

The relays controlling the closing order to the "Normal" and "Replacement" circuit breakers must be mechanically and/or electrically interlocked to prevent them from giving simultaneous closing commands.

It is recommended to use Tesys K relays from Schneider Electric reference LC2-K06010. These relays are mechanically and electrically interlocked.


[2] Operating diagram: the SDE "fault-trip" signals are transmitted to the IVE unit. The SDE auxiliary contacts are mounted in the circuit breakers.
Source-changeover system without automatic-control system

Without auxiliaries for emergency off

Local reset

Voluntary remote reset

States permitted by mechanical interlocking system

<table>
<thead>
<tr>
<th>Normal</th>
<th>Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: diagram shown with circuits de-energized, circuit breakers open and relays in normal position.

[1] Prefabricated wiring: cannot be modified.

Legends
QN  “Normal” source ComPact NSX equipped with motor mechanism
QR  “Replacement” source ComPact NSX equipped with motor mechanism
SDE “fault-trip” indication contact
IVE electrical interlocking and terminal block unit
MT  motor mechanism
OF2 breaker ON/OFF indication contact
RN  reset order for breaker QN
RR  reset order for breaker QR
Source-changeover system without automatic-control system

With emergency off by MN release and automatic reset

[1] Prefabricated wiring supplied.

States permitted by mechanical interlocking system

<table>
<thead>
<tr>
<th>Normal</th>
<th>Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
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<tr>
<td>1</td>
<td>0</td>
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<td>0</td>
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</tbody>
</table>

Note: after a fault trip, the breaker must be reset manually by pressing its reset button.
Diagram shown with circuits de-energized, circuit breakers open and relays in normal position.

Legends
QN   “Normal” source ComPact NSX equipped with motormechanism
QR   “Replacement” source ComPact NSX equipped with motor mechanism
MN   undervoltage release
OF2  breaker ON/OFF indication contact
SDE  “fault-trip” indication contact
MT   motor mechanism
IVE  electrical interlocking and terminal block unit
BP   emergency off button with latching
KA5  auxiliary relay
F1   auxiliary power supply circuit breaker
Remote-operated source-changeover systems
2 ComPact NSX100/630 devices
Diagram no. 51201179

Source-changeover system without automatic-control system
With emergency off by MX release and automatic reset

Diagram no. 51201179

States permitted by mechanical interlocking system

<table>
<thead>
<tr>
<th>Normal</th>
<th>Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
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<tr>
<td>1</td>
<td>0</td>
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</table>

Note: after a fault trip, the breaker must be reset manually by pressing its reset button.
Diagram shown with circuits de-energized, circuit breakers open and relays in normal position.

Legend:
- **QN**: “Normal” source ComPact NSX equipped with motor mechanism
- **QR**: “Replacement” source ComPact NSX equipped with motor mechanism
- **SDE**: “fault-trip” indication contact
- **OF2**: breaker ON/OFF indication contact
- **MX**: shunt release
- **MT**: motor mechanism
- **IVE**: electrical interlocking and terminal block unit
- **KA5**: time-delayed auxiliary relays
- **KA6**: time-delayed auxiliary relays
- **F1**: auxiliary power supply circuit breaker
- **F2**: auxiliary power supply circuit breaker

[1] Prefabricated wiring supplied
[2] This source can be:
- the source present in the case of voltage monitoring
- an independent source.

In this case, the MX release must be protected.
[3] The reset orders must be delayed by 0.3 seconds.
Remote-operated source-changeover systems
2 ComPact NS630b/1600 devices
Diagram no. 51201183

Electrical interlocking by IVE unit

**ATTENTION**
The diagram shows the electrical wiring for circuit breakers. When wiring the SDE with switch-disconnectors, connect wire BK to terminal 82.

[1] Not to be wired on fixed version.

**Wiring colour codes**

<table>
<thead>
<tr>
<th>RD</th>
<th>GN</th>
<th>BK</th>
<th>VT</th>
<th>YE</th>
<th>GY</th>
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</tbody>
</table>

**States permitted by mechanical interlocking system**

<table>
<thead>
<tr>
<th>Normal</th>
<th>Replacement</th>
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<tbody>
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</table>

**Note:** after a fault trip, the breaker must be reset manually by pressing its reset button. Diagram shown with circuit breakers in connected position, open, charged, and ready to close. Auxiliary power supply = supply voltage of auxiliary relays (KA...). * supply voltage of electrical auxiliaries (electrical operation, MT...).
**Remote-operated source-changeover systems**

*2 ComPact NS630b/1600 devices*

**Diagram no. 51201184**

### Electrical interlocking by IVE unit with emergency off by shunt release

**ATTENTION**

The diagram shows the electrical wiring for circuit breakers. When wiring the SDE with switch-disconnectors, connect wire BK to terminal 82.

**Wiring colour codes**

<table>
<thead>
<tr>
<th>RD</th>
<th>GN</th>
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</table>

**States permitted by mechanical interlocking system**

<table>
<thead>
<tr>
<th>Normal</th>
<th>Replacement</th>
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**Note:** after a fault trip, the breaker must be reset manually by pressing its reset button. Diagram shown with circuit breakers in connected position, open, charged, and ready to close.

Auxiliary power supply = supply voltage of auxiliary relays (KA...)

= supply voltage of electrical auxiliaries (electrical operation, MX, MT...).
Electrical diagrams

Remote-operated source-changeover systems
2 ComPact NS630b/1600 devices
Diagram no. 51201185

Electrical interlocking by IVE unit with emergency off by undervoltage release

ATTENTION
The diagram shows the electrical wiring for circuit breakers. When wiring the SDE with switch-disconnectors, connect wire BK to terminal 82.

[1] Not to be wired on fixed version.

States permitted by mechanical interlocking system

<table>
<thead>
<tr>
<th>Normal</th>
<th>Replacement</th>
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<tr>
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Note: after a fault trip, the breaker must be reset manually by pressing its reset button.
Diagram shown with circuit breakers in connected position, open, charged, and ready to close.
Auxiliary power supply = supply voltage of auxiliary relays (KA...)
= supply voltage of electrical auxiliaries (electrical operation, MN, MT...).

Legends
QN “Normal” source ComPact NS630b to 1600
QR “Replacement” source ComPact NS630b to 1600
OF. breaker ON/OFF indication contact
SDE “fault-trip” indication contact
CE1 “connected-position” indication contact (carriage switch)
F1 auxiliary power supply circuit breaker
IVE electrical interlocking and terminal block unit
MN undervoltage release
BP emergency off button with latching
KAS auxiliary relay
ON “Normal” source opening order
OR “Replacement” source opening order
CN “Normal” source closing order (0.25 second delay)
CR “Replacement” source closing order (0.25 second delay)
MT Motor Mechanism

Wiring colour codes
RD GN BK VT YE GY WH BN
red green black violet yellow grey white brown
Remote-operated source-changeover systems
2 MasterPact MTZ1 or MTZ2/MTZ3 devices

Electrical interlocking by IVE unit with lockout after a fault

ATTENTION
The diagram shows the electrical wiring for circuit breakers. When wiring the SDE with switch-disconnectors, connect wire BK to terminal 82.

Legends
QN  “Normal” source MasterPact MTZ1 or MTZ2 or MTZ3
QR  “Replacement” source MasterPact MTZ1 or MTZ2 or MTZ3
MCH spring-charging motor
MX  standard opening voltage release
XF  standard closing voltage release
OF... breaker ON/OFF indication contact
SDE1 “fault-trip” indication contact
PF  “ready-to-close” contact
CE1 “connected-position” indication contact (carriage switch)
CH  “springs charged” indication contact
IVE electrical interlocking and terminal block unit
F1 auxiliary power supply circuit breaker
ON “Normal” source opening order
OR “Replacement” source opening order
CN “Normal” source closing order (0.25 second delay)
CR “Replacement” source closing order (0.25 second delay)

Wiring colour codes
<table>
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<th>BK</th>
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States permitted by mechanical interlocking system

<table>
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<th>Replacement</th>
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Note: diagram shown with circuit breakers in connected position, open, charged, and ready to close. Auxiliary power supply = supply voltage of auxiliary relays (KA...) = supply voltage of electrical auxiliaries (electrical operation, MCH, MX, XF...).

[1] Not to be wired for the “without lockout after a fault” solution.
[2] Not to be wired on fixed version.
Remote-operated source-changeover systems
2 MasterPact MTZ1 or MTZ2 or MTZ3 devices

Electrical interlocking by IVE unit with lockout after a fault and emergency off by shunt release

**Attention**
The diagram shows the electrical wiring for circuit breakers. When wiring the SDE with switch-disconnectors, connect wire BK to terminal 82.

**Legends**
- **QN**: “Normal” source MasterPact MTZ1 or MTZ2 or MTZ3
- **QR**: “Replacement” source MasterPact MTZ1 or MTZ2 or MTZ3
- **MCH**: spring-charging motor
- **MX**: standard opening voltage release
- **XF**: standard closing voltage release
- **OF**: breaker ON/OFF indication contact
- **SDE1**: “fault-trip” indication contact
- **PF**: “ready-to-close” contact
- **CE1**: “connected-position” indication contact (carriage switch)
- **CH**: “springs charged” indication contact
- **IVE**: electrical interlocking and terminal block unit
- **KA5**: auxiliary relay
- **F1**: auxiliary power supply circuit breaker
- **BP**: emergency off button with latching
- **ON**: “Normal” source opening order
- **OR**: “Replacement” source opening order
- **CN**: “Normal” source closing order (0.25 second delay)
- **CR**: “Replacement” source closing order (0.25 second delay)

**Wiring colour codes**
- **RD**: red
- **GN**: green
- **BK**: black
- **VT**: violet
- **YE**: yellow
- **GY**: grey
- **WH**: white
- **BN**: brown

**States permitted by mechanical interlocking system**

<table>
<thead>
<tr>
<th>Normal</th>
<th>Replacement</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>1</td>
<td>0</td>
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<tr>
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</tbody>
</table>

**Note:**
- Not to be wired for the “without lockout after a fault” solution.
- Not to be wired on fixed version.
- Prefabricated wiring supplied.
Electrical diagrams
Remote-operated source-changeover systems
2 MasterPact MTZ1 or MTZ2 or MTZ3 devices

Electrical interlocking by IVE unit with lockout after a fault and emergency off by undervoltage release

The diagram shows the electrical wiring for circuit breakers. When wiring the SDE with switch-disconnectors, connect wire BK to terminal 82.

ATTENTION
The diagram shows the electrical wiring for circuit breakers. When wiring the SDE with switch-disconnectors, connect wire BK to terminal 82.

[1] Not to be wired for the “without lockout after a fault” solution.
[2] Not to be wired on fixed version.

Legends
QN “Normal” source MasterPact MTZ1 or MTZ2 or MTZ3
QR “Replacement” source MasterPact MTZ1 or MTZ2 or MTZ3
MCH spring-charging motor
MX standard opening voltage release
XF standard closing voltage release
MN undervoltage release
OF... breaker ON/OFF indication contact
SDE1 “fault-trip” indication contact
PF “ready-to-close” contact
CE1 “connected-position” indication contact (carriage switch)
CH “springs charged” indication contact
IVE electrical interlocking and terminal block unit
KA5 auxiliary relay
F1 auxiliary power supply circuit breaker
BP emergency off button with latching
ON “Normal” source opening order
OR “Replacement” source opening order
CN “Normal” source closing order (0.25 second delay)
CR “Replacement” source closing order (0.25 second delay)

Wiring colour codes
<table>
<thead>
<tr>
<th>RD</th>
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<th>BK</th>
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</tbody>
</table>

States permitted by mechanical interlocking system

<table>
<thead>
<tr>
<th>Normal</th>
<th>Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
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</table>

Note: diagram shown with circuit breakers in connected position, open, charged, and ready to close.
Auxiliary power supply = supply voltage of auxiliary relays (KA...) = supply voltage of electrical auxiliaries (electrical operation, MCH, MX, MN, XF...).
Remote-operated source-changeover systems
2 MasterPact MTZ1 or MTZ2 or MTZ3 devices

Automatic-control system for permanent replacement source with lockout after a fault (with MN)

Attention
The diagram shows the electrical wiring for circuit breakers. When wiring the SDE with switch-disconnectors, connect wire BK to terminal 82.

Important
The relays controlling the closing order to the “Normal” and “Replacement” circuit breakers must be mechanically and/or electrically interlocked to prevent them from giving simultaneous closing commands.

It is recommended to use Tesys K relays from Schneider Electric reference LC2-K06010. These relays are mechanically and electrically interlocked.

Legends
QN “Normal” source MasterPact MTZ1 or MTZ2 or MTZ3
QR “Replacement” source MasterPact MTZ1 or MTZ2 or MTZ3
MCH spring-charging motor
XF standard closing voltage release
MN undervoltage release
OF breaker ON/OFF indication contact
SDE1 “fault-trip” indication contact
PE “ready-to-close” contact
CE1 “connected-position” indication contact (carriage switch)
CH “springs charged” indication contact
IVE electrical interlocking and terminal block unit
F1 auxiliary power supply circuit breaker
F2 circuit breaker (high breaking capacity)
S1 control switches
KA1 auxiliary relays
KA2 auxiliary relays
KA3 auxiliary relays

Wiring colour codes
RD GN BK VT YE GY WH BN
red green black violet yellow grey white brown

States permitted by mechanical interlocking system
Normal Replacement
0 0
1 0
0 1

Note: diagram shown with circuit breakers in connected position, open, charged, and ready to close.
Auxiliary power supply = supply voltage of auxiliary relays (KA...)
= supply voltage of electrical auxiliaries (electrical operation, MCH, MN, XF...).
Remote-operated source-changeover systems

2 MasterPact MTZ1 or MTZ2 or MTZ3 devices

Automatic-control system for replacement source generator set with lockout after a fault (with MN)

ATTENTION
The diagram shows the electrical wiring for circuit breakers. When wiring the SDE with switch-disconnectors, connect wire BK to terminal 82.

[1] Not to be wired for the “without lockout after a fault” solution.
[2] Not to be wired on fixed version.

IMPORTANT
The relays controlling the closing order to the “Normal” and “Replacement” circuit breakers must be mechanically and/or electrically interlocked to prevent them from giving simultaneous closing commands.

It is recommended to use Tesys K relays from Schneider Electric reference LC2-K06010. These relays are mechanically and electrically interlocked.

Legend:
QN "Normal" source MasterPact MTZ1 or MTZ2 or MTZ3
QR "Replacement" source MasterPact MTZ1 or MTZ2 or MTZ3
MCH spring-charging motor
XF standard closing voltage release
MN undervoltage release
OF... breaker ON/OFF indication contact
SDE1 "fault-trip" indication contact
PF “ready-to-close” contact
CE1 “connected-position” indication contact (carriage switch)
CH “springs charged” indication contact
IVE electrical interlocking and terminal block unit
F1 auxiliary power supply circuit breaker
F2 circuit breaker (high breaking capacity)
S1 control switches
KA1 auxiliary relay
KA2 time delay for genset startup order to avoid starting the genset for transient UN disturbances
KA3 auxiliary relay

Wiring colour codes:
RD GN BK VT YE GY WH BN
red green black violet yellow grey white brown

States permitted by mechanical interlocking system

<table>
<thead>
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<th>Normal</th>
<th>Replacement</th>
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Note: diagram shown with circuit breakers in connected position, open, charged, and ready to close.
Auxiliary power supply = supply voltage of auxiliary relays (KA...) = supply voltage of electrical auxiliaries (electrical operation, MCH, MN, XF...).
Electrical diagrams

Source-changeover systems with UA controllers
2 ComPact NSX100/630, NS630b/1600 or MasterPact MTZ1/MTZ2/MTZ3 devices

Source-changeover system with UA controller

Load shedding and genset management

Transfer conditions

Terminals 20 and 21: additional control contact (not part of controller).

Tests on “Normal” and “Replacement” source voltages

“Normal” source voltage UN test

“Replacement” source voltage UR test

The single-phase check for UR is implemented across terminals 1 and 5 of circuit breaker Q2.

Legends

Q1 circuit breaker supplying and protecting the automatic-control circuits for the “Normal” source
Q2 circuit breaker supplying and protecting the automatic-control circuits for the “Replacement” source
ACP control plate
UA automatic controller
IVE electrical interlocking and terminal block unit

Note: diagram shown with circuits de-energized, circuit breakers open and relays in normal position.
Source-changeover systems with UA controllers

Controller settings

Tests on “Normal” source voltage
A = 0  single-phase test,
A = 1  three-phase test.

Voluntary transfert (e.g. for energy management)
- action in the event of genset failure
  B = 0  circuit breaker N opens,
  B = 1  circuit breaker N remains closed.
- maximum permissible genset startup time (T6)
  C = 0  T = 120 s,
  C = 1  T = 180 s.

After this time has elapsed, the genset is considered to have failed.
Source-changeover systems with BA controllers
2 ComPact NSX100/630, NS630b/1600 or MasterPact MTZ1/MTZ2/MTZ3 devices

Source-changeover system with BA controller

Coupling

Transfer conditions

Terminals 20 and 21:
additional control contact (not part of controller).

Tests on “Normal” and “Replacement” source voltages
The single-phase check for UN and UR is implemented across terminals 1 and 5 of circuit breakers Q1 and Q2.

Legends
Q1 circuit breaker supplying and protecting the automatic-control circuits for the “Normal” source
Q2 circuit breaker supplying and protecting the automatic-control circuits for the “Replacement” source
ACP control plate
BA automatic controller
IVE electrical interlocking and terminal block unit

Note: diagram shown with circuits de-energized, circuit breakers open and relays in normal position.
Remote-operated source-changeover systems
3 MasterPact MTZ2/MTZ3 devices

2 normal sources and 1 replacement source: electrical interlocking without lockout after a fault

Legends
QN... “Normal” source MasterPact MTZ2 or MTZ3
QR “Replacement” source MasterPact MTZ2 or MTZ3
MCH spring-charging motor
MX standard opening voltage release
XF standard closing voltage release
OF... breaker ON/OFF indication contact
PF “ready-to-close” contact
CE “connected-position” indication contact (carriage switch)
CH “springs charged” indication contact
F1 auxiliary power supply circuit breaker
\[ t1 \] order for transfer from “R” to “N1 + N2”
(QN1 and QN2 closing time delay = 0.25 sec. minimum)
\[ t2 \] order for transfer from “N1 + N2” to “R”
(QR closing time delay = 0.25 sec. minimum)

States permitted by mechanical interlocking system

<table>
<thead>
<tr>
<th>States</th>
<th>Normal 1</th>
<th>Normal 2</th>
<th>Replacement</th>
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Note: diagram shown with circuit breakers in connected position, open, charged, and ready to close.
Auxiliary power supply = supply voltage of auxiliary relays (KA...)
= supply voltage of electrical auxiliaries (electrical operation, MCH, MX, XF...).
Remote-operated source-changeover systems
3 MasterPact MTZ2/MTZ3 devices

2 normal sources and 1 replacement source: electrical interlocking with lockout after a fault

ATTENTION
The diagram shows the electrical wiring for circuit breakers. When wiring the SDE with switch-disconnectors, connect the SDE to terminals 81 and 84.

Legends
QN... “Normal” source MasterPact MTZ2 or MTZ3
QR “Replacement” source MasterPact MTZ2 or MTZ3
MCH spring-charging motor
MX standard opening voltage release
XF standard closing voltage release
OF... breaker ON/OFF indication contact
SDE1 “fault-trip” indication contact
PF “ready-to-close” contact
CE1 “connected-position” indication contact (carriage switch)
CH “springs charged” indication contact
F1 auxiliary power supply circuit breaker
S1 control switches
S2 source selection switches
KA1 auxiliary relay
KA2 auxiliary relays with 10 to 180 sec. time delay
\( t_1 \) order for transfer from “R” to “N1 + N2”
\( (QN1 \text{ and } QN2 \text{ closing time delay = 0.25 sec. minimum}) \)
\( t_2 \) order for transfer from “N1 + N2” to “R”
\( (QR \text{ closing time delay = 0.25 sec. minimum}) \)

States permitted by mechanical interlocking system

<table>
<thead>
<tr>
<th>Normal 1</th>
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<th>Replacement</th>
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Note: diagram shown with circuit breakers in connected position, open, charged, and ready to close. Auxiliary power supply = supply voltage of auxiliary relays (KA...). = supply voltage of electrical auxiliaries (electrical operation, MCH, MX, XF...).
2 normal sources and 1 replacement source: automatic-control system for generator set without lockout after a fault (with MN)

Legends
QN... “Normal” source MasterPact MTZ2 or MTZ3
QR “Replacement” source MasterPact MTZ2 or MTZ3
MCH spring-charging motor
XF standard closing voltage release
MN undervoltage release
OF... breaker ON/OFF indication contact
PF “ready-to-close” contact
CE... “connected-position” indication contact (carriage switch)
CH “springs charged” indication contact
F1 auxiliary power supply circuit breaker
F2/F3 circuit breaker (high breaking capacity)
S1 control switches
S2 source selection switches
KA1 auxiliary relay
KA2 auxiliary relays with 10 to 180 sec. time delay
KA3 auxiliary relays with 0.1 to 30 sec. time delay
KA4 auxiliary relay
KA5 auxiliary relays with 0.25 sec. time delay
KA6 auxiliary relays with 0.25 sec. time delay

States permitted by mechanical interlocking system and with associated automatism

<table>
<thead>
<tr>
<th>Normal 1</th>
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Note: diagram shown with circuit breakers in connected position, open, charged, and ready to close.
Auxiliary power supply = supply voltage of auxiliary relays (KA...)
= supply voltage of electrical auxiliaries (electrical operation, MCH, MN, XF...).
The diagram shows the electrical wiring for circuit breakers. When wiring the SDE with switch-disconnectors, connect the SDE to terminals 81 and 84.

Legends:
QN... “Normal” source MasterPact MTZ2 or MTZ3
QR... “Replacement” source MasterPact MTZ2 or MTZ3
MCH... spring-charging motor
XF... standard closing voltage release
MN... undervoltage release
OF... breaker ON/OFF indication contact
SDE1... “fault-trip” indication contact
PE... “ready-to-close” contact
CE... “connected-position” indication contact (carriage switch)
CH... “springs charged” indication contact
F1... auxiliary power supply circuit breaker
F2/F3... circuit breaker (high breaking capacity)
S1... control switches
S2... source selection switches
KA1... auxiliary relay
KA2... auxiliary relays with 10 to 180 sec. time delay
KA3... auxiliary relays with 0.1 to 30 sec. time delay
KA4... auxiliary relay
KA5... auxiliary relays with 0.25 sec. time delay
KA6... auxiliary relays with 0.25 sec. time delay
KA7... auxiliary relay
KA8... auxiliary relay

States permitted by mechanical interlocking system and with associated automatism

<table>
<thead>
<tr>
<th>Normal 1</th>
<th>Normal 2</th>
<th>Replacement</th>
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</table>

Note: diagram shown with circuit breakers in connected position, open, charged, and ready to close. Auxiliary power supply = supply voltage of auxiliary relays (KA...) = supply voltage of electrical auxiliaries (electrical operation, MCH, MN, XF...).
3 sources with only 1 device closed: electrical interlocking without lockout after a fault

**Electrical diagrams**

Remote-operated source-changeover systems

3 MasterPact MTZ2/MTZ3 devices

---

**Legends**

- **QS...**: “Source” MasterPact MTZ2 or MTZ3
- **MCH**: spring-charging motor
- **MX**: standard opening voltage release
- **XF**: standard closing voltage release
- **OF...**: breaker ON/OFF indication contact
- **PF**: “ready-to-close” contact
- **CE...**: “connected-position” indication contact (carriage switch)
- **CH**: “springs charged” indication contact
- **F1**: auxiliary power supply circuit breaker
- **t1**: order for transfer to “Source 1” (QS1 closing time delay = 0.25 sec. minimum)
- **t2**: order for transfer to “Source 2” (QS2 closing time delay = 0.25 sec. minimum)
- **t3**: order for transfer to “Source 3” (QS3 closing time delay = 0.25 sec. minimum)

**States permitted by mechanical interlocking system**

<table>
<thead>
<tr>
<th>Source 1</th>
<th>Source 2</th>
<th>Source 3</th>
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<tbody>
<tr>
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**Note:** diagram shown with circuit breakers in connected position, open, charged, and ready to close.

Auxiliary power supply = supply voltage of auxiliary relays (KA...)

Supply voltage of electrical auxiliaries (electrical operation, MCH, MX, XF...).
Remote-operated source-changeover systems
3 MasterPact MTZ2/MTZ3 devices

3 sources with only 1 device closed: electrical interlocking with lockout after a fault

ATTENTION
The diagram shows the electrical wiring for circuit breakers. When wiring the SDE with switch-disconnectors, connect the SDE to terminals 81 and 84.

Legends
QS... “Source” MasterPact MTZ2 or MTZ3
MCH spring-charging motor
MX standard opening voltage release
XF standard closing voltage release
OF... breaker ON/OFF indication contact
SDE1 “fault-trip” indication contact
PF “ready-to-close” contact
CE... “connected-position” indication contact (carriage switch)
CH “springs charged” indication contact
F1 auxiliary power supply circuit breaker
t1 order for transfer to “Source 1” (QS1 closing time delay = 0.25 sec. minimum)
t2 order for transfer to “Source 2” (QS2 closing time delay = 0.25 sec. minimum)
t3 order for transfer to “Source 3” (QS3 closing time delay = 0.25 sec. minimum)
KA1 auxiliary relays
KA2 auxiliary relays
KA3 auxiliary relays

States permitted by mechanical interlocking system

<table>
<thead>
<tr>
<th>Source 1</th>
<th>Source 2</th>
<th>Source 3</th>
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Note: diagram shown with circuit breakers in connected position, open, charged, and ready to close.
Auxiliary power supply = supply voltage of auxiliary relays (KA...)
= supply voltage of electrical auxiliaries (electrical operation, MCH, MX, XF...).
2 sources and 1 coupling: electrical interlocking without lockout after a fault

Source 1  Source 2  Coupling
0 0 0
1 1 0
1 0 1
0 1 1
1 0 0
0 1 0
0 0 1

Note: diagram shown with circuit breakers in connected position, open, charged, and ready to close.

Auxiliary power supply = supply voltage of auxiliary relays (KA...)
= supply voltage of electrical auxiliaries (electrical operation, MCH, MX, XF...).

Legends
QS... “Source” MasterPact MTZ2 or MTZ3
QC... “Coupling” MasterPact MTZ2 or MTZ3
MCH spring-charging motor
MX standard opening voltage release
XF standard closing voltage release
OF... breaker ON/OFF indication contact
PF “ready-to-close” contact
CE... “connected-position” indication contact (carriage switch)
CH “springs charged” indication contact
F1 auxiliary power supply circuit breaker

Source 1
QC... “Source 1 failure”
(QC closing time delay = 0.25 sec. minimum)
QC... “Source 1 restored”
(QS1 closing time delay = 0.25 sec. minimum)
QC... “Source 2 failure”
(QC closing time delay = 0.25 sec. minimum)
QC... “Source 2 restored”
(QS2 closing time delay = 0.25 sec. minimum)
Remote-operated source-changeover systems
3 MasterPact MTZ2/MTZ3 devices

2 sources and 1 coupling: electrical interlocking with lockout after a fault

ATTENTION
The diagram shows the electrical wiring for circuit breakers.
When wiring the SDE with switch-disconnectors, connect the SDE to terminals 81 and 84.

Legends
QS... “Source” MasterPact MTZ2 or MTZ3
QC “Coupling” MasterPact MTZ2 or MTZ3
MCH spring-charging motor
MX standard opening voltage release
XF standard closing voltage release
OF... breaker ON/OFF indication contact
SDE1 “fault-trip” indication contact
PF “ready-to-close” contact
CE... “connected-position” indication contact (carriage switch)
CH “springs charged” indication contact
F1 auxiliary power supply circuit breaker
t1 coupling order for “Source 1 failure” (QC closing time delay = 0.25 sec. minimum)
t2 coupling order for “Source 2 failure” (QC closing time delay = 0.25 sec. minimum)
t3 coupling order for “Source 1 restored” (QS1 closing time delay = 0.25 sec. minimum)
t4 coupling order for “Source 2 restored” (QS2 closing time delay = 0.25 sec. minimum)
KA1 auxiliary relays
KA2 auxiliary relays
KA3 auxiliary relays

States permitted by mechanical interlocking system

<table>
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<tr>
<th>Source 1</th>
<th>Source 2</th>
<th>Coupling</th>
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Note: diagram shown with circuit breakers in connected position, open, charged, and ready to close.
Auxiliary power supply = supply voltage of auxiliary relays (KA...)
= supply voltage of electrical auxiliaries (electrical operation, MCH, MX, XF...).
2 sources and 1 coupling: automatic-control system with lockout after a fault

ATTENTION
The diagram shows the electrical wiring for circuit breakers.
When wiring the SDE with switch-disconnectors, connect the SDE to terminals 81 and 84.

Legends
QS... “Source” MasterPact MTZ2 or MTZ3
QC “Coupling” MasterPact MTZ2 or MTZ3
MCH spring-charging motor
MX standard opening voltage release
XF standard closing voltage release
OF... breaker ON/OFF indication contact
SDE1 “fault trip” indication contact
PF “ready-to-close” contact
CE... “connected-position” indication contact (carriage switch)
CH “springs charged” indication contact
F1 auxiliary power supply circuit breaker
F2/F3 circuit breaker (high breaking capacity)
S1 control switches
S2 source selection switches
KA1 auxiliary relays with 10 to 180 sec. time delay
KA2 auxiliary relays with 0.1 to 30 sec. time delay
KA3 auxiliary relays with 0.1 to 30 sec. time delay
KA4 auxiliary relays with 0.1 to 30 sec. time delay
KA5 auxiliary relays with 0.25 sec. time delay
KA6 auxiliary relays with 0.25 sec. time delay
KA7 auxiliary relays with 0.25 sec. time delay

States permitted by mechanical interlocking system and with associated automatism

<table>
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<th>Source 1</th>
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Note: diagram shown with circuit breakers in connected position, open, charged, and ready to close.
Auxiliary power supply = supply voltage of auxiliary relays (KA...)
= supply voltage of electrical auxiliaries (electrical operation, MCH, MX, XF...).
Catalog numbers and order form

References of source-changeover systems for 2 devices
- ComPact INS40 to INS2500, INV100 to INV2500, and TransferPact FXM........................................... D-2
- ComPact NSX100 to NSX630................................................................. D-3
- ComPact NS630b to NS1600
- Circuit breakers and switch-disconnectors.......................... D-4
- MasterPact MTZ1
- Circuit breakers and switch-disconnectors.......................... D-5
- MasterPact MTZ2/MTZ3
- Circuit breakers and switch-disconnectors.......................... D-6

References of source-changeover systems for 3 devices
- MasterPact MTZ2/MTZ3
- Circuit breakers and switch-disconnectors.......................... D-7

Order form for source-changeover systems for 2 devices
- ComPact INS40 to INS630
- Switch-disconnectors .......................................................... D-8
- ComPact NSX100 to NSX630
- Circuit breakers and switch-disconnectors...................... D-10
- ComPact NS630b to NS1600
- Circuit breakers and switch-disconnectors...................... D-12
- MasterPact MTZ1/MTZ2/MTZ3
- Circuit breakers and switch-disconnectors...................... D-14

Order form for source-changeover systems for 3 devices
- MasterPact MTZ2/MTZ3
- Circuit breakers and switch-disconnectors...................... D-16
## Manual source-changeover systems

### Interlocking for rotary handle

<table>
<thead>
<tr>
<th>Interlocking for rotary handle</th>
<th>3/4P</th>
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<tbody>
<tr>
<td>Mechanical device for INS40 to INS160 equipped with an extended rotary handle</td>
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<tr>
<td>Mechanical device for INS250-100 to INS250/INV100 to INV250 equipped with a direct or extended rotary handle</td>
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<tr>
<td>Mechanical device for INS/INV320 to INS/INV630 equipped with a direct or extended rotary handle</td>
<td>31074</td>
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### Interlocking

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<tr>
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<tr>
<td>Locking device for Ronis/Profalux keylocks on INS250-100 to INS250/INV100 to INV250</td>
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<td>Locking device for Ronis/Profalux keylocks on INS/INV320 to INS/INV630</td>
<td>2x</td>
<td>31088</td>
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<tr>
<td>Locking device for Ronis/Profalux keylocks on INS/INV630b to INS/INV2500</td>
<td>2x</td>
<td>31291</td>
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+ Ronis 1351B.500 keylock (2 keylocks / 1 key) | 41950 |
+ Profalux KS5 B24 D4Z keylock (2 keylocks / 1 key) | 42878 |

### TransferPact FXM (complete source-changeover assembly)

<table>
<thead>
<tr>
<th>TransferPact FXM (complete source-changeover assembly)</th>
<th>3P</th>
<th>4P</th>
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<td>31140</td>
<td>31141</td>
</tr>
<tr>
<td>FXM160</td>
<td>31144</td>
<td>31145</td>
</tr>
<tr>
<td>FXM200</td>
<td>31142</td>
<td>31143</td>
</tr>
<tr>
<td>FXM250</td>
<td>31146</td>
<td>31147</td>
</tr>
<tr>
<td>FXM320</td>
<td>31148</td>
<td>31149</td>
</tr>
<tr>
<td>FXM400</td>
<td>31150</td>
<td>31151</td>
</tr>
<tr>
<td>FXM500</td>
<td>31152</td>
<td>31153</td>
</tr>
<tr>
<td>FXM630</td>
<td>31154</td>
<td>31155</td>
</tr>
</tbody>
</table>

#### Locking for TransferPact FXM

Handle locking by 1 to 3 padlocks (in OFF position) Built in

By keylock

- Keylocking device
- + Ronis 1351B.500 keylock | 31097 |
- or + Profalux KS5 B24 D4Z keylock | 41940 |
- or + Profalux KS5 B24 D4Z keylock | 42888 |

#### Rotary handle

Extended front control for complete source changeover assembly | 31055 |

### Connection accessories

#### Downstream coupling accessories

#### Short terminal shields (1 pair) + “Normal” source/“Replacement” source

<table>
<thead>
<tr>
<th>Short terminal shields (1 pair) + “Normal” source/“Replacement” source</th>
<th>3/4P</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>INS250/INS250</td>
<td>LV429359</td>
<td></td>
</tr>
<tr>
<td>INS320 to INS630/INS320 to INS630</td>
<td>LV432620</td>
<td></td>
</tr>
</tbody>
</table>

#### Long terminal shields (1 piece)

<table>
<thead>
<tr>
<th>Long terminal shields (1 piece)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>INS250</td>
<td>LV429518</td>
</tr>
<tr>
<td>INS320 to INS630</td>
<td>LV432594</td>
</tr>
<tr>
<td>Long terminal shield, 45 mm (1 piece)</td>
<td>LV432596</td>
</tr>
</tbody>
</table>

#### Terminal extensions

<table>
<thead>
<tr>
<th>Terminal extensions</th>
<th>Spreads</th>
<th>52.5 mm</th>
<th>4P</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Spreaders</td>
<td></td>
<td>52.5 mm</td>
<td></td>
<td>4P</td>
</tr>
</tbody>
</table>
## Manual source changeover

### Mechanical interlocking

For toggle controlled circuit breakers

<table>
<thead>
<tr>
<th>Circuit Breakers</th>
<th>Catalog Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSX100...250</td>
<td>LV429354</td>
</tr>
<tr>
<td>NSX400...630</td>
<td>LV432614</td>
</tr>
</tbody>
</table>

For rotary handled circuit breakers

<table>
<thead>
<tr>
<th>Circuit Breakers</th>
<th>Catalog Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSX100...250</td>
<td>LV429369</td>
</tr>
<tr>
<td>NSX400...630</td>
<td>LV432621</td>
</tr>
</tbody>
</table>

### Key lock interlocking

For rotary handled or remote controlled circuit breakers

- 2 locks, 1 key
  - Ronis 1351B 500: 41950
  - Profalux KS5 B24 D4Z: 42878

## Remote controlled source changeover

### Plate + IVE unit

<table>
<thead>
<tr>
<th>Source Changeover</th>
<th>Plate + IVE Unit</th>
<th>Plate</th>
<th>IVE Unit</th>
<th>Auxiliary switches 2 OF + 2 SDE</th>
<th>Spare wiring system (device/IVE unit)</th>
<th>Back sockets option add:</th>
<th>Plug in base option add:</th>
<th>Adaptor kit for NSX100...250</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NSX100...250/NSX100...250</strong></td>
<td>24 to 250 V DC</td>
<td>29351</td>
<td>29350</td>
<td>4 x 29450</td>
<td>29365</td>
<td>Only long RC</td>
<td>[2]</td>
<td>[2]</td>
</tr>
<tr>
<td><strong>NSX400...630/NSX400...630</strong></td>
<td>48 to 415 V AC 50/60 Hz 440 V 60 Hz</td>
<td>29360</td>
<td>29369</td>
<td>4 x 29451</td>
<td>29366</td>
<td>Only long RC</td>
<td>[2]</td>
<td>[2]</td>
</tr>
</tbody>
</table>

### Control unit option

<table>
<thead>
<tr>
<th>Control Unit</th>
<th>Plate ACP</th>
<th>Controller BA</th>
<th>Plate ACP</th>
<th>Controller BA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACP + controller BA</strong></td>
<td>110/127 V AC 50/60 Hz</td>
<td>29470</td>
<td>29363</td>
<td>29364</td>
</tr>
<tr>
<td><strong>ACP + controller UA</strong></td>
<td>220/240 V AC 50/60 Hz</td>
<td>29472</td>
<td>29376</td>
<td>29377</td>
</tr>
</tbody>
</table>

### Wiring cable between UA/BA and ACP/IVE

- 1.5 meter: 29365

## Connection accessories

### Downstream coupling accessories

#### Short terminal shields (1 pair) + "Normal" source/"Replacement" source

<table>
<thead>
<tr>
<th>Circuit Breakers</th>
<th>Catalog Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSX100...250/NSX100...250 / 250 A</td>
<td>LV429358</td>
</tr>
<tr>
<td>NSX400...630/NSX400...630 / 630 A</td>
<td>LV432619</td>
</tr>
</tbody>
</table>

#### Long terminal shields (1 piece)

<table>
<thead>
<tr>
<th>Circuit Breakers</th>
<th>Catalog Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSX100...250</td>
<td>LV429518</td>
</tr>
<tr>
<td>NSX400...630</td>
<td>LV432594</td>
</tr>
</tbody>
</table>

### Terminal extensions

- Spreader: 52.5 mm 4P | LV432491

---

(1) The supply voltages UA/BA controller, ACP plate, IVE unit and the remote control must be identical whatever the source changeover type.

(2) See products pages.
References of source-changeover systems for 2 devices

ComPact NS630b to NS1600

Circuit breakers and switch-disconnectors

Mechanical interlocking for source-changeover systems

| Interlocking | For 2 devices with extended rotary handles | 33890 |
| Interlocking using connecting rods | Complete assembly with 2 adaptation fixtures + rods | |
| | 2 ComPact fixed devices | 33910 |
| | 2 ComPact withdrawable devices | 33913 |
| Interlocking using cables | Complete assembly with 2 adaptation fixtures + cables | |
| | 2 ComPact fixed devices | 33911 |
| | 2 ComPact withdrawable devices | 33914 |
| | 1 ComPact fixed + 1 ComPact withdrawable device | 33915 |

Associated controller

The automatic-control option includes:
- an IVE electrical-interlocking unit
- an ACP control plate
- a BA or UA controller, depending on the required functions
- a UA/BA adapter kit.

Note: the circuit breaker auxiliaries (MCH, MX, XF) and the automatic-control components (IVE, ACP, UA or BA) must have the same voltages.

TransferPact Electrical Interlocking

| IVE unit | 24 to 250 V DC | 48/415 V AC 50/60 Hz |
| For 2 devices | 29356 | 29352 |
| Wiring kit for connection of 2 fixed/withdrawable devices to the IVE unit | 54655 |

TransferPact Controllers

| Control unit | 110/127 V AC 50/60 Hz | 220/240 V AC 50/60 Hz | 380/415 V AC 50/60 Hz |
| ACP + controller BA (1) | 29470 | 29471 |
| Plate ACP | 29360 | 29365 |
| Controller BA | 29370 | 29375 |
| ACP + controller UA (1) | 29488 | 29492 |
| Plate ACP | 29368 | 29373 |
| Controller UA | 29388 | 29393 |

(1) The supply voltages of the UA/BA controller, ACP plate, IVE unit and circuit breaker operating mechanism must be identical whatever the type of source-changeover system.
References of source-changeover systems for 2 devices

MasterPact MTZ1
Circuit breakers and switch-disconnectors

Mechanical interlocking for source-changeover systems

Interlocking using connecting rods

| Complete assembly with 2 adaptation fixtures + rods | 33912 |
| 2 MasterPact MTZ1 fixed devices | 33913 |
| 2 MasterPact MTZ1 drawout devices | 33913 |

Interlocking using cables (1)

| Choose 2 adaptation fixtures (1 for each breaker + 1 set of cables) | 33200 |
| 1 adaptation fixture for MasterPact MTZ1 fixed devices | 33201 |
| 1 adaptation fixture for MasterPact MTZ1 drawout devices | 33209 |
| 1 set of 2 cables | 33209 |

Associated controller

The automatic-control option includes:
- an IVE electrical-interlocking unit
- an ACP control plate
- a BA or UA controller, depending on the required functions
- a UA/BA adapter kit.

Note: the circuit breaker auxiliaries (MCH, MX, XF) and the automatic-control components (IVE, ACP, UA or BA) must have the same voltages.

TransferPact Electrical Interlocking

<table>
<thead>
<tr>
<th>IVE unit</th>
<th>24 to 250 V DC</th>
<th>48/415 V AC 50/60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>For 2 devices</td>
<td>29356</td>
<td>29352</td>
</tr>
<tr>
<td>Wiring kit for connection of 2 fixed/drawout devices to the IVE unit</td>
<td>54655</td>
<td></td>
</tr>
</tbody>
</table>

TransferPact Controllers

<table>
<thead>
<tr>
<th>Control unit</th>
<th>110/127 V AC 50/60 Hz</th>
<th>220/240 V AC 50/60 Hz</th>
<th>380/415 V AC 50/60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACP + controller BA (2)</td>
<td>29470</td>
<td>29471</td>
<td></td>
</tr>
<tr>
<td>Plate ACP</td>
<td>29470</td>
<td>29471</td>
<td></td>
</tr>
<tr>
<td>Controller BA</td>
<td>29376</td>
<td>29377</td>
<td></td>
</tr>
<tr>
<td>ACP + controller UA (2)</td>
<td>29448</td>
<td>29473</td>
<td></td>
</tr>
<tr>
<td>Plate ACP</td>
<td>29447</td>
<td>29472</td>
<td></td>
</tr>
<tr>
<td>Controller UA</td>
<td>29446</td>
<td>29378</td>
<td></td>
</tr>
</tbody>
</table>

(1) Can be used with any combination of MTZ1 or MTZ2/MTZ3, fixed or drawout devices.
(2) The supply voltages of the UA/BA controller, ACP plate, IVE unit and circuit breaker operating mechanism must be identical whatever the type of source-changeover system.
Catalog numbers and order form

References of source-changeover systems for 2 devices

MasterPact MTZ2/MTZ3
Circuit breakers and switch-disconnectors

Mechanical interlocking for source-changeover systems for 2 devices

<table>
<thead>
<tr>
<th>Interlocking of 2 devices using connecting rods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete assembly with 2 adaptation fixtures + rods</td>
</tr>
<tr>
<td>2 MasterPact MTZ2/MTZ3 fixed devices</td>
</tr>
<tr>
<td>2 MasterPact MTZ2/MTZ3 drawout devices</td>
</tr>
</tbody>
</table>

**Note:** Can be used with 1 MTZ2/MTZ3 fixed + 1 MTZ2/MTZ3 drawout.

<table>
<thead>
<tr>
<th>Interlocking of 2 devices using cables (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose 2 adaptation fixtures (1 for each breaker + 1 set of cables)</td>
</tr>
<tr>
<td>1 adaptation fixture for MasterPact MTZ2/MTZ3 fixed devices</td>
</tr>
<tr>
<td>1 adaptation fixture for MasterPact MTZ2/MTZ3 drawout devices</td>
</tr>
<tr>
<td>1 set of 2 cables</td>
</tr>
</tbody>
</table>

**Associated controller for 2 devices**

The automatic-control option includes:

- an IVE electrical-interlocking unit
- an ACP control plate
- a BA or UA controller, depending on the required functions
- a UA/BA adapter kit.

**Note:** the circuit breaker auxiliaries (MCH, MX, XF) and the automatic-control components (IVE, ACP, UA or BA) must have the same voltages.

**TransferPact Electrical Interlocking**

<table>
<thead>
<tr>
<th>IVE unit</th>
<th>24 to 250 V DC</th>
<th>48/415 V AC 50/60 Hz</th>
<th>440 V 60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>For 2 devices</td>
<td>29356</td>
<td>29352</td>
<td></td>
</tr>
<tr>
<td>Wiring kit for connection of 2 fixed/drawout devices to the IVE unit</td>
<td>54655</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TransferPact Controllers**

<table>
<thead>
<tr>
<th>Control unit</th>
<th>110/127 V AC 50/60 Hz</th>
<th>220/240 V AC 50/60 Hz</th>
<th>380/415 V AC 50/60 Hz</th>
<th>440 V 60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACP + controller BA (2)</td>
<td>29470</td>
<td>29471</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plate ACP</td>
<td>29363</td>
<td>29364</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Controller BA</td>
<td>29376</td>
<td>29377</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACP + controller UA (2)</td>
<td>29448</td>
<td>29472</td>
<td>29473</td>
<td></td>
</tr>
<tr>
<td>Plate ACP</td>
<td>29447</td>
<td>29363</td>
<td>29364</td>
<td></td>
</tr>
<tr>
<td>Controller UA</td>
<td>29446</td>
<td>29378</td>
<td>29380</td>
<td></td>
</tr>
</tbody>
</table>

(1) Can be used with any combination of MTZ1 or MTZ2/MTZ3, fixed or drawout devices.

(2) The supply voltages of the UA/BA controller, ACP plate, IVE unit and circuit breaker operating mechanism must be identical whatever the type of source-changeover system.
References of source-changeover systems for 3 devices

MasterPact MTZ2/MTZ3

Circuit breakers and switch-disconnectors

### Mechanical interlocking for source-changeover systems for 3 devices

<table>
<thead>
<tr>
<th>Interlocking of 3 devices using cables</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose 3 adaptation fixtures (1 complete set with 3 adaptation fixtures + cables)</td>
<td></td>
</tr>
<tr>
<td>3 sources, only 1 device closed, fixed or drawout devices</td>
<td>48610</td>
</tr>
<tr>
<td>2 sources, 1 coupling, fixed or drawout devices</td>
<td>48609</td>
</tr>
<tr>
<td>2 normal, 1 replacement source, fixed or drawout devices</td>
<td>48608</td>
</tr>
</tbody>
</table>
Order form for source-changeover systems for 2 devices

ComPact INS40 to INS630
Switch-disconnectors

To indicate your choices, check the applicable square boxes and enter the appropriate information in the rectangles.

### Mechanical interlocking of two INS40 to INS630 devices

**Devices with front rotary handles, mounted side by side**

<table>
<thead>
<tr>
<th>Two devices with direct rotary handles</th>
<th>Two devices with extended rotary handles</th>
</tr>
</thead>
<tbody>
<tr>
<td>INS250</td>
<td>INS200-100 A</td>
</tr>
<tr>
<td>INS320/400/500/630</td>
<td>INS200-160 A</td>
</tr>
<tr>
<td>INS40/63/80</td>
<td>INS250-200 A</td>
</tr>
<tr>
<td>INS250</td>
<td>INS320</td>
</tr>
<tr>
<td></td>
<td>INS400</td>
</tr>
<tr>
<td>Downstream coupling accessory</td>
<td>Long terminal shields</td>
</tr>
<tr>
<td>INS250</td>
<td>INS320/400/500/630</td>
</tr>
<tr>
<td></td>
<td>INS250-250 A</td>
</tr>
<tr>
<td></td>
<td>INS500</td>
</tr>
<tr>
<td></td>
<td>INS630</td>
</tr>
</tbody>
</table>

Complete source-changeover assembly

| INS250-100 A                          | INS250-160 A                           |
| INS250-200 A                          | INS250-250 A                           |
| INS320                                | INS500                                  |
| INS400                                | INS630                                  |
Order form for source-changeover systems for 2 devices

ComPact INS40 to INS630
Switch-disconnectors

To indicate your choices, check the applicable square boxes and enter the appropriate information in the rectangles. (one sheet per device, make copies if necessary)

Device identification:
Q 1 - NORMAL SOURCE
Q 2 - REPLACEMENT SOURCE

Switch-disconnector

<table>
<thead>
<tr>
<th>ComPact type</th>
<th>INS40/63/80</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>INS100/125/160</td>
</tr>
<tr>
<td></td>
<td>INS250</td>
</tr>
<tr>
<td></td>
<td>INS320/400/500/630</td>
</tr>
</tbody>
</table>

Rating: A

Number of poles: 3 or 4

Connections

Front connection: Standard

Rear connection: 2 short, 2 long

INS40/80 connectors

INS100/160 connectors

INS250 connectors

INS320/630 connectors

Distribution blocks

Linergy DX

4P 125 A 160 A

1P 160 A

Linergy BS (multi stage) 160 A 250 A

Linergy DP 250 A

Rt-angle extension

Set of 3 or 4 250 A 630 A

Straight extension

INS250

Edgewise ext.

INS630

Spreader

INS250 (45 mm)

Front alignment base INS320/630 52.5 mm 70 mm

One-piece INS250 INS630

Cu cable lugs supplied with 2 or 3 inter-phase barriers

INS100/160 For 95° cable

INS250 For 120° cable

INS320/630 For 150° cable For 185° cable For 240° cable For 300° cable

Al cable lugs supplied with 2 or 3 inter-phase barriers

INS250 For 150° cable For 185° cable For 240° cable For 300° cable

INS320/630

Terminal shrouds

INS40/63/80 INS100/125/160

INS250 INS320/630

Terminal shields

INS40/63/80 INS100/125/160

INS250 Long

INS320/630 Long

Long for 52.5 mm spreaders

Interphase barriers

INS100/160 Set of 6

INS250 Set of 6

INS320/630 Set of 6

Indication and measurements

4P ammeter module For INS250 Rating 100 A 150 A 250 A

Adaptation kit required for direct handles

For INS320/630 Rating 400 A 600 A

4P current-transformer module

For INS250 Rating 100 A 150 A 250 A

For INS320/630 Rating 400 A 600 A

Auxiliary contact

For INS40/160 1OF/CAF/CAO Standard Low level

For INS250/630 1 OF/CAM Standard Low level

Rotary handles

Extended front handles

INS40 to INS160 Black Red on yellow front

INS250 Black Red on yellow front

INS320 to INS630 Black Red on yellow front

For complete changeover assembly INS250 INS320/630

Locking of rotary handles

Padlocking 1 to 3 padlocks (in OFF position)

Keylocking Keylock adapter (keylock not included)

Keylocks Ronis 1351B.500 Profalux KS5 B24 D4Z

Installation accessories

Front-panel escutcheon For switch-disconnectors For ammeter module, IP40

Switch-disconnectors

ComPact type

INS40/63/80

INS100/125/160

INS250

INS320/400/500/630

Rating A

Number of poles 3 or 4

Connections

Front connection: Standard

Rear connection: 2 short, 2 long

INS40/80 connectors

INS100/160 connectors

INS250 connectors

INS320/630 connectors

Distribution blocks

Linergy DX

4P 125 A 160 A

1P 160 A

Linergy BS (multi stage) 160 A 250 A

Linergy DP 250 A

Rt-angle extension

Set of 3 or 4 250 A 630 A

Straight extension

INS250

Edgewise ext.

INS630

Spreader

INS250 (45 mm)

Front alignment base INS320/630 52.5 mm 70 mm

One-piece INS250 INS630

Cu cable lugs supplied with 2 or 3 inter-phase barriers

INS100/160 For 95° cable

INS250 For 120° cable

INS320/630 For 150° cable For 185° cable For 240° cable For 300° cable

Al cable lugs supplied with 2 or 3 inter-phase barriers

INS250 For 150° cable For 185° cable For 240° cable For 300° cable

INS320/630

Terminal shrouds

INS40/63/80 INS100/125/160

INS250 INS320/630

Terminal shields

INS40/63/80 INS100/125/160

INS250 Long

INS320/630 Long

Long for 52.5 mm spreaders

Interphase barriers

INS100/160 Set of 6

INS250 Set of 6

INS320/630 Set of 6

Indication and measurements

4P ammeter module For INS250 Rating 100 A 150 A 250 A

Adaptation kit required for direct handles

For INS320/630 Rating 400 A 600 A

4P current-transformer module

For INS250 Rating 100 A 150 A 250 A

For INS320/630 Rating 400 A 600 A

Auxiliary contact

For INS40/160 1OF/CAF/CAO Standard Low level

For INS250/630 1 OF/CAM Standard Low level

Rotary handles

Extended front handles

INS40 to INS160 Black Red on yellow front

INS250 Black Red on yellow front

INS320 to INS630 Black Red on yellow front

For complete changeover assembly INS250 INS320/630

Locking of rotary handles

Padlocking 1 to 3 padlocks (in OFF position)

Keylocking Keylock adapter (keylock not included)

Keylocks Ronis 1351B.500 Profalux KS5 B24 D4Z

Installation accessories

Front-panel escutcheon For switch-disconnectors For ammeter module, IP40
# Catalog numbers and order form

## Order form for source-changeover systems for 2 devices

**ComPact** NSX100 to NSX630  
Circuit breakers and switch-disconnectors

To indicate your choices, check the applicable square boxes and enter the appropriate information in the rectangles.

### Diagram for two ComPact NSX devices

<table>
<thead>
<tr>
<th>Description</th>
<th>Options</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without automatic control, without emergency off auxiliaries</td>
<td>(no. 51201177)</td>
<td></td>
</tr>
<tr>
<td>Without automatic control, with emergency off by MN</td>
<td>(no. 51201178)</td>
<td></td>
</tr>
<tr>
<td>Without automatic control, with emergency off by MX</td>
<td>(no. 51201179)</td>
<td></td>
</tr>
</tbody>
</table>

### Mechanical interlocking of two NSX100 to NSX630 devices

<table>
<thead>
<tr>
<th>Options</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>(fixed, plug-in or withdrawable)</td>
<td></td>
</tr>
<tr>
<td>Manually operated devices, mounted side by side:</td>
<td></td>
</tr>
<tr>
<td>Two devices with toggles</td>
<td></td>
</tr>
<tr>
<td>Two devices with rotary handles</td>
<td></td>
</tr>
</tbody>
</table>

### Mechanical and electrical interlocking of two NSX100 to NSX630 devices

<table>
<thead>
<tr>
<th>Options</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>(fixed or plug-in)</td>
<td></td>
</tr>
</tbody>
</table>

### Electrically operated devices, mounted side by side:

Select 1 base plate + IVE unit, the 4 auxiliary contacts and the options / accessories

<table>
<thead>
<tr>
<th>Options</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base plate + IVE unit</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Base plate + IVE unit</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Base plate + IVE unit</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Adapter kit for NSX400/630 with NSX100/250 (plug-in)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Auxiliary contacts</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 OF + 2 SDE (mandatory)</td>
<td>4</td>
</tr>
</tbody>
</table>

### Options

- Long rear connections
- 3P
- 4P
- Base plate + IVE unit

### Prefabricated wiring

- Between device and IVE

### Automatic-control option

<table>
<thead>
<tr>
<th>Power supply 220/240 V - 50/60 Hz:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ACP + BA controller</td>
<td></td>
</tr>
<tr>
<td>ACP + UA controller</td>
<td></td>
</tr>
<tr>
<td>ACP + UA150 controller</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Power supply 380/415 V - 50/60 Hz and 440 V - 60 Hz:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ACP + BA controller</td>
<td></td>
</tr>
<tr>
<td>ACP + UA controller</td>
<td></td>
</tr>
<tr>
<td>ACP + UA150 controller</td>
<td></td>
</tr>
</tbody>
</table>
Order form for source-changeover systems for 2 devices

ComPact NSX100 to NSX630

Circuit breakers and switch-disconnectors

<table>
<thead>
<tr>
<th>Indication and measurement</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammeter module</td>
<td>Standard</td>
<td>3P</td>
</tr>
<tr>
<td>Current-transformer module</td>
<td>1 max</td>
<td>3P</td>
</tr>
<tr>
<td>Current-transformer module + TCU</td>
<td>3P</td>
<td>4P</td>
</tr>
<tr>
<td>Insulation-monitoring module</td>
<td>3P</td>
<td>4P</td>
</tr>
<tr>
<td>Voltage-presence indicator</td>
<td>OF</td>
<td>SD</td>
</tr>
<tr>
<td>Auxiliary contact</td>
<td>OF</td>
<td>SD</td>
</tr>
<tr>
<td>SDE adapter (TM, MA or MicroLogic 2 trip units)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SDX module</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remote operation

<table>
<thead>
<tr>
<th>Electrical operation</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor mechanism</td>
<td>AC</td>
<td>DC</td>
</tr>
<tr>
<td>Voltage releases</td>
<td>Instantaneous MX</td>
<td>AC</td>
</tr>
<tr>
<td>Instantaneous MN</td>
<td>AC</td>
<td>DC</td>
</tr>
<tr>
<td>Fixed time delay MN</td>
<td>AC</td>
<td>DC</td>
</tr>
<tr>
<td>Adjust. time delay MN</td>
<td>AC</td>
<td>DC</td>
</tr>
</tbody>
</table>

Rotary handles

<table>
<thead>
<tr>
<th>Direct</th>
<th>Black</th>
<th>Red and yellow front</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotary handle</td>
<td>Keylock adapter (keylock not included)</td>
<td>Profalux KSS B24 D4Z</td>
</tr>
<tr>
<td>Motor mechanism</td>
<td>Keylock adapter + keylock (special)</td>
<td>NSX100/250</td>
</tr>
<tr>
<td>Keylock (keylock not included)</td>
<td>NSX100/250</td>
<td></td>
</tr>
<tr>
<td>NSX100/151.5B.500</td>
<td>Profalux KSS B24 D4Z</td>
<td></td>
</tr>
</tbody>
</table>

Interlocking

<table>
<thead>
<tr>
<th>Mechanical</th>
<th>Toggle operated</th>
<th>Rotary Handle</th>
</tr>
</thead>
<tbody>
<tr>
<td>By key (2 keylocks, 1 key)</td>
<td>Locking kit (keylock not included)</td>
<td>NSX100/151.5B.500</td>
</tr>
<tr>
<td>for rotary handle</td>
<td>Keylock adapter</td>
<td>Profalux KSS B24 D4Z</td>
</tr>
</tbody>
</table>

Installation accessories

| IP30 escutcheon for all types (toggles/rotary handle/motor mechanism) |  |
| IP30 escutcheon (with access to toggle + trip unit) |  |
| IP30 escutcheon for Vigi module |  |
| IP40 escutcheon for all types (toggles/rotary handle/motor mechanism) |  |
| IP40 escutcheon for Vigi module |  |
| Toggle cover |  |
| Sealing accessories |  |
| DIN rail adapter | 3P 60 mm busbar adapter |  |

Plug-in / withdrawable configuration accessories

| Auxiliary connections | 1 automatic connector fixed part with 9 wires (for base) |  |
| 1 automatic connector moving part with 9 wires (for circuit breaker) |  |
| 1 sup. for 3 auto. conn. moving parts | 1 sup. for 2 auto. conn. 9-wire manual auxiliary connector (fixed + moving) | |

Plug-in base accessories

| Long insulated terminals | 2 IP4 shutters for base |  |
| Set of two power connections | Safety trip for advanced opening |  |
| For 3P/4P chassis | Moving part Fixed part |  |

Adaptator for plug-in base (for terminal shield or interphase barriers)

<table>
<thead>
<tr>
<th>Communication</th>
<th>NSX Cord L = 0.35 m</th>
<th>NSX Cord L = 1.3 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSX Cord U &gt; 480 V AC L = 0.35 m</td>
<td>NSX Cord L = 3 m</td>
<td></td>
</tr>
<tr>
<td>BSCM (NSX400/830)</td>
<td>Communicating motor mechanism 220-240 V</td>
<td>Switchboard front display module FDM121</td>
</tr>
<tr>
<td>FDM mounting accessory</td>
<td>Modbus interface</td>
<td>Stacking accessory</td>
</tr>
<tr>
<td>LUP line termination</td>
<td>RJ45 connectors</td>
<td></td>
</tr>
<tr>
<td>female/female</td>
<td>Wire length RJ45 L = 0.3 m</td>
<td>Wire length RJ45 L = 0.6 m</td>
</tr>
<tr>
<td>Wire length RJ45 L = 1 m</td>
<td>Wire length RJ45 L = 2 m</td>
<td></td>
</tr>
<tr>
<td>Wire length RJ45 L = 3 m</td>
<td>Wire length RJ45 L = 5 m</td>
<td></td>
</tr>
</tbody>
</table>

(One sheet per device, make copies if necessary)

Name of customer:
Address for delivery:

Requested delivery date: Customer order no.:

To indicate your choices, check the applicable square boxes and enter the appropriate information in the rectangles

Q 1 - NORMAL SOURCE
Q 2 - REPLACEMENT SOURCE

Circuit breaker or switch disconnector

<table>
<thead>
<tr>
<th>ComPact type</th>
<th>NSX100/160/250</th>
<th>NSX400/630</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rating</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>Circuit breaker</td>
<td>B, F, N, H, S, L</td>
<td></td>
</tr>
<tr>
<td>Switch-disc.</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>No. of poles</td>
<td>2, 3 or 4</td>
<td></td>
</tr>
<tr>
<td>No. of poles protected</td>
<td>2d, 3d or 4d</td>
<td></td>
</tr>
<tr>
<td>Fixed device</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plug-ins/wdr.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earth-leakage protection</td>
<td>ME, MH, MB</td>
<td></td>
</tr>
<tr>
<td>Vigi module</td>
<td>Voltage</td>
<td>V</td>
</tr>
<tr>
<td>Trip unit</td>
<td>Thermal-mag.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TMD rating (16 ... 250 A)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TGMD rating (16 ... 63 A)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MA rating (2.5 ... 220 A)</td>
<td></td>
</tr>
<tr>
<td>Electronic</td>
<td>MicroLogic 2.2</td>
<td>MicroLogic 2.3</td>
</tr>
<tr>
<td></td>
<td>MicroLogic 2.2 G</td>
<td>MicroLogic 2.3 AB</td>
</tr>
<tr>
<td></td>
<td>MicroLogic 2.2 A</td>
<td>MicroLogic 2.3 A</td>
</tr>
<tr>
<td></td>
<td>MicroLogic 5.2 A</td>
<td>MicroLogic 5.3 E</td>
</tr>
<tr>
<td></td>
<td>MicroLogic 5.2 E</td>
<td>MicroLogic 5.3 A E</td>
</tr>
<tr>
<td></td>
<td>MicroLogic 5.2 A Z</td>
<td>MicroLogic 6.3 A</td>
</tr>
<tr>
<td></td>
<td>MicroLogic 6.2 A</td>
<td>MicroLogic 6.3 E</td>
</tr>
<tr>
<td></td>
<td>MicroLogic 6.2 E</td>
<td>MicroLogic 1.3 M</td>
</tr>
<tr>
<td></td>
<td>MicroLogic 2.3 M</td>
<td>MicroLogic 2.3 M</td>
</tr>
<tr>
<td></td>
<td>MicroLogic 6.2 E M</td>
<td>MicroLogic 6.3 E M</td>
</tr>
<tr>
<td></td>
<td>SDTAM module</td>
<td></td>
</tr>
<tr>
<td>External neutral CT</td>
<td>24 V DC power supply connector</td>
<td></td>
</tr>
<tr>
<td>External power supply module</td>
<td>24-30 V DC</td>
<td>100-125 V AC</td>
</tr>
<tr>
<td>Battery module</td>
<td>24 V DC</td>
<td>200-240 V AC</td>
</tr>
<tr>
<td>3P</td>
<td>4P</td>
<td></td>
</tr>
</tbody>
</table>

Connection

<table>
<thead>
<tr>
<th>Rear-connection kit</th>
<th>Short</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NSX100/250 connectors</td>
<td>Snap-on 1.5° to 95° (&lt; 180 A)</td>
<td>Snap-on 25° to 95° (&lt; 250 A)</td>
</tr>
<tr>
<td></td>
<td>Distribution 6 x 1.5° to 35°</td>
<td>Aluminum 2 cables 50° to 120°</td>
</tr>
<tr>
<td>NSX400/630 connectors</td>
<td>1 cable 35° to 300°</td>
<td>2 cables 35° to 240°</td>
</tr>
<tr>
<td>Right-angle terminal extensions</td>
<td>45° term. ext.</td>
<td>Dbl.-L term. ext.</td>
</tr>
<tr>
<td>Straight extensions</td>
<td>NSX100/250</td>
<td>NSX400/630</td>
</tr>
<tr>
<td>Spreader</td>
<td>NSX100/250 (one piece)</td>
<td>NSX400/630 (52.5 mm)</td>
</tr>
<tr>
<td>Cu cable lugs</td>
<td>NSX100/250</td>
<td>120°</td>
</tr>
<tr>
<td></td>
<td>NSX400/630</td>
<td>150°</td>
</tr>
<tr>
<td>Al cable lugs</td>
<td>NSX100/250</td>
<td>120°</td>
</tr>
<tr>
<td></td>
<td>NSX400/630</td>
<td>150°</td>
</tr>
<tr>
<td>V measl Input for connector</td>
<td>For lugs NSX100/250</td>
<td>185°</td>
</tr>
<tr>
<td></td>
<td>For lugs NSX400/630</td>
<td>185°</td>
</tr>
<tr>
<td>Terminal shields</td>
<td>NSX100/250</td>
<td>Long</td>
</tr>
<tr>
<td></td>
<td>NSX400/630</td>
<td>Long</td>
</tr>
<tr>
<td>Long for 52.5 mm spreaders</td>
<td>Set of 6</td>
<td>2 insulating scrn.</td>
</tr>
<tr>
<td>Test tool</td>
<td>NSX100/250</td>
<td>NSX400/630</td>
</tr>
<tr>
<td>Pocket battery for MicroLogic</td>
<td>70 pitch</td>
<td></td>
</tr>
<tr>
<td>Maintenance case</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USB maintenance interface</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power supply 110-240 V AC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spare MicroLogic cord</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Catalog numbers and order form

www.se.com
**Order form for source-changeover systems for 2 devices**

**ComPact NS630b to NS1600**

**Circuit breakers and switch-disconnectors**

To indicate your choices, check the applicable square boxes and enter the appropriate information in the rectangles.

### Diagram for two ComPact NS devices

#### Electrical interlocking with lockout after fault:
- Permanent replacement source (with IVE unit) (no. 51201183)
- With emergency off by MX (with IVE unit) (no. 51201184)
- With emergency off by MN (with IVE unit) (no. 51201185)

#### Interlocking using connecting rods between two NS630b to NS1600 devices

#### Manually operated devices installed side-by-side:
- For two fixed NS devices with extended rotary handles

#### Electrically operated devices installed one above the other:
- Select a complete set including two adaptation fixtures and the connecting rods
  - Complete set for: 2 fixed NS devices
  - 2 withdrawable NS devices

#### Interlocking using cables between two NS630b to NS1600 devices

#### Electrically operated devices installed one above the other or side-by-side:
- Select a complete set including two adaptation fixtures and the cables
  - Complete set for: 2 fixed NS devices
  - 2 withdrawable NS devices
  - 1 fixed NS device + 1 withdrawable NS device

#### Electrical interlocking between two NS630b to NS1600 devices
- 1 IVE unit 48/415 V - 50/60 Hz and 440 V - 60 Hz
- 1 wiring kit for connection between 2 fixed / withdrawable devices to the IVE unit

### Automatic-control option

#### Power supply 110 V - 50/60 Hz:
- ACP + BA controller
- ACP + UA controller
- ACP + UA150 controller

#### Power supply 220/240 V - 50/60 Hz:
- ACP + BA controller
- ACP + UA controller
- ACP + UA150 controller

#### Power supply 380/415 V - 50/60 Hz and 440 V - 60 Hz:
- ACP + BA controller
- ACP + UA controller
- ACP + UA150 controller
ComPact NS630b to NS1600

Circuit breakers and switch-disconnectors

Order form for source-changeover systems for 2 devices

Indication contacts

| SD trip indication (maximum 1) | 6 A-240 V AC | Low level |
| SDE fault-trip indication (maximum 1) (SDE integrated in electrically operated devices) | 6 A-240 V AC | Low level |
| OF ON/OFF indication contacts (maximum 3) | 6 A-240 V AC | qty | Low level | qty |

Carriage switches (possible combinations: 3 CE, 2 CD, 1 CT)

CE - “connected” position | 6 A-240 V AC qty | Low level | qty |
CD - “disconnected” position | 6 A-240 V AC qty | Low level | qty |
CT - “test” position | 6 A-240 V AC qty | Low level | qty |

Auxiliary terminals for chassis alone

Jumpers (set of 10)

3-wire terminal (30 parts) | 6-wire terminal (10 parts) |

Remote operation

Electrical operation | Standard |
Communicating | V |
Power supply | AC DC |
Voltage releases | MX AC DC |
MN | AC DC V |
MN delay unit | Adjustable | Non-adjustable |

Rotary handles for fixed and withdrawable device

Direct | Black | Red on yellow front |
Extended | Black | Red on yellow front |

Telescopic handle for withdrawable device

Chassis locking in “disconnected” position:

VPEC - door interlock On right-hand side of chassis
VPOC - racking interlock On left-hand side of chassis

VDC - mismatch protection

Accessories

CDM - mechanical operation counter
CDP - escutcheon
CP - transparent cover for escutcheon
OP - blanking plate for escutcheon

Mounting brackets for fixed NS For mounting on horizontal plane

Test kits

Mini Portable test kit
**Diagram for 2 MasterPact MTZ1/MTZ2/MTZ3 devices**

### Electrical interlocking with lockout after fault:
- Permanent replacement source (with IVE unit)
- With emergency off by MX (with IVE unit)
- With emergency off by MN (with IVE unit)

### Automatic control with lockout after fault:
- Permanent replacement source (with IVE unit)
- Engine generator set (with IVE unit)

### Interlocking using connecting rods (MTZ1/MTZ2/MTZ3 devices one above the other)

Select a complete set including two adaptation fixtures and the connecting rods

<table>
<thead>
<tr>
<th>Complete set for:</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 drawout MTZ1</td>
<td></td>
</tr>
<tr>
<td>2 fixed MTZ1</td>
<td></td>
</tr>
<tr>
<td>2 drawout MTZ2/3</td>
<td></td>
</tr>
<tr>
<td>2 fixed MTZ2/3</td>
<td></td>
</tr>
<tr>
<td>1 fixed MTZ1 device + 1 fixed MTZ2/3 device</td>
<td></td>
</tr>
<tr>
<td>1 drawout MTZ1 device + 1 drawout MTZ2/3 device</td>
<td></td>
</tr>
</tbody>
</table>

### Interlocking using cables (MTZ1/MTZ2/MTZ3 devices one above the other or side-by-side)

Select two adaptation fixtures (one for each device) and a set of two cables

<table>
<thead>
<tr>
<th>Adaptation fixture for: (MTZ1/MTZ2/3 fixed and drawout devices may be mixed)</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 fixed MTZ1 device</td>
<td></td>
</tr>
<tr>
<td>1 drawout MTZ1 device</td>
<td></td>
</tr>
<tr>
<td>1 fixed MTZ2/3 device</td>
<td></td>
</tr>
<tr>
<td>1 drawout MTZ2/3 device</td>
<td></td>
</tr>
<tr>
<td>1 set of 2 cables (for two devices)</td>
<td></td>
</tr>
</tbody>
</table>

### Electrical interlocking 2 MasterPact MTZ1/MTZ2/MTZ3 devices
- 1 IVE unit 48/415 V - 50/60 Hz and 440 V - 60 Hz
- 1 wiring kit for connection between 2 fixed / withdrawable devices to the IVE unit

### Automatic-control option

<table>
<thead>
<tr>
<th>Power supply 220/240 V - 50/60 Hz:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ACP + BA controller</td>
<td></td>
</tr>
<tr>
<td>ACP + UA controller</td>
<td></td>
</tr>
<tr>
<td>ACP + UA150 controller</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Power supply 380/415 V - 50/60 Hz and 440 V - 60 Hz:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ACP + BA controller</td>
<td></td>
</tr>
<tr>
<td>ACP + UA controller</td>
<td></td>
</tr>
<tr>
<td>ACP + UA150 controller</td>
<td></td>
</tr>
</tbody>
</table>
Indication contacts

**OFF - ON/OFF indication contacts**
- Standard: 4 OF 6 A-240 V AC (10 A-240 V AC and low-level for MTZ2/3)
- Additional: 1 block of 4 OF for MTZ2/3

**EF - combined “connected/closed” contacts**
- 1 EF 6 A-240 V AC for MTZ2/3
- 1 EF low-level for MTZ2/3

**SDE - “fault-trip” indication contact**
- Standard: 1 SDE 6 A-240 V AC
- Additional: 1 SDE 6 A-240 V AC

Programmable contacts
- Carriage switches 6 A-240 V AC

Remote operation
- Remote ON/OFF MCH - gear motor
- XF - closing voltage release
- MX - opening voltage release
- PF - “ready to close” contact Low level
- BPFE - electrical closing pushbutton
- Res - electrical reset option
- RAR - automatic reset option

Remote tripping
- MN - undervoltage release
- R - delay unit (non-adjustable)
- Rr - adjustable delay unit

Locking
- VBP - ON/OFF pushbutton locking (by transparent cover + padlocks)

OFF position locking:
- VCPO - by padlocks
- VSPO - by keylocks

Chassis locking in “disconnected” position:
- VSPD - by keylocks

VPEC - door interlock
- VPOC - racking interlock

Accessories
- CDM - mechanical operation counter
- CB - auxiliary terminal shield for chassis
- CDP - escutcheon
- CP - transparent cover for escutcheon
- OP - blanking plate for escutcheon
- IBPO - racking interlock between crank and OFF pushbutton for MTZ2/3
- DAE - automatic spring discharge before breaker removal for MTZ2/3
## Order form for source-changeover systems for 3 devices

**MasterPact MTZ2/MTZ3**

Circuit breakers and switch-disconnectors

To indicate your choices, check the applicable square boxes [ ] and enter the appropriate information in the rectangles [ ].

### Diagram for 3 MasterPact MTZ2/MTZ3 devices

<table>
<thead>
<tr>
<th>2 &quot;Normal&quot; sources + 1 &quot;Replacement&quot; source:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical interlocking without lockout after fault</td>
<td></td>
</tr>
<tr>
<td>Electrical interlocking with lockout after fault</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2 &quot;Normal&quot; sources + 1 &quot;Replacement&quot; source with source selection:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic control w/ engine generator set w/o lockout after fault</td>
<td></td>
</tr>
<tr>
<td>Automatic control w/ engine generator set w/ lockout after fault</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3 sources, only 1 device ON:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical interlocking without lockout after fault</td>
<td></td>
</tr>
<tr>
<td>Electrical interlocking with lockout after fault</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2 &quot;Normal&quot; sources + 1 coupling:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical interlocking without lockout after fault</td>
<td></td>
</tr>
<tr>
<td>Electrical interlocking with lockout after fault</td>
<td></td>
</tr>
</tbody>
</table>

Automatic control with lockout after fault:

Interlocking using cables (MTZ2/MTZ3 devices one above the other or side-by-side)

### Select a complete set including three adaptation fixtures and the cables

<table>
<thead>
<tr>
<th>1 complete set for:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3 sources / 1 device ON, fixed or drawout</td>
<td></td>
</tr>
<tr>
<td>2 sources + 1 coupling, fixed or drawout</td>
<td></td>
</tr>
<tr>
<td>2 sources + 1 replacement source, fixed or drawout</td>
<td></td>
</tr>
</tbody>
</table>
To indicate your choices, check the applicable square boxes _______ and enter the appropriate information in the rectangles _______.

(one sheet per device, make copies if necessary)

## Device identification:

**Q 1 - NORMAL SOURCE**

**Q 2 - REPLACEMENT SOURCE**

### Circuit breaker or switch-disconnector

<table>
<thead>
<tr>
<th>MasterPact type</th>
<th>MTZ2/MTZ3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rating</td>
<td>A</td>
</tr>
<tr>
<td>Sensor rating</td>
<td>A</td>
</tr>
<tr>
<td>Circuit breaker</td>
<td>N1, H1, H2, H3, L1</td>
</tr>
<tr>
<td>Switch-disconnector</td>
<td>NA, HA, HF</td>
</tr>
<tr>
<td>Number of poles</td>
<td>3 or 4</td>
</tr>
<tr>
<td>Option: neutral on right side</td>
<td>Fixed</td>
</tr>
<tr>
<td>Device</td>
<td>Drawout with chassis</td>
</tr>
<tr>
<td></td>
<td>Drawout without chassis (moving part only)</td>
</tr>
</tbody>
</table>

### Chassis alone without connections

**MicroLogic control unit**

| LI | 2.X |
| LSI | 5.X |
| LSIG | 6.X |
| LSIV | 7.X |

**AD - external power-supply module**

**TCE - external sensor (CT) for neutral protection**

**Rectangular sensor**

470 x 160 mm

for earthing-leakage protection

### TCW - external sensor for SGR protection

**LR - long-time rating plug**

Standard 0.4 to 1 Ir

Low setting 0.4 to 0.8 Ir

High setting 0.8 to 1 Ir

**LT OFF**

**PTE - external voltage measurement input (required for reverse supply)**

**BAS - battery module**

### Communication

**EcoCOM module** Modbus Device Chassis

Front Display Module (FDM121) Mounting accessory

**Breaker ULP cord**

| L = 0.35 m |
| L = 1.3 m |
| L = 3 m |

**ULP port**

**ULP cord**

**I/O module**

**IFE**

### Connections

**Horizontal**

Top Bottom

**Vertical**

Top Bottom

**Front**

Top Bottom

**Interphase barriers**

Fixed, drawout

**Disconnectable front connection adapter**

**VO - safety shutters on chassis**

**VIVC - shutter position indication and locking**

### Indication contacts

#### OF - ON/OFF indication contacts

<table>
<thead>
<tr>
<th>Standard</th>
<th>OFF 6 A-240 V AC (10 A-240 V AC and low-level)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional</td>
<td>1 block of 4 OF max. 2 qty</td>
</tr>
</tbody>
</table>

#### EF - combined “connected/closed” contacts

| EF 6 A-240 V AC | max. 8 qty |
| EF low-level    | max. 8 qty |

#### SDE - “fault-trip” indication contact

| Standard | 1 SDE 6 A-240 V AC |
| Additional | 1 SDE 6 A-240 V AC and low-level |

### Programmable contacts

| Carriage switches | 6 A-240 V AC |
| Additional | 2 M2C contacts |

#### CE - “connected” position

Max. 3 qty

#### CD - “disconnected” position

Max. 3 qty

#### CT - “test” position

Max. 3 qty

#### AG - MTZ2/3 actuator for 6 CE - 3 CD - 0 CT additional carriage switches

### Remote operation

**Remote ON/OFF**

MCH - gear motor

**XF - closing voltage release**

**MX - opening voltage release**

**PF - “ready to close” contact**

Low level 6 A-240 V AC

**BPFE - electrical closing pushbutton**

**Res - electrical reset option**

**RAR - automatic reset option**

### Remote tripping

**MN - undervoltage release**

**R - delay unit (non-adjustable)**

**Rr - adjustable delay unit**

**2**™ MX shunt release

### Locking

**VBP - ON/OFF pushbutton locking (by transparent cover + padlocks)**

**OFF position locking:**

**VCPO - by paddocks**

**VSPO - by keylocks**

Keylock kit (w/o keylock) Profalux Ronis Kirk Castell

1 keylock Profalux Ronis

2 identical keylocks, 1 key Profalux Ronis

2 keylocks (MTZ2/3) Profalux Ronis

**VPEC - door interlock**

On right-hand side of chassis

On left-hand side of chassis

**VPOC - racking interlock**

**IBPO - cable-type door interlock**

**DAE - automatic spring discharge before breaker removal for MTZ2/3**

**VDC - mismatch protection**

**Accessories**

**CDM - mechanical operation counter**

**CB - auxiliary terminal shield for chassis**

**CDF - escutcheon**

**CP - transparent cover for escutcheon**

**OP - blanking plate for escutcheon**

Brackets for mounting MTZ2/3 fixed On backplates

### MicroLogic control unit

LI 2.X

LSI 5.X

LSIG 6.X

LSIV 7.X

### LT OFF

### PTE - external voltage measurement input (required for reverse supply)

### BAT - battery module

**Chassis locking in “disconnected” position:**

**VSPD - by keylocks**

Keylock kit (w/o keylock) Profalux Ronis Kirk Castell

1 keylock Profalux Ronis

2 identical keylocks, 1 key Profalux Ronis

2 keylocks, different keys Profalux Ronis

**Optional connected/disconnected/test position locking**

**VPEC - door interlock**

On right-hand side of chassis

On left-hand side of chassis

**VPOC - racking interlock**

**IPA - cable-type door interlock**

**IBPO - racking interlock between crank and OFF pushbutton for MTZ2/3**

**DAE - automatic spring discharge before breaker removal for MTZ2/3**

**VDC - mismatch protection**

**Accessories**

**CDM - mechanical operation counter**

**CB - auxiliary terminal shield for chassis**

**CDF - escutcheon**

**CP - transparent cover for escutcheon**

**OP - blanking plate for escutcheon**

Brackets for mounting MTZ2/3 fixed On backplates