CHANGEOVER SWITCHES
35A-3200A

THE RELIABLE AND MODULAR SOLUTION FOR YOUR TRANSFERS

INS-IN-DO-EN-81

KOHLER

SDMO
KOHLER-SDMO CHANGEOVER SWITCHES ARE PERFECTLY SUITTED TO ALL POWER FAILURE SITUATIONS

Thanks to its expertise and knowledge in the energy business, KOHLER-SDMO offers a wide range of automatic changeover switches. SDMO Industries is able to meet all your requirements and adapt to each of your needs. The KOHLER-SDMO offer comprises 3 product ranges.

VERSO 100
This automatic changeover switch, which is reliable and simple to use, is equipped with the main functions of this type of equipment. The range extends from 35 to 160 A.

VERSO 150 D
The VERSO 150 D is a changeover switch sized to operate at an ambient temperature of 50 °C. The built-in mains detection relay has two fixed delays that prevent unwanted start-ups following mains micro disconnections, and allow controlled power return when it has become stable again. This range has been developed for markets subject to frequent major fluctuations in the mains power. Three ratings are available: 63 A, 100 A and 160 A.

VERSO 200
The Verso 200 is an automatic changeover switch intended for larger installations. This version is available from 200 to 630 A in an IP20 metal control unit (IP55 on request) and from 800 to 3200 A in an IP55 control unit.

ADVANTAGES OF THE PRODUCT (IDENTICAL FOR ALL 3 SOURCE CHANGEOVER SWITCHES)

- A complete product, supplied in the form of a fully assembled solution and tested according to standard IEC* 60947-6-1
- Double integrated power supply (autonomous)
- Padlocking can be configured in 3 positions (I, O, II)
- Robust switch-disconnector
- Clear mechanical indicator of the changeover switch position (I-O-II)
- Intrinsic mechanical locking
- Automatic genset start-up
- High dynamic resistance for even greater safety, in the case of a short circuit closure
- Presence of a manual control for all emergency interventions
- Simple and clear readout of the status of the installation

A protected power supply is available on the 3 equipment models, in order to supply the charger and preheat the water of the genset.
## TECHNICAL SPECIFICATIONS

### VERSO 100

<table>
<thead>
<tr>
<th>Type</th>
<th>Voltage range - Frequency</th>
<th>Display and setting</th>
<th>Voltage drop tolerated</th>
<th>Maximum voltage tolerated by the equipment</th>
<th>Protects against a change in the phase rotation direction</th>
<th>Protection index</th>
<th>Dimensions (h x w x d) mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three phase</td>
<td>208/220/230/240 V &amp; 380/400/415/440 V - 50-60Hz</td>
<td>Potentiometer</td>
<td>20% of the nominal voltage @400V</td>
<td>288 V</td>
<td>•</td>
<td>IP31</td>
<td>385 x 385 x 193</td>
</tr>
<tr>
<td>Three phase</td>
<td>208/220/230/240 V &amp; 380/400/415/440 V - 50-60Hz</td>
<td>LCD display</td>
<td>30% of the nominal voltage @400V</td>
<td>305 V</td>
<td>•</td>
<td>IP44</td>
<td>600 x 400 x 200</td>
</tr>
</tbody>
</table>

### VERSO 150D

<table>
<thead>
<tr>
<th>Type</th>
<th>Voltage range - Frequency</th>
<th>Display and setting</th>
<th>Voltage drop tolerated</th>
<th>Protects against a change in the phase rotation direction</th>
<th>Lightning arrester</th>
<th>EJP (for France only)</th>
<th>Confirmation of mains return</th>
<th>Protection index</th>
<th>Dimensions (h x w x d) mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three phase</td>
<td>230/400Vac 50-60Hz</td>
<td>Potentiometer</td>
<td>320/480 Vac between phases</td>
<td>•</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td>IP65</td>
<td>500 x 400 x 200</td>
</tr>
</tbody>
</table>

### VERSO 200

<table>
<thead>
<tr>
<th>Type</th>
<th>Voltage range - Frequency</th>
<th>Display and setting</th>
<th>Voltage drop tolerated</th>
<th>Maximum voltage tolerated by the equipment</th>
<th>Protects against a change in the phase rotation direction</th>
<th>Protection index</th>
<th>Dimensions (h x w x d) mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three phase</td>
<td>208/220/230/240 V &amp; 380/400/415/440 V - 50-60Hz</td>
<td>LCD display</td>
<td>30% of the nominal voltage @400V</td>
<td>332 V</td>
<td>•</td>
<td>IP55</td>
<td>840 x 640 x 450</td>
</tr>
</tbody>
</table>

### PART NUMBERS FOR ORDERS

In order to make it easy to place orders, please find below all of the KOHLER-SDMO part numbers:

Please get in touch with your KOHLER-SDMO commercial contact and provide the desired parts list, below.

Your contact is also available for any advice or opinions regarding the choice of source changeover switch.

#### Nominal voltage range

<table>
<thead>
<tr>
<th>Verso 100 S</th>
<th>Verso 100 D</th>
<th>Verso 150 D</th>
<th>Verso 200</th>
</tr>
</thead>
<tbody>
<tr>
<td>208 to 440V</td>
<td>208 to 480V</td>
<td>380 to 440V</td>
<td>208 to 440V</td>
</tr>
</tbody>
</table>

#### Number of pole

<table>
<thead>
<tr>
<th>Verso 100 S</th>
<th>Verso 100 D</th>
<th>Verso 150 D</th>
<th>Verso 200</th>
</tr>
</thead>
<tbody>
<tr>
<td>3P</td>
<td>4P</td>
<td>3P</td>
<td>4P</td>
</tr>
</tbody>
</table>

#### Ratings

<table>
<thead>
<tr>
<th>Verso 100 S</th>
<th>Verso 100 D</th>
<th>Verso 150 D</th>
<th>Verso 200</th>
</tr>
</thead>
<tbody>
<tr>
<td>35A</td>
<td>INS353</td>
<td>INS354</td>
<td>X</td>
</tr>
<tr>
<td>63A</td>
<td>INS633</td>
<td>INS634</td>
<td>X</td>
</tr>
<tr>
<td>100A</td>
<td>INS103</td>
<td>INS104</td>
<td>X</td>
</tr>
<tr>
<td>125A</td>
<td>INS123</td>
<td>INS124</td>
<td>X</td>
</tr>
<tr>
<td>160A</td>
<td>INS163</td>
<td>INS164</td>
<td>X</td>
</tr>
<tr>
<td>200A</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>250A</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>400A</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>630A</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>800A</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>1000A</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>1250A</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>1600A</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2000A</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2500A</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>3200A</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

* Standard  ○ Option  X Not available
VERSO 100 S
The Verso 100 S is the first changeover switch offered as part of our industrial range. It covers three-phase ratings from 35 to 160A. It is one of the most compact solutions on the market.

VERSO 100 D
This product is a more advanced automatic changeover switch. It is available, as standard, with the IP54 protection rating. The Verso 100 D is available up to 160A.

> ADVANTAGES OF THE PRODUCT
- Adjustments made using potentiometers
- Complies with standard IEC* 60947-6-1
- Secure maintenance (no contact with conducting parts)
- Handle for manual emergency operation supplied as standard
- EJP function (without management of EJP priority) - (for France only)
- Kit for earthing neutral
- Programmable timings
- Stable positions not affected by vibrations and impacts
- Monitoring by a microprocessor

> ADVANTAGES OF THE PRODUCT
- Adjustments (thresholds and timings) facilitated by a MMI
- Complies with standard IEC* 60947-6-1
- One of the most compact solutions on the market
- Secure maintenance (no contact with conducting parts)
- Handle for manual emergency operation (supplied as standard)
- Monitoring by a microprocessor
- Return to position 0 in the event of faults on the mains power side
- Lightning arrester
- Possibility of up to 480V
- Complete EJP function (for France only)
- IP54 wall-mounted control unit with panel
- The cables can be installed through the top or bottom, which makes connection easy. The control unit is therefore suited to all situations.
- Programmable timings

*IEC: the “International Electrotechnical Commission” or the “Commission électrotechnique internationale” (CEI) in French, is the international standardisation organisation responsible for the fields of electricity, electronics, electromagnetic compatibility, nanotechnology and related techniques. It complements the International Organisation for Standardisation (ISO), which is responsible for other fields.
VERSO 150 D
The VERSO 150 D is a robust changeover switch sized to operate at an ambient temperature of 50 °C. It comprises two SCHNEIDER switches.

ADVANTAGES OF THE PRODUCT

- A three-phase mains detection relay with voltage thresholds adjustable to +/-30% and a «Phase rotation» monitoring function
  - A fixed 3-second fixed delay prevents unwanted start-ups following mains micro disconnections
  - A power return delay (1 minute fixed) to ensure that mains power has been restored before the installation is switched to the mains

- A set of reliable, robust SCHNEIDER switches
- Protection of changeover switch control components via three-pole circuit breaker
- Protection of a single-phase output to the generator auxiliaries via single-phase circuit breaker
- Optional lightning arrester
- Connection of the load to terminals and directly to switches for the mains and the generator
- Two dedicated terminals for connecting the generator starting order
- Test on load switch on the front of the control unit
- Voltage on indicator lights for both sources on the front
- Closing indicator lights for both switches on the front
VERSO 200

The Verso 200, available from 200 to 3200A is autonomous and complete. This changeover switch is perfectly suited to low voltage industrial applications.

> ADVANTAGES OF THE PRODUCT

- **Detachable mains measurement board:** in the event of damage due to a mains overvoltage situation, only the mains measurement board needs to be replaced.
- **Reduced wiring:** the source changeover switch is connected as close as possible to the network protection with an emergency genset installed at a distance.
- **By programming:** the product is fully adaptable to the customer’s network
- **Electrical measurements of the mains power and genset:** indicates the status of the installation, fault finding, settings ...
- **Continuity of service:** in the event of a motorisation fault, the supply to the installation is maintained.
- **Protection:** protection present for the genset auxiliaries.
- **Adaptability to unstable networks:** this control unit is suited to all types of unstable networks.
- **Event history**
Verso 200 control automaton

**Phase rotation direction protection indicator**
Configurable: ABC, ACB or OFF

**Generating set test function**
Test off load/Test during production

**Navigation keypad**
Display
Access to the Settings menu

**Timer programming**
Start-up of genset with no load or during production for a given period

**Control panels**
Automatic mode
Forced mains operation
Forced generating set operation

**Large LCD screen**
Universal display
Backlighting
Automatically scrolls

### ADVANTAGES OF OPTIONS

- **Simplified connection through the top**
  On the IP55 control unit, all connections are made through the bottom but with the possibility, on request, to add the “connection through the top” option.
  This feature includes inversions:
  - of the bus bars
  - of the voltage references
  - of the protection connections
  - of the auxiliary connections
  In addition, for the 800A to 3200A changeover switches, this option includes removal of the roof and supply of the cable gland panel.

- **Lightning arrester**
  (IP55 version)

- **IT neutral system**
  For an installation with an IT neutral system, a charge will be incurred (see price list).

- **Base kit**
  The kit allows the source changeover switch to be raised. This option is only available with an IP55 configuration from 200 to 3200 A.
### Sales Offices in France

**West**
- **SDMO Brest**
  - TÉL. +33(0)2 98 41 13 48
  - FAX +33(0)2 98 41 13 57

**Central West**
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**Paris/North Normandy**
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  - FAX +33(0)4 75 81 31 10

**South-West**
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  - FAX +34 (9) 35 80 31 36

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  - FAX +1 954 432 8330

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  - FAX +213 (0) 21 68 14 14

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  - FAX +971 4 458 69 85

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**Togo**
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**Turkey**
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