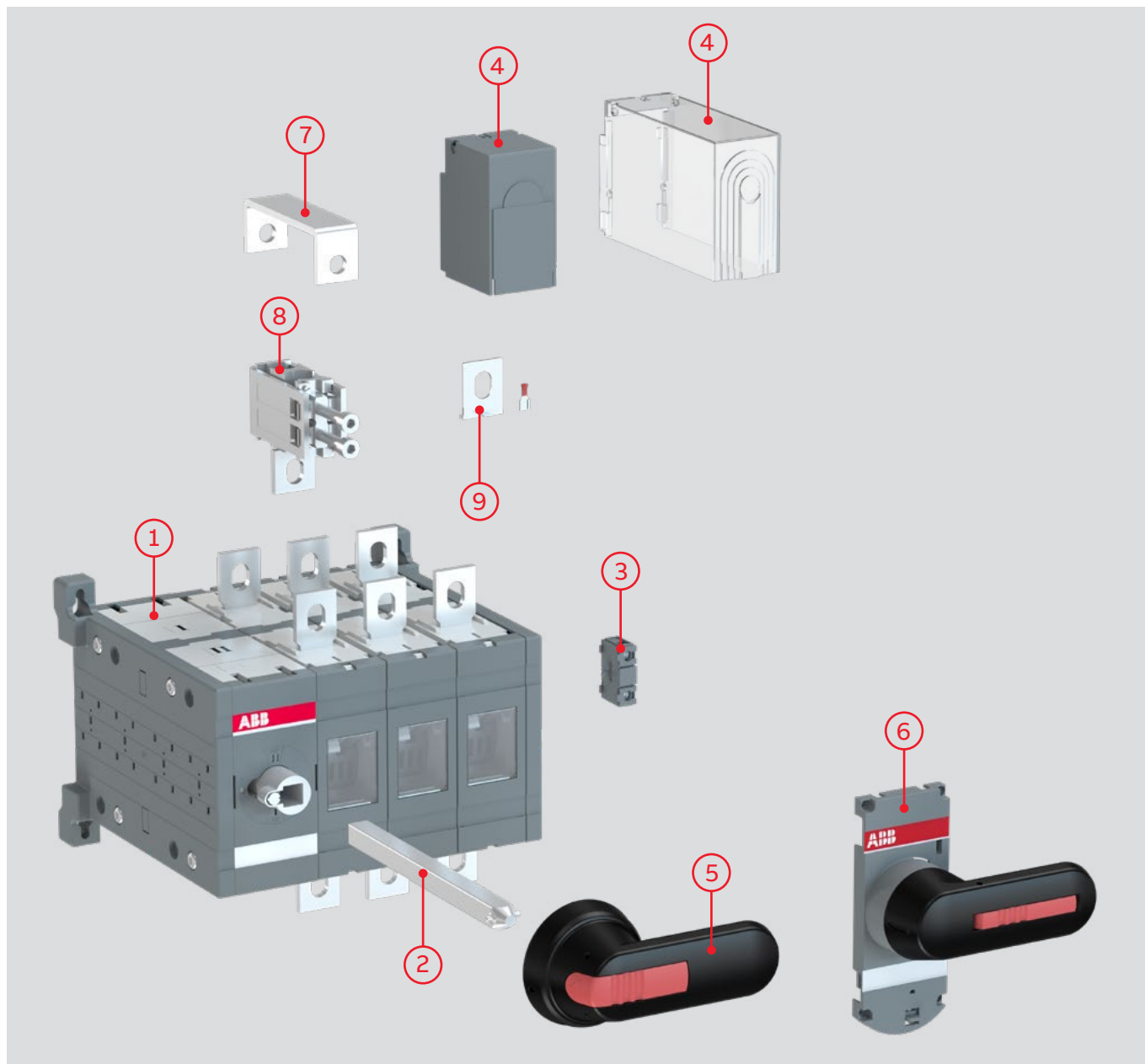


## Manual change-over switches

Ordering information for OT160...OT800\_C, OT200...OT600U\_C



### Manual change-over switch accessory guide

- |                              |                              |
|------------------------------|------------------------------|
| 1. Manual change-over switch | 6. Direct mount handle*      |
| 2. Extended shaft            | 7. Bridging bar              |
| 3. Auxiliary contact         | 8. Terminal clamp            |
| 4. Terminal shroud           | 9. Voltage sensing connector |
| 5. Pistol handle             |                              |



Please note that not all listed accessories are automatically included in your order. See next page for recommendations.

## Load break switches

Accessories: Change-over switches OT160...3200\_C



OH B\_



OH B200\_P\_

### Optional pistol handle, for base and DIN rail mounted switches

Forwarded handle, IP65. Screw fixing from the back side of the handle. No screws on the front ensures double insulation.

Indication I-O-II. Padlockable in the O-position with 3 padlocks, door interlock in I- and II-position and when padlocked.

Shaft to be ordered separately.

| Suitable switches | Shaft diameter mm | Knob length mm | Colour | Order code      |
|-------------------|-------------------|----------------|--------|-----------------|
| OT160...250_C     | 6                 | 65             | Black  | OH B65J6E011    |
| OT315...400_C     | 12                | 95             | Black  | OH B95J12E011   |
| OT630...800_C     | 12                | 125            | Black  | OH B125J12E011  |
| OT1000...3200_C   | 12                | 200            | Black  | OH B200J12PE011 |

### Shafts

| Suitable switches | Shaft length mm | Order code |
|-------------------|-----------------|------------|
| OT160...250_C     | 150             | OX P6X150  |
|                   | 210             | OX P6X210  |
|                   | 265             | OX P6X265  |
|                   | 290             | OX P6X290  |
|                   | 360             | OX P6X360  |
|                   | 430             | OX P6X430  |
| OT315...3200      | 166             | OX P12X166 |
|                   | 185             | OX P12X185 |
|                   | 250             | OX P12X250 |
|                   | 280             | OX P12X280 |
|                   | 325             | OX P12X325 |
|                   | 395             | OX P12X395 |
|                   | 465             | OX P12X465 |
|                   | 535             | OX P12X535 |



OX P6X\_



OX P12X\_

### Auxiliary contact blocks

IP20. Snap-on mounted on the right side of the switch. I=16A, cable cross section max. 2x2.5mm<sup>2</sup>. Maximum 4 auxiliary contact blocks/switch (totally 8 blocks).

Simultaneous action with the main contacts.



OA1G\_

| Suitable switches | Description | Order code |
|-------------------|-------------|------------|
| OT160...3200_C    | 1 N.O.      | OA1G10     |
|                   | 1 N.C.      | OA3G01     |

## Load break switches

Accessories: Change-over switches OT160...3200\_C



OTS1600G1L



OTS1600G1S

### Terminal shrouds

Snap-on mounted. Pack with either 3 or 4 pieces of single pole shrouds, IP3X. Grey plastic. For full change-over protection 4 times the same part number should be ordered.

| Suitable switches | Number of poles | Description | Order code   |
|-------------------|-----------------|-------------|--------------|
| OT160EV...250_C   | 3               | Long type   | OTS250G1L/3  |
|                   |                 | Short type  | OTS250G1S/3  |
|                   | 4               | Long type   | OTS250G1L/4  |
|                   |                 | Short type  | OTS250G1S/4  |
| OT315...400_C     | 3               | Long type   | OTS400G1L/3  |
|                   |                 | Short type  | OTS400G1S/3  |
|                   | 4               | Long type   | OTS400G1L/4  |
|                   |                 | Short type  | OTS400G1S/4  |
| OT630...800_C     | 3               | Long type   | OTS800G1L/3  |
|                   |                 | Short type  | OTS800G1S/3  |
|                   | 4               | Long type   | OTS800G1L/4  |
|                   |                 | Short type  | OTS800G1S/4  |
| OT1000...1600_C   | 3               | Long type   | OTS1600G1L/3 |
|                   |                 | Short type  | OTS1600G1S/3 |
|                   | 4               | Long type   | OTS1600G1L/4 |
|                   |                 | Short type  | OTS1600G1S/4 |



OTZC13...34



OTZC43...44

### Bridging bars

The bridging bars provide a connection link either on the incoming or outcoming side of the switch.

| Suitable switches | Number of poles | Order code |
|-------------------|-----------------|------------|
| OT160...250_C     | 3               | OTZC13     |
|                   | 4               | OTZC14     |
| OT315...400_C     | 3               | OTZC23     |
|                   | 4               | OTZC24     |
| OT600...800_C     | 3               | OTZC33     |
|                   | 4               | OTZC34     |
| OT1000...1250_C   | 3               | OTZC43     |
|                   | 4               | OTZC44     |
| OT1600_C          | 3               | OTZC53     |
|                   | 4               | OTZC54     |
| OT2000...2500_C   | 3               | OTZC63     |
|                   | 4               | OTZC64     |
| OT3200_C          | 3               | OTZC73     |
|                   | 4               | OTZC74     |

## Motorized change-over switches

### Technical data for OTM16...125\_C

#### Motorized change-over switches

| Data according to IEC 60947-3                                                                                                                                                                                                                       |                                                |                    |     | Switch size     |         |         |         |         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|--------------------|-----|-----------------|---------|---------|---------|---------|
|                                                                                                                                                                                                                                                     |                                                |                    |     | OTM40_          | OTM63_  | OTM80_  | OTM100_ | OTM125_ |
| Rated insulation voltage and rated operational voltage AC20/DC20                                                                                                                                                                                    | Pollution degree 3                             | V                  |     | 800             | 800     | 800     | 800     | 800     |
| Dielectric strength                                                                                                                                                                                                                                 | 50 Hz 1min.                                    | kV                 |     | 6               | 6       | 6       | 6       | 6       |
| Rated impulse withstand voltage                                                                                                                                                                                                                     |                                                | kV                 |     | 8               | 8       | 8       | 8       | 8       |
| Rated thermal current and rated operational current AC20/DC20                                                                                                                                                                                       | / ambient 40°C                                 | In open air        | A   | 40              | 63      | 80      | 115     | 125     |
|                                                                                                                                                                                                                                                     | / ambient 40°C                                 | In enclosure       | A   | 40              | 63      | 80      | 115     | 125     |
|                                                                                                                                                                                                                                                     | / ambient 60°C                                 | In enclosure       | A   | 32              | 50      | 63      | 80      | 100     |
| ..with minimum conductor cross section                                                                                                                                                                                                              | Cu                                             | mm <sup>2</sup>    |     | 10              | 16      | 25      | 35      | 50      |
| Rated operational current, AC-21A                                                                                                                                                                                                                   | up to 500 V                                    | A                  |     | 40              | 63      | 80      | 100     | 125     |
|                                                                                                                                                                                                                                                     | 690 V                                          | A                  |     | 40              | 63      | 80      | 100     | 125     |
| Rated operational current, AC-22A                                                                                                                                                                                                                   | up to 500 V                                    | A                  |     | 40              | 63      | 80      | 100     | 125     |
|                                                                                                                                                                                                                                                     | 690 V                                          | A                  |     | 40              | 63      | 80      | 100     | 125     |
| Rated operational current, AC-23A                                                                                                                                                                                                                   | up to 415 V                                    | A                  |     | 40              | 63      | 80      | 80      | 90      |
|                                                                                                                                                                                                                                                     | 500 V                                          | A                  |     | 40              | 60      | 60      | 60      | 70      |
|                                                                                                                                                                                                                                                     | 690 V                                          | A                  |     | 40              | 40      | 40      | 40      | 50      |
|                                                                                                                                                                                                                                                     |                                                |                    |     |                 |         |         |         |         |
| Rated operational current / poles in series, DC-21A                                                                                                                                                                                                 | up to 48 V                                     | A                  |     | 40/1            | 63/1    | 80/1    | 100/1   | 125/1   |
|                                                                                                                                                                                                                                                     | 110 V                                          | A                  |     | 40/2            | 63/2    | 80/2    | 100/2   | 125/2   |
|                                                                                                                                                                                                                                                     | 220 V                                          | A                  |     | 40/4            | 63/4    | 80/4    | 100/4   | 100/4   |
| Rated operational current / poles in series, DC-22A                                                                                                                                                                                                 | up to 48 V                                     | A                  |     | 40/1            | 63/1    | 80/1    | 100/1   | 125/1   |
|                                                                                                                                                                                                                                                     | 110 V                                          | A                  |     | 40/2            | 63/2    | 80/2    | 100/2   | 125/2   |
|                                                                                                                                                                                                                                                     | 220 V                                          | A                  |     | 40/4            | 63/4    | 80/4    | 80/4    | 80/4    |
| Rated operational current / poles in series, DC-23A                                                                                                                                                                                                 | up to 48 V                                     | A                  |     | 40/1            | 63/1    | 80/1    | 100/1   | 125/1   |
|                                                                                                                                                                                                                                                     | 110 V                                          | A                  |     | 40/2            | 63/2    | 80/2    | 100/2   | 125/2   |
|                                                                                                                                                                                                                                                     | 220 V                                          | A                  |     | 40/4            | 63/4    | 63/4    | 63/4    | 63/4    |
| Rated operational power, AC-23A <sup>1)</sup><br>The kW-ratings are accurate for 3-phase 1500 R.P.M. standard asynchronous motors                                                                                                                   | 230 V                                          | kW                 |     | 7.5             | 15      | 22      | 22      | 22      |
|                                                                                                                                                                                                                                                     | 400 V                                          | kW                 |     | 18.5            | 30      | 37      | 37      | 45      |
|                                                                                                                                                                                                                                                     | 415 V                                          | kW                 |     | 18.5            | 30      | 37      | 37      | 45      |
|                                                                                                                                                                                                                                                     | 500 V                                          | kW                 |     | 22              | 37      | 37      | 37      | 45      |
|                                                                                                                                                                                                                                                     | 690 V                                          | kW                 |     | 37              | 37      | 37      | 37      | 45      |
| Rated breaking capacity in category AC-23                                                                                                                                                                                                           | up to 415 V                                    | A                  |     | 320             | 504     | 640     | 640     | 720     |
|                                                                                                                                                                                                                                                     | 500 V                                          | A                  |     | 320             | 480     | 480     | 480     | 560     |
|                                                                                                                                                                                                                                                     | 690 V                                          | A                  |     | 320             | 320     | 320     | 320     | 400     |
| Rated conditional short-circuit current $I_p$ (r.m.s.) and corresponding max. allowed cut-off current $\hat{I}_c$ (peak) value. The cut-off current $\hat{I}_c$ refers to values listed by fuse manufacturers (single phase test acc. to IEC60269). | $I_p$ (r.m.s.) 50 kA, 415 V                    | $\hat{I}_c$ (peak) | kA  | 16.5            | 16.5    | 16.5    | 16.5    | 16.5    |
|                                                                                                                                                                                                                                                     | Max. OFA_fuse size                             | gG/aM              | A/A | 125/125         | 125/125 | 125/125 | 125/125 | 125/125 |
|                                                                                                                                                                                                                                                     | $I_p$ (r.m.s.) 18 kA, 690 V                    | $\hat{I}_c$ (peak) | kA  | 11              | 11      | 11      | 11      | 11      |
|                                                                                                                                                                                                                                                     | Max. OFA_fuse size                             | gG                 | A   | 125             | 125     | 125     | 125     | 125     |
| Rated short-time withstand current                                                                                                                                                                                                                  | $I_{cw}$ (r.m.s.)                              | 690 V 1s           | kA  | 2.5             | 2.5     | 2.5     | 2.5     | 2.5     |
|                                                                                                                                                                                                                                                     | Rated short-time making capacity <sup>2)</sup> | $I_{cm}$ (peak)    | kA  | 3.6             | 3.6     | 3.6     | 3.6     | 3.6     |
| Power loss / pole                                                                                                                                                                                                                                   | With rated current                             |                    | W   | 1.6             | 2.8     | 3.5     | 4.0     | 6.3     |
| Mechanical endurance                                                                                                                                                                                                                                | Number of oper. cycles <sup>3)</sup>           | Cycles             |     | 10 000          | 10 000  | 10 000  | 10 000  | 10 000  |
| Cable size                                                                                                                                                                                                                                          | Cu-wire size suitable                          | mm <sup>2</sup>    |     | 2.5-25/2x2.5-16 | 10-70   | 10-70   | 10-70   | 10-70   |
|                                                                                                                                                                                                                                                     | for terminal clamps                            | AWG                |     | 14-4/2x14-6     | 8-00    | 8-00    | 8-00    | 8-00    |
| Terminal tightening torque                                                                                                                                                                                                                          | Counter torque required                        | Nm                 |     | 6               | 6       | 6       | 6       | 6       |
| Operating torque                                                                                                                                                                                                                                    | 3-pole switches                                | Nm                 |     | 5               | 5       | 5       | 5       | 5       |
| Weight without accessories                                                                                                                                                                                                                          | 3-pole switch                                  | kg                 |     | 1.37            | 1.37    | 1.37    | 1.37    | 1.37    |
|                                                                                                                                                                                                                                                     | 4-pole switch                                  | kg                 |     | 1.60            | 1.60    | 1.60    | 1.60    | 1.60    |
| Data according to IEC 60947-6-1                                                                                                                                                                                                                     |                                                |                    |     |                 |         |         |         |         |
| Class of equipment                                                                                                                                                                                                                                  |                                                |                    |     | PC              | PC      | PC      | PC      | PC      |
| Rated short-time withstand current                                                                                                                                                                                                                  | $I_{cw}$ (r.m.s.)                              | 690 V 0.1s         | kA  | 5               | 5       | 5       | 5       | 5       |
| Conditional short-circuit current                                                                                                                                                                                                                   | $I_{cc}$ (r.m.s.)                              | 415 V              | kA  | 50              | 50      | 50      | 50      | 50      |
| Corresponding fuse rating                                                                                                                                                                                                                           | gG/aM fuse                                     | 415 V              | A   | 125             | 125     | 125     | 125     | 125     |
| Rated operational current, AC-31B                                                                                                                                                                                                                   |                                                | up to 415 V        | A   | 40              | 63      | 80      | 100     | 125     |
| Rated operational current, AC-32B                                                                                                                                                                                                                   |                                                | up to 415 V        | A   | 40              | 63      | 80      | 100     | 125     |
| Rated operational current, AC-33B                                                                                                                                                                                                                   |                                                | up to 415 V        | A   | 40              | 63      | 80      | 80      | 80      |

1) These values are given for guidance and may vary according to the motor manufacturer

2) Short circuit duration > 50ms, without fuse protection

3) Operating cycle: O - I - O - II - O

## Motorized change-over switches

### Technical data for OTM160...800\_C

#### Motorized change-over switches

| Data according to IEC 60947-3                                                                                                                                                                                                           |                                                              |                                |           | Switch size     |                 |                 |                     |                     |                     |                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|--------------------------------|-----------|-----------------|-----------------|-----------------|---------------------|---------------------|---------------------|---------------------|
|                                                                                                                                                                                                                                         |                                                              |                                |           | OT_160_         | OT_200_         | OT_250_         | OT_315_             | OT_400_             | OT_630_             | OT_800_             |
| Rated insulation voltage and rated operational voltage AC20/DC20 <sup>1)</sup>                                                                                                                                                          | Pollution degree 3 <sup>2)</sup>                             | V                              |           | 1000            | 1000            | 1000            | 1000                | 1000                | 1000                | 1000                |
| Dielectric strength                                                                                                                                                                                                                     | 50 Hz 1min.                                                  | kV                             |           | 10              | 10              | 10              | 10                  | 10                  | 10                  | 10                  |
| Rated impulse withstand voltage <sup>3)</sup>                                                                                                                                                                                           |                                                              | kV                             |           | 12              | 12              | 12              | 12                  | 12                  | 12                  | 12                  |
| Rated thermal current and rated operational current AC20/DC20 / ambient 40°C                                                                                                                                                            | In open air                                                  | A                              |           | 160             | 200             | 250             | 315                 | 400                 | 630                 | 800                 |
| ..with minimum conductor cross section                                                                                                                                                                                                  | In enclosure                                                 | A                              |           | 160             | 200             | 250             | 315                 | 400                 | 630                 | 800                 |
|                                                                                                                                                                                                                                         | Cu                                                           | mm <sup>2</sup>                |           | 70              | 95              | 120             | 185                 | 240                 | 2x185               | 2x240               |
| Rated operational current, AC-21A                                                                                                                                                                                                       | up to 500 V                                                  | A                              |           | 160             | 200             | 250             | 315                 | 400                 | 630                 | 800                 |
|                                                                                                                                                                                                                                         | 690 V                                                        | A                              |           | 160             | 200             | 250             | 315                 | 400                 | 630                 | 800                 |
| Rated operational current, AC-22A                                                                                                                                                                                                       | up to 500 V                                                  | A                              |           | 160             | 200             | 250             | 315                 | 400                 | 630                 | 800                 |
|                                                                                                                                                                                                                                         | 690 V                                                        | A                              |           | 160             | 200             | 250             | 315                 | 400                 | 630                 | 800                 |
| Rated operational current, AC-23A                                                                                                                                                                                                       | up to 415 V                                                  | A                              |           | 160             | 200             | 250             | 315                 | 400                 | 630                 | 800                 |
|                                                                                                                                                                                                                                         | 440 V                                                        | A                              |           | 160             | 200             | 250             | 315                 | 400                 | 630                 | 800                 |
|                                                                                                                                                                                                                                         | 500 V                                                        | A                              |           | 160             | 200             | 250             | 315                 | 400                 | 630                 | 800                 |
|                                                                                                                                                                                                                                         | 690 V                                                        | A                              |           | 160             | 200             | 250             | 315                 | 400                 | 630                 | 800                 |
| Rated operational current / poles in series, DC-21A <sup>6)</sup>                                                                                                                                                                       | ≤ 110 V                                                      | A                              |           | 160/2           | 200/2           | 250/2           | 315/1 <sup>1)</sup> | 400/1 <sup>1)</sup> | 630/1               | 800/1               |
|                                                                                                                                                                                                                                         | 220 V                                                        | A                              |           | 160/2           | 200/2           | 250/2           | 315/2 <sup>1)</sup> | 400/2 <sup>1)</sup> | 630/1               | 800/1               |
|                                                                                                                                                                                                                                         | 440 V                                                        | A                              |           | 160/3           | 200/3           | 230/3           | 315/3               | 360/3               | 630/2               | 720/2               |
|                                                                                                                                                                                                                                         | 660 V                                                        | A                              |           | 160/4           | 200/4           | 200/4           | 315/4               | 315/4               | 630/4 <sup>1)</sup> | 630/4 <sup>1)</sup> |
| Rated operational power, AC-23A <sup>2)</sup>                                                                                                                                                                                           | 230 V                                                        | kW                             |           | 45              | 60              | 75              | 100                 | 132                 | 200                 | 250                 |
| The kW-ratings are accurate for 3-phase 1500 R.P.M. standard asynchronous motors                                                                                                                                                        | 400 V                                                        | kW                             |           | 90              | 110             | 140             | 160                 | 220                 | 355                 | 450                 |
|                                                                                                                                                                                                                                         | 415 V                                                        | kW                             |           | 90              | 110             | 145             | 180                 | 230                 | 355                 | 450                 |
|                                                                                                                                                                                                                                         | 500 V                                                        | kW                             |           | 110             | 132             | 170             | 220                 | 280                 | 400                 | 560                 |
|                                                                                                                                                                                                                                         | 690 V                                                        | kW                             |           | 160             | 200             | 250             | 315                 | 400                 | 630                 | 800                 |
| Rated breaking capacity in category AC-23                                                                                                                                                                                               | up to 415 V                                                  | A                              |           | 1 280           | 1 600           | 2 000           | 2 520               | 3 200               | 5 040               | 6 400               |
|                                                                                                                                                                                                                                         | 500 V                                                        | A                              |           | 1 280           | 1 600           | 2 000           | 2 520               | 3 200               | 5 040               | 6 400               |
|                                                                                                                                                                                                                                         | 690 V                                                        | A                              |           | 1 280           | 1 600           | 2 000           | 2 520               | 3 200               | 5 040               | 6 400               |
| Rated conditional short-circuit current I <sub>p</sub> (r.m.s.) and cut-off current I <sub>c</sub> (peak) value. The cut-off current I <sub>c</sub> refers to values listed by fuse manufacturers (single phase test acc. to IEC60269). | I <sub>p</sub> (r.m.s.) 80 kA, 415 V<br>Max. OFA_ fuse size  | I <sub>c</sub> (peak)<br>gG/aM | kA<br>A/A | 40.5<br>355/315 | 40.5<br>355/315 | 40.5<br>355/315 | 59<br>500/500       | 59<br>500/500       | 83.5<br>800/1 000   | 83.5<br>800/1 000   |
|                                                                                                                                                                                                                                         | I <sub>p</sub> (r.m.s.) 100 kA, 500 V<br>Max. OFA_ fuse size | I <sub>c</sub> (peak)<br>gG/aM | kA<br>A   | 40.5<br>315/315 | 40.5<br>315/315 | 40.5<br>315/315 | 61.5<br>500/450     | 61.5<br>500/450     | 90<br>800/800       | 90<br>800/800       |
|                                                                                                                                                                                                                                         | I <sub>p</sub> (r.m.s.) 80 kA, 690 V<br>Max. OFA_ fuse size  | I <sub>c</sub> (peak)<br>gG/aM | kA<br>A   | 40.5<br>355/315 | 40.5<br>355/315 | 40.5<br>355/315 | 59<br>500/500       | 59<br>500/500       | 83.5<br>800/1 000   | 83.5<br>800/1 000   |
| Rated short-time withstand current I <sub>cw</sub> (r.m.s.)                                                                                                                                                                             | 690 V 0.15s                                                  | kA                             |           | 15              | 15              | 15              | 31                  | 31                  | 38                  | 38                  |
|                                                                                                                                                                                                                                         | 690 V 0.25s                                                  | kA                             |           | 15              | 15              | 15              | 24                  | 24                  | 36                  | 36                  |
|                                                                                                                                                                                                                                         | 690 V 1s                                                     | kA                             |           | 8               | 8               | 8               | 15                  | 15                  | 20                  | 20                  |
| Rated short-time making capacity <sup>3)</sup>                                                                                                                                                                                          | I <sub>cm</sub> (peak) <sup>4)</sup>                         | kA                             |           | 30              | 30              | 30              | 65                  | 65                  | 80                  | 80                  |
| Power loss / pole                                                                                                                                                                                                                       | With rated current                                           | W                              |           | 2.4             | 4               | 6.5             | 6.5                 | 10                  | 25                  | 40                  |
| Mechanical endurance                                                                                                                                                                                                                    | Number of oper. cycles <sup>5)</sup>                         | Cycles                         |           | 8 000           | 8 000           | 8 000           | 8 000               | 8 000               | 5 000               | 5 000               |
| Terminal bolt size                                                                                                                                                                                                                      | Metric thread<br>diameter x length                           | mm                             |           | M8x25           | M8x25           | M8x25           | M10x30              | M10x30              | M12x40              | M12x40              |
| Terminal tightening torque                                                                                                                                                                                                              | Counter torque required                                      | Nm                             |           | 15-22           | 15-22           | 15-22           | 30-44               | 30-44               | 50-75               | 50-75               |
| Operating torque                                                                                                                                                                                                                        | 3-pole change-over switches                                  | Nm                             |           | 7               | 7               | 7               | 16                  | 16                  | 27                  | 27                  |
| Weight without accessories                                                                                                                                                                                                              | 3-pole switch                                                | kg                             |           | 5.7             | 5.7             | 5.7             | 10.2                | 10.2                | 17.5                | 17.5                |
|                                                                                                                                                                                                                                         | 4-pole switch                                                | kg                             |           | 6.4             | 6.4             | 6.4             | 11.4                | 11.4                | 20.4                | 20.4                |
| Data according to IEC 60947-6-1                                                                                                                                                                                                         |                                                              |                                |           |                 |                 |                 |                     |                     |                     |                     |
| Class of equipment                                                                                                                                                                                                                      |                                                              |                                |           | PC              | PC              | PC              | PC                  | PC                  | PC                  | PC                  |
| Rated short-time withstand current I <sub>cw</sub> (r.m.s.)                                                                                                                                                                             | 690 V 0.1s                                                   | kA                             |           | 15              | 15              | 15              | 25                  | 25                  | 38                  | 38                  |
| Rated operational current, AC-31B                                                                                                                                                                                                       | up to 415 V                                                  | A                              |           | 160             | 200             | 250             | 315                 | 400                 | 650                 | 720                 |
| Rated operational current, AC-33B                                                                                                                                                                                                       | up to 415 V                                                  | A                              |           | 160             | 200             | 250             | 315                 | 400                 | 650                 | 650                 |

1) Utilization category B

2) These values are given for guidance and may vary acc. to the motor manufacturer

3) Short circuit duration > 50ms, without fuse protection

4) Max. distance from switch frame to nearest busbar / cable support 150 mm

5) Operating cycle: O - I - O - II - O

6) Further ratings on request

## Motorized change-over switches

### Technical data for OTM1000...3200\_C

#### Motorized change-over switches

| Data according to IEC 60947-3                                                                                                                                                                                                           |                                       |                       |                 | Switch size |             |             |                     |                     |                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-----------------------|-----------------|-------------|-------------|-------------|---------------------|---------------------|---------------------|
|                                                                                                                                                                                                                                         |                                       |                       |                 | OT_1000_    | OT_1250_    | OT_1600_    | OT_2000_            | OT_2500_            | OT_3200_            |
| Rated insulation voltage and rated operational voltage AC20/DC20 <sup>1)</sup>                                                                                                                                                          | Pollution degree 3 <sup>2)</sup>      | V                     |                 | 1 000       | 1 000       | 1 000       | 1 000               | 1 000               | 1 000               |
| Dielectric strength                                                                                                                                                                                                                     | 50 Hz 1min.                           | kV                    |                 | 10          | 10          | 10          | 10                  | 10                  | 10                  |
| Rated impulse withstand voltage <sup>3)</sup>                                                                                                                                                                                           |                                       | kV                    |                 | 12          | 12          | 12          | 12                  | 12                  | 12                  |
| Rated thermal current and rated operational current AC20/DC20                                                                                                                                                                           | / ambient 40°C                        | In open air           | A               | 1 000       | 1 250       | 1 600       | 2 000               | 2 500               | 3 200               |
| ..with minimum conductor cross section                                                                                                                                                                                                  | / ambient 40°C                        | In enclosure          | A               |             |             |             |                     |                     |                     |
|                                                                                                                                                                                                                                         |                                       | Cu                    | mm <sup>2</sup> | 2x300       | 2x400       | 2x500       | 3x500               | 4x500               | 4x1 000             |
| Rated operational current, AC-21A                                                                                                                                                                                                       | up to 500 V                           | A                     |                 | 1 000       | 1 250       | 1 600       | 2 000 <sup>5)</sup> | 2 500 <sup>5)</sup> | 3 200 <sup>5)</sup> |
|                                                                                                                                                                                                                                         | 690 V                                 | A                     |                 | 1 000       | 1 250       | 1 600       |                     |                     |                     |
| Rated operational current, AC-22A                                                                                                                                                                                                       | up to 500 V                           | A                     |                 | 1 000       | 1 250       | 1 600       |                     |                     |                     |
|                                                                                                                                                                                                                                         | 690 V                                 | A                     |                 | 1 000       | 1 250       | 1 600       |                     |                     |                     |
| Rated operational current, AC-23A                                                                                                                                                                                                       | up to 415 V                           | A                     |                 | 1 000       | 1 250       | 1 250       |                     |                     |                     |
|                                                                                                                                                                                                                                         | 440 V                                 | A                     |                 | 1 000       | 1 250       | 1 250       |                     |                     |                     |
|                                                                                                                                                                                                                                         | 500 V                                 | A                     |                 | 1 000       | 1 250       | 1 250       |                     |                     |                     |
|                                                                                                                                                                                                                                         | 690 V                                 | A                     |                 | 1 000       | 1 250       | 1 250       |                     |                     |                     |
| Rated operational power, AC-23A <sup>1)</sup>                                                                                                                                                                                           | 230 V                                 | kW                    |                 | 315         | 400         | 400         |                     |                     |                     |
| The kW-ratings are accurate for 3-phase 1500 R.P.M. standard asynchronous motors                                                                                                                                                        | 400 V                                 | kW                    |                 | 560         | 710         | 710         |                     |                     |                     |
|                                                                                                                                                                                                                                         | 415 V                                 | kW                    |                 | 560         | 710         | 710         |                     |                     |                     |
|                                                                                                                                                                                                                                         | 500 V                                 | kW                    |                 | 710         | 900         | 900         |                     |                     |                     |
|                                                                                                                                                                                                                                         | 690 V                                 | kW                    |                 | 1 000       | 1 200       | 1 200       |                     |                     |                     |
| Rated breaking capacity in category AC-23                                                                                                                                                                                               | up to 415 V                           | A                     |                 | 10 000      | 10 000      | 10 000      |                     |                     |                     |
|                                                                                                                                                                                                                                         | 500 V                                 | A                     |                 | 10 000      | 10 000      | 10 000      |                     |                     |                     |
|                                                                                                                                                                                                                                         | 690 V                                 | A                     |                 | 10 000      | 10 000      | 10 000      |                     |                     |                     |
| Rated conditional short-circuit current I <sub>p</sub> (r.m.s.) and cut-off current I <sub>c</sub> (peak) value. The cut-off current I <sub>c</sub> refers to values listed by fuse manufacturers (single phase test acc. to IEC60269). | I <sub>p</sub> (r.m.s.) 80 kA, 415 V  | I <sub>c</sub> (peak) | kA              | 100         | 100         | 100         |                     |                     |                     |
|                                                                                                                                                                                                                                         | Max. OFA_ fuse size                   | gG/aM                 | A/A             | 1 250/1 250 | 1 250/1 250 | 1 250/1 250 |                     |                     |                     |
|                                                                                                                                                                                                                                         | I <sub>p</sub> (r.m.s.) 100 kA, 500 V | I <sub>c</sub> (peak) | kA              | 106         | 106         | 106         |                     |                     |                     |
|                                                                                                                                                                                                                                         | Max. OFA_ fuse size                   | gG/aM                 | A               | 1 250/1 250 | 1 250/1 250 | 1 250/1 250 |                     |                     |                     |
|                                                                                                                                                                                                                                         | I <sub>p</sub> (r.m.s.) 80 kA, 690 V  | I <sub>c</sub> (peak) | kA              |             |             |             |                     |                     |                     |
|                                                                                                                                                                                                                                         | Max. OFA_ fuse size                   | gG/aM                 | A               |             |             |             |                     |                     |                     |
| Rated short-time withstand current I <sub>cw</sub> (r.m.s.)                                                                                                                                                                             | 690 V 0.15s                           | kA                    |                 | 50          | 50          | 50          | 50                  | 50                  |                     |
|                                                                                                                                                                                                                                         | 690 V 0.25s                           | kA                    |                 | 50          | 50          | 50          | 50                  | 50                  |                     |
|                                                                                                                                                                                                                                         | 690 V 1s                              | kA                    |                 | 50          | 50          | 50          | 55                  | 55                  | 65                  |
| Rated short-time making capacity <sup>2)</sup>                                                                                                                                                                                          | I <sub>cm</sub> (peak) <sup>3)</sup>  | 690 V                 | kA              | 92          | 92          | 92          | 110                 | 110                 | 143                 |
| Power loss / pole                                                                                                                                                                                                                       | With rated current                    | W                     |                 | 19          | 29          | 48          | 55                  | 85                  | 95                  |
| Mechanical endurance                                                                                                                                                                                                                    | Number of oper. cycles <sup>4)</sup>  | Cycles                |                 | 3 000       | 3 000       | 3 000       | 2 000               | 2 000               | 2 000               |
| Terminal bolt size                                                                                                                                                                                                                      | Metric thread diameter                | mm                    |                 | M12x60      | M12x60      | M12x60      | M12x60              | M12x60              | M12x100             |
|                                                                                                                                                                                                                                         | x length                              |                       |                 |             |             |             |                     |                     |                     |
| Terminal tightening torque                                                                                                                                                                                                              | Counter torque required               | Nm                    |                 | 50-75       | 50-75       | 50-75       | 50-75               | 50-75               | 50-75               |
| Operating torque                                                                                                                                                                                                                        | 3-pole change-over switches           | Nm                    |                 | 78          | 78          | 78          | 78                  | 78                  | 80                  |
| Weight without accessories                                                                                                                                                                                                              | 3-pole switch                         | kg                    |                 | 42          | 42          | 44          | 56                  | 56                  | 83                  |
|                                                                                                                                                                                                                                         | 4-pole switch                         | kg                    |                 | 50          | 50          | 52          | 70                  | 70                  | 101                 |
| Data according to IEC 60947-6-1                                                                                                                                                                                                         |                                       |                       |                 |             |             |             |                     |                     |                     |
| Class of equipment                                                                                                                                                                                                                      |                                       |                       |                 | PC          | PC          | PC          |                     |                     |                     |
| Rated short-time withstand current I <sub>cw</sub> (r.m.s.)                                                                                                                                                                             | 690 V 0.1s                            | kA                    |                 | 50          | 50          | 50          |                     |                     |                     |
| Rated operational current, AC-31B                                                                                                                                                                                                       | up to 415 V                           | A                     |                 | 1 000       | 1 250       | 1 600       |                     |                     |                     |
| Rated operational current, AC-33B                                                                                                                                                                                                       | up to 415 V                           | A                     |                 | 1 000       | 1 000       | 1 000       |                     |                     |                     |

1) These values are given for guidance and may vary acc. to the motor manufacturer

2) Short circuit duration > 50ms, without fuse protection

3) Max. distance from switch frame to nearest busbar / cable support 150 mm

4) Operating cycle: O - I - O - II - O

5) Category AC-21B, up to 415V