

















| Description   |
|---|
| <p>3TF Series AC Contactors are latest products of Siemens AG in 1990's. The series products are suitable for frequency of 50/60Hz, rated insulation voltage up to 690 ~ 1000V, rated operational current up to 9A ~ 400A at rated operational voltage up to 380V under the utilization category AC - 3. 3TF Series AC Contactors are mainly used for making/breaking electric circuits at a long distance and for frequent starting/stopping and reversing control of AC motors. They comply with IEC947, VDE0660, GB14048.</p>  |
| Operating Conditions  |
| <ul style="list-style-type: none"> <li>• The altitude of the site of installation does not exceed 2000 meters above sea levels.</li> <li>• The ambient air temperature: -25 ~ +55°C</li> <li>• Relative humidity does not exceed 50% at +40°C and 90% at +25°C</li> <li>• Atmospheric conditions: the air does not contain any explosive medium, corrosive gases and conductive dust.</li> <li>• Never be shocked and vibrated obviously.</li> <li>• Never be wetted by rain and snow.</li> </ul>   |
| Features  |
| <ul style="list-style-type: none"> <li>• For better safety, conductive part are enclosed.</li> <li>• Small sizes, light weight, material of arc chute adopts unsaturated resin, with good arc resistance, never splitting.</li> <li>• The arc chute is enclosed, arc-over distance is small, with a compact electric cabinet.</li> <li>• Construction of main contacts system is unique, abrasion of the contacts is small, with a long electric endurance.</li> <li>• The operation of the magnet has many advantages such as good reliability, little consumption, low noise and high mechanical strength.</li> <li>• The contactors have higher operation frequency and control capacity.</li> <li>• Auxiliary contact block may be attached to 3TF30 ~ 50 Series AC Contactors.</li> <li>• SIGUT - Siemens patent terminal, ensures easy and reliable connection, strog shock resistance and perfect safety protection.</li> </ul> <div data-bbox="772 1640 1240 1823" style="border: 2px solid red; padding: 5px; margin-top: 20px;"> <p style="text-align: center;"> <b>勝特力材料 886-3-5753170</b><br/> <b>勝特力电子(上海) 86-21-34970699</b><br/> <b>勝特力电子(深圳) 86-755-83298787</b><br/> <a href="http://www.100y.com.tw">Http://www.100y.com.tw</a> </p> </div> |

## 3TF AC Contactors









| Selection and ordering data                             |  |   |  |  |                |   |  |  |  |
|---|--|---|--|--|----------------|---|--|--|--|
| AC operation  |  |  |  |                   |                |  |  |                 |  |
|   |  | 3TF30   |  | 3TF40  |                | 3TF31   |  | 3TF41  |  |
| Auxiliary contacts<br>NO      NC                        |  |  |  |                   |                |  |  |                 |  |
|   |  | NO - NC   |  | NO - NC  |                | NO - NC   |  | NO - NC  |  |
| Order No.   |  | 3TF30 00 - 0X<br>3TF30 10 - 0X<br>3TF30 01 - 0X                                   |  | 3TF40 10 - 0X<br>3TF40 01 - 0X<br>3TF40 11 - 0X<br>3TF40 22 - 0X<br>3TF40 20 - 0X<br>3TF40 31 - 0X |                | 3TF31 00 - 0X<br>3TF31 10 - 0X<br>3TF31 01 - 0X                                     |  | 3TF41 10 - 0X<br>3TF41 01 - 0X<br>3TF41 11 - 0X<br>3TF41 22 - 0X<br>3TF41 20 - 0X<br>3TF41 31 - 0X |  |
|   |  | - -<br>1 -<br>- 1   |  | - -<br>- 1<br>1 1<br>2 2<br>2 -<br>3 1   |                | - -<br>1 -<br>- 1   |  | 1 -<br>- 1<br>1 1<br>2 2<br>2 -<br>3 1   |  |
| Rated insulation voltage (V)                            |  | 690   |  | 690  |                | 690   |  | 690  |  |
| Rated operational current (380V)                        |  | AC - 3<br>AC - 4  |  | 9<br>3.3   |                | 9<br>3.3  |  | 12<br>4.3  |  |
| Rated outputs of three-phase motors at 50Hz (KW)        |  | AC - 3<br>AC - 4  |  | 2.4<br>4<br>5.5<br>5.5<br>--<br>1.48/1.4<br>2.54/2.4   |                | 2.4<br>4<br>5.5<br>5.5<br>--<br>1.48/1.4<br>2.54/2.4                                |  | 3.3<br>5.5<br>7.5<br>7.5<br>--<br>2/1.9<br>3.45/3.3  |  |
|   |  | 230/220V<br>400/380V<br>500 V<br>690/660V<br>1000 V                               |  | 400/380V<br>690/660V   |                | 400/380V<br>690/660V  |  | 400/380V<br>690/660V   |  |
| Mechanical endurance (x10 <sup>6</sup> )                |  | 15  |  | 15   |                | 15  |  | 15   |  |
| Electrical endurance (x10 <sup>6</sup> )                |  | AC - 3<br>AC - 4  |  | 1.2<br>0.2   |                | 1.2<br>0.2  |  | 1.2<br>0.2   |  |
| Switching frequency (1/h)                               |  | AC - 3<br>AC - 4  |  | 1000<br>250  |                | 1000<br>250   |  | 1000<br>250  |  |
| Coil voltage tolerance (AC)                             |  | (0.8~1.1)U <sub>n</sub>   |  |  |                |   |  |  |  |
| Order No. suffixes for rated control voltages for coils |  | Coils for 50Hz  |  |  | Coils for 60Hz |   |  | Coils for 50/60Hz  |  |
|   |  | 50Hz    60Hz  |  | 60Hz    50Hz   |                |   |  |  |  |
| 3TF3...0X <input type="checkbox"/>                      |  | 24V    29V    B0  |  | 24V    20V    C1   |                | 24V    C2   |  |  |  |
| 3TF4...0X <input type="checkbox"/>                      |  | 32V    38V    C0  |  | 110V    92V    G1  |                | 42V    D2   |  |  |  |
|   |  | 36V    42V    G0  |  | 115V    96V    J1  |                | 110V    G2  |  |  |  |
|   |  | 42V    50V    D0  |  | 120V    100V    K1   |                | 115V    J2  |  |  |  |
|   |  | 48V    58V    H0  |  | 208V    173V    M1   |                | 120V    K2  |  |  |  |
|   |  | 60V    72V    E0  |  | 220V    183V    N1   |                | 208V    M2  |  |  |  |
|   |  | 110V    132V    F0  |  | 230V    192V    L1   |                | 220V    N2  |  |  |  |
|   |  | 125/127V 150/152V    L0   |  | 240V    200V    P1   |                | 230V    L2  |  |  |  |
|   |  | 220V    264V    M0  |  | 440V    367V    R1   |                | 240V    P2  |  |  |  |
|   |  | 230V    277V    P0  |  | 575V    480V    S1   |                | 440V    R2  |  |  |  |
|   |  | 240V    288V    U0  |  |  |                | 575V    S2  |  |  |  |
|   |  | 380V    460V    Q0  |  |  |                |   |  |  |  |
|   |  | 400V    480V    V0  |  |  |                |   |  |  |  |
|   |  | 415V    500V    R0  |  |  |                |   |  |  |  |
|   |  | 500V    600V    S0  |  |  |                |   |  |  |  |
| Power consumption of coil (50Hz)                        |  | Closed (VA)<br>p.f.   |  | 10<br>0.29   |                | 10<br>0.29  |  | 10<br>0.29   |  |
|   |  | Closed (VA)<br>p.f.   |  | 68<br>0.82   |                | 68<br>0.82  |  | 68<br>0.82   |  |
| Conventional thermal current (A)                        |  | 20  |  | 20   |                | 20  |  | 20   |  |
| Conventional thermal current of auxiliary contacts      |  | 10  |  | 10   |                | 10  |  | 10   |  |
| Rated insulation voltage of auxiliary contacts          |  | 690   |  | 690  |                | 690   |  | 690  |  |
| Rated operational current of auxiliary contacts (A)     |  | AC - 15<br>380/220V<br>DC - 13<br>110/220V  |  | 6/10<br>0.9/0.45   |                | 6/10<br>0.9/0.45  |  | 6/10<br>0.9/0.45   |  |
| Weight (kg)   |  | 0.37  |  | 0.43   |                | 0.37  |  | 0.43   |  |

Note: 3TX4 auxiliary contact blocks for 3TF3 series, see P2/16.









| Selection and ordering data                             |  |   |  |   |                |   |  |   |  |          |  |
|---|--|---|--|---|----------------|---|--|---|--|----------|--|
| AC operation  |  |  |  |  |                |  |  |  |  |          |  |
|   |  | 3TF32   |  | 3TF42   |                | 3TF33   |  | 3TF43   |  |          |  |
| Auxiliary contacts<br>NO<br>NC                          |  |  |  |  |                |  |  |  |  |          |  |
|   |  | NO - NC   |  | NO - NC   |                | NO - NC   |  | NO - NC   |  |          |  |
| Order No.   |  | 3TF32 00 - 0X<br>3TF32 11 - 0X  |  | 3TF42 10 - 0X<br>3TF42 11 - 0X<br>3TF42 20 - 0X<br>3TF42 22 - 0X                  |                | 3TF33 00 - 0X<br>3TF33 11 - 0X  |  | 3TF43 10 - 0X<br>3TF43 11 - 0X<br>3TF43 20 - 0X<br>3TF43 22 - 0X                    |  |          |  |
|   |  | - -<br>1 1  |  | 1 -<br>1 1<br>2 -<br>2 2  |                | - -<br>1 1  |  | 1 -<br>1 1<br>2 -<br>2 2  |  |          |  |
| Rated insulation voltage (V)                            |  | 690   |  | 690   |                | 690   |  | 690   |  |          |  |
| Rated operational current (A)<br>(380V)                 |  | AC - 3  |  | 16  |                | 16  |  | 22  |  |          |  |
|   |  | AC - 4  |  | 7.7   |                | 7.7   |  | 8.5   |  |          |  |
| Rated outputs of<br>three-phase motors<br>at 50Hz (KW)  |  | AC - 3  |  | 230/220V<br>400/380V<br>500 V<br>690/660V<br>1000 V                               |                | 4<br>7.5<br>9<br>11<br>--   |  | 4<br>7.5<br>9<br>11<br>--   |  |          |  |
|   |  | AC - 4  |  | 400/380V<br>690/660V  |                | 3.5<br>6  |  | 3.5<br>6  |  |          |  |
|   |  |   |  |   |                | 5.5   |  | 5.5   |  |          |  |
|   |  |   |  |   |                | 11  |  | 11  |  |          |  |
|   |  |   |  |   |                | 11  |  | 11  |  |          |  |
|   |  |   |  |   |                | 11  |  | 11  |  |          |  |
| Mechanical endurance (x10 <sup>6</sup> )                |  | 15  |  | 15  |                | 15  |  | 15  |  |          |  |
| Electrical endurance (x10 <sup>6</sup> )                |  | AC - 3  |  | 1.2   |                | 1.2   |  | 1.2   |  |          |  |
|   |  | AC - 4  |  | 0.2   |                | 0.2   |  | 0.2   |  |          |  |
| Switching frequency (1/h)                               |  | AC - 3  |  | 750   |                | 750   |  | 750   |  |          |  |
|   |  | AC - 4  |  | 250   |                | 250   |  | 250   |  |          |  |
| Coil voltage tolerance (AC)                             |  | (0.8-1.1)U <sub>n</sub>   |  |   |                |   |  |   |  |          |  |
| Order No. suffixes for rated control voltages for coils |  | Coils for 50Hz  |  |   | Coils for 60Hz |   |  | Coils for 50/60Hz   |  |          |  |
|   |  | 50Hz  |  | 60Hz  |                | 60Hz  |  | 50Hz  |  |          |  |
| 3TF3...-0X <input type="checkbox"/>                     |  | 24V 29V   |  | B0  |                | 24V 20V   |  | C1  |  | 24V C2   |  |
| 3TF4...-0X <input type="checkbox"/>                     |  | 32V 38V   |  | C0  |                | 110V 92V  |  | G1  |  | 42V D2   |  |
|   |  | 36V 42V   |  | G0  |                | 115V 96V  |  | J1  |  | 110V G2  |  |
|   |  | 42V 50V   |  | D0  |                | 120V 100V   |  | K1  |  | 115V J2  |  |
|   |  | 48V 58V   |  | H0  |                | 208V 173V   |  | M1  |  | 120V K2  |  |
|   |  | 60V 72V   |  | E0  |                | 220V 183V   |  | N1  |  | 208V M2  |  |
|   |  | 110V 132V   |  | F0  |                | 230V 192V   |  | L1  |  | 220V N2  |  |
|   |  | 125/127V 150/152V   |  | L0  |                | 240V 200V   |  | P1  |  | 230V L2  |  |
|   |  | 220V 264V   |  | M0  |                | 440V 367V   |  | R1  |  | 240V P2  |  |
|   |  | 230V 277V   |  | P0  |                | 575V 480V   |  | S1  |  | 440V R2  |  |
|   |  | 240V 288V   |  | U0  |                |   |  |   |  | 575V S2  |  |
|   |  | 380V 460V   |  | Q0  |                |   |  |   |  |          |  |
|   |  | 400V 480V   |  | V0  |                |   |  |   |  |          |  |
|   |  | 415V 500V   |  | R0  |                |   |  |   |  |          |  |
|   |  | 500V 600V   |  | S0  |                |   |  |   |  |          |  |
| Power consumption of coil (50Hz)                        |  | Closed (VA)   |  | 10  |                | 10  |  | 10  |  | 10       |  |
|   |  | p.f.  |  | 0.29  |                | 0.29  |  | 0.29  |  | 0.29     |  |
|   |  | Closing (VA)  |  | 68  |                | 68  |  | 68  |  | 68       |  |
|   |  | p.f.  |  | 0.82  |                | 0.82  |  | 0.82  |  | 0.82     |  |
| Conventional thermal current (A)                        |  | 30  |  | 30  |                | 30  |  | 30  |  | 30       |  |
| Conventional thermal current of auxiliary contacts      |  | 10  |  | 10  |                | 10  |  | 10  |  | 10       |  |
| Rated insulation voltage of auxiliary contacts          |  | 690   |  | 690   |                | 690   |  | 690   |  | 690      |  |
| Rated operational current of auxiliary contacts (A)     |  | AC - 15<br>380/220V   |  | 4/6   |                | 6/10  |  | 4/6   |  | 6/10     |  |
|   |  | DC - 13<br>110/220V   |  | 1.14/0.48   |                | 0.9/0.45  |  | 1.14/0.48   |  | 0.9/0.45 |  |
| Weight (kg)   |  | 0.45  |  | 0.49  |                | 0.45  |  | 0.49  |  | 0.49     |  |

Note: 3TX4 auxiliary contact blocks for 3TF3 series, see P2/16









## 3TF AC Contactors







| Selection and ordering data                                |  |   |  |   |                |   |  |   |  |
|--|--|---|--|---|----------------|---|--|---|--|
| AC operation   |  |  |  |  |                |  |  |  |  |
|  |  | 3TF34   |  | 3TF44   |                | 3TF35   |  | 3TF45   |  |
| Auxiliary contacts<br>NO      NC                           |  |  |  |  |                |  |  |  |  |
|  |  | NO - NC   |  | NO - NC   |                | NO - NC   |  | NO - NC   |  |
| Order No.  |  | 3TF34 00 - 0X<br>3TF34 11 - 0X  |  | 3TF44 11 - 0X<br>3TF44 22 - 0X  |                | 3TF35 00 - 0X<br>3TF35 11 - 0X  |  | 3TF45 11 - 0X<br>3TF45 22 - 0X  |  |
|  |  | - -<br>1 1  |  | 1 1<br>2 2  |                | - -<br>1 1  |  | 1 1<br>2 2  |  |
| Rated insulation voltage (V)                               |  | 690   |  | 690   |                | 690   |  | 690   |  |
| Rated operational current (A)<br>(380V)                    |  | AC - 3<br>AC - 4  |  | 32<br>15.6  |                | 32<br>15.6  |  | 38<br>18.5  |  |
| Rated outputs of<br>three-phase motors<br>at 50Hz (kW)     |  | AC - 3<br>AC - 4  |  | 230/220V<br>400/380V<br>500 V<br>690/660V<br>1000 V                               |                | 8.5<br>15<br>21<br>23<br>--   |  | 8.5<br>15<br>21<br>23<br>--   |  |
|  |  | 400/380V<br>690/660V  |  | 7.5<br>13   |                | 7.5<br>13   |  | 9<br>15.5   |  |
| Mechanical endurance (x10 <sup>6</sup> )                   |  | 10  |  | 10  |                | 10  |  | 10  |  |
| Electrical endurance (x10 <sup>6</sup> )                   |  | AC - 3<br>AC - 4  |  | 1.2<br>0.2  |                | 1.2<br>0.2  |  | 1.2<br>0.2  |  |
| Switching frequency (1/h)                                  |  | AC - 3<br>AC - 4  |  | 750<br>250  |                | 750<br>250  |  | 600<br>200  |  |
| Coil voltage tolerance (AC)                                |  | (0.8~1.1)U <sub>s</sub>   |  |   |                |   |  |   |  |
| Order No. suffixes for rated<br>control voltages for coils |  | Coils for 50Hz  |  |   | Coils for 60Hz |   |  | Coils for 50/60Hz   |  |
|  |  | 50Hz    60Hz  |  | 60Hz    50Hz  |                |   |  |   |  |
| 3TF3...-0X <input type="checkbox"/>                        |  | 24V    29V    B0  |  | 24V    20V    C1  |                | 24V    C2   |  |   |  |
| 3TF4...-0X <input type="checkbox"/>                        |  | 32V    38V    C0  |  | 110V    92V    G1   |                | 42V    D2   |  |   |  |
|  |  | 36V    42V    G0  |  | 115V    96V    J1   |                | 110V    G2  |  |   |  |
|  |  | 42V    50V    D0  |  | 120V    100V    K1  |                | 115V    J2  |  |   |  |
|  |  | 48V    58V    H0  |  | 208V    173V    M1  |                | 120V    K2  |  |   |  |
|  |  | 60V    72V    E0  |  | 220V    183V    N1  |                | 208V    M2  |  |   |  |
|  |  | 110V    132V    F0  |  | 230V    192V    L1  |                | 220V    N2  |  |   |  |
|  |  | 125/127V    150/152V    L0  |  | 240V    200V    P1  |                | 230V    L2  |  |   |  |
|  |  | 220V    264V    M0  |  | 440V    367V    R1  |                | 240V    P2  |  |   |  |
|  |  | 230V    277V    P0  |  | 575V    480V    S1  |                | 440V    R2  |  |   |  |
|  |  | 240V    288V    U0  |  |   |                | 575V    S2  |  |   |  |
|  |  | 380V    460V    Q0  |  |   |                |   |  |   |  |
|  |  | 400V    480V    V0  |  |   |                |   |  |   |  |
|  |  | 415V    500V    R0  |  |   |                |   |  |   |  |
|  |  | 500V    600V    S0  |  |   |                |   |  |   |  |
| Power consumption<br>of coil (50Hz)                        |  | Closed (VA)<br>p.f.<br>Closing (VA)<br>p.f.                                       |  | 12.1<br>0.28<br>101<br>0.83   |                | 12.1<br>0.28<br>101<br>0.83   |  | 12.1<br>0.28<br>101<br>0.83   |  |
| Conventional thermal current (A)                           |  | 55  |  | 55  |                | 55  |  | 55  |  |
| Conventional thermal current of auxiliary contacts (A)     |  | 10  |  | 10  |                | 10  |  | 10  |  |
| Rated insulation voltage of auxiliary contacts (V)         |  | 690   |  | 690   |                | 690   |  | 690   |  |
| Rated operational current of auxiliary contacts (A)        |  | AC - 15<br>380/220V<br>DC - 13<br>110/220V  |  | 4/6<br>1.14/0.48  |                | 4/6<br>1.14/0.48  |  | 4/6<br>1.14/0.48  |  |
| Weight (kg)  |  | 0.68  |  | 0.8   |                | 0.68  |  | 0.8   |  |

Note: 3TX4 auxiliary contact blocks for 3TF3 series, see P2/16.









| Selection and ordering data                                |  |  |  |  |                |   |  |   |  |
|--|--|--|--|--|----------------|---|--|---|--|
| AC operation   |  |                             |  |   |                |  |  |  |  |
|  |  | 3TF46  |  | 3TF47  |                | 3TF48   |  | 3TF49   |  |
| Auxiliary contacts<br>NO NC                                |  |                             |  |  |                |  |  |  |  |
|  |  | NO - NC  |  | NO - NC  |                | NO - NC   |  | NO - NC   |  |
| Order No.  |  | 3TF46 22 - 0X<br>3TF46 44 - 0X   |  | 2 2<br>4 4   |                | 3TF47 22 - 0X<br>3TF47 44 - 0X  |  | 2 2<br>4 4  |  |
| Rated insulation voltage (V)                               |  | 1000   |  | 1000   |                | 1000  |  | 1000  |  |
| Rated operational current (A)<br>(380V)                    |  | AC - 3<br>AC - 4   |  | 45<br>24   |                | 63<br>28  |  | 75<br>34  |  |
| Rated outputs of<br>three-phase motors<br>at 50Hz (KW)     |  | AC - 3<br>AC - 4   |  | 15<br>12.6/12<br>21.8/20.8   |                | 18.5<br>14.7/14<br>25.4/24.3  |  | 22<br>17.9/17<br>30.9/29.5  |  |
|  |  | 230/220V<br>400/380V<br>500 V<br>690/660V<br>1000 V  |  | 30<br>39<br>7.5  |                | 30<br>55<br>7.5   |  | 37<br>67<br>39  |  |
| Mechanical endurance (x10 <sup>6</sup> )                   |  | 10   |  | 10   |                | 10  |  | 10  |  |
| Electrical endurance (x10 <sup>6</sup> )                   |  | AC - 3<br>AC - 4   |  | 1.2<br>0.2   |                | 1.2<br>0.2  |  | 1.2<br>0.2  |  |
| Switching frequency (1/h)                                  |  | AC - 3<br>AC - 4   |  | 1200<br>400  |                | 1000<br>300   |  | 1000<br>250   |  |
| Coil voltage tolerance (AC)                                |  | (0.8-1.1)U <sub>s</sub>  |  |  |                |   |  |   |  |
| Order No. suffixes for rated<br>control voltages for coils |  | Coils for 50Hz   |  |  | Coils for 60Hz |   |  | Coils for 50/60Hz   |  |
|  |  | 50Hz 60Hz  |  | 60Hz 50Hz  |                |   |  |   |  |
| 3TF46 - ..0X <input type="checkbox"/>                      |  | 24V 29V<br>32V 38V<br>36V 42V<br>42V 50V<br>48V 58V<br>60V 72V<br>110V 132V                                  |  | B0<br>C0<br>G0<br>D0<br>H0<br>E0<br>F0   |                | 24V 20V<br>110V 92V<br>115V 96V<br>120V 100V<br>208V 173V<br>220V 183V<br>230V 192V |  | C1<br>G1<br>J1<br>K1<br>M1<br>N1<br>L1  |  |
| 3TF49 - ..0X <input type="checkbox"/>                      |  | 125/127V 150/152V<br>220V 264V<br>230V 277V<br>240V 288V<br>380V 460V<br>400V 480V<br>415V 500V<br>500V 600V |  | L0<br>M0<br>P0<br>U0<br>Q0<br>V0<br>R0<br>S0                                       |                | 240V 200V<br>440V 367V<br>575V 480V   |  | C2<br>D2<br>G2<br>J2<br>K2<br>M2<br>L2<br>P2<br>R2<br>S2                            |  |
| Power consumption<br>of coil (50Hz)                        |  | Closed (VA)<br>p.f.<br>Closing (VA)<br>p.f.  |  | 17<br>0.29<br>183<br>0.6   |                | 17<br>0.29<br>183<br>0.6  |  | 32<br>0.23<br>330<br>0.5  |  |
| Conventional thermal current (A)                           |  | 80   |  | 90   |                | 100   |  | 100   |  |
| Conventional thermal current of auxiliary contacts (A)     |  | 10   |  | 10   |                | 10  |  | 10  |  |
| Rated insulation voltage of auxiliary contacts (V)         |  | 690  |  | 690  |                | 690   |  | 690   |  |
| Rated operational current of auxiliary contacts (A)        |  | AC - 15<br>380/220V<br>DC - 13<br>110/220V   |  | 4/6<br>1.14/0.48   |                | 4/6<br>1.14/0.48  |  | 4/6<br>1.14/0.48  |  |
| Weight (kg)  |  | 1.4/1.6  |  | 1.4/1.6  |                | 2.3/2.5   |  | 2.3/2.5   |  |

# 3TF AC Contactors









| Selection and ordering data                                |  |  |   |  |   |  |   |  |  |
|--|--|--|---|--|---|--|---|--|--|
| AC operation   |  | <br>3TF50   |   | <br>3TF51   |   | <br>3TF52   |   | <br>3TF53   |  |
| Auxiliary contacts<br>NO      NC                           |  | <br>NO - NC |   | <br>NO - NC |   | <br>NO - NC |   | <br>NO - NC |  |
| Order No.  |  | 3TF50 22 - 0X<br>3TF50 44 - 0X   | 2 2<br>4 4  | 3TF51 22 - 0X<br>3TF51 44 - 0X   | 2 2<br>4 4  | 3TF52 22 - 0X<br>3TF52 44 - 0X   | 2 2<br>4 4                                      | 3TF53 22 - 0X<br>3TF53 44 - 0X   | 2 2<br>4 4                             |
| Rated insulation voltage (V)                               |  | 1000   |   | 1000   |   | 1000   |   | 1000   |  |
| Rated operational current (A)<br>(380V)                    |  | AC - 3<br>AC - 4   | 110<br>54   | 140<br>68  | 170<br>75   | 205<br>96  |   |  |  |
| Rated outputs of<br>three-phase motors<br>at 50Hz (KW)     |  | AC - 3<br>AC - 4   | 230/220V<br>400/380V<br>500 V<br>690/660V<br>1000 V<br>400/380V<br>690/660V | 37<br>55<br>76<br>100<br>65<br>28.4/27<br>49/46.9  | 43<br>75<br>98<br>100<br>65<br>36/35<br>63/60       | 55<br>90<br>118<br>156<br>90<br>40/38<br>69/66   | 64<br>110<br>145<br>156<br>90<br>52/50<br>90/86 |  |  |
| Mechanical endurance (x10 <sup>6</sup> )                   |  | 10   |   | 10   |   | 10   |   | 10   |  |
| Electrical endurance (x10 <sup>6</sup> )                   |  | AC - 3<br>AC - 4   | 1.2<br>0.2  | 1.2<br>0.2   | 1.2<br>0.2  | 1.2<br>0.2   |   |  |  |
| Switching frequency (1/h)                                  |  | AC - 3<br>AC - 4   | 1000<br>300   | 750<br>200   | 700<br>200  | 500<br>130   |   |  |  |
| Coil voltage tolerance (AC)                                |  | (0.8~1.1)U <sub>s</sub>  |   |  |   |  |   |  |  |
| Order No. suffixes for rated<br>control voltages for coils |  | Coils for 50Hz   |   |  | Coils for 60Hz                                      |  |   | Coils for 50/60Hz  |  |
|  |  | 50Hz   | 60Hz  |  | 60Hz  | 50Hz   |   |  |  |
| 3TF50...0X□□   |  | 24V<br>32V<br>36V<br>42V<br>48V<br>60V<br>110V   | 29V<br>38V<br>42V<br>50V<br>58V<br>72V<br>132V                              | B0<br>C0<br>G0<br>D0<br>H0<br>E0<br>F0   | 24V<br>110V<br>115V<br>120V<br>208V<br>220V<br>230V | 20V<br>92V<br>96V<br>100V<br>173V<br>183V<br>192V  | C1<br>G1<br>J1<br>K1<br>M1<br>N1<br>L1          | 24V<br>42V<br>110V<br>115V<br>120V<br>208V<br>220V   | C2<br>D2<br>G2<br>J2<br>K2<br>M2<br>N2 |
| 3TF53...0X□□   |  | 125/127V<br>220V<br>230V<br>240V<br>380V<br>400V<br>415V<br>500V                             | 150/152V<br>264V<br>277V<br>288V<br>460V<br>480V<br>500V<br>600V            | L0<br>M0<br>P0<br>U0<br>Q0<br>V0<br>R0<br>S0   | 240V<br>440V<br>575V                                | 200V<br>367V<br>480V   | P1<br>R1<br>S1                                  | 230V<br>240V<br>440V<br>575V   | L2<br>P2<br>R2<br>S2                   |
| Power consumption<br>of coil (50Hz)                        |  | Closed (VA)<br>p.f.  | 39<br>0.24  | 39<br>0.24   | 58<br>0.26  | 58<br>0.38   |   |  |  |
|  |  | Closing (VA)<br>p.f.   | 550<br>0.45   | 550<br>0.45  | 910<br>0.38   | 910<br>0.38  |   |  |  |
| Conventional thermal current (A)                           |  | 160  |   | 160  |   | 210  |   | 220  |  |
| Conventional thermal current of auxiliary contacts<br>(A)  |  | 10   |   | 10   |   | 10   |   | 10   |  |
| Rated insulation voltage of auxiliary contacts<br>(V)      |  | 690  |   | 690  |   | 690  |   | 690  |  |
| Rated operational current of<br>auxiliary contacts (A)     |  | AC - 15<br>380/220V<br>DC - 13<br>110/220V   | 4/6<br>1.14/0.48  | 4/6<br>1.14/0.48   | 4/6<br>1.14/0.48                                    | 4/6<br>1.14/0.48   |   |  |  |
| Weight (kg)  |  | 3.3/3.5  |   | 3.3/3.5  |   | 4.8/5.0  |   | 4.8/5.0  |  |

| Selection and ordering data                                |  |  |  |  |  |  |   |  |
|--|--|--|--|--|--|--|---|--|
| AC operation   |  | <br>3TF54   |  | <br>3TF55  |  | <br>3TF56   |   |  |
| Auxiliary contacts<br>NO<br>NC                             |  | <br>NO - NC   |  | <br>NO - NC   |  | <br>NO - NC |   |  |
| Order No.  |  | 3TF54 22 - 0X<br>3TF54 44 - 0X   |  | 3TF55 22 - 0X<br>3TF55 44 - 0X   |  | 3TF56 22 - 0X<br>3TF56 44 - 0X   |   |  |
|  |  | 2 2<br>4 4   |  | 2 2<br>4 4   |  | 2 2<br>4 4   |   |  |
| Rated insulation voltage (V)                               |  | 1000   |  | 1000   |  | 1000   |   |  |
| Rated operational current (A)<br>(380V)                    |  | 250<br>110   |  | 300<br>125   |  | 400<br>150   |   |  |
| Rated outputs of<br>three-phase motors<br>at 50Hz (KW)     |  | 230/220V<br>400/380V<br>500 V<br>690/660V<br>1000 V  |  | 78<br>132<br>178<br>235<br>132   |  | 93<br>160<br>210<br>235<br>132   |   |  |
|  |  | AC - 3   |  | AC - 3   |  | AC - 3   |   |  |
|  |  | AC - 4   |  | AC - 4   |  | AC - 4   |   |  |
|  |  | 61/58<br>105/100   |  | 69/66<br>119/114   |  | 85/81<br>147/140   |   |  |
| Mechanical endurance (x10 <sup>6</sup> )                   |  | 10   |  | 10   |  | 10   |   |  |
| Electrical endurance (x10 <sup>6</sup> )                   |  | AC - 3<br>AC - 4   |  | 1.2<br>0.2   |  | 1.2<br>0.2   |   |  |
| Switching frequency (1/h)                                  |  | AC - 3<br>AC - 4   |  | 700<br>200   |  | 500<br>130   |   |  |
| Coil voltage tolerance (AC)                                |  | (0.8~1.1)U <sub>s</sub>  |  |  |  |  |   |  |
| Order No. suffixes for rated<br>control voltages for coils |  | Coils for 50Hz<br>50Hz 60Hz  |  | Coils for 60Hz<br>60Hz 50Hz  |  |  | Coils for 50/60Hz   |  |
| 3TF54...0X□□   |  | 24V 29V B0<br>32V 38V C0<br>36V 42V G0<br>42V 50V D0<br>48V 58V H0<br>60V 72V E0<br>110V 132V F0                                     |  | 24V 20V C1<br>110V 92V G1<br>115V 96V J1<br>120V 100V K1<br>208V 173V M1<br>220V 183V N1<br>230V 192V L1<br>240V 200V P1<br>440V 367V R1<br>575V 480V S1 |  |  | 24V C2<br>42V D2<br>110V G2<br>115V J2<br>120V K2<br>208V M2<br>220V N2<br>230V L2<br>240V P2<br>440V R2<br>575V S2 |  |
| 3TF56...0X□□   |  | 125/127V 150/152V L0<br>220V 264V M0<br>230V 277V P0<br>240V 288V U0<br>380V 460V Q0<br>400V 480V V0<br>415V 500V R0<br>500V 600V S0 |  |  |  |  |   |  |
| Power consumption<br>of coil (50Hz)                        |  | Closed (VA)<br>p.f.<br>Closing (VA)<br>p.f.  |  | 84<br>0.24<br>1430<br>0.34   |  |  | 84<br>0.24<br>1430<br>0.21  |  |
| Conventional thermal current (A)                           |  | 300  |  | 300  |  |  | 400   |  |
| Conventional thermal current of auxiliary contacts (A)     |  | 10   |  | 10   |  |  | 10  |  |
| Rated insulation voltage of auxiliary contacts (V)         |  | 690  |  | 690  |  |  | 690   |  |
| Rated operational current of auxiliary contacts (A)        |  | AC - 15<br>380/220V<br>DC - 13<br>110/220V   |  | 4/6<br>1.14/0.48   |  |  | 4/6<br>1.14/0.48  |  |
| Weight (kg)  |  | 6.2/6.4  |  | 6.2/6.4  |  |  | 8.5/8.7   |  |

# 3TF AC Contactors









| Selection and ordering data  |                           |   |   |  |   |   |                   |  |  |
|--|---------------------------|---|---|--|---|---|-------------------|--|--|
| DC operation   |                           |    |  |                 |  |   |                   |  |  |
|  |                           | 3TF30   | 3TF40   | 3TF31  | 3TF41   |   |                   |  |  |
| Auxiliary contacts<br>NO      NC   |                           |    |  |                 |  |   |                   |  |  |
|  |                           | NO - NC   | NO - NC   | NO - NC  | NO - NC   |   |                   |  |  |
| Order No.  |                           | 3TF30 00 - 1X<br>3TF30 10 - 1X<br>3TF30 01 - 1X                                     | -<br>-<br>- 1   | 3TF40 10 - 1X<br>3TF40 01 - 1X<br>3TF40 11 - 1X<br>3TF40 20 - 1X<br>3TF40 22 - 1X<br>3TF40 31 - 1X | 1 -<br>- 1<br>1 1<br>2 -<br>2 2<br>3 1  | 3TF31 00 - 1X<br>3TF31 10 - 1X<br>3TF31 01 - 1X | - -<br>1 -<br>- 1 | 3TF41 10 - 1X<br>3TF41 01 - 1X<br>3TF41 11 - 1X<br>3TF41 20 - 1X<br>3TF41 22 - 1X<br>3TF41 31 - 1X | 1 -<br>- 1<br>1 1<br>2 -<br>2 2<br>3 1 |
| Rated insulation voltage (V)   |                           | 690   |   | 690  |   | 690   |                   | 690  |  |
| Rated operational current (A)<br>(380V)                                  |                           | AC - 3  | 9   | 9  | 12  | 12  |                   |  |  |
|  |                           | AC - 4  | 3.3   | 3.3  | 4.3   | 4.3   |                   |  |  |
| Rated outputs of<br>three-phase motors<br>at 50Hz (KW)                   |                           | 230/220V<br>400/380V<br>AC - 3 500 V<br>690/660V<br>1000 V                          | 2.4<br>4<br>5.5<br>5.5<br>--  | 2.4<br>4<br>5.5<br>5.5<br>--   | 3.3<br>5.5<br>7.5<br>7.5<br>--  | 3.3<br>5.5<br>7.5<br>7.5<br>--                  |                   |  |  |
|  |                           | AC - 4 400/380V<br>690/660V   | 1.48/1.4<br>2.54/2.4  | 1.48/1.4<br>2.54/2.4   | 2/1.9<br>3.45/3.3   | 2/1.9<br>3.45/3.3                               |                   |  |  |
| Mechanical endurance (x10 <sup>6</sup> )                                 |                           | 15  |   | 15   |   | 15  |                   | 15   |  |
| Electrical endurance (x10 <sup>6</sup> )                                 |                           | AC - 3  | 1.2   | 1.2  | 1.2   | 1.2   |                   |  |  |
|  |                           | AC - 4  | 0.2   | 0.2  | 0.2   | 0.2   |                   |  |  |
| Switching frequency (1/h)  |                           | AC - 3  | 1000  | 1000   | 1000  | 1000  |                   |  |  |
|  |                           | AC - 4  | 250   | 250  | 250   | 250   |                   |  |  |
| Coil voltage tolerance (AC)  |                           | (0.8~1.1)U <sub>s</sub>   |   |  |   |   |                   |  |  |
| Order No. suffixes for rated<br>control voltages for coils               |                           | Rated V DC<br>control voltage 12 21.5 24 30 36 42 48 60 110 125 180 220 230 240 250 |   |  |   |   |                   |  |  |
| 3TF3...1X <input type="checkbox"/><br>3TF4...1X <input type="checkbox"/> |                           | Order No. suffix A4 U4 B4 C4 V4 D4 W4 E4 F4 G4 K4 M4 P4 Q4 N4                       |   |  |   |   |                   |  |  |
| Power consumption<br>of coil (50Hz)                                      | Closing and Closed<br>(W) | 6.2   |   | 6.2  |   | 6.2   |                   | 6.2  |  |
| Conventional thermal current (A)   |                           | 20  |   | 20   |   | 20  |                   | 20   |  |
| Conventional thermal current of auxiliary contacts<br>(A)                |                           | 10  |   | 10   |   | 10  |                   | 10   |  |
| Rated insulation voltage of auxiliary contacts<br>(V)                    |                           | 690   |   | 690  |   | 690   |                   | 690  |  |
| Rated operational current of<br>auxiliary contacts (A)                   |                           | AC - 15<br>380/220V   | 6/10  |  | 6/10  |   | 6/10              |  |  |
|  |                           | DC - 13<br>110/220V   | 0.9/0.45  |  | 0.9/0.45  |   | 0.9/0.45          |  |  |
| Weight (kg)  |                           | 0.58  |   | 0.64   |   | 0.58  |                   | 0.64   |  |

Note: 3TX4 auxiliary contact blocks for 3TF3 series, see P2/16.









| Selection and ordering data                                |                           |   |   |   |   |                                |            |  |                          |
|--|---------------------------|---|---|---|---|--------------------------------|------------|--|--------------------------|
| DC operation   |                           |  |  |  |  |                                |            |  |                          |
|  |                           | 3TF32   | 3TF42   | 3TF33   | 3TF43   |                                |            |  |                          |
| Auxiliary contacts<br>NO<br>NC                             |                           |  |  |  |  |                                |            |  |                          |
|  |                           | NO - NC   | NO - NC   | NO - NC   | NO - NC   |                                |            |  |                          |
| Order No.  |                           | 3TF32 00 - 1X<br>3TF32 11 - 1X  | - -<br>1 1  | 3TF42 10 - 1X<br>3TF42 11 - 1X<br>3TF42 20 - 1X<br>3TF42 22 - 1X                    | 1 -<br>1 1<br>2 -<br>2 2  | 3TF33 00 - 1X<br>3TF33 11 - 1X | - -<br>1 1 | 3TF43 10 - 1X<br>3TF43 11 - 1X<br>3TF43 20 - 1X<br>3TF43 22 - 1X | 1 -<br>1 1<br>2 -<br>2 2 |
| Rated insulation voltage (V)                               |                           | 690   |   | 690   |   | 690                            |            | 690  |                          |
| Rated operational current (A)<br>(380V)                    |                           | AC - 3  |   | 16  |   | 16                             |            | 22   |                          |
|  |                           | AC - 4  |   | 7.7   |   | 7.7                            |            | 8.5  |                          |
| Rated outputs of<br>three-phase motors<br>at 50Hz (kW)     |                           | 230/220V  |   | 4   |   | 4                              |            | 5.5  |                          |
|  |                           | 400/380V  |   | 7.5   |   | 7.5                            |            | 11   |                          |
| AC - 3   |                           | 500 V   |   | 9   |   | 9                              |            | 11   |                          |
|  |                           | 690/660V  |   | 11  |   | 11                             |            | 11   |                          |
| AC - 4   |                           | 1000 V  |   | -   |   | -                              |            | -  |                          |
|  |                           | 400/380V  |   | 3.5   |   | 3.5                            |            | 4  |                          |
|  |                           | 690/660V  |   | 6   |   | 6                              |            | 6.6  |                          |
| Mechanical endurance (x10 <sup>6</sup> )                   |                           | 15  |   | 15  |   | 15                             |            | 15   |                          |
| Electrical endurance (x10 <sup>6</sup> )                   |                           | AC - 3  |   | 1.2   |   | 1.2                            |            | 1.2  |                          |
|  |                           | AC - 4  |   | 0.2   |   | 0.2                            |            | 0.2  |                          |
| Switching frequency (1/h)                                  |                           | AC - 3  |   | 750   |   | 750                            |            | 750  |                          |
|  |                           | AC - 4  |   | 250   |   | 250                            |            | 250  |                          |
| Coil voltage tolerance (AC)                                |                           | (0.8-1.1)U <sub>s</sub>   |   |   |   |                                |            |  |                          |
| Order No. suffixes for rated<br>control voltages for coils |                           | Rated control voltage   |   | V DC  |   | 24                             |            | 48 110 125 220   |                          |
| 3TF3...-1X <input type="checkbox"/>                        |                           | Order No. suffix  |   | B4  |   | W4                             |            | F4 G4 M4   |                          |
| 3TF4...-1X <input type="checkbox"/>                        |                           |   |   |   |   |                                |            |  |                          |
| Power consumption<br>of coil (50Hz)                        | Closing and Closed<br>(W) | 6.2   |   | 6.2   |   | 6.2                            |            | 6.2  |                          |
| Conventional thermal current (A)                           |                           | 30  |   | 30  |   | 30                             |            | 30   |                          |
| Conventional thermal current of auxiliary contacts (A)     |                           | 10  |   | 10  |   | 10                             |            | 10   |                          |
| Rated insulation voltage of auxiliary contacts (V)         |                           | 690   |   | 690   |   | 690                            |            | 690  |                          |
| Rated operational current of<br>auxiliary contacts (A)     |                           | AC - 15<br>380/220V   |   | 4/6   |   | 6/10                           |            | 4/6  |                          |
|  |                           | DC - 13<br>110/220V   |   | 1.14/0.48   |   | 0.9/0.45                       |            | 1.14/0.48  |                          |
| Weight (kg)  |                           | 0.70  |   | 0.66  |   | 0.70                           |            | 0.66   |                          |

Note: 3TX4 auxiliary contact blocks for 3TF3 series, see P2/16.









## 3TF AC Contactors

| Selection and ordering data                                |                           |   |   |   |   |                                |            |                                |            |  |
|--|---------------------------|---|---|---|---|--------------------------------|------------|--------------------------------|------------|--|
| DC operation   |                           |  |  |  |  |                                |            |                                |            |  |
|  |                           | 3TF34   | 3TF44   | 3TF35   | 3TF45   |                                |            |                                |            |  |
| Auxiliary contacts<br>NO      NC                           |                           |  |  |  |  |                                |            |                                |            |  |
|  |                           | NO - NC   | NO - NC   | NO - NC   | NO - NC   |                                |            |                                |            |  |
| Order No.  |                           | 3TF34 00 - 1X<br>3TF34 11 - 1X  | - -<br>1 1  | 3TF44 11 - 1X<br>3TF44 22 - 1X  | 1 1<br>2 2  | 3TF35 00 - 1X<br>3TF35 11 - 1X | - -<br>1 1 | 3TF45 11 - 1X<br>3TF45 22 - 1X | 1 1<br>2 2 |  |
| Rated insulation voltage (V)                               |                           | 690   | 690   | 690   | 690   |                                |            |                                |            |  |
| Rated operational current (A)<br>(380V)                    | AC - 3                    | 32  | 32  | 38  | 38  |                                |            |                                |            |  |
|  | AC - 4                    | 15.6  | 15.6  | 18.5  | 18.5  |                                |            |                                |            |  |
| Rated outputs of<br>three-phase motors<br>at 50Hz (kW)     | AC - 3                    | 230/220V<br>400/380V<br>500 V<br>690/660V<br>1000 V                               | 8.5<br>15<br>21<br>23<br>--   | 8.5<br>15<br>21<br>23<br>--   | 11<br>18.5<br>25<br>23<br>--  | 11<br>18.5<br>25<br>23<br>--   |            |                                |            |  |
|  | AC - 4                    | 400/380V<br>690/660V  | 7.5<br>13   | 7.5<br>13   | 9<br>15.5   | 9<br>15.5                      |            |                                |            |  |
| Mechanical endurance (x10 <sup>6</sup> )                   |                           | 10  | 10  | 10  | 10  |                                |            |                                |            |  |
| Electrical endurance (x10 <sup>6</sup> )                   | AC - 3                    | 1.2   | 1.2   | 1.2   | 1.2   |                                |            |                                |            |  |
|  | AC - 4                    | 0.2   | 0.2   | 0.2   | 0.2   |                                |            |                                |            |  |
| Switching frequency (1/h)                                  | AC - 3                    | 750   | 750   | 600   | 600   |                                |            |                                |            |  |
|  | AC - 4                    | 250   | 250   | 200   | 200   |                                |            |                                |            |  |
| Coil voltage tolerance (AC)                                |                           | (0.8-1.1)U <sub>s</sub>   |   |   |   |                                |            |                                |            |  |
| Order No. suffixes for rated<br>control voltages for coils |                           | Rated control voltage   |   | V DC  |   |                                |            |                                |            |  |
| 3TF3...1X □□<br>3TF4...1X □□                               |                           | 24  | 48  | 110   | 125   | 220                            |            |                                |            |  |
|  |                           | Order No. suffix  |   | B4    W4    F4    G4    M4  |   |                                |            |                                |            |  |
| Power consumption<br>of coil (50Hz)                        | Closing and Closed<br>(W) | 11.7  | 11.7  | 11.7  | 11.7  |                                |            |                                |            |  |
| Conventional thermal current (A)                           |                           | 55  | 55  | 55  | 55  |                                |            |                                |            |  |
| Conventional thermal current of auxiliary contacts<br>(A)  |                           | 10  | 10  | 10  | 10  |                                |            |                                |            |  |
| Rated insulation voltage of auxiliary contacts<br>(V)      |                           | 690   | 690   | 690   | 690   |                                |            |                                |            |  |
| Rated operational current of<br>auxiliary contacts (A)     | AC - 15<br>380/220V       | 4/6   | 4/6   | 4/6   | 4/6   |                                |            |                                |            |  |
|  | DC - 13<br>110/220V       | 1.14/0.48   | 1.14/0.48   | 1.14/0.48   | 1.14/0.48   |                                |            |                                |            |  |
| Weight (kg)  |                           | 1.25  | 1.43  | 1.25  | 1.43  |                                |            |                                |            |  |







Note: 3TX4 auxiliary contact blocks for 3TF3 series, see P2/16.

| Selection and ordering data  |  |   |  |   |   |                                |            |                                |            |
|--|--|---|--|---|---|--------------------------------|------------|--------------------------------|------------|
| DC operation   |  |  |   |  |  |                                |            |                                |            |
|  |  | 3TF46   | 3TF47  | 3TF48   | 3TF49   |                                |            |                                |            |
| Auxiliary contacts<br>NO<br>NC   |  |  |  |  |  |                                |            |                                |            |
|  |  | NO - NC   | NO - NC  | NO - NC   | NO - NC   |                                |            |                                |            |
| Order No.  |  | 3TF46 22 - 1X<br>3TF46 33 - 1X  | 2 2<br>3 3   | 3TF47 22 - 1X<br>3TF47 33 - 1X  | 2 2<br>3 3  | 3TF48 22 - 1X<br>3TF48 33 - 1X | 2 2<br>3 3 | 3TF49 22 - 1X<br>3TF49 33 - 1X | 2 2<br>3 3 |
| Rated insulation voltage (V)   |  | 1000  |  | 1000  |   | 1000                           |            | 1000                           |            |
| Rated operational current (A)<br>(380V)  |  | AC - 3  |  | 63  |   | 75                             |            | 85                             |            |
|  |  | AC - 4  |  | 28  |   | 34                             |            | 42                             |            |
| Rated outputs of<br>three-phase motors<br>at 50Hz (KW)                                     |  | 230/220V<br>400/380V  |  | 18.5<br>30  |   | 22<br>37                       |            | 26<br>45                       |            |
|  |  | AC - 3 500 V<br>690/660V<br>1000 V  |  | 30<br>41<br>55<br>7.5   |   | 50<br>67<br>39                 |            | 59<br>67<br>39                 |            |
|  |  | AC - 4 400/380V<br>690/660V   |  | 12.6/12<br>21.8/20.8  |   | 17.9/17<br>30.9/29.5           |            | 22/21<br>38/36                 |            |
| Mechanical endurance (x10 <sup>6</sup> )   |  | 3   |  | 3   |   | 3                              |            | 3                              |            |
| Electrical endurance (x10 <sup>6</sup> )   |  | AC - 3  |  | 1.2   |   | 1.2                            |            | 1.2                            |            |
|  |  | AC - 4  |  | 0.2   |   | 0.2                            |            | 0.2                            |            |
| Switching frequency (1/h)  |  | AC - 3  |  | 1200  |   | 1000                           |            | 850                            |            |
|  |  | AC - 4  |  | 400   |   | 300                            |            | 250                            |            |
| Coil voltage tolerance (AC)  |  | (0.8-1.1)U <sub>s</sub>   |  |   |   |                                |            |                                |            |
| Order No. suffixes for rated<br>control voltages for coils<br>3TF46...1X□□<br>3TF49...1X□□ |  | Rated control voltage   |  | V DC  |   | 24                             |            | 48 110 125 220                 |            |
|  |  | Order No. suffix  |  | B4  |   | W4 F4 G4                       |            | M4                             |            |
| Power consumption<br>of coil (50Hz)  |  | Closed (W)  |  | 2.1   |   | 2.1                            |            | 2.7                            |            |
|  |  | Closing (W)   |  | 400   |   | 400                            |            | 420                            |            |
| Conventional thermal current (A)   |  | 80  |  | 90  |   | 100                            |            | 100                            |            |
| Conventional thermal current of auxiliary contacts (A)                                     |  | 10  |  | 10  |   | 10                             |            | 10                             |            |
| Rated insulation voltage of auxiliary contacts (V)   |  | 690   |  | 690   |   | 690                            |            | 690                            |            |
| Rated operational current of<br>auxiliary contacts (A)                                     |  | AC - 15<br>380/220V   |  | 4/6   |   | 4/6                            |            | 4/6                            |            |
|  |  | DC - 13<br>110/220V   |  | 1.14/0.48   |   | 1.14/0.48                      |            | 1.14/0.48                      |            |
| Weight (kg)  |  | 1.4/1.6   |  | 1.4/1.6   |   | 2.3/2.5                        |            | 2.3/2.5                        |            |

## 3TF AC Contactors











| Selection and ordering data  |  |   |  |   |  |   |  |   |  |                              |  |                               |  |     |  |
|--|--|---|--|---|--|---|--|---|--|------------------------------|--|-------------------------------|--|-----|--|
| DC operation   |  |  |  |  |  |  |  |  |  |                              |  |                               |  |     |  |
|  |  | 3TF50   |  | 3TF51   |  | 3TF52   |  | 3TF53   |  |                              |  |                               |  |     |  |
| Auxiliary contacts<br>NO      NC   |  |  |  |  |  |  |  |  |  |                              |  |                               |  |     |  |
|  |  | NO - NC   |  | NO - NC   |  | NO - NC   |  | NO - NC   |  |                              |  |                               |  |     |  |
| Order No.  |  | 3TF50 22 - 1X<br>3TF50 33 - 1X  |  | 3TF51 22 - 1X<br>3TF51 33 - 1X  |  | 3TF52 22 - 1X<br>3TF52 33 - 1X  |  | 3TF53 22 - 1X<br>3TF53 33 - 1X  |  |                              |  |                               |  |     |  |
|  |  | 2 2<br>3 3  |  | 2 2<br>3 3  |  | 2 2<br>3 3  |  | 2 2<br>3 3  |  |                              |  |                               |  |     |  |
| Rated insulation voltage (V)   |  | 1000  |  | 1000  |  | 1000  |  | 1000  |  |                              |  |                               |  |     |  |
| Rated operational current (A)<br>(380V)  |  | AC - 3  |  | 110   |  | 140   |  | 170   |  | 205                          |  |                               |  |     |  |
|  |  | AC - 4  |  | 54  |  | 68  |  | 75  |  | 96                           |  |                               |  |     |  |
| Rated outputs of<br>three-phase motors<br>at 50Hz (KW)                                     |  | AC - 3  |  | 230/220V<br>400/380V<br>500 V<br>690/660V<br>1000 V                               |  | 37<br>55<br>76<br>100<br>65   |  | 43<br>75<br>98<br>100<br>65   |  | 55<br>90<br>118<br>156<br>90 |  | 64<br>110<br>145<br>156<br>90 |  |     |  |
|  |  | AC - 4  |  | 400/380V<br>690/660V  |  | 28.4/27<br>49/46.9  |  | 36/35<br>63/60  |  | 40/38<br>69/66               |  | 52/50<br>90/86                |  |     |  |
| Mechanical endurance (x10 <sup>6</sup> )   |  | 3   |  | 3   |  | 3   |  | 3   |  |                              |  |                               |  |     |  |
| Electrical endurance (x10 <sup>6</sup> )   |  | AC - 3  |  | 1.2   |  | 1.2   |  | 1.2   |  | 1.2                          |  |                               |  |     |  |
|  |  | AC - 4  |  | 0.2   |  | 0.2   |  | 0.2   |  | 0.2                          |  |                               |  |     |  |
| Switching frequency (1/h)  |  | AC - 3  |  | 1000  |  | 750   |  | 700   |  | 500                          |  |                               |  |     |  |
|  |  | AC - 4  |  | 300   |  | 200   |  | 200   |  | 130                          |  |                               |  |     |  |
| Coil voltage tolerance (AC)  |  | (0.8~1.1)U <sub>s</sub>   |  |   |  |   |  |   |  |                              |  |                               |  |     |  |
| Order No. suffixes for rated<br>control voltages for coils<br>3TF50...1X□□<br>3TF53...1X□□ |  | Rated control voltage   |  | V DC  |  | 24  |  | 48  |  | 110                          |  | 125                           |  | 220 |  |
|  |  | Order No. suffix  |  | B4  |  | W4  |  | F4  |  | G4                           |  | M4                            |  |     |  |
| Power consumption<br>of coil (50Hz)  |  | Closed (W)  |  | 2.7   |  | 2.7   |  | 11  |  | 11                           |  |                               |  |     |  |
|  |  | Closing (W)   |  | 500   |  | 500   |  | 876   |  | 876                          |  |                               |  |     |  |
| Conventional thermal current (A)   |  | 160   |  | 160   |  | 210   |  | 220   |  |                              |  |                               |  |     |  |
| Conventional thermal current of auxiliary contacts (A)                                     |  | 10  |  | 10  |  | 10  |  | 10  |  |                              |  |                               |  |     |  |
| Rated insulation voltage of auxiliary contacts (V)   |  | 690   |  | 690   |  | 690   |  | 690   |  |                              |  |                               |  |     |  |
| Rated operational current of<br>auxiliary contacts (A)                                     |  | AC - 15<br>380/220V   |  | 4/6   |  | 4/6   |  | 4/6   |  | 4/6                          |  |                               |  |     |  |
|  |  | DC - 13<br>110/220V   |  | 1.14/0.48   |  | 1.14/0.48   |  | 1.14/0.48   |  | 1.14/0.48                    |  |                               |  |     |  |
| Weight (kg)  |  | 3.3/3.5   |  | 3.3/3.5   |  | 5.4/5.6   |  | 5.4/5.6   |  |                              |  |                               |  |     |  |

Note: The changeover contactor of 3TF52~3TF56 DC operation contactors is included in the delivery and contained in the contactor package.

| Selection and ordering data  |  |   |   |   |            |                                 |
|--|--|---|---|---|------------|---------------------------------|
| DC operation   |  |  |   |  |            |                                 |
|  |  | 3TF54   | 3TF55   | 3TF56   |            |                                 |
| Auxiliary contacts<br>NO NC  |  |  |  |  |            |                                 |
|  |  | NO - NC   | NO - NC   | NO - NC   |            |                                 |
| Order No.  |  | 3TF54 22 - 1X<br>3TF54 33 - 1X  | 2 2<br>3 3  | 3TF55 22 - 1X<br>3TF55 33 - 1X  | 2 2<br>3 3 | 3TF56 22 - 1X<br>3TF56 33 - 1X  |
|  |  |   |   |   |            |                                 |
| Rated insulation voltage (V)   |  | 1000  |   | 1000  |            | 1000                            |
| Rated operational current (A)<br>(380V)                                    |  |   |   |   |            |                                 |
| AC - 3   |  | 250   |   | 300   |            | 400                             |
| AC - 4   |  | 110   |   | 125   |            | 150                             |
| Rated outputs of<br>three-phase motors<br>at 50Hz (KW)                     |  |   |   |   |            |                                 |
| AC - 3   |  | 230/220V<br>400/380V<br>500 V<br>690/660V<br>1000 V                               | 78<br>132<br>178<br>235<br>132  | 93<br>160<br>210<br>235<br>132  |            | 125<br>200<br>284<br>375<br>250 |
| AC - 4   |  | 400/380V<br>690/660V  | 61/58<br>105/100  | 69/66<br>119/114  |            | 85/81<br>147/140                |
| Mechanical endurance (x10 <sup>6</sup> )                                   |  | 3   |   | 3   |            | 3                               |
| Electrical endurance (x10 <sup>6</sup> )                                   |  |   |   |   |            |                                 |
| AC - 3   |  | 1.2   |   | 1.2   |            | 1.2                             |
| AC - 4   |  | 0.2   |   | 0.2   |            | 0.2                             |
| Switching frequency (1/h)  |  |   |   |   |            |                                 |
| AC - 3   |  | 700   |   | 500   |            | 500                             |
| AC - 4   |  | 200   |   | 130   |            | 150                             |
| Coil voltage tolerance (AC)  |  | (0.8-1.1)U <sub>s</sub>   |   |   |            |                                 |
| Order No. suffixes for rated<br>control voltages for coils<br>3TF54...1X□□ |  | Rated control voltage V DC  |   |   |            |                                 |
| 3TF56...1X□□   |  | 24 48 110 125 220   |   |   |            |                                 |
|  |  | Order No. suffix B4 W4 F4 G4 M4   |   |   |            |                                 |
| Power consumption<br>of coil (50Hz)  |  |   |   |   |            |                                 |
| Closed (W)   |  | 13.3  |   | 13.3  |            | 14                              |
| Closing(W)   |  | 1216  |   | 1216  |            | 1306                            |
| Conventional thermal current (A)   |  | 300   |   | 300   |            | 400                             |
| Conventional thermal current of auxiliary contacts (A)                     |  | 10  |   | 10  |            | 10                              |
| Rated insulation voltage of auxiliary contacts (V)                         |  | 690   |   | 690   |            | 690                             |
| Rated operational current of<br>auxiliary contacts (A)                     |  |   |   |   |            |                                 |
| AC - 15<br>380/220V  |  | 4/6   |   | 4/6   |            | 4/6                             |
| DC - 13<br>110/220V  |  | 1.14/0.48   |   | 1.14/0.48   |            | 1.14/0.48                       |
| Weight (kg)  |  | 6.8/7.0   |   | 6.8/7.0   |            | 9.2/9.4                         |

Note: The changeover contactor of 3TF52~3TF56 DC operation contactors is included in the delivery and contained in the contactor package.

# 3TB AC Contactors


| Selection and ordering data                             |                     |   |   |  |   |   |  |
|---|---------------------|---|---|--|---|---|--|
| AC operation  |                     |  |  |  |  |  |  |
|   |                     | 3TB40   | 3TB41   | 3TB42  | 3TB43   | 3TB44   |  |
| Auxiliary contacts<br>NO      NC                        |                     |  |  |  |  |  |  |
|   |                     | NO - NC   | NO - NC   | NO - NC  | NO - NC   | NO - NC   |  |
| Order No.   |                     | 3TB40 10 - 0X 1 -<br>3TB40 01 - 0X - 1<br>3TB40 22 - 0X 2 2                       | 3TB41 10 - 0X 1 -<br>3TB41 01 - 0X - 1<br>3TB41 22 - 0X 2 2                       | 3TB42 22 - 0X 2 2  | 3TB43 22 - 0X 2 2   | 3TB44 22 - 0X 2 2   |  |
| Rated insulation voltage (V)                            |                     | 660   | 660   | 660  | 660   | 660   |  |
| Rated operational current (A)<br>(380V)                 | AC - 3              | 9   | 12  | 16   | 22  | 32  |  |
|   | AC - 4              | 3.3   | 4.3   | 7.7  | 8.5   | 15.6  |  |
| Rated outputs of<br>three-phase motors<br>at 50Hz (kW)  | AC - 3              | 230/220V 2.4  | 3.3   | 4  | 6.1   | 8.5   |  |
|   |                     | 400/380V 4  | 5.5   | 7.5  | 11  | 15  |  |
|   | AC - 4              | 500 V 5.5   | 7.5   | 10   | 11  | 21  |  |
|   |                     | 690/660V 5.5  | 7.5   | 11   | 11  | 23  |  |
|   |                     | 1000 V -  | -   | -  | -   | -   |  |
|   | 400/380V 1.4        | 1.9   | 3.5   | 4  | 7.5   |   |  |
|   | 690/660V 2.4        | 3.3   | 6   | 6.6  | 13  |   |  |
| Mechanical endurance (x10 <sup>6</sup> )                |                     | 10  | 10  | 10   | 10  | 10  |  |
| Electrical endurance (x10 <sup>6</sup> )                | AC - 3              | 1.0   | 1.0   | 1.0  | 1.0   | 1.0   |  |
|   | AC - 4              | 0.2   | 0.2   | 0.2  | 0.2   | 0.2   |  |
| Switching frequency (1/h)                               | AC - 3              | 1000  | 1000  | 750  | 750   | 750   |  |
|   | AC - 4              | 250   | 250   | 250  | 250   | 250   |  |
| Coil voltage tolerance (AC)                             |                     | (0.8~1.1)U <sub>n</sub>   |   |  |   |   |  |
| Order No. suffixes for rated control voltages for coils |                     | Coils for 50Hz<br>V AC  |   |  | Coils for 50/60Hz<br>V AC   |   |  |
| 3TB40...-0X□□   |                     | 24  | B0  | 24   | C2  |   |  |
| 3TB44...-0X□□   |                     | 42  | D0  | 42   | D2  |   |  |
|   |                     | 110   | F0  | 110  | G2  |   |  |
|   |                     | 220   | M0  | 220  | N2  |   |  |
|   |                     | 240   | U0  | 240  | P2  |   |  |
|   |                     | 380   | Q0  |  |   |   |  |
| Power consumption<br>of coil (50Hz)                     | Closed (VA)         | 10  | 10  | 10   | 10  | 10  |  |
|   | p.f.                | 0.29  | 0.29  | 0.29   | 0.29  | 0.29  |  |
|   | Closing (VA)        | 68  | 68  | 68   | 68  | 69  |  |
|   | p.f.                | 0.82  | 0.82  | 0.82   | 0.82  | 0.86  |  |
| Conventional thermal current (A)                        |                     | 20  | 20  | 30   | 30  | 45  |  |
| Conventional thermal current of auxiliary contacts (A)  |                     | 10  | 10  | 10   | 10  | 10  |  |
| Rated insulation voltage of auxiliary contacts (V)      |                     | 660   | 660   | 660  | 660   | 660   |  |
| Rated operational current of auxiliary contacts (A)     | AC - 15<br>380/220V | 6/10  | 6/10  | 6/10   | 6/10  | 4/6   |  |
|   | DC - 13<br>110/220V | 0.9/0.45  | 0.9/0.45  | 0.9/0.45   | 0.9/0.45  | 1.8/0.9   |  |
| Weight (kg)   |                     | 0.43  | 0.43  | 0.49   | 0.49  | 0.7   |  |

| Spare Parts  |  |                       |    |                                |  |                |      |
|--|--|-----------------------|----|--------------------------------|--|----------------|------|
| Type   | Contactor size   | Contacts No           |    | Order No                       | Illustration   | Weight         |      |
|  |  | NO                    | NC |                                |  | kg             |      |
| <br>3TY75 61-1.<br>Auxiliary contacts block     | 3TF32 11, 3TF33 11   | 1                     | 1  | 3TX4 011 - 8A                  | Auxiliary contacts left  | 0.042          |      |
|  | 3TF34 11, 3TF35 11   | 1                     | 1  | 3TY7 561 - 1AA00               | Auxiliary contacts left  |                |      |
|  | 3TF44 - 3TF56  | 1                     | 1  | 3TY7 561 - 1AA00               | Auxiliary contacts left  |                |      |
|  |  | 1                     | 1  | 3TY7 561 - 1AA00               | Auxiliary contacts right   |                |      |
|  | 3TF46 - 3TF56  | 1                     | 1  | 3TY7 561 - 1KA00               | 2nd auxiliary contacts left  |                |      |
|  |  | 1                     | 1  | 3TY7 561 - 1KA00               | 2nd auxiliary contacts right   |                |      |
| <br>IBE;<br>Coil                                | 3TF30 - 3TF33<br>3TF40 - 3TF43<br>3TH3 - 3TH4  |                       |    | 3TY7 403 - 0X..                | Double coil from 3TF48   | 0.07           |      |
|  | 3TF34 - 3TF35<br>3TF44 - 3TF45   |                       |    | 3TY7 443 - 0X..                |  | 0.1            |      |
|  | 3TF46, 3TF47   |                       |    | 3TY7 463 - 0X..                |  | 0.12           |      |
|  | 3TF48, 3TF49   |                       |    | 3TY7 483 - 0X..                |  | 0.2            |      |
|  | 3TF50, 3TF51   |                       |    | 3TY7 503 - 0X..                |  | 0.23           |      |
|  | 3TF52, 3TF53   |                       |    | 3TY7 523 - 0X..                |  | 0.35           |      |
|  | 3TF54, 3TF55   |                       |    | 3TY7 543 - 0X..                |  | 0.39           |      |
|  | 3TF56  |                       |    | 3TY7 563 - 0X..                |  | 0.56           |      |
|  | <br>3TX40.. - ..                   | 3TF30 - 3TF35<br>3TH3 |    |                                |  |                |      |
|  |  |                       |    |                                |  |                |      |
| <br>3TY7.0 - 0X<br>Contact bridge<br>Contacts | 3TF44<br>3TF45   |                       |    | 3TY74 40 - 0X<br>3TY74 50 - 0X | Three pieces of contact bridge and six pieces of contacts consists of one sets | 0.1            |      |
|  | 3TF46<br>3TF47   |                       |    | 3TY74 60 - 0X<br>3TY74 70 - 0X |  | 0.1            |      |
|  | 3TF48<br>3TF49   |                       |    | 3TY74 80 - 0X<br>3TY74 90 - 0X |  | 0.13           |      |
|  | 3TF50<br>3TF51   |                       |    | 3TY75 00 - 0X<br>3TY75 10 - 0X |  | 0.25           |      |
|  | 3TF52<br>3TF53   |                       |    | 3TY75 20 - 0X<br>3TY75 30 - 0X |  | 0.3            |      |
|  | 3TF54<br>3TF55   |                       |    | 3TY75 40 - 0X<br>3TY75 50 - 0X |  | 0.47           |      |
|  | 3TF56  |                       |    | 3TY75 60 - 0X                  |  | 0.73           |      |
|  | <br>3TY7.2 - 0X<br>Arcing chamber | 3TF44<br>3TF45        |    |                                | 3TY74 42 - 0X<br>3TY74 52 - 0X   | Arcing chamber | 0.15 |
|  |  | 3TF46<br>3TF47        |    |                                | 3TY74 62 - 0X<br>3TY74 72 - 0X   |                | 0.28 |
|  |  | 3TF48<br>3TF49        |    |                                | 3TY74 82 - 0X<br>3TY74 92 - 0X   |                | 0.45 |
| 3TF50<br>3TF51   |  |                       |    | 3TY75 01 - 0X<br>3TY75 12 - 0X |  | 0.75           |      |
| 3TF52<br>3TF53   |  |                       |    | 3TY75 22 - 0X<br>3TY75 32 - 0X |  | 1              |      |
| 3TF54<br>3TF55   |  |                       |    | 3TY75 42 - 0X<br>3TY75 52 - 0X |  | 1.3            |      |
| 3TF56  |  |                       |    | 3TY75 62 - 0X                  |  | 1.7            |      |

Auxiliary contact blocks

When an additional auxiliary contact is needed, you can select the 3TX4 auxiliary contact block for the 3TF3 contactors only. Up to 4 auxiliary contact blocks with 1NO or 1NC contact can be plugged onto 3TF3 contactors.

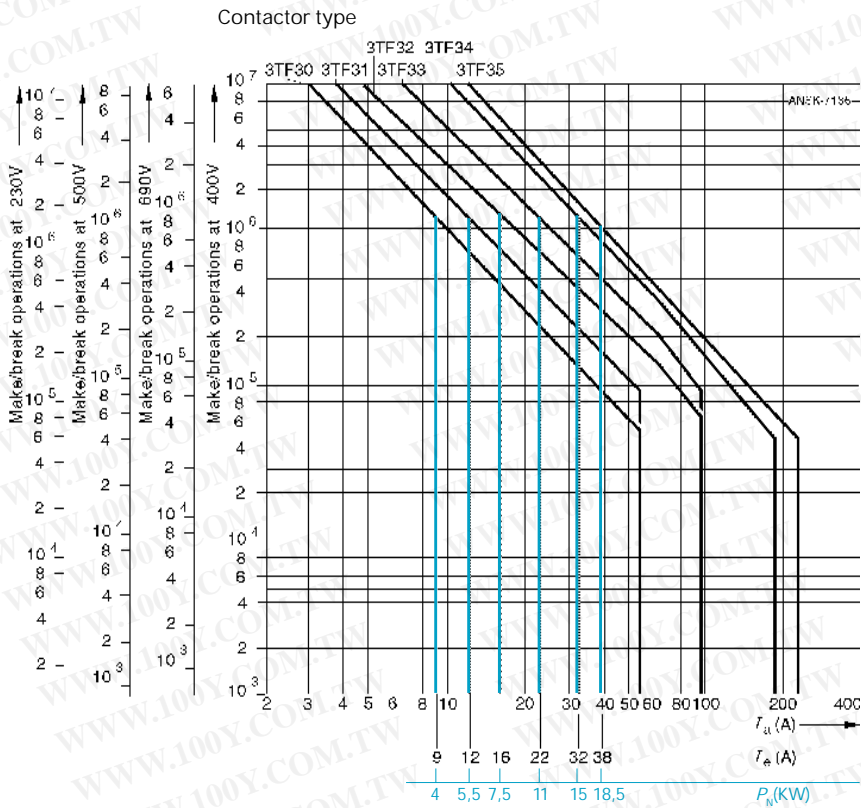
Mounting see 3TH30 mounting size figure

|   |  |                   |           |                   |          |    |  |        |
|---|--|-------------------|-----------|-------------------|----------|----|--|--------|
|  <p>3TX4</p> | Rated operational current<br>$I_e/AC - 15/AC - 14$ |                   |           |                   | Contacts |    | Order No.  | Weight |
|   | 230/<br>220V<br>A                                  | 400/<br>380V<br>A | 500V<br>A | 690/<br>660V<br>A | NO       | NC |  | kg     |
|   | 5.6/6  | 3.8/4             | 2.5       | 1.8/2             | 1        | -  | 3TX4 010 - 2A<br>3TX4 001 - 2A<br>3TX4 010 - 3A* | 0.02   |

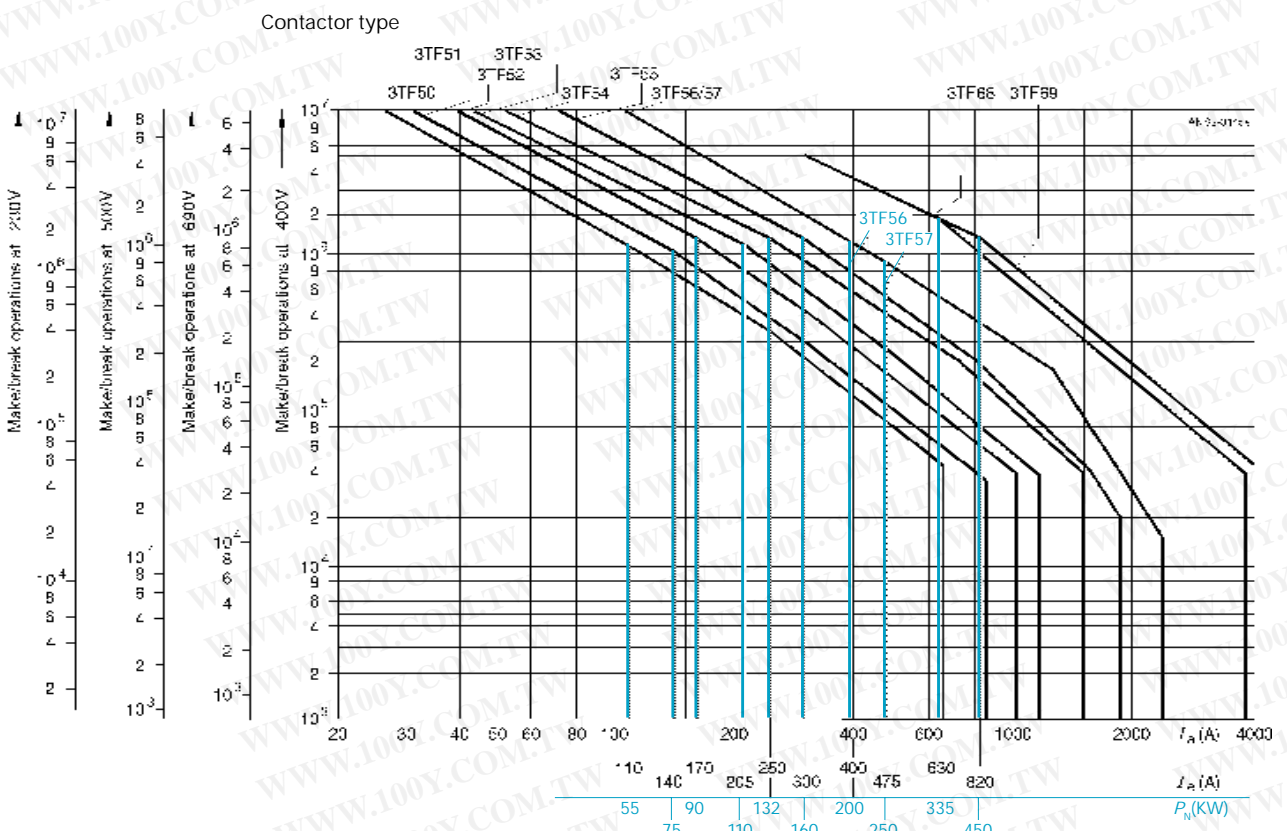
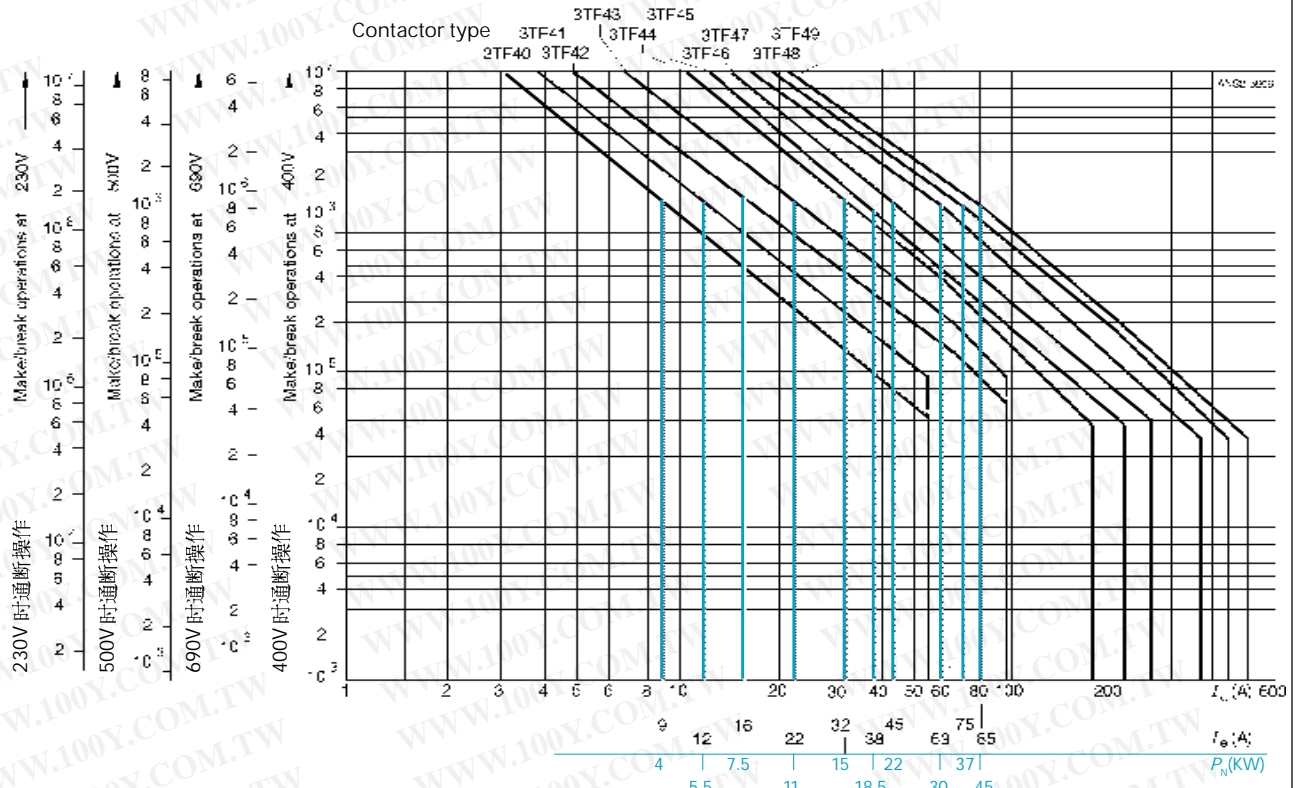
\* 3TX4010 - 3A with switch position indicator

Technical data

Contact endurance of the main contacts (AC-3):



Technical data

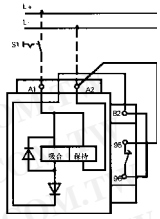


$I_b$ : Breaking current  
 $I_e$ : Rated operational current

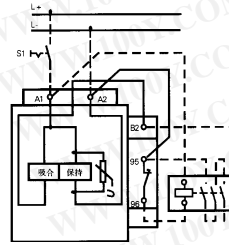
$P_N$ : Rated output of three-phase motors with squirrel-cage (at 400V)

# 3TF/3TB AC Contactors

## DC circuit diagrams



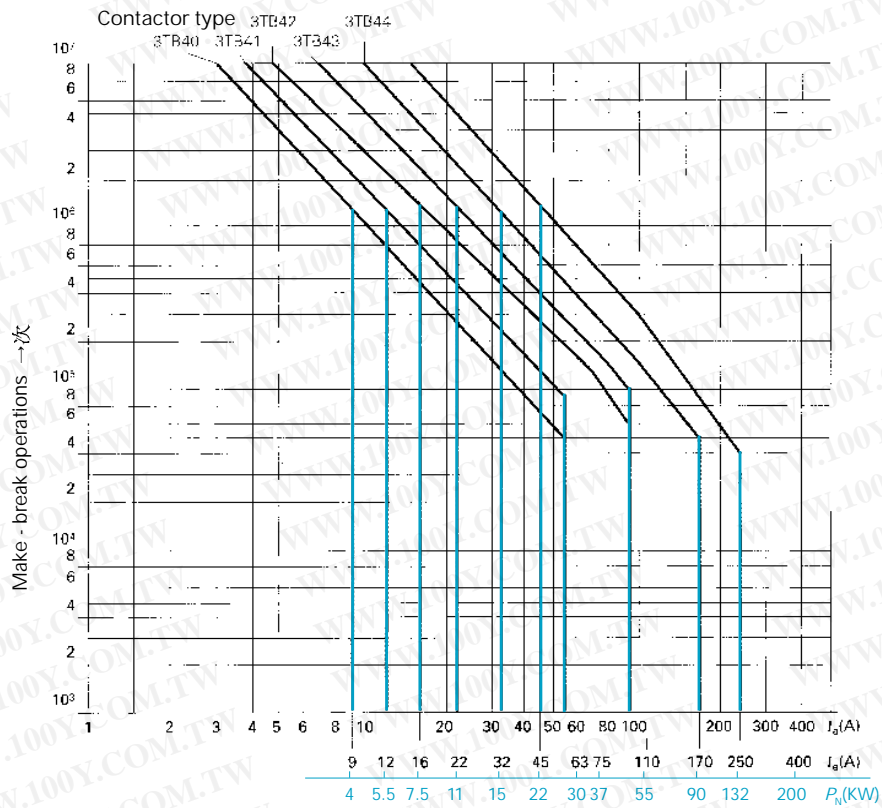
3TF46-3TF51  
DC economy circuit



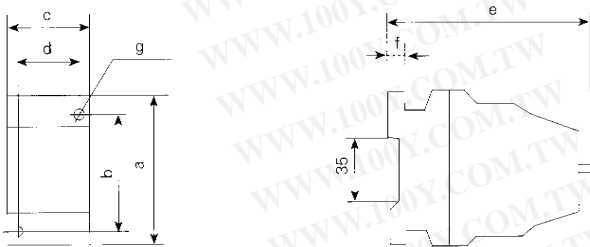
3TF52-3TF56  
DC economy circuit  
with changeover contactor:  
3TF52 ~ 3TF55 : 3TF40  
3TF56 : 3TF42

## Technical data

Contact endurance of the main contacts (AC-3):



## Dimension drawings

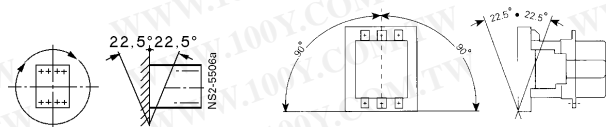


| Type         | a  | b  | c  | d  | e          | f   | g  |
|--------------|----|----|----|----|------------|-----|----|
| 3TB40, 3TB41 | 79 | 60 | 46 | 35 | *90<br>106 | 7.5 | ∅5 |
| 3TB42, 3TB43 | 89 | 75 | 46 | 35 | 116        | 8   | ∅5 |
| 3TB44        | 90 | 75 | 74 | 50 | 109        | 8   | ∅5 |

\* Size 90 is suitable for 3TB4010, 3TB4001, 3TB4110, 3TB4101  
Size 106 is suitable for 3TB4011, 3TB4022, 3TB4111, 3TB4122

## Permissible Mounting Position

The contactors are designed for operation on vertical mounting surface.



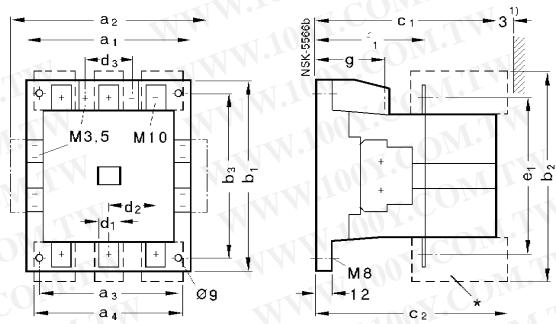
3TB40-3TB43

3TB44





Dimension drawings



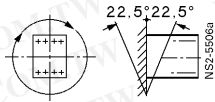
3TF53 to 3TF56, size 8-12

| Type         | a <sub>1</sub> | a <sub>2</sub> | a <sub>3</sub> | b <sub>1</sub> | b <sub>3</sub> | c <sub>1</sub> | (c <sub>1</sub> ) <sup>1</sup> | e <sub>1</sub> | f <sub>1</sub> | g  | d <sub>1</sub> | d <sub>2</sub> | ∅g <sub>1</sub> |
|--------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------------------------|----------------|----------------|----|----------------|----------------|-----------------|
| 3TF53        | 135            | 158            | 110            | 180            | 160            | 185            | 185                            | 159            | 115            | 48 | 25             | 48             | 7               |
| 3TF54, 3TF55 | 145            | 168            | 120            | 200            | 180            | 198            | 198                            | 168            | 132            | 58 | 25             | 48             | 9               |
| 3TF53        | 160            | 183            | 130            | 200            | 180            | 222            | 222                            | 178            | 150            | 65 | 25             | 48             | 9               |

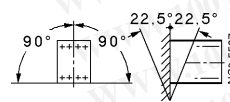
\* With box terminals (Accessories)  
 ( )<sup>1</sup> DC operation

Permissible mounting position

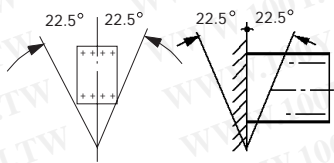
The contactors are designed for operation on vertical mounting surface.



3TF30 - 3TF33 (AC operation)  
 3TF40 - 3TF43 (AC operation)



3TF34 - 3TF35 (AC operation)  
 3TF44 - 3TF56 (AC operation)  
 3TF30 - 3TF33 (DC operation)  
 3TF40 - 3TF43 (DC solenoid system)  
 3TF46 - 3TF56 (DC economy circuit)



3TF34, 3TF35 (DC operation)  
 3TF44, 3TF45 (DC solenoid system)

## 3TD Reversing Contactor Combinations

### Description

3TD Reversing Contactor Combinations are suitable for frequency of 50/60Hz, rated insulation voltage up to 690 – 1000V, rated operational current 9A – 400A at rated operational voltage 380V under AC - 3. They are mainly used for controlling the forward and reverse rotation. They comply with IEC947, VDE0660, GB14048.

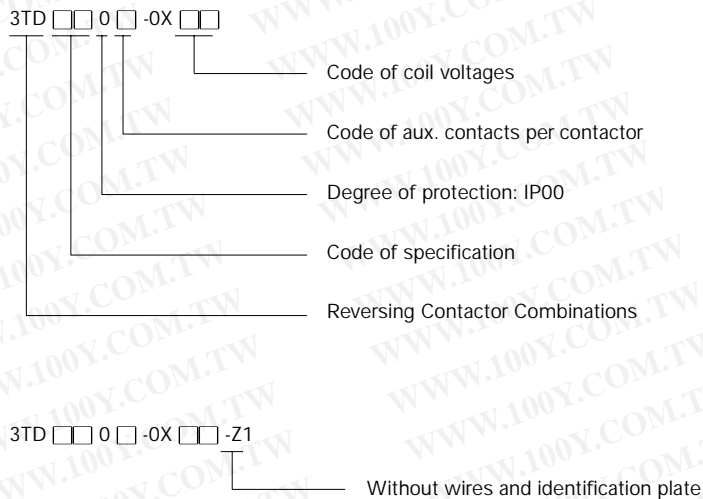
### Operating Conditions

- The altitude of the site of installation does not exceed 2000 meters above sea levels.
- The ambient air temperature: -25 ~ +55°C
- Relative humidity does not exceed 50% at +40°C and 90% at +25°C
- Atmospheric conditions: the air does not contain any explosive medium, corrosive gases and conductive dust.
- Never be shocked and vibrated obviously.
- Never be wetted by rain and snow.

### Features

- It is a Combinations consisting of two same type sets of 3TF AC contactors, between which one is interlocked by another through a mechanical device.
- The mechanical interlocking device does not affect the acting time of a single set of AC contactors.
- The conducting wires of the main circuit and auxiliary circuit have been connected. (The products without connection can also be supplied.)
- Compact in size, reliable in interlocking.
- The overload relays 3UA can be mounting directly on the 3TD (up to 3TD42).

### Type model nomenclature



**Selection and ordering data**

- Mechanical endurance: 10 x10<sup>6</sup> operations;
- Operating time: the making time of the contacts in a contactor can not overlap the arcing time of the contacts in another contactor;
- The other technical data are same as those of 3TF, for example 3TD40, see 3TF40;
- Parameters and order specifications.

|                       | Order No. | Auxiliary contact no. per contactor |     | Rated operational current I <sub>e</sub><br>at AC-3,<br>400/380V<br>A | Rated outputs of three-phase motors AC-3 |                    |            |                    |             | Overload Relay Type | Fuses Coordination type |          |    |    |
|-----------------------|-----------|-------------------------------------|-----|---|--|--------------------|------------|--------------------|-------------|---------------------|-------------------------|----------|----|----|
|                       |           | NO                                  | NC  |   | 230/<br>220V<br>KW                       | 400/<br>380V<br>KW | 500V<br>KW | 690/<br>660V<br>KW | 1000V<br>KW |                     | "1"<br>A                | "2"<br>A |    |    |
|                       |           |                                     |     |   |  |                    |            |                    |             |                     |                         |          |    |    |
| 3TD40 02 - 0X ..      | 2         | 2                                   | 9   | 2.4   | 4  | 5.5                | 5.5        | -                  | 3UA50       | 35                  | 25                      |          |    |    |
| 3TD40 02 - 0X .. - Z1 | 2         | 2                                   |     |   |  |                    |            |                    |             |                     |                         |          |    |    |
| 3TD40 01 - 0X .. - Z1 | 1         | 1                                   |     |   |  |                    |            |                    |             |                     |                         |          |    |    |
| 3TD40 00 - 0X .. - Z1 | -         | 1                                   |     |   |  |                    |            |                    |             |                     |                         |          |    |    |
| 3TD41 02 - 0X ..      | 2         | 2                                   | 12  | 3.3   | 5.5                                      | 7.5                | 7.5        | -                  |             | 3UA50               | 35                      | 25       |    |    |
| 3TD41 02 - 0X .. - Z1 | 2         | 2                                   |     |   |  |                    |            |                    |             |                     |                         |          |    |    |
| 3TD41 01 - 0X .. - Z1 | 1         | 1                                   |     |   |  |                    |            |                    |             |                     |                         |          |    |    |
| 3TD41 00 - 0X .. - Z1 | -         | 1                                   |     |   |  |                    |            |                    |             |                     |                         |          |    |    |
| 3TD42 02 - 0X ..      | 2         | 2                                   | 16  | 4   | 7.5                                      | 9                  | 11         | -                  |             |                     | 3UA52                   | 65       | 35 |    |
| 3TD42 02 - 0X .. - Z1 | 2         | 2                                   |     |   |  |                    |            |                    |             |                     |                         |          |    |    |
| 3TD43 02 - 0X ..      | 2         | 2                                   | 22  | 5.5   | 11                                       | 11                 | 11         | -                  |             |                     |                         | 3UA52    | 65 | 35 |
| 3TD43 02 - 0X .. - Z1 | 2         | 2                                   |     |   |  |                    |            |                    |             |                     |                         |          |    |    |
| 3TD44 02 - 0X ..      | 2         | 2                                   | 32  | 8.5   | 15                                       | 21                 | 23         | -                  | 3UA55       |                     |                         |          | 80 | 63 |
| 3TD44 02 - 0X .. - Z1 | 2         | 2                                   |     |   |  |                    |            |                    |             |                     |                         |          |    |    |
| 3TD45 02 - 0X ..      | 2         | 2                                   | 38  | 11  | 18.5                                     | 25                 | 23         | -                  |             |                     | 3UA55                   |          | 80 | 63 |
| 3TD45 02 - 0X .. - Z1 | 2         | 2                                   |     |   |  |                    |            |                    |             |                     |                         |          |    |    |
| 3TD46 02 - 0X ..      | 2         | 2                                   | 45  | 15  | 22                                       | 30                 | 39         | -                  | 3UA58       | 160                 |                         | 100      |    |    |
| 3TD47 02 - 0X ..      | 2         | 2                                   | 63  | 18.5  | 30                                       | 41                 | 55         | -                  |             | 160                 |                         | 125      |    |    |
| 3TD48 02 - 0X ..      | 2         | 2                                   | 75  | 22  | 37                                       | 50                 | 67         | 39                 |             | 250                 | 160                     |          |    |    |
| 3TD50 02 - 0X ..      | 2         | 2                                   | 110 | 37  | 55                                       | 76                 | 100        | 55                 | 3UA60       | 315                 | 250                     |          |    |    |
| 3TD52 02 - 0X ..      | 2         | 2                                   | 170 | 55  | 90                                       | 118                | 156        | 90                 | 3AU62       | 355                 | 250                     |          |    |    |
| 3TD54 02 - 0X ..      | 2         | 2                                   | 250 | 78  | 132                                      | 178                | 235        | 132                | 3UA66       | 500                 | 315                     |          |    |    |
| 3TD55 02 - 0X ..      | 2         | 2                                   |     |   |  |                    |            |                    |             |                     |                         |          |    |    |
| 3TD56 02 - 0X ..      | 2         | 2                                   | 400 | 125   | 200                                      | 284                | 375        | 150                |             | 800                 | 500                     |          |    |    |

1) The coil for AC 50/60 Hz for 3TD40 to 3TD50 contactor combinations should be used only if it is ensured that between the signal output for both directions of rotation minimum dead interval on reversing of 50ms exists.

2) Selection of the fuses in the above table is in accordance with excerpt from IEC947 - 4.

Type of co-ordination "1":

Destruction of contactor and overload relay is admissible. Contactor and/or overload relay must be replaced, if necessary.

Type of co-ordination "2":

No damage can be tolerated on the overload relay, but contact welding on the contactor is permitted, if the contacts can easily be separated.

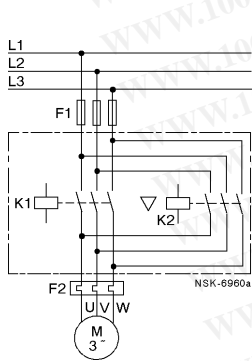
# 3TD Reversing Contactor Combinations

## Conductor cross-section (screw terminal)

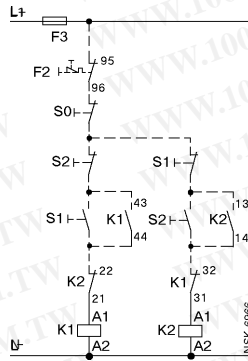
- |   |  |
|---|--|
| <p>1. Main conductors</p> <p>a) solid/stranded</p> <p>b) finely stranded with and without end sleeve</p> <p>c) finely stranded with cable lug</p> <p>d) stranded with cable lug</p> <p>e) connecting bars</p> <p>f) stripped length</p> <p>g) terminal screws</p> <p>h) tightening torque</p> <p>i) AWG wires</p> | <p>2. Auxiliary conductors</p> <p>a) solid</p> <p>b) finely stranded with end sleeve</p> <p>c) terminal screws</p> <p>d) tightening torque</p> <p>e) AWG wires</p> |
|---|--|

|                         | 1.a)<br>mm <sup>2</sup> | 1.b)<br>mm <sup>2</sup> | 1.c)<br>mm <sup>2</sup> | 1.d)<br>mm <sup>2</sup> | 1.e)<br>mm <sup>2</sup> | 1.f)<br>mm       | 1.g) | 1.h)<br>Nm/lb.in | 1.i)<br>AWG | 2.a)<br>mm <sup>2</sup> | 2.b)<br>mm <sup>2</sup> | 2.c) | 2.d)<br>Nm/lbin | 2.e)<br>AWG |
|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|------------------|------|------------------|-------------|-------------------------|-------------------------|------|-----------------|-------------|
| 3TD40<br>3TD41          | 1-2.5<br>1 x 4          | 0.75-2.5                | -                       | -                       | -                       | 10               | M3.5 | 0.8-1, 4/7-12    | 18-12       | 0.5-2.5                 | 0.75-2.5                | M3.5 | 0.8-1, 4/7-12   | 18-14       |
| 3TD42<br>3TD43          | 2.5-6                   | 1.5-4                   | -                       | -                       | -                       | 12               | M4   | 1-1.5/9-13       | 14-10       | 0.5-2.5                 | 0.75-2.5                | M3.5 | 0.8-1, 4/7-12   | 18-14       |
| 3TD44<br>3TD45          | 2.5-25                  | 2.5-16                  | -                       | -                       | -                       | 10               | M5   | 2.5-3/22-26.5    | 14-6        |                         |                         |      |                 |             |
| 3TD46<br>3TD47<br>3TD48 | 6-35                    | 4-25                    | -                       | -                       | -                       | 16 <sup>+3</sup> | -    | 3-4              |             |                         |                         |      |                 |             |
| 3TD50                   | 25-70                   | 25-50                   | -                       | -                       | -                       | 22 <sup>+3</sup> | -    | 4-5              |             |                         |                         |      |                 |             |
| 3TD52                   | -                       | -                       | 35-95                   | 50-120                  | 20 x 3                  | -                | M8   | 10-14            |             |                         |                         |      |                 |             |
| 3TD54                   | -                       | -                       | 50-240                  | 70-240                  | 25 x 5                  | -                | M10  | 14-16.5          |             |                         |                         |      |                 |             |
| 3TD56                   | -                       | -                       | 50-240                  | 70-240                  | 2 x (25 x 5)            | -                | M10  | 14-16.5          |             |                         |                         |      |                 |             |

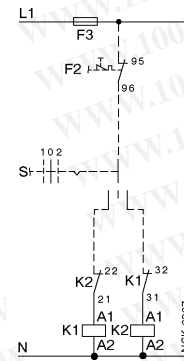
## Circuit diagrams



Power circuit



Control circuit for momentary-contact control

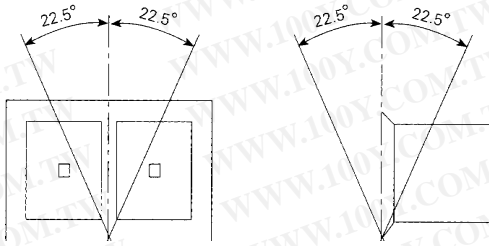


Control circuit for maintained-contact control

- S0 "Off" button
- S1 "On-clockwise" button
- S2 "On-anti-clockwise" button
- S "clockwise-Off-anti-clockwise" selector switch

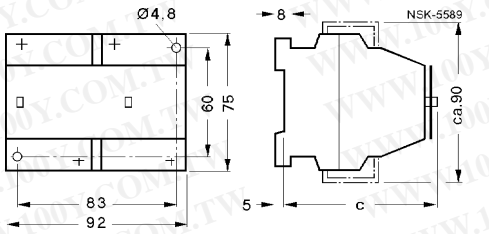
- K1 Contactor for clockwise rotation
- K2 Contactor for anti-clockwise rotation
- F1 Fuse for power circuit
- F2 Overload relay
- F3 Fuse for control circuit

Permissible mounting position

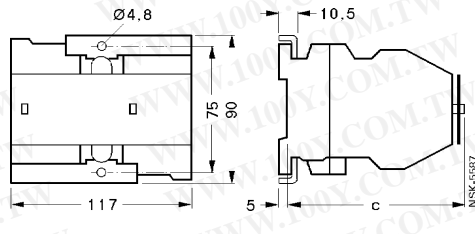


Dimension drawings

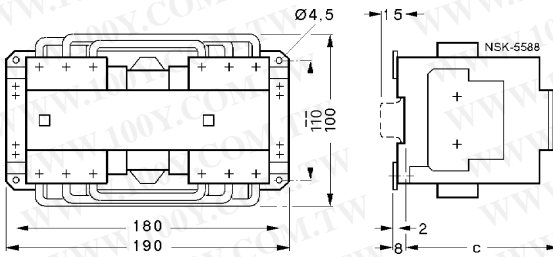
1. 3TD40, 3TD41 c=97mm/81mm



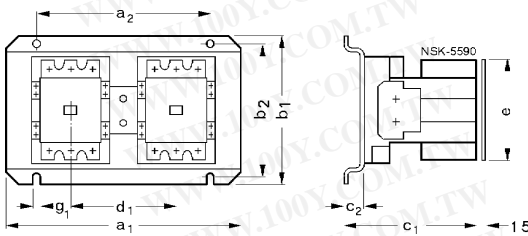
2. 3TD42, 3TD43 c=107mm



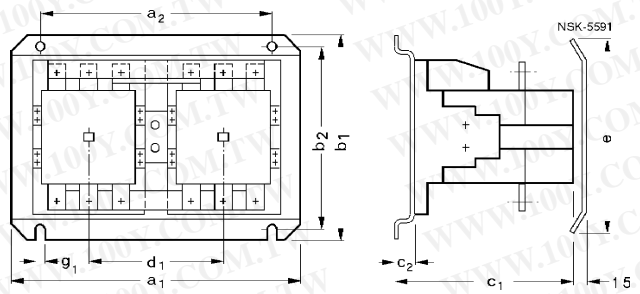
3. 3TD44, 3TD45 c=102mm



4. 3TD46 - 3TD48



5. 3TD50 - 3TD56



|       | a1  | a2  | b1  | b2  | b4  | c1  | c2 | d1  | e   | g1      |
|-------|-----|-----|-----|-----|-----|-----|----|-----|-----|---------|
| 3TD46 | 240 | 180 | 165 | 145 | -   | 141 | 18 | 117 | 150 | 7(M6)   |
| 3TD47 | 240 | 180 | 165 | 145 | -   | 141 | 18 | 117 | 150 | 7(M6)   |
| 3TD48 | 260 | 200 | 175 | 155 | -   | 158 | 18 | 127 | 160 | 7(M6)   |
| 3TD50 | 300 | 240 | 210 | 185 | 260 | 168 | 18 | 147 | -   | 9(M8)   |
| 3TD52 | 330 | 270 | 240 | 215 | 315 | 203 | 18 | 162 | -   | 9(M8)   |
| 3TD54 | 350 | 290 | 265 | 240 | 375 | 219 | 21 | 172 | -   | 11(M10) |
| 3TD56 | 380 | 310 | 265 | 240 | 385 | 243 | 21 | 187 | -   | 11(M10) |