

Data Sheet for Article: LTD25030--

# Contactor 22kW/400V/50A, coil 24VAC

Size type 2, Product category Power contactor, Rated current 50A, Coil voltage 24V



## Technical Data

|                                                    |                                                                                |
|----------------------------------------------------|--------------------------------------------------------------------------------|
| Size type                                          | 2                                                                              |
| Product category                                   | Power contactor                                                                |
| Coil voltage                                       | 24V                                                                            |
| Rated current (A)                                  | 50                                                                             |
| Standard                                           | IEC EN 60947-4-1<br>IEC EN 60947-5-1<br>UL 508                                 |
| Lifespan, mechanical AC operated                   | 10000000 Operations                                                            |
| Operating frequency, mechanical AC operated        | 3600 Operations/h                                                              |
| Climatic proofing                                  | Damp heat, constant, to IEC 60068-2-78<br>Damp heat, cyclic, to IEC 60068-2-30 |
| Ambient temperature Open (°C)                      | -25 / +60                                                                      |
| Ambient temperature Enclosed (°C)                  | -25 / + 40                                                                     |
| Ambient temperature Storage (°C)                   | -40 / +80                                                                      |
| Mech. shock resistance Half-sinusoidal shock 10ms  | -                                                                              |
| Main contacts NO contact (g)                       | 10                                                                             |
| Auxiliary contacts NO contact (g)                  | 7                                                                              |
| Auxiliary contacts NC contact (g)                  | 5                                                                              |
| Mech. shock resist. Half-sinusoidal shock horizon. | -                                                                              |

## Technical Data - continued

|                                                             |                                     |
|-------------------------------------------------------------|-------------------------------------|
| Main contacts N/O contact (g)                               | 10                                  |
| Auxiliary contacts N/O contact (g)                          | 7                                   |
| Auxiliary contacts N/C contact (g)                          | 5                                   |
| IP Rating                                                   | IP00                                |
| When actuated from front (EN 50274)                         | Finger and back-of-hand proof       |
| Weight (kg)                                                 | -                                   |
| AC-operated                                                 | 0,87                                |
| Terminal cross-section main contact (mm <sup>2</sup> )      | -                                   |
| Solid [main cable] (mm <sup>2</sup> )                       | 1 x (0,75 - 16)   2 x (0,75 - 16)   |
| Flexible with ferrule [main cable] (mm <sup>2</sup> )       | 1 x (0,75 - 35)   2 x (0,75 - 25)   |
| Stranded [main cable] (mm <sup>2</sup> )                    | 1 x (16 - 50)   2 x (16 - 35)       |
| Solid or stranded [main cable] (AWG)                        | single 14 - 1, double 14 - 2        |
| Band [lamella x width x thickness] (mm)                     | 2 x (6 x 9 x 0.8)                   |
| Stripping length [main cable] (mm)                          | 14                                  |
| Terminal screw [main cable]                                 | M6                                  |
| Tightening torque [main contact] (Nm)                       | 3,30                                |
| Tools [main cable]                                          | -                                   |
| Philips/Pozidriv screwdriver [main cable]                   | PZ 2                                |
| Standard screwdriver [main cable] (mm)                      | 0,8 x 5,5<br>1 x 6                  |
| Allen wrench [main cable] (mm)                              | 5                                   |
| Terminal capacity auxiliary contact (mm <sup>2</sup> )      | -                                   |
| Solid [auxiliary cables] (mm <sup>2</sup> )                 | 1 x (0,75 - 4)   2 x (0,75 - 2,5)   |
| Flexible with ferrule [auxiliary cables] (mm <sup>2</sup> ) | 1 x (0,75 - 2,5)   2 x (0,75 - 2,5) |
| Solid or stranded [auxiliary cables] (AWG)                  | 18 - 14                             |
| Stripping length [auxiliary cables] (mm)                    | 10                                  |
| Terminal screw [auxiliary cables]                           | M3,5                                |
| Tightening torque [auxiliary contact] (Nm)                  | 1,20                                |
| Tools [auxiliary cables]                                    | -                                   |
| Philips/Pozidriv screwdriver [auxiliary cables]             | PZ 2                                |
| Standard screwdriver [auxiliary cables]                     | 0,8 x 5,5<br>1 x 6                  |
| Rated impulse withstand voltage [Uimp] (V)                  | 8000                                |
| Overvoltage category/pollution degree                       | III/3                               |
| Rated insulation voltage [Ui] (V)                           | 690                                 |
| Rated operational voltage (V)                               | 690                                 |
| Safe isolation to EN 61140                                  | -                                   |
| Between coil and contacts (VAC)                             | 440                                 |
| Between the contacts (VAC)                                  | 440                                 |
| Making capacity p.f. to IEC/EN 60947 up to 690 V (A)        | 700                                 |
| Breaking capacity                                           | -                                   |
| 220 V 230 V (A)                                             | 500                                 |
| 380 V 400 V (A)                                             | 500                                 |

## Technical Data - continued

|                                                                      |      |
|----------------------------------------------------------------------|------|
| 500 V (A)                                                            | 500  |
| 660 V 690 V (A)                                                      | 320  |
| Short circuit withstand                                              | -    |
| Short-circuit protection maximum fuse                                | -    |
| Type „2“ coordination 400 V [gG/gL 500 V] (A)                        | 80   |
| Type „2“ coordination 690 V [gG/gL 690 V] (A)                        | 63   |
| Type „1“ coordination 400 V [gG/gL 500 V] (A)                        | 160  |
| Type „1“ coordination 690 V [gG/gL 690 V] (A)                        | 80   |
| AC-1                                                                 | -    |
| AC-1 Rated operational current                                       | -    |
| Conventional free air therm. current 3pole 50-60Hz                   | -    |
| Open at 40 °C [I <sub>th</sub> =I <sub>e</sub> ] (A)                 | 80   |
| Open at 50 °C [I <sub>th</sub> =I <sub>e</sub> ] (A)                 | 71   |
| Open at 55 °C [I <sub>th</sub> =I <sub>e</sub> ] (A)                 | 68   |
| Open at 60 °C [I <sub>th</sub> =I <sub>e</sub> ] (A)                 | 65   |
| Enclosed [I <sub>th</sub> ] (A)                                      | 58   |
| Convent. free air thermal cur. 1 pole Open[I <sub>th</sub> ] (A)     | 162  |
| Convent. free air thermal cur. 1 pole Enclosed[I <sub>th</sub> ] (A) | 145  |
| AC-3                                                                 | -    |
| AC-3 Rated operational current                                       | -    |
| AC-3 Open, 3-pole: 50 – 60 Hz 220 V 230 V [I <sub>e</sub> ] (A)      | 50   |
| AC-3 Open, 3-pole: 50 – 60 Hz 240 V [I <sub>e</sub> ] (A)            | 50   |
| AC-3 Open, 3-pole: 50 – 60 Hz 380 V 400 V [I <sub>e</sub> ] (A)      | 50   |
| AC-3 Open, 3-pole: 50 – 60 Hz 415 V [I <sub>e</sub> ] (A)            | 50   |
| AC-3 Open, 3-pole: 50 – 60 Hz 440 V [I <sub>e</sub> ] (A)            | 50   |
| AC-3 Open, 3-pole: 50 – 60 Hz 500 V [I <sub>e</sub> ] (A)            | 50   |
| AC-3 Open, 3-pole: 50 – 60 Hz 660 V 690 V [I <sub>e</sub> ] (A)      | 32   |
| AC-3 Motor rating                                                    | -    |
| AC-3 220 V 230 V [P] (kW)                                            | 15,5 |
| AC-3 240V [P] (kW)                                                   | 17   |
| AC-3 380 V 400 V [P] (kW)                                            | 22   |
| AC-3 415 V [P] (kW)                                                  | 30   |
| AC-3 440 V [P] (kW)                                                  | 32   |
| AC-3 500 V [P] (kW)                                                  | 36   |
| AC-3 660 V 690 V [P] (kW)                                            | 30   |
| AC-4                                                                 | -    |
| AC-4 Rated operational current                                       | -    |
| AC-4 Open, 3-pole, 50 – 60 Hz 220 V 230 V [I <sub>e</sub> ] (A)      | 21   |
| AC-4 Open, 3-pole, 50 – 60 Hz 240 V [I <sub>e</sub> ] (A)            | 21   |
| AC-4 Open, 3-pole, 50 – 60 Hz 380 V 400 V [I <sub>e</sub> ] (A)      | 21   |
| AC-4 Open, 3-pole, 50 – 60 Hz 415 V [I <sub>e</sub> ] (A)            | 21   |
| AC-4 Open, 3-pole, 50 – 60 Hz 440 V [I <sub>e</sub> ] (A)            | 21   |
| AC-4 Open, 3-pole, 50 – 60 Hz 500 V [I <sub>e</sub> ] (A)            | 21   |

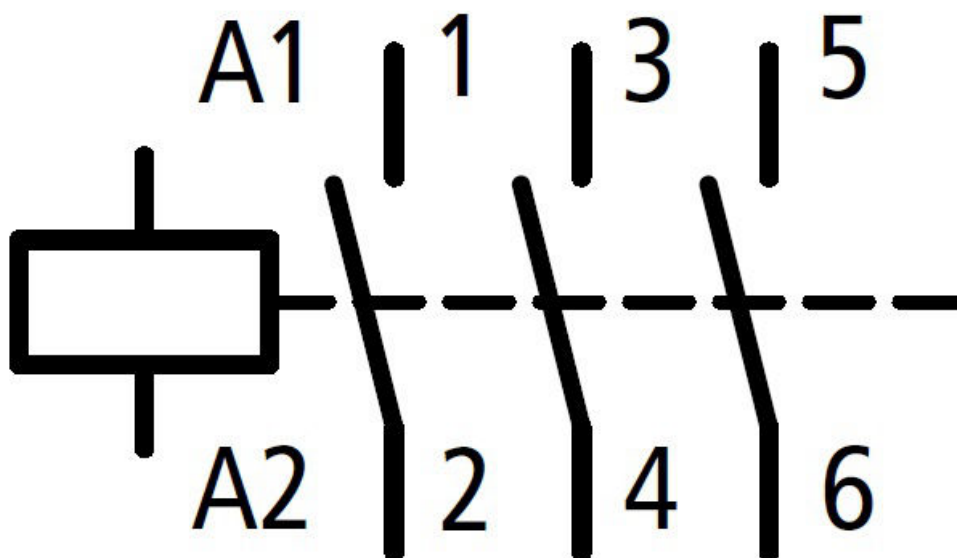
## Technical Data - continued

|                                                                 |                         |
|-----------------------------------------------------------------|-------------------------|
| AC-4 Open, 3-pole, 50 – 60 Hz 660 V 690 V [I <sub>e</sub> ] (A) | 17                      |
| AC-4 Motor rating                                               | -                       |
| AC-4 220 V 230 V [P] (kW)                                       | 6                       |
| AC-4 240 V [P] (kW)                                             | 6,5                     |
| AC-4 380 V 400 V [P] (kW)                                       | 10                      |
| AC-4 415 V [P] (kW)                                             | 11                      |
| AC-4 440 V [P] (kW)                                             | 12                      |
| AC-4 500 V [P] (kW)                                             | 13                      |
| AC-4 660 V 690 V [P] (kW)                                       | 14                      |
| DC-1                                                            | -                       |
| DC-1 Rated operational current                                  | -                       |
| DC-1 Open                                                       | -                       |
| 60 V [I <sub>e</sub> ] (A)                                      | 60                      |
| 110 V [I <sub>e</sub> ] (A)                                     | 50                      |
| 220 V [I <sub>e</sub> ] (A)                                     | 45                      |
| Current heat loss                                               | -                       |
| 3-polig, bei I <sub>th</sub> [60°] (W)                          | 16,7                    |
| Bei I <sub>e</sub> nach AC-3/400 V (W)                          | 9,9                     |
| Impedance per pole (mΩ)                                         | 1,9                     |
| Magnet systems                                                  | -                       |
| Voltage tolerance AC operated [Pick-up] (x U <sub>c</sub> )     | 0,8 - 1,1               |
| Voltage tolerance AC operated [Drop-out] (x U <sub>c</sub> )    | 0,3 - 0,6               |
| Duty factor (% DF)                                              | 100                     |
| Changeover time at 100 % U <sub>s</sub> (Recommended value)     | -                       |
| Main contacts                                                   | -                       |
| AC operated closing delay                                       | 12 - 18                 |
| AC operated opening delay                                       | 8 - 13                  |
| Arcing time (ms)                                                | 10                      |
| EMC Emitted interference                                        | according to EN 60947-1 |
| EMC Interference immunity                                       | according to EN 60947-1 |
| Rating data for approved types                                  | -                       |
| Rated breaking capacity (kA)                                    | -                       |
| Maximum motor rating Three-phase                                | -                       |
| Three-phase 200 V 208 V (HP)                                    | 15                      |
| Three-phase 230 V 240 V (HP)                                    | 20                      |
| Three-phase 460 V 480 V (HP)                                    | 40                      |
| Three-phase 575 V 600 V (HP)                                    | 50                      |
| Maximum motor rating Single-phase                               | -                       |
| Single-phase 115 V 120 V (HP)                                   | 3                       |
| Single-phase 230 V 240 V (HP)                                   | 10                      |
| Maximum motor rating General use (A)                            | 80                      |
| Short Circuit Current Rating                                    | -                       |
| Basic Rating SCCR (kA)                                          | 10                      |

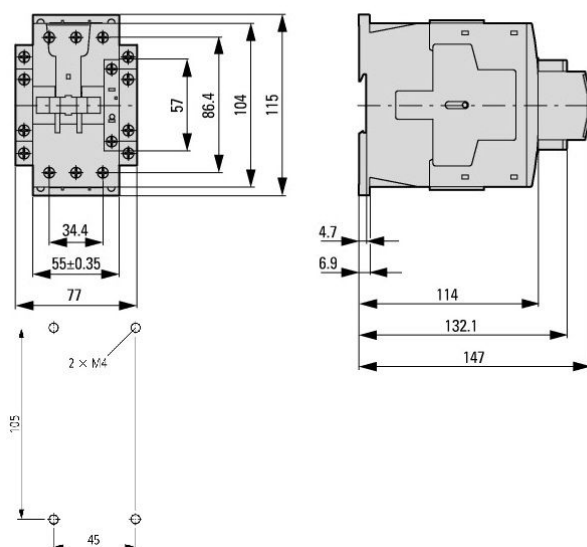
## Technical Data - continued

|                                                      |                 |
|------------------------------------------------------|-----------------|
| Basic Rating max. Fuse (A)                           | 250             |
| Basic Rating max. CB (A)                             | 250             |
| 480 V High Fault SCCR (fuse) (kA)                    | 30/100          |
| 480 V High Fault max. Fuse (A)                       | 250/150 Class J |
| 480 V High Fault SCCR (CB) (kA)                      | 65              |
| 480 V High Fault max. CB (A)                         | 100             |
| 600 V High Fault SCCR (fuse) (kA)                    | 30/100          |
| 600 V High Fault max. Fuse (A)                       | 250/150 Class J |
| 600 V High Fault SCCR (CB) (kA)                      | 30              |
| 600 V High Fault max. CB (A)                         | 250             |
| Special Purpose Ratings                              | -               |
| Elec. Discharge Lamps (Ballast) 480V 60Hz 3phase (A) | 79              |
| Elec. Discharge Lamps (Ballast) 277V 60Hz 1phase (A) | 79              |
| Elec. Discharge Lamps (Ballast) 600V 60Hz 3phase (A) | 79              |
| Elec. Discharge Lamps (Ballast) 347V 60Hz 1phase (A) | 79              |
| Incandescent Lamps (Tungsten) 480V 60Hz 3phase (A)   | 74              |
| Incandescent Lamps (Tungsten) 277V 60Hz 1phase (A)   | 74              |
| Incandescent Lamps (Tungsten) 600V 60Hz 3phase (A)   | 74              |
| Incandescent Lamps (Tungsten) 347V 60Hz 1phase (A)   | 74              |
| Resistance Air Heating 480V 60Hz 3phase (A)          | 79              |
| Resistance Air Heating 277V 60Hz 1phase (A)          | 79              |
| Resistance Air Heating 600V 60Hz 3phase (A)          | 79              |
| Resistance Air Heating 347V 60Hz 1phase (A)          | 79              |
| Refrig. Control (CSA only) LRA 480V 60Hz 3phase (A)  | 540             |
| Refrig. Control (CSA only) FLA 480V 60Hz 3phase (A)  | 90              |
| Refrig. Control (CSA only) LRA 600V 60Hz 3phase (A)  | 420             |
| Refrig. Control (CSA only) FLA 600V 60Hz 3phase (A)  | 70              |
| Def. Purpose Ratings(100,000 cycles acc.to UL1995)   | -               |
| LRA 480V 60Hz 3phase (A)                             | 480             |
| FLA 480V 60Hz 3phase (A)                             | 80              |
| Elevator Control 200V 60Hz 3phase (HP)               | 10              |
| Elevator Control 200V 60Hz 3phase (A)                | 32,20           |
| Elevator Control 240V 60Hz 3phase (HP)               | 15              |
| Elevator Control 240V 60Hz 3phase (A)                | 42              |
| Elevator Control 480V 60Hz 3phase (HP)               | 30              |
| Elevator Control 480V 60Hz 3phase (A)                | 40              |
| Elevator Control 600V 60Hz 3phase (HP)               | 40              |
| Elevator Control 600V 60Hz 3phase (A)                | 41              |

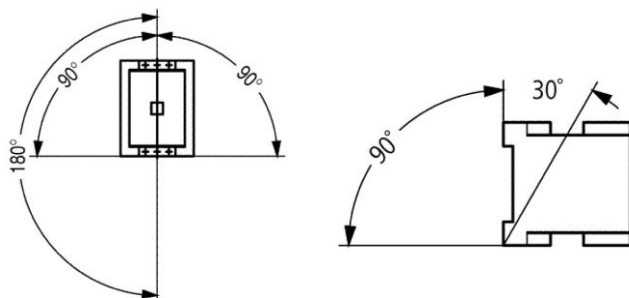
**Circuit diagram: Contactor 22kW/400V/50A, coil 24VAC**



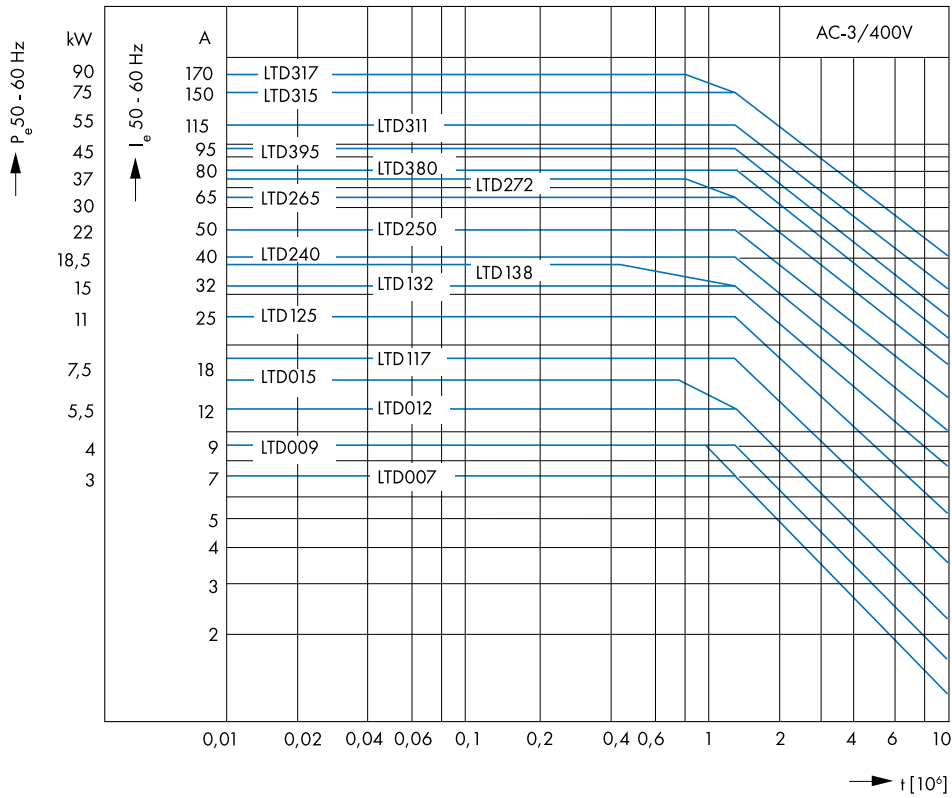
**Dimensioned drawing: Contactor 22kW/400V/50A, coil 24VAC**



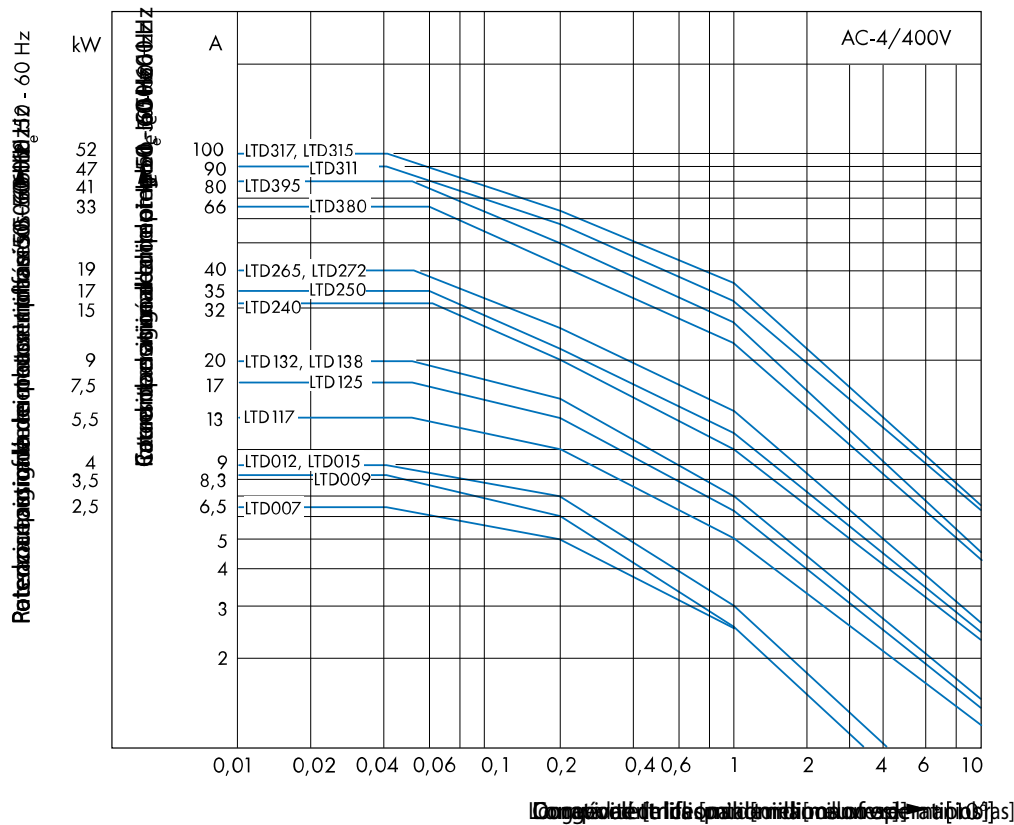
**Dimensioned drawing: Contactor 22kW/400V/50A, coil 24VAC**



**Diagram: Contactor 22kW/400V/50A, coil 24VAC**

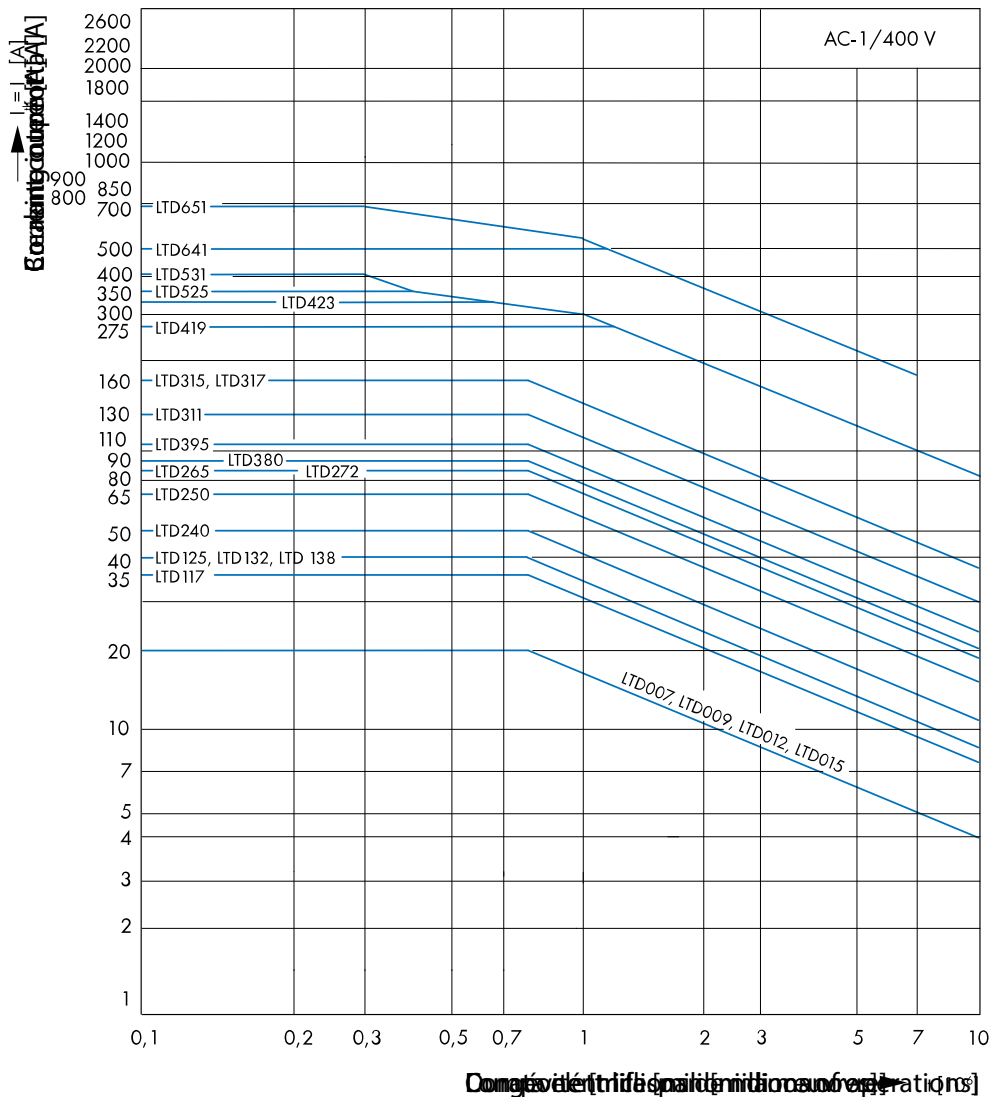


**Diagram: Contactor 22kW/400V/50A, coil 24VAC**





**Diagram: Contactor 22kW/400V/50A, coil 24VAC**



**Article Table**

| DESCRIPTION                                                                        | Order No. |
|------------------------------------------------------------------------------------|-----------|
| Contactor 22kW/400V/50A, coil 24VAC                                                | LTD25030  |
| Size type 2, Product category Power contactor, Rated current 50A, Coil voltage 24V |           |
| <b>Optional Accessories</b>                                                        |           |
| RC-suppressor für for contactors size 2-3, 110-240VAC                              | LTD30001  |
| Size type 3, Coil voltage 127-240V, Accessories Current limiter module             |           |
| Varistor-suppressor for contactors size 2-3, 24-48VAC                              | LTD30002  |
| Size type 3, Coil voltage 24-48V, Accessories Current limiter module               |           |
| Varistor-suppressor for contactors size 2-3, 48-130VAC                             | LTD30003  |
| Size type 3, Coil voltage 110V, Accessories Current limiter module                 |           |

## Article Table

| DESCRIPTION                                                                                                                       | Order No. |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>Optional Accessories</b>                                                                                                       |           |
| Varistor-suppressor for contactors size 2-3, 130-240VAC<br>Size type 3, Coil voltage 127-240V, Accessories Current limiter module | LTZ30004  |
| Mechanical interlock for contactors size 2<br>Size type 2, Accessories Locking device                                             | LTZ2W001  |
| Reversing wiring set for contactors size 2<br>Size type 2, Accessories el. Additional component                                   | LTZ2W002  |
| Connector for contactors size 0-2<br>Size type 1, Accessories Connection link                                                     | LTZ10005  |
| Auxiliary contact for contactor size 2-3, 2 NO<br>Size type 3, Accessories Auxiliary contacts                                     | LTZ3D420  |
| Auxiliary contact for contactor size 2-3, 1 NO 1 NC<br>Size type 3, Accessories Auxiliary contacts                                | LTZ3D411  |
| Auxiliary contact for contactor size 2-3, 2 NC<br>Size type 3, Accessories Auxiliary contacts                                     | LTZ3D402  |
| Auxiliary contact for contactor size 2-3, 4 NO<br>Size type 3, Accessories Auxiliary contacts                                     | LTZ3D140  |
| Auxiliary contact for contactor size 2-3, 3 NO 1 NC<br>Size type 3, Accessories Auxiliary contacts                                | LTZ3D131  |
| Auxiliary contact for contactor size 2-3, 2 NO 2 NC<br>Size type 3, Accessories Auxiliary contacts                                | LTZ3D122  |
| Auxiliary contact for contactor size 2-3, 1 NO 3 NC<br>Size type 3, Accessories Auxiliary contacts                                | LTZ3D113  |
| Auxiliary contact for contactor size 2-3, 4 NC<br>Size type 3, Accessories Auxiliary contacts                                     | LTZ3D104  |
| Aux contact for contactor S 2-4, 1 NO 1 NC, lateral 1. level<br>Size type 4, Accessories Auxiliary contacts                       | LTZ3D711  |
| Aux contact for contactor S 2-4, 1 NO 1 NC, lateral 2. level<br>Size type 4, Accessories Auxiliary contacts                       | LTZ3D811  |