# TeSys contactors

## For switching 3-phase capacitor banks, used for power factor correction, Direct connection without choke inductors

PB107881_32_r.eps

*LC1 DFK●.*

PB107885_28_r.eps

*LC1 DPK●.*

### Special contactors

Special contactors **LC1 D●K** are designed for switching 3-phase, single or multiple-step capacitor banks. The contactors are conform to standard IEC 60947-4-1 according to the AC-6b category of use and are UL, CSA and CCC certified.

### Contactor applications

**Specification**

Contactors fitted with a block of early make poles and damping resistors (external resistive wires), limiting the value of the current on closing to 60 In max.
This current limitation increases the life of all the components of the installation, in particular that of the fuses and capacitors.
The design of the add-on block ensures safety and long life of the installation.

**Operating conditions**

**There is no need to use choke inductors for either single or multiple-step capacitor banks.**
Short-circuit protection must be provided by gl type fuses rated at 1.7…2 In.

**Maximum operational power**

The power values given in the selection table below are for the following operating conditions:

| | | | |
|---|---|---|---|
| Prospective peak current at switch-on | LC1 D●K | | 200 In |
| Maximum operating rate | LC1 DFK, DGK, DLK, DMK | | 240 operating cycles/hour |
| | LC1 DPK, DTK, DWK | | 100 operating cycles/hour |
| Electrical durability at nominal load | All contactor ratings | 400 V | 300 000 operating cycles |
| | | 690 V | 200 000 operating cycles |

| Operational power [1] according to IEC 60947-4-1, AC-6b 50/60 Hz, θ ≤ 60 °C | | | | Instantaneous auxiliary contacts | | Tightening torque of power terminals | Basic reference, to be completed by adding the voltage code [2] | Weight |
|---|---|---|---|---|---|---|---|---|
| 230 V | 400 V 415 V | 440 V | 690 V | | | | | |
| kVAR | kVAR | kVAR | kVAR | N/O | N/C | N.m | | kg |
| 7 | 13 | 13 | 21 | 1 | 2 | 1.7 | **LC1 DFK●●** | 0.530 |
| 9 | 16 | 17 | 27 | 1 | 2 | 1.7 | **LC1 DGK●●** | 0.530 |
| 11 | 20 | 21 | 33 | 1 | 2 | 2.5 | **LC1 DLK●●** | 0.570 |
| 14 | 25 | 27 | 42 | 1 | 2 | 2.5 | **LC1 DMK●●** | 0.570 |
| 17 | 30 | 32 | 50 | 1 | 2 | 5 | **LC1 DPK●●** | 1.070 |
| 22 | 40 | 43 | 67 | 1 | 2 | 5 | **LC1 DTK●●** | 1.070 |
| 35 | 63 | 67 | 104 | 1 | 2 | 9 | **LC1 DWK12●●** | 1.650 |

**Switching of multiple-step capacitor banks** (with equal or different power ratings)

The correct contactor for each step is selected from the above table, according to the power rating of the step to be switched.
**Example:** 50 kVAR 3-step capacitor bank. Temperature: 40 °C and U = 400 V or 440 V.
One 25 kVAR step: contactor LC1 DMK, one 15 kVAR step: contactor LC1 DGK, and one 10 kVAR step: contactor LC1 DFK.

*(1) Operational power of the contactor according to the scheme on the page opposite.*
*(2) Standard control circuit voltages (the delivery time is variable, please consult your Regional Sales Office):*

| Volts | 24 | 48 | 110 | 120 | 220 | 230 | 240 | 380 | 400 | 415 | 440 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50/60 Hz | B7 | E7 | F7 | G7 | M7 | P7 | U7 | Q7 | V7 | N7 | R7 |

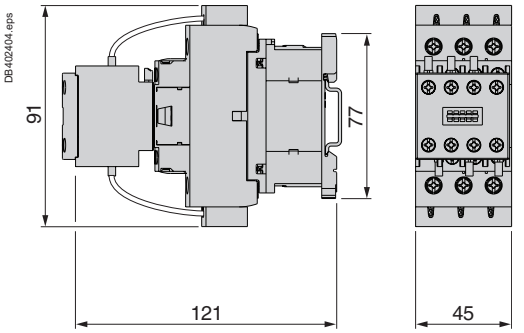
References : page 3

# TeSys contactors

## For switching 3-phase capacitor banks, used for power factor correction

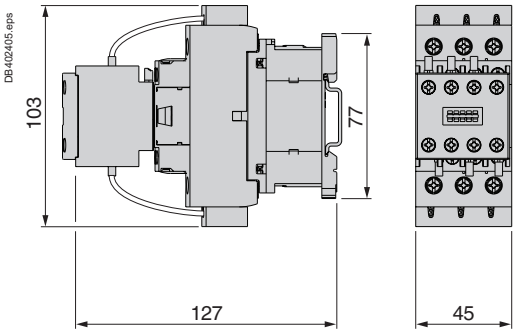
## Dimensions

### LC1 DFK, DGK



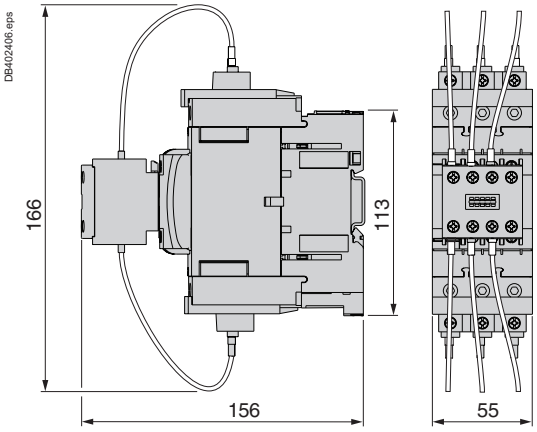

| LC1 | Type of fixing | |
|---|---|---|
| **DFK** | LC1 D18 | See pages 5/94 and 5/95 |
| **DGK** | LC1 D18 | See pages 5/94 and 5/95 |

### LC1 DLK, DMK



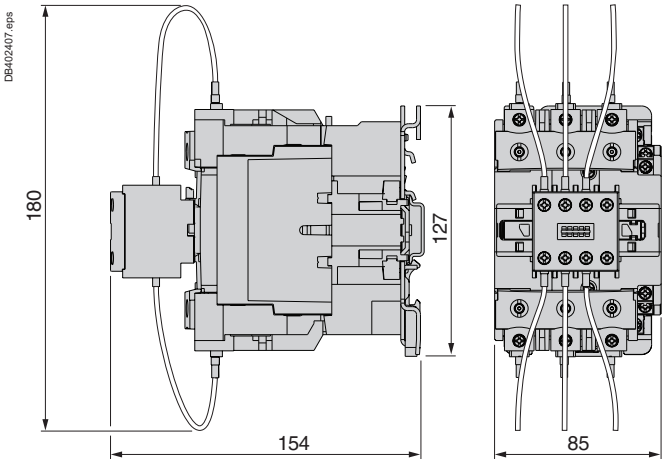

| LC1 | Type of fixing | |
|---|---|---|
| **DLK** | LC1 D25 | See pages 5/94 and 5/95 |
| **DMK** | LC1 D32 | See pages 5/94 and 5/95 |

### LC1 DPK, DTK




| LC1 | Type of fixing | |
|---|---|---|
| **DPK** | LC1 D40A | See pages 5/94 and 5/95 |
| **DTK** | LC1 D65A | See pages 5/94 and 5/95 |

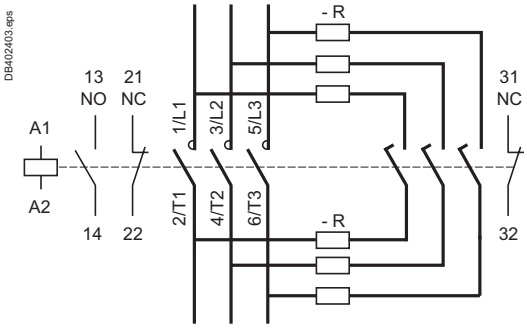
### LC1 DWK




| LC1 | Type of fixing | |
|---|---|---|
| **DWK** | LC1 D80 | See pages 5/94 and 5/95 |

## Schemes

### LC1 D●K




R = Pre-wired resistor connections.

References :
page 2