

# TeSys™ IEC-Style Contactors and Starters

Catalog

# 04

File 8502



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# TeSys™ IEC-Style Contactors and Starters Selection Guide

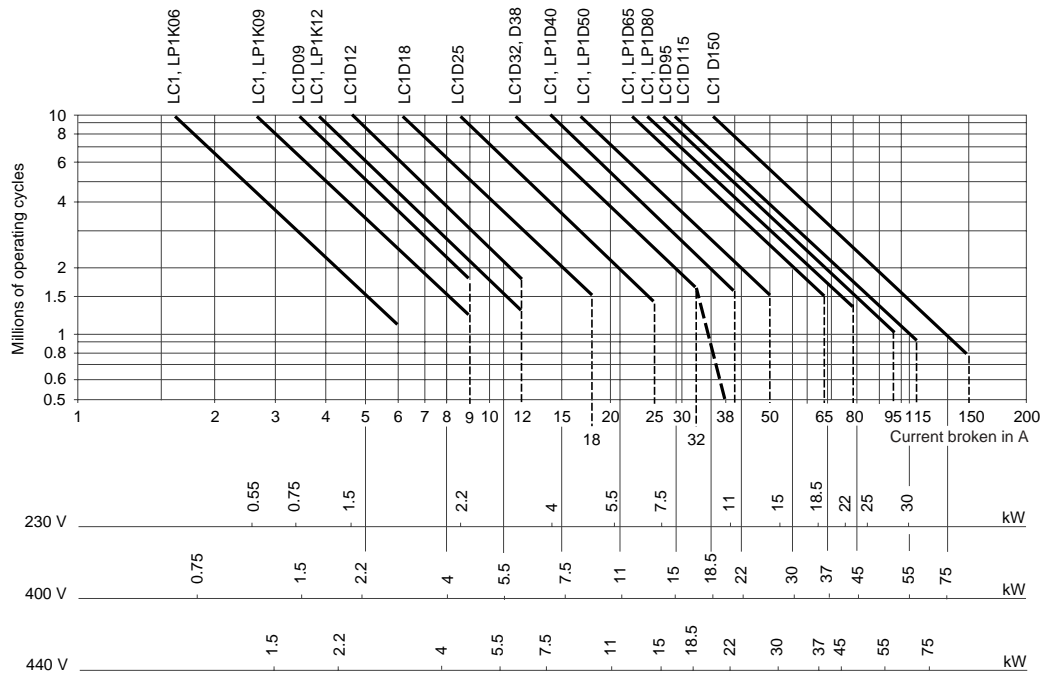
## Contactors Selection for Utilization Category AC-3

### Use in Category AC-3 (Ve ≤ 440 Vac)

Control of 3-phase asynchronous squirrel cage motors with breaking while running.

**The current broken (Ic) in category AC-3 is equal to the rated operational current (Ie) of the motor.**

**Use motor full-load current on horizontal axis for selection purposes.**



NOTE: The dotted lines relate to LC1D38 contactors only.

Operational power in kW-50 Hz.

**Example:** Asynchronous motor with P = 5.5 kW – Ve = 400 V – Ie = 11 A – Ic = Ie = 11 A; or  
Asynchronous motor with P = 5.5 kW – Ve = 415 V – Ie = 11 A – Ic = Ie = 11 A.  
3 million operating cycles required.

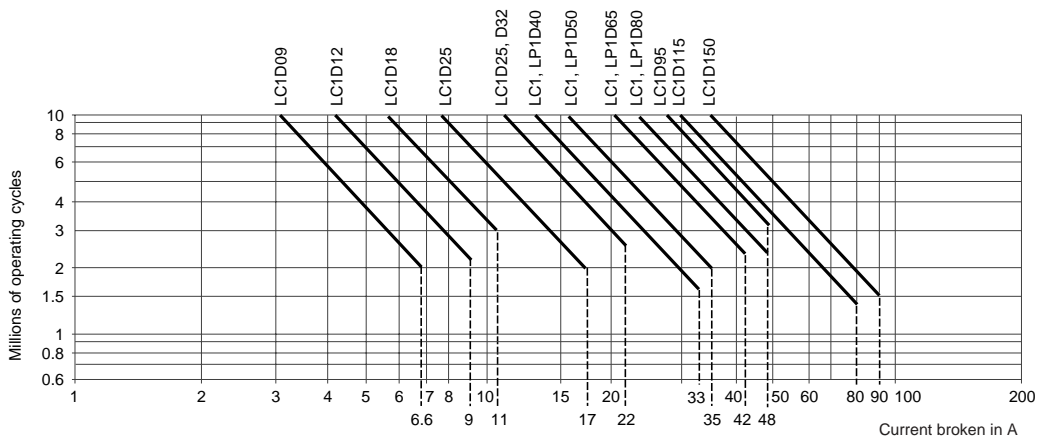
The above selection curves show the contactor rating needed: LC1D18 or LP1D18.

### Use in Category AC-3 (Ve = 660/690 Vac)

Control of 3-phase asynchronous squirrel cage motors with breaking while running.

**The current broken (Ic) in category AC-3 is equal to the rated operational current (Ie) of the motor.**

**Use motor full-load current on horizontal axis for selection purposes.**



NOTE: For Ve = 1000 Vac, use the 660/690 Vac curves without exceeding the corresponding operational current at the operational power indicated for 1000 Vac.

# TeSys™ IEC-Style Contactors and Starters Selection Guide

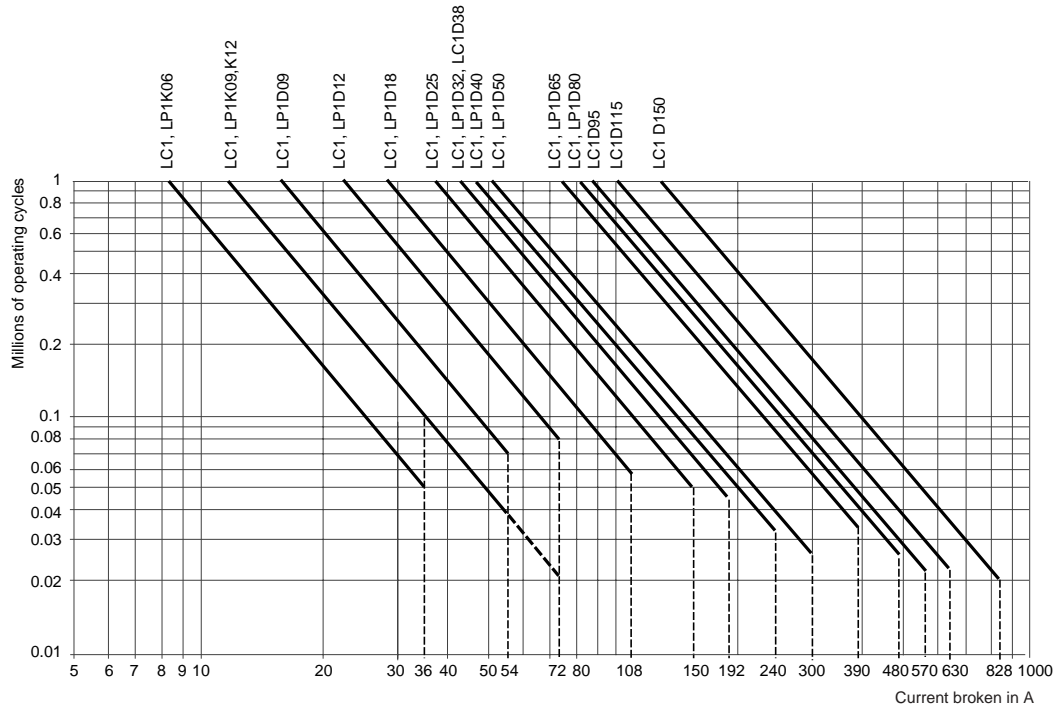
## Contactors Selection for Utilization Categories AC-2 and AC-4

### Use in Categories AC-2 or AC-4 ( $V_e \leq 440$ Vac)

Control of 3-phase asynchronous squirrel cage (AC-4) or slip-ring (AC-2) motors with breaking while motor stalled.

**The current broken ( $I_c$ ) in category AC-4 is equal to 6 times  $I_e$ , where  $I_e$  is the operational current of the motor.**

**Use motor-locked rotor current (6 times full-load current) on horizontal axis for selection purposes.**



*NOTE: The dotted lines relate to LC1K12 and LP1K12 contactors only.*

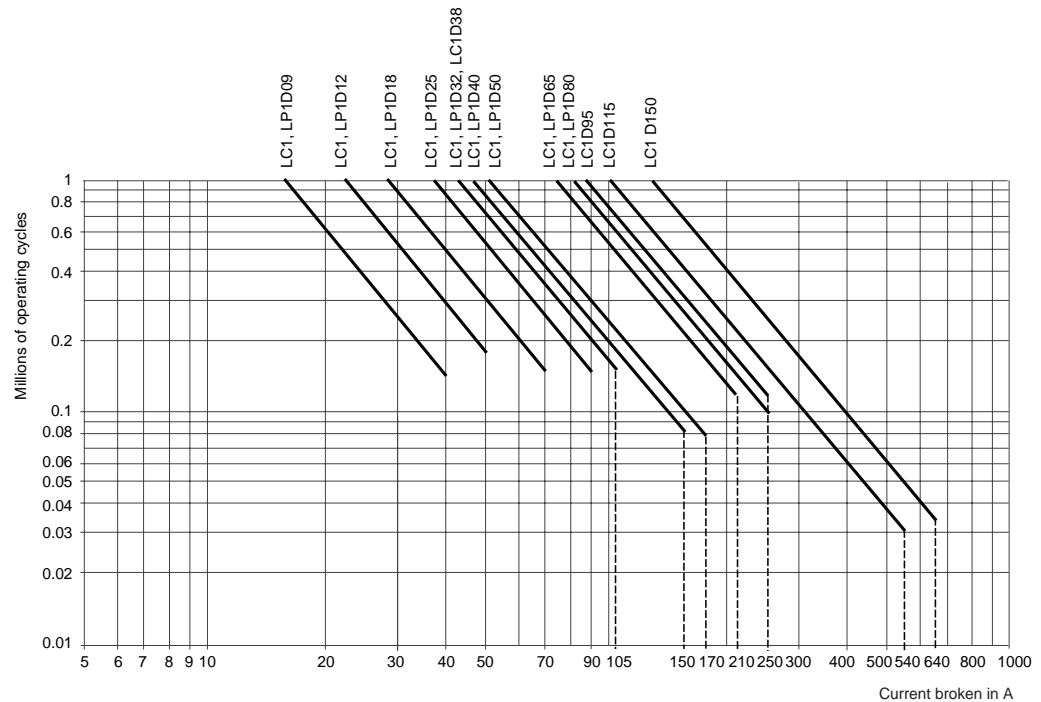
**Example:** Asynchronous motor with  $P = 5.5$  kW –  $V_e = 400$  V –  $I_e = 11$  A      $I_c = 6 \times I_e = 66$  A; or  
 Asynchronous motor with  $P = 5.5$  kW –  $V_e = 415$  V –  $I_e = 11$  A      $I_c = 6 \times I_e = 66$  A.  
 200,000 operating cycles required.  
 The above selection curves show the contactor rating needed: LC1D25 or LP1D25.

### Use in Category AC-4 ( $440$ Vac < $V_e \leq 690$ V)

Control of 3-phase asynchronous squirrel cage motors with breaking while motor stalled.

**The current broken ( $I_c$ ) in category AC-4 is equal to 6 times  $I_e$ , where  $I_e$  is the operational current of the motor.**

**Use motor-locked rotor current (6 times full-load current) on horizontal axis for selection purposes.**



# TeSys™ IEC-Style Contactors and Starters Selection Guide

## Contactor Selection for Utilization Categories DC-1 to DC-5

### Use in Category DC-1 to DC-5

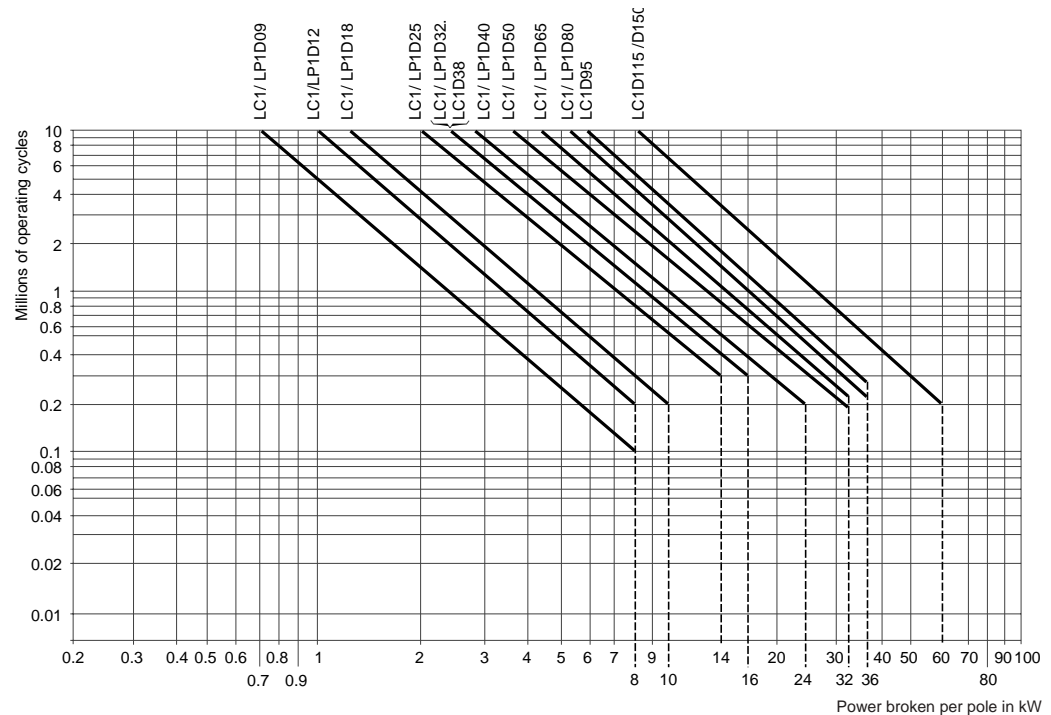
The criteria for contactor selection are:

- The rated operational current  $I_e$ .
- The rated operational voltage  $V_e$  (see page 31).
- The utilization category and the time constant  $L/R$  (see page 31)
- The required electrical durability.

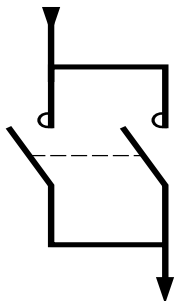
### Maximum Operating Rate (Operating Cycles)

The following operating rate must not be exceeded: 120 operating cycles/hour at rated operational current  $I_e$ .

### Electrical Durability



**Example:** Series-wound motor with  $P = 1.5$  kW,  $V_e = 200$  V, and  $I_e = 7.5$  A.  
 Application: counter-current braking and inching (utilization category DC-5).  
 Select a contactor type LC1D25 or LP1D25 with 3 poles in series.  
 The power broken is:  $P_c \text{ total} = 2.5 \times 200 \times 7.5 = 3.75$  kW.  
 The power broken per pole is: 1.25 kW.  
 The electrical durability read from the curve above is  $\geq 106$  operating cycles.



### Use of Poles in Parallel

Electrical durability can be increased by using poles connected in parallel. With  $N$  poles connected in parallel, the electrical durability becomes: electrical durability read from the curves  $\times N \times 0.7$ .


*NOTE:* Connecting the poles in parallel does not allow the maximum operational currents indicated on pages 28 and 29 to be exceeded.

*NOTE:* Ensure that the connections are made in such a way as to equalize the currents in each pole.

# TeSys™ D-Line Contactors and Starters

## Characteristics of Type LC•D and LP•D Contactors

### Environment

Type			LC1D09	LC1D12	LC1D18	LC1D25	
			LC1DT20	LC1DT25	LC1DT32	LC1DT40	
Rated insulation voltage (Vi)	UL/CSA	V	690	690	690	690	
	To IEC 60947-4-1, overvoltage category III, degree of pollution: 3	V	1000	1000	1000	1000	
	Conforming to UL, CSA	V	600	600	600	600	
Rated impulse withstand voltage (Vimp)	Conforming to IEC 60947	kV	6	6	6	6	
Conforming to standards	 Meets the essential requirements of the LV & EMC directives		IEC 60947-1, 60947-4-1, NFC 63-110, VDE 0660, BS 5424, JEM 1038., EN 60947-1, EN 60947-4-1.				
Approvals	 E164862 CCN NLDX	 LR43364 Class 3211 04	ASE, UL, CSA, DEMKO, NEMKO, SEMKO, FI, Conforming to SNCF, Sichere Trennung recommendations				
Degree of protection ♦	Conforming to VDE 0106	Power connections	Protection against direct finger contact IP 2X				
		Coil connections	Protection against direct finger contact IP 2X				
Protective treatment	Conforming to IEC 60068		"TH"				
Ambient air temperature around the device	Storage		- 60 to + 80 °C (-76 to +176 °F)				
	Operation at 80 to 110% nominal control voltage		- 5 to + 60 °C (+23 to +140 °F)				
	Permissible at nominal control voltage		- 40 to + 70 °C (-40 to +158 °F)				
Maximum operating altitude	Without derating		3000m (8900 ft.)				
Operating positions	Without derating		± 30° possible, in relation to normal vertical mounting plane				
Flame resistance	Conforming to UL 94		V 1	V1	V1	V1	
	Conforming to IEC 60695-2-1		960°	960°	960°	960°	
Shock resistance ▲ 1/2 sine wave = 11ms	Contacteur open		10 g	10 g	10 g	8 g	
	Contacteur closed		15 g	15 g	15 g	15 g	
Vibration resistance ▲ 5 to 300 Hz	Contacteur open		2 g	2 g	2 g	2 g	
	Contacteur closed		4 g	4 g	4 g	4 g	
<b>Pole characteristics</b>							
Number of poles			3	3 or 4	3	3 or 4	
Rated operational current (Ie)	In ac-3, θ ≤ 55°C (131°F)	A	9	12	18	25	
	In ac-1, θ ≤ 40°C (104°F)	A	25	25	32	40	
Rated operational voltage (Ve)	Up to	V	690	690	690	690	
Frequency limits	Of the operational current	Hz	25 to 400	25 to 400	25 to 400	25 to 400	
Rated thermal current (Ith)	θ ≤ 40°C (104°F)	A	25	25	32	40	
Rated making capacity (1 rms)	Conforming to IEC 60947-4	A	250	250	300	450	
Rated breaking capacity (1 rms)	Conforming to IEC 60947	220-380-415-440 V	A	250	250	300	450
		500 V	A	175	175	250	400
		690 V	A	85	85	120	180
Permissible short time rating from cold state, no current flowing for previous 15 minutes, at θ ≤ 40 °C (104 °F)	For 1 s	A	210	210	240	380	
	For 10 s	A	105	105	145	240	
	For 1 min	A	61	61	84	120	
	For 10 min	A	30	30	40	50	
Short-circuit protection	By circuit breaker		Select circuit breaker in accordance with NEC and local codes				
	By fuses		Maximum 400% of motor full load Amps				
Average impedance per pole	A Ith and 50 Hz	mΩ	2.5	2.5	2.5	2	
Power dissipation per pole for the above operational currents	AC-3	W	0.20	0.36	0.8	1.25	
	AC-1	W	1.56	1.56	2.5	3.2	

♦ Protection provided for the cable c.s.a. indicated on page 86 and for cable connections.

▲ In the least favorable direction, without change of contact state (coil supplied at Ve).

# TeSys™ D-Line Contactors and Starters

## Characteristics of Type LC•D and LP•D Contactors

### Control Circuit Characteristics

Type				LC1D09	LC1D12	LC1D18	LC1D25	LC1D32	LC1D38	
				LC1DT20	LC1DT25	LC1DT32	LC1DT40			
<b>Rated control circuit voltage (Vc)</b>		50 or 60 Hz		V				21 to 660		
<b>Control voltage limits</b> ( $\theta \leq 55\text{ °C}$ [131 °F])	50 or 60 Hz coils	Operational		0.8 to 1.1 Vac				0.8 to 1.1 Vac		
		Drop-out		0.3 to 0.6 Vac				0.3 to 0.6 Vac		
	50/60 Hz coils	Operational		0.85 to 1.1 Vac at 60 Hz				0.85 to 1.1 Vac at 60 Hz		
		Drop-out		0.3 to 0.6 Vac				0.3 to 0.6 Vac		
<b>Average consumption</b> at 20 °C (68 °F) and at Vc	50 Hz ac	Inrush	50 Hz coil	VA	–	–	–	–	–	
			Cos $\varphi$		0.75	0.75	0.75	0.75	0.75	0.75
			50/60 Hz coil	VA	70	70	70	70	70	70
		Sealed	50 Hz coil	VA	–	–	–	–	–	–
			Cos $\varphi$		0.3	0.3	0.3	0.3	0.3	0.3
			50/60 Hz coil	VA	7	7	7	7	7	7
	60 Hz ac	Inrush	60 Hz coil	VA	–	–	–	–	–	–
			Cos $\varphi$		0.75	0.75	0.75	0.75	0.75	0.75
			50/60 Hz coil	VA	70	70	70	100	70	70
		Sealed	60 Hz coil	VA	–	–	–	–	–	–
			Cos $\varphi$		0.3	0.3	0.3	0.3	0.3	0.3
			50/60 Hz coil	VA	7.5	7.5	7.5	7.5	7.5	7.5
<b>Heat dissipation</b>	50/60 Hz		W	2 to 3	2 to 3	2 to 3	2.5 to 3.5	2 to 3	2 to 3	
<b>Operating time</b>	Closing "C" ■		ms	12 to 22	12 to 22	12 to 22	15 to 24	12 to 22	12 to 22	
	Opening "O" ▲		ms	4 to 19	4 to 19	4 to 19	5 to 19	4 to 19	4 to 19	
<b>Mechanical durability in millions of operating cycles</b>	50 or 60 Hz coil			–	–	–	–	–	–	
	50/60 Hz coil at 50 Hz			15	15	15	15	15	15	
<b>Maximum operating rate at ambient temperature <math>\leq 55\text{ °C}</math> (131 °F)</b>	In operating cycles per hour			3600	3600	3600	3600	3600	3600	

■ The closing time "C" is measured from the moment the coil supply is switched on to initial contact of the main poles.

▲ The opening time "O" is measured from the moment the coil supply is switched off to the moment the mains poles separate.

# TeSys™ D-Line Contactors and Starters

## Characteristics of Type LC•D and LP•D Contactors

### Power Circuit Connections

Type			LC1 D09, D12 DT20, DT25	LC1D18 LC1DT32	LC1D25 LC1DT40	LC1D32	LC1D38	LC1D40 LP1D40	LC1D50 LP1D50	
Cabling (for screw clamp terminals)	Connector type		Screw clamp terminals					Box lug terminals		
	Stranded cable without cable end	1 conductor	AWG	18-10	18-8	18-8	14-6	–	10-3	10-3
		2 conductors	AWG	18-10	18-8	18-8	14-6	–	10-4	10-4
		1 conductor	mm <sup>2</sup>	1/4	1.5/6	1.5/10	2.5/10	2.5/10	2.5/25	2.5/25
		2 conductors	mm <sup>2</sup>	1/4	1.5/6	1.5/6	2.5/10	2.5/10	2.5/16	2.5/16
	Stranded cable with cable end	1 conductor	AWG	18-10	18-3	18-3	18-3/0	–	10-4	10-4
		2 conductors	AWG	18-10	18-10	18-10	14-2	–	12-2	12-2
		1 conductor	mm <sup>2</sup>	1/4	1/6	1/6	1/10	1/10	2.5/25	2.5/25
		2 conductors	mm <sup>2</sup>	1/2.5	1/4	1/4	1.5/6	1.5/6	2.5/10	2.5/10
	Solid cable without cable end	1 conductor	AWG	18-8	18-8	18-8	14-8	–	10-3	10-3
		2 conductors	AWG	18-8	18-8	18-8	10-8	–	10-6	10-6
		1 conductor	mm <sup>2</sup>	1/4	1.5/6	1.5/6	1.5/10	1.5/10	2.5/25	2.5/25
		2 conductors	mm <sup>2</sup>	1/4	1.5/6	1.5/6	2.5/10	2.5/10	2.5/16	2.5/16
	Phillips head type			N° 2	N° 2	N° 2	N° 2	N° 2	–	–
	Screwdriver Ø			Ø 6	Ø 6	Ø 6	Ø 6	Ø 6	Ø 6 to Ø 8	Ø 6 to Ø 8
Hexagon spanner			–	–	–	–	–	4 mm	4 mm	
Tightening torque			15 lb.-in. 1.7 N•m	15 lb.-in. 1.7 N•m	23 lb.-in. 2.5 N•m	23 lb.-in. 2.5 N•m	23 lb.-in. 2.5 N•m	45 lb.-in. 5 N•m	45 lb.-in. 5 N•m	
Connection by bus bar or ring-tongue terminals										
Bar c.s.a.			–	–	–	–	–	–	–	
Lug external Ø			mm	8	8	10	10	13	16	
Screw Ø			mm	M3.5	M3.5	M4	M4	M5	M6	
Phillips head type			N° 2	N° 2	N° 2	N° 2	N° 2	N° 2	N° 3	
Screwdriver Ø			Ø 6	Ø 6	Ø 6	3/16 in. Ø 6 mm	3/16 in. Ø 6 mm	Ø 8 mm	Ø 8 mm	
Hexagon spanner			–	–	–	–	–	–	–	
Tightening torque			15 lb.-in. 1.7 N•m	15 lb.-in. 1.7 N•m	15 lb.-in. 1.7 N•m	20 lb.-in. 7.5 N•m	20 lb.-in. 7.5 N•m	53 lb.-in. 6 N•m	71 lb.-in. 6 N•m	
Spring terminals										
Flexible cabling (for spring terminals)	Flexible cable without cable end	1 conductor	AWG	14	12	12	12	12	–	–
		2 conductors	AWG	14	12	12	12	12	–	–
		1 conductor	mm <sup>2</sup>	2.5	4	4	4	4	–	–
		2 conductors	mm <sup>2</sup>	2.5	4	4	4	4	–	–

### Control Circuit Connections

Type			LC1 D09, D12 DT20, DT25	LC1D18 LC1DT32	LC1D25 LC1DT40	LC1D32	LC1D38	LC1D40 LP1D40	LC1D50 LP1D50	
Connection by cable										
Screw clamp terminals										
Cabling	Stranded cable without cable end	1 conductor	AWG (mm <sup>2</sup> )	18 - 10 (1/4)	18 - 10 (1/4)	18 - 10 (1/4)	1/4	18 - 10 (1/4)	18 - 10 (1/4)	18 - 10 (1/4)
		2 conductors	AWG (mm <sup>2</sup> )	18 - 10 (1/4)	18 - 10 (1/4)	18 - 10 (1/4)	1/4	18 - 10 (1/4)	18 - 10 (1/4)	18 - 10 (1/4)
	Stranded cable with cable end	1 conductor	AWG (mm <sup>2</sup> )	18 - 10 (1/4)	18 - 10 (1/4)	18 - 10 (1/4)	1/4	18 - 10 (1/4)	18 - 10 (1/4)	18 - 10 (1/4)
		2 conductors	AWG (mm <sup>2</sup> )	18 - 12 (1/2.5)	18 - 12 (1/2.5)	18 - 12 (1/2.5)	18 - 12 (1/2.5)	18 - 12 (1/2.5)	18 - 12 (1/2.5)	18 - 12 (1/2.5)
	Solid cable without cable end	1 conductor	AWG (mm <sup>2</sup> )	18 - 10 (1/4)	18 - 10 (1/4)	18 - 10 (1/4)	1/4	18 - 10 (1/4)	18 - 10 (1/4)	18 - 10 (1/4)
		2 conductors	AWG (mm <sup>2</sup> )	18 - 10 (1/4)	18 - 10 (1/4)	18 - 10 (1/4)	1/4	18 - 10 (1/4)	18 - 10 (1/4)	18 - 10 (1/4)
Phillips head type			N° 2	N° 2	N° 2	N° 2	N° 2	N° 2	N° 2	
Screwdriver Ø			mm	Ø 6	Ø 6	Ø 6	Ø 6	Ø 6	Ø 6	
Tightening torque			15 lb.-in. 1.7 N•m	15 lb.-in. 1.7 N•m	17 lb.-in. 1.7 N•m	15 lb.-in. 1.7 N•m	15 lb.-in. 1.7 N•m	15 lb.-in. 1.7 N•m	15 lb.-in. 1.7 N•m	
Connection by bus bar or ring-tongue terminals										
Lug external Ø			mm	8	8	8	8	8	8	
Screw Ø			mm	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5	
Phillips head type			N° 2	N° 2	N° 2	N° 2	N° 2	N° 2	N° 2	
Screwdriver Ø			3/16 in. Ø 6	3/16 in. Ø 6	3/16 in. Ø 6	3/16 in. Ø 6	3/16 in. Ø 6	3/16 in. Ø 6	3/16 in. Ø 6	
Tightening torque			15 lb.-in. 1.7 N•m	15 lb.-in. 1.7 N•m	15 lb.-in. 1.7 N•m	15 lb.-in. 1.7 N•m	15 lb.-in. 1.7 N•m	15 lb.-in. 1.7 N•m	15 lb.-in. 1.7 N•m	

# TeSys™ D-Line Contactors and Starters

## Selection of Contactors for Motor Control

The tables below show the kilowatt ratings (for international applications) and horsepower ratings (for North American applications) of contactors for motor control.

### AC and DC Control Circuit — 3-pole Contactors with Touch-safe Terminals for Power Cabling (AC-3 category)

Maximum horsepower ratings						Maximum Inductive Current in AC-3 Category 600 V	Standard power ratings of 3-phase motors 50/60 Hz in category AC-3							Rated Operating Current in AC-3 up to 440 V	Instantaneous Auxiliary Contacts		Catalog Number ▼◆	Weight lb (kg)	
1-phase 50/60 Hz		3-phase 50/60 Hz					220 V 230 V	380 V 400 V	415 V	440 V	500 V	660 V 690 V	1000 V		A	N.O.			N.C.
115/ 120 V	230/ 240 V	200/ 208 V	220/ 240 V	460/ 480 V	575 V 600 V														
HP	HP	HP	HP	HP	HP	A	kW	kW	kW	kW	kW	kW	kW	A					
0.5	1	2	2	5	7.5	9	2.2	4	4	4	5.5	5.5	—	9	1	1	LC1D09●●	0.71 (0.320)	
1	2	3	3	7.5	10	12	3	5.5	5.5	5.5	7.5	7.5	—	12	1	1	LC1D12●●	0.72 (0.325)	
1	3	5	5	10	15	18	4	7.5	9	9	10	10	—	18	1	1	LC1D18●●	0.73 (0.330)	
2	3	7.5	7.5	15	20	25	5.5	11	11	11	15	15	—	25	1	1	LC1D25●●	0.82 (0.370)	
2	5	10	10	20	30	32	7.5	15	15	15	18.5	18.5	—	32	1	1	LC1D32●●	0.83 (0.375)	
Not for North American applications ■						38	9	18.5	18.5	18.5	18.5	18.5	—	38	1	1	LC1D38●●	0.84 (0.380)	
3	5	10	10	30	30	40	11	18.5	22	22	22	30	22	40	1	1	LC1D40●●	3.11 (1.400)	
3	7.5	15	15	40	40	50	15	22	25	30	30	33	30	50	1	1	LC1D50●●	3.11 (1.400)	
5	10	20	20	50	50	65	18.5	30	37	37	37	37	37	65	1	1	LC1D65●●	3.11 (1.400)	
7.5	15	25	30	60	60	80	22	37	45	45	55	45	45	80	1	1	LC1D80●●	3.53 (1.590)	
Not for North American applications ■						95	25	45	45	45	55	45	45	95	1	1	LC1D95●●	3.58 (1.610)	
—	—	30	40	75	100	115	30	55	59	59	75	80	75	115	1	1	LC1D115●●	5.38 (2.420)	
—	—	40	50	100	125	150	40	75	80	80	90	100	90	150	1	1	LC1D150●●	5.42 (2.440)	

- ◆ For LC1D09 to LC1D38: clip-on mounting on 35 mm DIN rail **AM1DP** or screw mounting.  
For LC1D40 to LC1D95: clip-on mounting on 35 mm DIN rail **AM1DE** or 75 mm DIN rail **AM1DL** or screw mounting.  
For LC1D115 and LC1D150: clip-on mounting on 2 x 35 mm DIN rails **AM1DP** or screw mounting.
- ▼ Use voltage codes on page 115 "Voltage Code Table" to complete catalog number.
- Devices are UL Listed at the same HP ratings as 32 and 80 amp devices, respectively.

LC1D09●●



LC1D65●●



LC1D150●●





## TeSys™ D-Line Contactors and Starters

### Selection of Contactors for Motor Control

The tables below show the kilowatt ratings (for international applications) and horsepower ratings (for North American applications) of contactors for motor control.



**LC1D123••**

#### AC and DC Control Circuit — 3-pole Contactors for Spring Terminal Connections (AC-3 category)

Maximum horsepower ratings						Maximum Inductive Current in AC-3 Category 600 V	Standard power ratings of 3-phase motors 50/60 Hz in category AC-3							Rated Operating Current in AC-3 up to 440 V	Instantaneous Auxiliary Contacts		Catalog Number ▼◆	Weight lb (kg)	
1-phase 50/60 Hz		3-phase 50/60 Hz					220 V 230 V	380 V 400 V	415 V	440 V	500 V	660 V 690 V	1000 V		A	N.O.			N.C.
115/ 120 V	230/ 240 V	200/ 208 V	220/ 240 V	460/ 480 V	575 V 600 V														
HP	HP	HP	HP	HP	HP	A	kW	kW	kW	kW	kW	kW	A	N.O.	N.C.				
0.5	1	2	2	5	7.5	9	2.2	4	4	4	5.5	5.5	—	9	1	1	LC1D093••	0.71 (0.320)	
1	2	3	3	7.5	10	12	3	5.5	5.5	5.5	7.5	7.5	—	12	1	1	LC1D123••	0.72 (0.325)	
1	3	5	5	10	15	18	4	7.5	9	9	10	10	—	18	1	1	LC1D183••	0.73 (0.330)	
2	3	7.5	7.5	15	20	25	5.5	11	11	11	15	15	—	25	1	1	LC1D253••	0.82 (0.370)	
2	5	10	10	20	30	32	7.5	15	15	15	18.5	18.5	—	32	1	1	LC1D323••	0.83 (0.375)	
Not for North American applications ■						38	9	18.5	18.5	18.5	18.5	18.5	—	38	1	1	LC1D383••	0.84 (0.380)	

- ◆ For LC1D09 to LC1D38: clip-on mounting on 35 mm DIN rail AM1DP or screw mounting.
- ▼ Use voltage codes on page 115 "Voltage Code Table" to complete catalog number.
- Device is UL Listed at the same HP ratings as 32 amp device.

# TeSys™ D-Line Contactors and Starters

## Selection of Contactors for Motor Control



The tables below show the kilowatt ratings (for international applications) and horsepower ratings (for North American applications) of contactors for motor control.

### LC1D1506••

#### AC and DC Control Circuit — 3-pole Contactors for Ring-tongue Terminals or Bus Bar Power Connections (AC-3 category)

Maximum horsepower ratings						Maximum Inductive Current in AC-3 Category 600 V	Standard power ratings of 3-phase motors 50/60 Hz in category AC-3							Rated Operating Current in AC-3 up to 440 V	Instantaneous Auxiliary Contacts		Catalog Number ◆ ▼	Weight lb (kg)
1-phase 50/60 Hz		3-phase 50/60 Hz					220 V 230 V	380 V 400 V	415 V	440 V	500 V	660 V 690 V	1000 V		N.O.	N.C.		
115/120 V	230/240 V	200/208 V	220/240 V	460/480 V	575 V 600 V		kW	kW	kW	kW	kW	kW	A					
HP	HP	HP	HP	HP	HP	A	kW	kW	kW	kW	kW	kW	A	N.O.	N.C.			
0.5	1	2	2	5	7.5	9	2.2	4	4	4	5.5	5.5	—	9	1	1	LC1D096••	0.71 (0.320)
1	2	3	3	7.5	10	12	3	5.5	5.5	5.5	7.5	7.5	—	12	1	1	LC1D126••	0.72 (0.325)
1	3	5	5	10	15	18	4	7.5	9	9	10	10	—	18	1	1	LC1D186••	0.73 (0.330)
2	3	7.5	7.5	15	20	25	5.5	11	11	11	15	15	—	25	1	1	LC1D256••	0.82 (0.370)
2	5	10	10	20	30	32	7.5	15	15	15	18.5	18.5	—	32	1	1	LC1D326••	0.83 (0.375)
Not for North American applications ■						38	9	18.5	18.5	18.5	18.5	18.5	—	38	1	1	LC1D386••	0.84 (0.380)
3	5	10	10	30	30	40	11	18.5	22	22	22	30	22	40	1	1	LC1D406••	2.93 (1.320)
3	7.5	15	15	40	40	50	15	22	25	30	30	33	30	50	1	1	LC1D506••	2.93 (1.320)
5	10	20	20	50	50	65	18.5	30	37	37	37	37	37	65	1	1	LC1D656••	2.93 (1.320)
7.5	15	25	30	60	60	80	22	37	45	45	55	45	45	80	1	1	LC1D806••	3.55 (1.600)
Not for North American applications ■						95	25	45	45	45	55	45	45	95	1	1	LC1D956••	3.55 (1.600)
—	—	30	40	75	100	115	30	55	59	59	75	80	75	115	1	1	LC1D1156••	4.69 (2.110)
—	—	40	50	100	125	150	40	75	80	80	90	100	90	150	1	1	LC1D1506••	4.69 (2.130)

- ◆ For LC1D09 to LC1D38: clip-on mounting on 35 mm DIN rail AM1DP or screw mounting.
- For LC1D40 to LC1D95: clip-on mounting on 35 mm DIN rail AM1DE or 75 mm DIN rail AM1DL or screw mounting.
- For LC1D115 and LC1D150: clip-on mounting on 2 x 35 mm DIN rails AM1DP or screw mounting.
- ▼ Use voltage codes on page 115 "Voltage Code Table" to complete catalog number.
- Devices are UL Listed at the same HP ratings as 32 and 80 amp devices, respectively.

#### AC and DC Control Circuit — 3-pole Contactors for Connection with Slip-on Connectors

For contactors LC1D09 and LC1D12 only, replace the last digit in the catalog numbers shown in the table above ("6") with a 9. For example, LC1D096•• becomes LC1D099••. These contactors include slip-on connectors: UL Recognized **E164862 NLDX2**, 2 x 6.35 mm (0.25 in.) on the power poles and 1 x 6.35 mm (0.25 in.) on the coil terminals.