

# TeSys

**TeSys Control**  
Electronically-Controlled Contactors  
up to 800 A (AC-3/AC-3e)  
**Catalog 2025**



August, 2025

[se.com/tesys](https://se.com/tesys)

Life Is On

**Schneider**  
Electric

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# Start smart. Run smart. With TeSys motor controls.



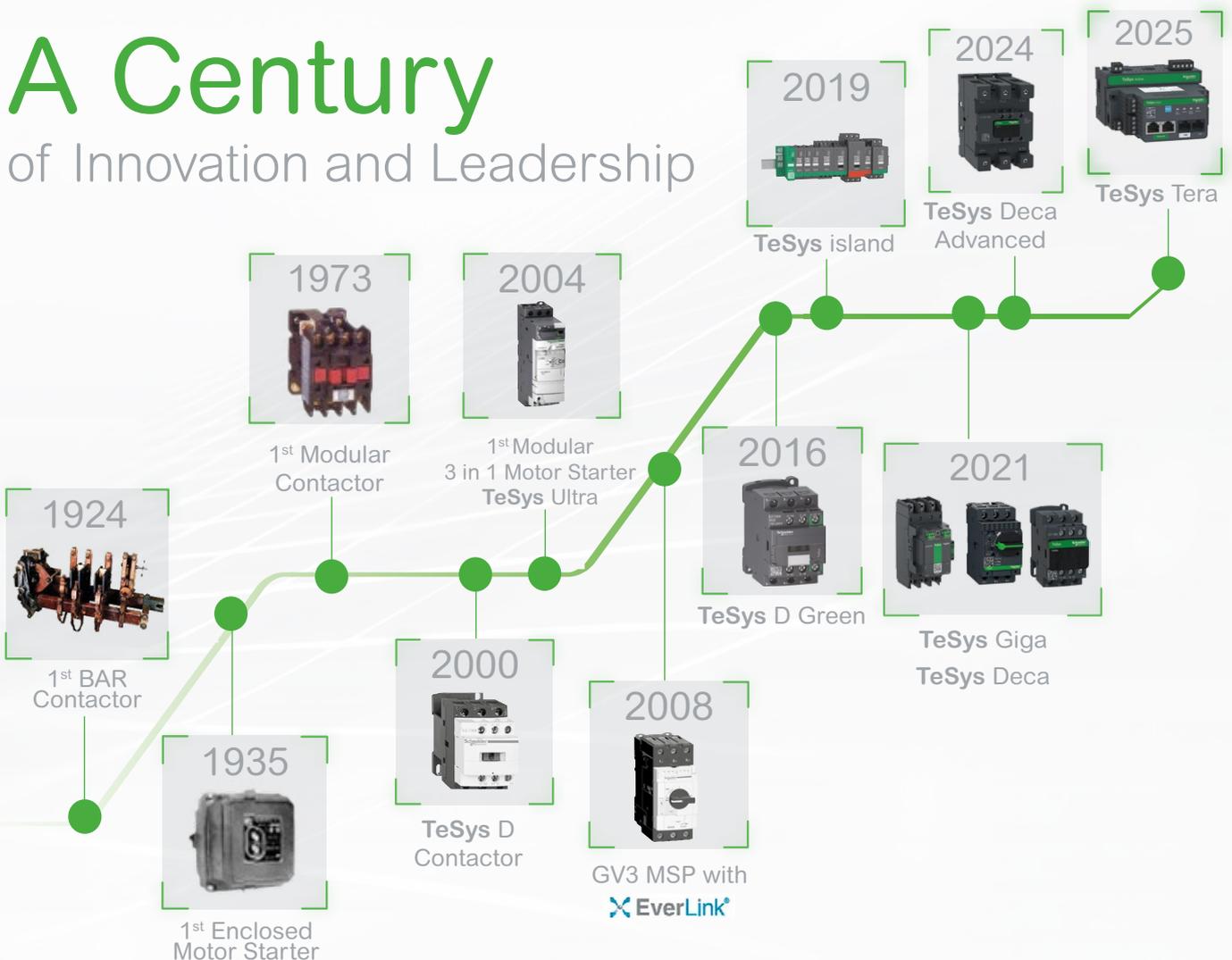
Stay smart with the world's best-selling motor control solutions from the inventor of the world's first contactor - Schneider Electric™.

For almost a century, TeSys motor controls have driven the industry with innovations in motor protection, monitoring, and control.

It started with the introduction of the industry's first BAR contactor in 1924, and today, the legacy of innovation is built into every **TeSys** motor control device.

Best-in-class robustness and reliability, plug-and-play architecture, and flexible functionality mean TeSys motor control solutions can meet your requirements across a wide range of applications, from the most common to the most advanced.

## A Century of Innovation and Leadership



# Introducing **TeSys** Deca Advanced & **TeSys** Giga

The electronically-controlled contactors series up to 800 A (AC-3e) & 1050 A (AC-1)

## From electro-mechanical...

### TeSys Deca



9 - 12 - 18 A

25 - 32 - 38 A

40 - 50 - 65 - 80 A

115 - 150 A

115 - 800 A

### TeSys F

## to electronically-controlled

### TeSys Deca Advanced



9 - 12 - 18 A

25 - 32 - 38 A

40 - 50 - 65 - 80 A

115 - 150 A

115 - 800 A

### TeSys Giga



## Enhanced robustness

The adoption of electronic coils in contactors offers a range of benefits that collectively contribute to extending product lifetime and enhancing robustness. It provides more consistent and reliable operation which helps to reduce stress on mechanical components. The wide-band coil design covers control voltage input from 24 V to 500 V AC/DC, reducing accidental downtime caused by voltage fluctuations and providing conditions for continuous and optimum operation of the load.

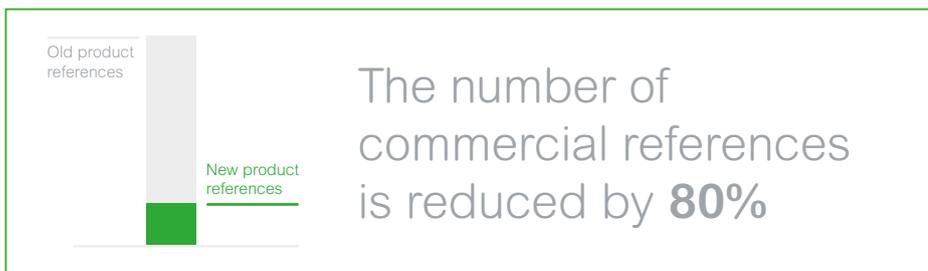


## Designed for efficiency

Reduced coil power consumption enhances energy efficiency, optimizes operational costs and extends the lifespan of the contactor by minimizing heat generation. That contributes significantly to achieving sustainability goals and promoting environmentally responsible practices. With innovative mechanical architecture supporting a compact product size, these contactors help minimize wiring complexity and optimize panel design, enhancing the overall system efficiency.



## Simplified customer journey



This makes for simpler, more convenient product selection and inventory management. TeSys complies with multiple global certifications and industry standards and is suitable for various load applications, supported by a high range of accessories.



## All applications

Electronically-controlled contactors are suitable for a broad range of applications to provide dependable switching and control, enhancing the system's efficiency and robustness across varied electrical environments.

- Industrial automation
- Heavy machinery
- Building management systems
- Renewable energy systems
- Transportation infrastructure
- ...

# Robustness and Efficiency Powered by Electronic Coils

## A simple selection of electronic coil

80% reduction in commercial references

### TeSys Deca Advanced

- BBE: 24 V DC <sup>(1)</sup>
- BNE: 24 V - 60 V AC/DC
- EHE: 48 V - 130 V AC/DC
- KUE: 100 V - 250 V AC/DC
- LSE: 200 V - 500 V AC/DC <sup>(2)</sup>

### TeSys Giga

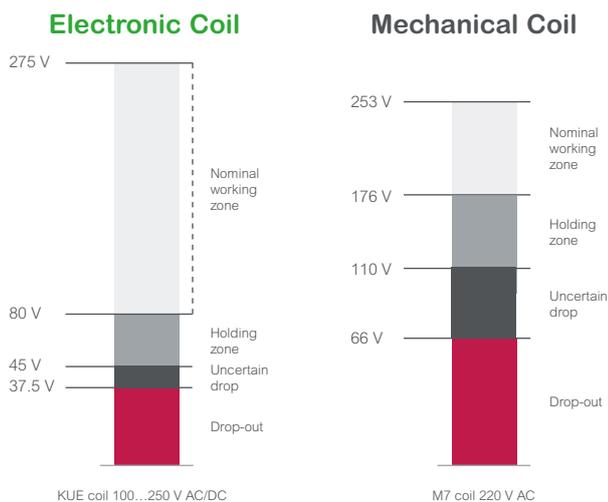
- BEE: 24 V - 48 V AC/DC
- EHE: 48 V - 130 V AC/DC
- KUE: 100 V - 250 V AC/DC
- LSE: 200 V - 500 V AC/DC

## Ready to connect with PLC

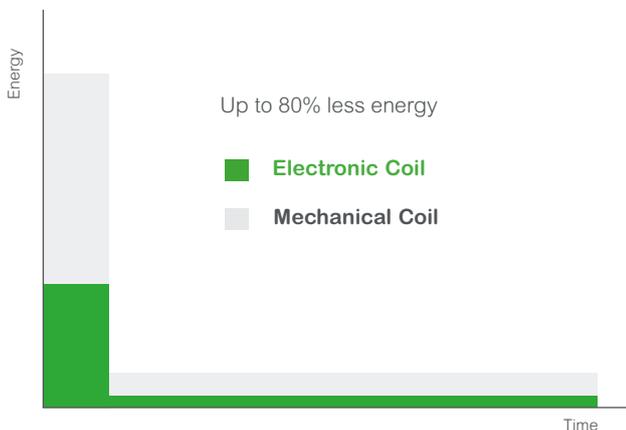
All **TeSys** electronic coils are embedded with an integrated surge suppressor, enhancing its resilience against transient voltage spikes and providing superior protection against electrical surges. **TeSys** Deca Advanced BBE coil <sup>(1)</sup> and BNE coil <sup>(3)</sup>, **TeSys** Giga BEEA, LSEA & EHEA coils allow direct control by 24 V DC 500 mA PLC-output.

## Robustness to thrive through voltage fluctuations

The wide-band coil design exhibits strong resistance to voltage fluctuations, providing robust performance and durability under electrical stress.



## Maximized efficiency by minimizing energy consumption



**TeSys** electronic coil with lower inrush and holding consumption reduces energy usage, minimizes heat generation for enhanced longevity, and improves overall efficiency. This design contributes to operational cost savings and environmental sustainability.

<sup>(1)</sup> Available for LC1D40A...80A, LC1DT60A...80A  
<sup>(2)</sup> Available for LC1D115A...150A, LC1DT200A  
<sup>(3)</sup> BNE for LC1D09...38

# Simplicity Engineered by Product Architecture

## Always embed 1 NO + 1 NC auxiliary

**TeSys** Deca Advanced and **TeSys** Giga are always integrated with 1 NO + 1 NC auxiliaries, enhancing the versatility to support a wider range of control and signaling tasks and thus provide a more cohesive and efficient solution for managing electrical loads.



## Simple wiring with all front access to control circuit

**TeSys** Deca Advanced and **TeSys** Giga are designed with all front access for control circuit wiring and positioning the control circuit in front of the main power lines, This design:

1. Enhances accessibility: simplifies the installation process, making it faster and more straightforward.
2. Improves security: provides easier interactions with the contactor during adjustments or inspections, thus minimizes the need for technicians to reach around or through power lines, reducing the probability of electrical accidents.
3. Increases operational efficiency: allows for a more compact design of electrical panels and control system with easy access even during maintenance or trouble shooting, reducing downtime and labor costs.



# Continuing to Innovate for greater Robustness, Efficiency, and Simplicity

## Robust and Durable connection EverLink <sup>(1)</sup>

Power connections are the basis of electrical installations. Reliable connections are critical in terms of protecting installations against electrical fires, which can inadvertently start as a result of poor or loose connections.

Schneider Electric's EverLink™ technology provides a long-lasting connection by mitigating the loosening effects of heat cycling or vibrations. It is achieved by the user tightening the lug around the cable and loading a spring which compensates the loss of space due to creeping effect.

EverLink™ is designed to offer customers peace of mind in terms of maintenance and continuity of service.



## Wear diagnosis and predictive maintenance <sup>(2)</sup>

Contact wear is monitored by a dedicated module and shown in the front panel through LED, as well as under or over control voltage indication.

Therefore, the predictive maintenance can be planned for replacing the complete set of switching modules, thus avoiding breakdown maintenance. Switching modules can be replaced quickly and easily thanks to their Plug and Play design.



<sup>(1)</sup> EverLink available on TeSys Deca Advanced LC1D40A...150A, LC1DT60A...200A

<sup>(2)</sup> Wear diagnosis function is embedded on TeSys Giga series

# Full load management solution

3-pole & 4-pole

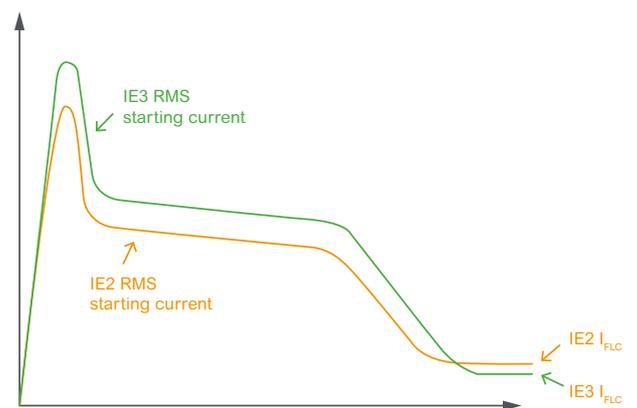
**TeSys** Deca Advanced and **TeSys** Giga are available in both 3-pole and 4-pole versions, which allows that a wide array of power management needs can be met with precision, from standard 3-phase power control to more specialized applications (like power switch) that requires an additional pole for enhanced functionality.



## Ideal for high efficiency motor (IE3 & IE4)

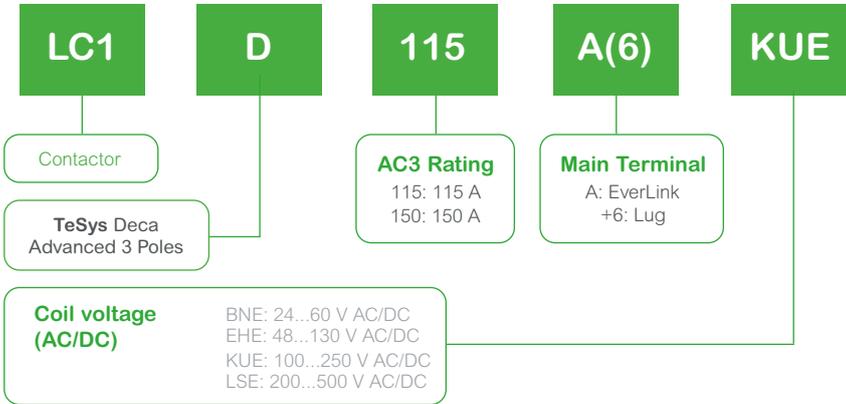
As industries move towards more sustainable solutions and high-efficiency motors become more prevalent, having a contactor capable of handling these motors means that infrastructure is already in place to accommodate technological advancements without requiring significant modifications or replacements.

**TeSys** Deca Advanced and **TeSys** Giga with a higher making capacity can handle the initial inrush current of high-efficiency motors without degradation. This capability reduces wear and tear on the contactor, extending its lifespan and decreasing the need for frequent replacements or maintenance. They support the motor potential for energy savings and reduced operational costs to be fully realized.

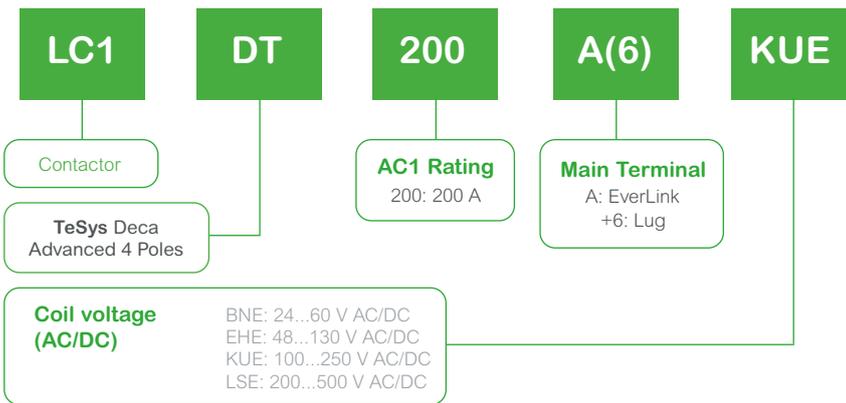


# New Coming TeSys Deca Advanced 115 A - 150 A

## TeSys Deca Advanced 115 A - 150 A product references and coding principle



## TeSys Deca Advanced 115 A - 150 A product references and coding principle



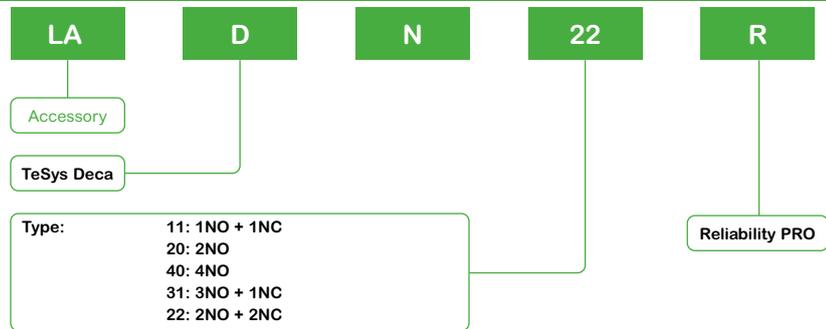
## TeSys Deca Advanced core values

<p><b>Efficient concept</b></p> <ul style="list-style-type: none"> <li>Reduced coil consumption contributes to sustainability</li> <li>Compact size</li> <li>Side by side installation allowed</li> <li>Optimized accessories design enhances space saving from system level</li> </ul>	<p><b>Robust connection</b></p> <ul style="list-style-type: none"> <li>Patented EverLink main power terminals avoid maintenance</li> <li>By default full IP20 with EverLink</li> </ul>
<p><b>Simple installation</b></p> <ul style="list-style-type: none"> <li>Front access to control and aux circuits</li> <li>Both-side wiring slot for control circuit guidance</li> </ul>	<p><b>Reliable operation</b></p> <ul style="list-style-type: none"> <li>Withstand wider operation temperature</li> <li>Improved robustness under demanding environment (e.g. dust, humidity, shock...)</li> </ul>

# New Coming High Reliability Auxiliary Contact Blocks

## TeSys Deca auxiliary contact blocks for use in harsh industrial environment

Product references:  
coding principle



*Note: There are differences in NO/NC position between LADN●●R and LADN●●. Please refer to page A1/42 for wiring diagram details. This auxiliary module only supports the installation on contactors with standard power consumption.*

## Product core values

Dustproof, Ultra-fine grain silver contacts, Improved Reliability, 17 V/1 mA

### New upgrade, with innovative design



**20% stability increased on contacts**  
Improves contact reliability between mobile and static contacts



**Fully sealed design benefits on reduced dust access**  
Comprehensive blocking of dust and external pollution

**5X granularity refinement on silver alloy**  
Innovative binary alloy refinement process provides precise conduction for each operation

**10<sup>-8</sup> level on reliability**   
Capacity 17 V/1 mA

### Target industries and applications

- For elevator, textile machinery and other harsh industrial applications
- For low voltage and low current high sensitive applications

## Product variants:



LADN11R



LADN20R



LADN22R



LADN31R



LADN40R

## Guideline for product upgrading

Existing products	
<b>LADN●● Standard applications 17 V/5 mA</b>	
Product type	Product description
LADN11	Auxiliary module 1NO+1NC, screw terminals
LADN20	Auxiliary module 2NO, screw terminals
LADN22	Auxiliary module 2NO + 2NC, screw terminals
LADN31	Auxiliary module 3NO + 1NC, screw terminals
LADN40	Auxiliary module 4NO, screw terminals



New products	
<b>LADN●●R for harsh environment 17 V/1 mA</b>	
Product type	Product description
LADN11R	Auxiliary module 1NO +1NC, screw terminals
LADN20R	Auxiliary module 2NO, screw terminals
LADN22R	Auxiliary module 2NO + 2NC, screw terminals
LADN31R	Auxiliary module 3NO + 1NC, screw terminals
LADN40R	Auxiliary module 4NO, screw terminals

# On-line tools to configure your **motor starters**

## EcoStruxure™ Motor Control Configurator



Scan or click  
on the QR code

### Build your starter configuration

- Build your motor starter configuration with different solutions
- Complete offer base suited for different countries.

### Enhanced customer's journey

- Easy selection, replacing complex paper catalogs
- Convert into Bill of Materials (BoM) by adding the products to the cart.

### Answers to customer needs

- Option to save and re-work your configurations
- Direct access to products documentation in one place
- Possibility with unique configurations ID and share.

## Product Selector for TeSys Contactors



TeSys Deca  
Scan or click  
on the QR code

### Offer selection

- Easy selection of **TeSys** Control contactors
- Intuitive tool to configure the devices to suit your needs
- Helps to select the right devices for your application.

### Configure your motor starter components

- Options to select auxiliaries and accessories
- Configure reversers and changeover contactors with ease
- Get the extensive bill of material, export it in standard format (PDF, XLS), or drop it into the product cart
- Access to technical information and documentations for every item.



TeSys Giga  
Scan or click  
on the QR code

## EcoStruxure Motor Management Design



Scan or click  
on the QR code

### Electrical design calculations for high-power motors

Easily perform basic calculations related to transformer size, short-circuit current and voltage drop, comparing direct-on-line, Star-Delta, soft-starter, and variable speed drive. Verify starting feasibility from mechanical standpoint and allows power quality objectives to be met, for power factor or harmonic levels. Check energy saving potential of using a variable speed drive for centrifugal pumps and fans.

### Offer selection and report

Select among latest compatible offers to build a complete motor management solution: circuit breakers, contactors, MCC panels, drives, protection relays, power factor capacitors, active filters, power quality monitoring and services.

Get a summary report with calculations and recommended offers.

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## Introduction

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## TeSys Deca Advanced Contactors

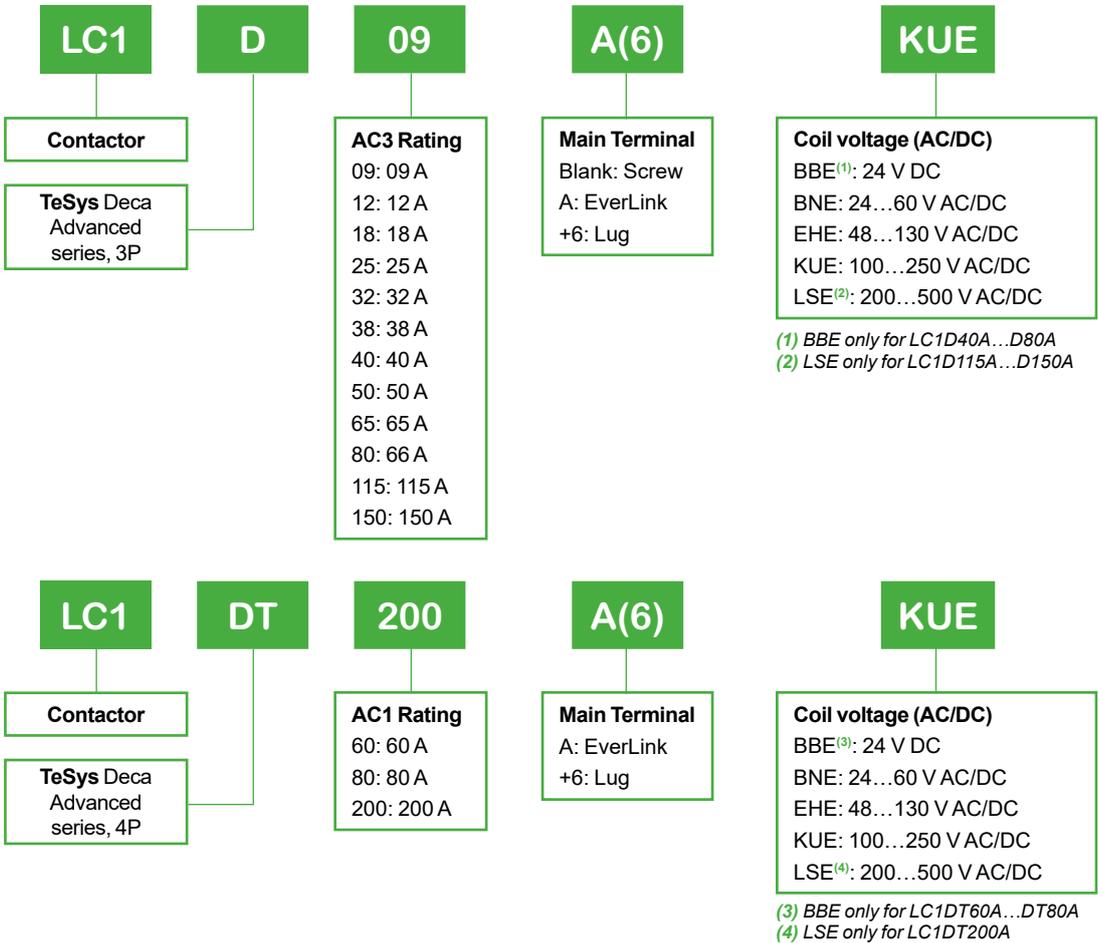
Type of product	Range		Pages
AC-3/AC-3e Applications - 3-pole <b>TeSys</b> Deca Advanced Contactors (with AC/DC compatible coil)	From 9 to 150 A		A1/9
AC-1 Applications - 3-pole and 4-pole <b>TeSys</b> Deca Advanced Contactors	From 25 to 200 A		A1/10
<b>UL and CSA Applications -</b> <b>3-pole TeSys</b> Deca Advanced Contactors	From 25 to 200 A		A1/11
<b>Reversing Contactors</b> <b>TeSys</b> Deca Advanced Contactors (with AC/DC compatible coil)	From 9 to 80 A		A1/12
Auxiliary Contact Blocks, Accessories, Assembly kits for <b>TeSys</b> Deca Advanced Contactors			A1/14
Spare Parts for <b>TeSys</b> Deca Advanced Contactors			A1/22

## Technical Data for Designers

A1/27

# Product reference - coding principle

## > TeSys Deca Advanced Contactors



# TeSys Control

## Deca Advanced Contactors

### Introduction

#### Reliability with efficiency and simplicity

**TeSys** Deca Advanced  
One step further to a sustainable future

For decades, **TeSys** Deca has set the standard for reliable motor management, powering millions of motors and loads across more than 50 countries.

However, today's industries are facing new challenges: climate change, escalating energy costs, and constantly changing industrial standards. Our customers are under pressure to reduce operating costs, speed up engineering, and minimize complexity, all while adhering to stricter regulations.

**TeSys** Deca Advanced contactors are designed to meet these challenges head-on.



With new technologies and innovative architecture, this advanced series aims to simplify the customer journey from design to maintenance. Whether you're looking to streamline installation, increase operational efficiency, or boost reliability, **TeSys** Deca Advanced delivers.

In a world where efficiency and reliability are paramount, **TeSys** Deca Advanced stands out as a trusted partner for load management. Choose **TeSys** Deca Advanced to meet today's challenges and prepare for tomorrow's opportunities.

### Key values and features



#### Easy selection

With only five wide-band coil references, the **TeSys** Deca Advanced contactors cover the entire voltage range from 24 to 500 V for both AC and DC applications. This streamlined selection process ensures you can quickly and easily find the right component for your needs, saving you time and reducing complexity in inventory management.



#### Compact & robust

The **TeSys** Deca Advanced contactors deliver top-tier performance, including robust durability and rigorous industrial environments withstand, within a compact footprint. This combination of performance and space-saving design allows for more flexibility in system layouts and applications.



#### Ready for digitalization

Designed for seamless integration, the **TeSys** Deca Advanced contactors offer BNE & BBE coil that can connect directly to a PLC without requiring additional interface relays for loads up to 80 A. This feature simplifies wiring, reduces installation time, leading to a more efficient system setup.



#### Superior Uptime

Reliability is a hallmark of the **TeSys** Deca Advanced series. The wide-band coil has high resistance to voltage surges which helps ensure high uptime, reducing the probability of unexpected downtime and associated costs.



#### More sustainability

The low-consumption coil in the **TeSys** Deca Advanced contactors uses up to 80% less energy compared to traditional electromechanical contactors. This significant reduction in energy usage not only contributes to lower operating costs but also supports sustainability goals by reducing your overall carbon footprint.

# TeSys Control

## Deca Advanced Contactors

### Introduction



EverLink Connection <sup>(1)</sup> for main power robust connection throughout product lifetime

Wiring slot for control cable guidance

Front face A1 - A2 control circuit terminal

Built-in 1 NO + 1 NC auxiliary contact block

Unique QR code providing quick access to complete product data

## TeSys Deca Advanced contactors



9...18 A



25...38 A



40...80 A



115...150 A

Contactors

### Power & switch

- 3 or 4 power poles
- 9 to 150 A (AC-3/AC-3e)
- 25 to 200 A (AC-1)
- Embedded 1 NO + 1 NC auxiliary contacts
- Patent EverLink main power terminals <sup>(1)</sup>

### Efficient design

- Low consumption coils
- High rating within compact size
- Ready for IE3/IE4 high efficiency motor

### Remote control

- 24 V DC <sup>(2)</sup>, 24...60 V, 48...130 V, 100...250 V, 200...500 V <sup>(3)</sup> AC/DC coils
- PLC direct control available <sup>(4)</sup>
- High resistance to voltage fluctuation
- Embedded surge suppressor

### Standards & Certifications

- Multiple standards
- International certifications

<sup>(1)</sup> For LC1D40A...D150A.

<sup>(2)</sup> BBE coil for LC1D40A...D80A for PLC direct input.

<sup>(3)</sup> LSE coil for LC1D115A...D150A.

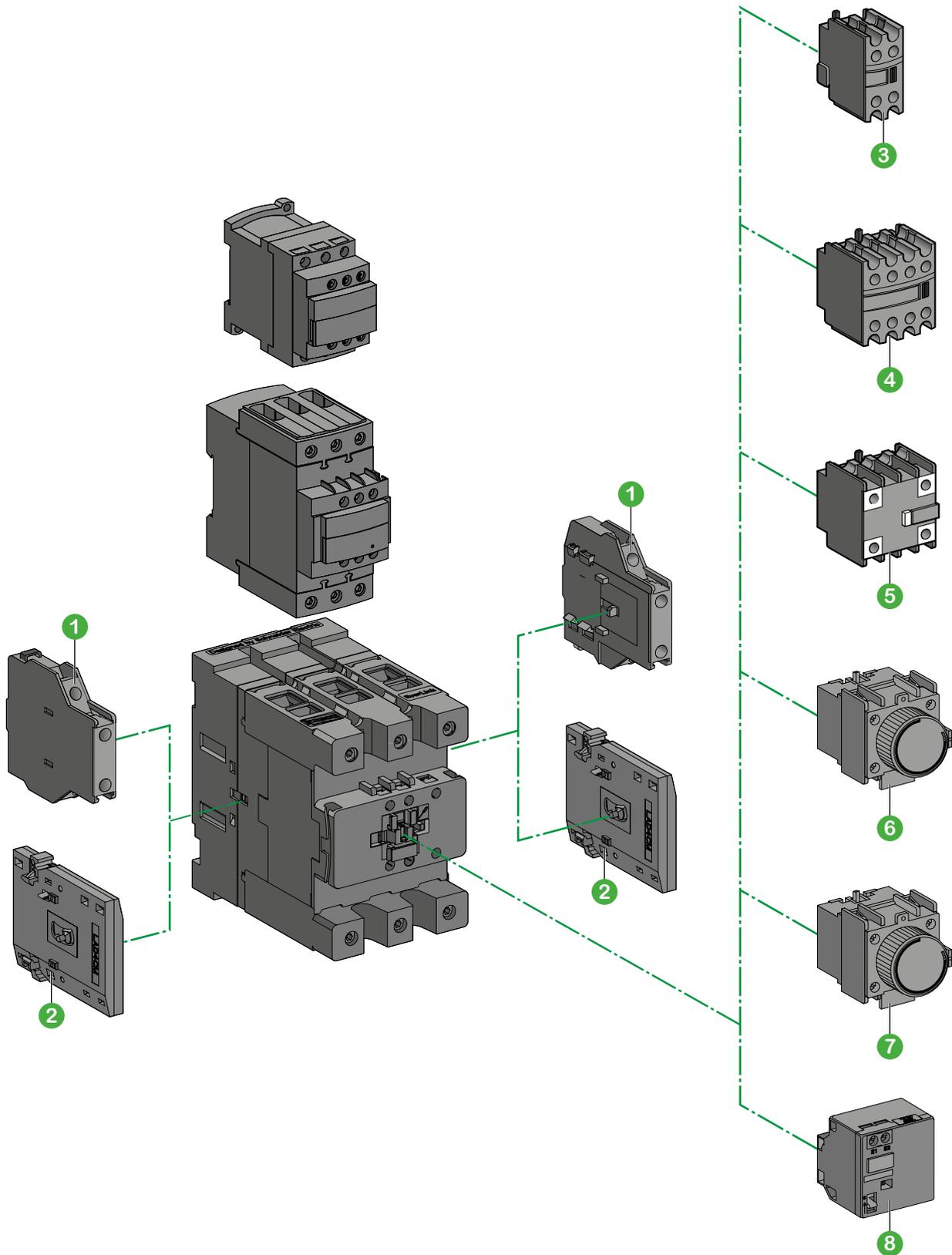
<sup>(4)</sup> BNE coil for LC1D09...D38, BBE coil for LC1D40A...D80A.

# TeSys Control

## Deca Advanced Contactors

### Introduction

DB433945.eps



- ① Side-mounted auxiliary block, please refer to pages A1/14 and A1/15.
- ② Mechanical interlock, please refer to page A1/20.
- ③ ④ ⑤ Front-mounted auxiliary block, please refer to pages A1/14 and A1/15.
- ⑥ ⑦ Time delay auxiliary contact blocks, please refer to pages A1/16 and A1/17.
- ⑧ Mechanical latch blocks, please refer to pages A1/16 and A1/17.

Contactors

# TeSys Control

## Deca Advanced Contactors

### Product references

## TeSys Deca Advanced 3-pole contactors - For motor control (9 to 150 A)



Motor ratings (kW) $\theta \leq 60^\circ\text{C}$												Reference <sup>(1) (2)</sup>				
IEC												3-pole				
AC-3						AC-3e										
230 V	400 V	415 V	440 V	500 V	690 V	230 V	400 V	415 V	440 V	500 V	690 V	24 V DC <sup>(3)</sup>	24...60 V <sup>(3)</sup>	48...130 V	100...250 V	200...500 V
kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW					
2.2	4	4	4	5.5	5.5	2.2	4	4	4	5.5	5.5		LC1D09BNE	LC1D09EHE	LC1D09KUE	
3	5.5	5.5	5.5	7.5	7.5	3	5.5	5.5	5.5	7.5	7.5		LC1D12BNE	LC1D12EHE	LC1D12KUE	
4	7.5	9	9	10	10	4	7.5	9	9	10	10		LC1D18BNE	LC1D18EHE	LC1D18KUE	
5.5	11	11	11	15	15	5.5	11	11	11	15	15		LC1D25BNE	LC1D25EHE	LC1D25KUE	
7.5	15	15	15	18.5	18.5	7.5	15	15	15	18.5	18.5		LC1D32BNE	LC1D32EHE	LC1D32KUE	
9	18.5	18.5	18.5	18.5	18.5	9	18.5	18.5	18.5	18.5	18.5		LC1D38BNE	LC1D38EHE	LC1D38KUE	
11	18.5	22	22	22	30	11	18.5	22	22	22	30	LC1D40A(6)BBE	LC1D40A(6)BNE	LC1D40A(6)EHE	LC1D40A(6)KUE	
15	22	25	30	30	33	15	22	25	30	30	33	LC1D50A(6)BBE	LC1D50A(6)BNE	LC1D50A(6)EHE	LC1D50A(6)KUE	
18.5	30	37	37	37	37	18.5	30	37	37	37	37	LC1D65A(6)BBE	LC1D65A(6)BNE	LC1D65A(6)EHE	LC1D65A(6)KUE	
22	37	37	37	37	37	22	37	37	37	37	37	LC1D80A(6)BBE	LC1D80A(6)BNE	LC1D80A(6)EHE	LC1D80A(6)KUE	
30	55	59	59	75	80	30	55	59	59	75	80		LC1D115A(6)BNE	LC1D115A(6)EHE	LC1D115A(6)KUE	LC1D115A(6)LSE
40	75	80	90	90	100	40	75	80	90	90	100		LC1D150A(6)BNE	LC1D150A(6)EHE	LC1D150A(6)KUE	LC1D150A(6)LSE

Motor ratings (kW) $\theta \leq 60^\circ\text{C}$							Motor ratings (HP)				Reference <sup>(1) (2)</sup>				
IEC							UL - 3-phase				3-pole				
AC-4															
230 V	400 V	415 V	440 V	500 V	690 V	200/208 V	230/240 V	460/480 V	575/600 V	24 V DC <sup>(3)</sup>	24...60 V <sup>(3)</sup>	48...130 V	100...250 V	200...500 V	
kW	kW	kW	kW	kW	kW	Hp	Hp	Hp	Hp						
2.2	4	4	4	5.5	5.5	2	2	5	7.5		LC1D09BNE	LC1D09EHE	LC1D09KUE		
3	5.5	5.5	5.5	7.5	7.5	3	3	7.5	10		LC1D12BNE	LC1D12EHE	LC1D12KUE		
4	7.5	9	9	10	10	5	5	10	15		LC1D18BNE	LC1D18EHE	LC1D18KUE		
5.5	11	11	11	15	15	7.5	7.5	15	20		LC1D25BNE	LC1D25EHE	LC1D25KUE		
7.5	15	15	15	18.5	18.5	10	10	20	25		LC1D32BNE	LC1D32EHE	LC1D32KUE		
9	18.5	18.5	18.5	18.5	18.5	10	10	20	25		LC1D38BNE	LC1D38EHE	LC1D38KUE		
11	18.5	22	22	22	30	10	10	30	30	LC1D40A(6)BBE	LC1D40A(6)BNE	LC1D40A(6)EHE	LC1D40A(6)KUE		
15	22	25	30	30	33	15	15	40	40	LC1D50A(6)BBE	LC1D50A(6)BNE	LC1D50A(6)EHE	LC1D50A(6)KUE		
18.5	30	37	37	37	37	20	20	40	50	LC1D65A(6)BBE	LC1D65A(6)BNE	LC1D65A(6)EHE	LC1D65A(6)KUE		
22	37	37	37	37	37	20	20	40	50	LC1D80A(6)BBE	LC1D80A(6)BNE	LC1D80A(6)EHE	LC1D80A(6)KUE		
30	55	55	55	63	65	30	40	75	100		LC1D115A(6)BNE	LC1D115A(6)EHE	LC1D115A(6)KUE	LC1D115A(6)LSE	
37	75	75	75	75	80	40	50	100	125		LC1D150A(6)BNE	LC1D150A(6)EHE	LC1D150A(6)KUE	LC1D150A(6)LSE	

- (1) For screw terminal type, no need of "6" in the commercial reference. For lug terminal type, add "6" in the commercial reference, before the coil code.  
For example, LC1D40ABBE is for screw terminal, LC1D40A6BBE is for lug type terminal. For reverser contactors LC2D, please see pages A1/9 to A1/12.
- (2) For the highest ratings, LC1D115A & LC1D150A, please note a slight contactor width difference between the screw terminal and the lug terminal type (97 mm versus 99 mm between the 3-pole types and 132 mm versus 134 mm between the 4-pole types).  
No assembly width difference (contactor + 2 auxiliary blocks) when using left and right side-mounted auxiliary blocks.  
For more details, please refer to page A1/39.
- (3) LC1D40A...D80ABBE & LC1D09...D38BNE for PLC direct control.

# TeSys Control

## Deca Advanced Contactors

### Product references

## TeSys Deca Advanced 3-pole and 4-pole contactors - For load control (non-motor, 25 to 200 A)



Maximum current (A) ( $\theta \leq 60^\circ\text{C}$ )	General purpose continuous current (A)	Reference <sup>(1) (2)</sup>									
		3-pole					4-pole				
IEC	UL	24 V DC <sup>(3)</sup>	24...60 V <sup>(3)</sup>	48...130 V	100...250 V	200...500 V	24 V DC <sup>(3)</sup>	24...60 V <sup>(3)</sup>	48...130 V	100...250 V	200...500 V
<b>AC-1</b>											
25	25		LC1D09BNE	LC1D09EHE	LC1D09KUE						
25	25		LC1D12BNE	LC1D12EHE	LC1D12KUE						
32	32		LC1D18BNE	LC1D18EHE	LC1D18KUE						
40	40		LC1D25BNE	LC1D25EHE	LC1D25KUE						
50	50		LC1D32BNE	LC1D32EHE	LC1D32KUE						
50	50		LC1D38BNE	LC1D38EHE	LC1D38KUE						
60	60	LC1D40A(6)BBE	LC1D40A(6)BNE	LC1D40A(6)EHE	LC1D40A(6)KUE		LC1DT60A(6)BBE	LC1DT60A(6)BNE	LC1DT60A(6)EHE	LC1DT60A(6)KUE	
80	70	LC1D50A(6)BBE	LC1D50A(6)BNE	LC1D50A(6)EHE	LC1D50A(6)KUE						
80	80	LC1D65A(6)BBE	LC1D65A(6)BNE	LC1D65A(6)EHE	LC1D65A(6)KUE						
80	80	LC1D80A(6)BBE	LC1D80A(6)BNE	LC1D80A(6)EHE	LC1D80A(6)KUE		LC1DT80A(6)BBE	LC1DT80A(6)BNE	LC1DT80A(6)EHE	LC1DT80A(6)KUE	
200	160		LC1D115A(6)BNE	LC1D115A(6)EHE	LC1D115A(6)KUE	LC1D115A(6)LSE		LC1DT200A(6)BNE	LC1DT200A(6)EHE	LC1DT200A(6)KUE	LC1DT200A(6)LSE
200	160		LC1D150A(6)BNE	LC1D150A(6)EHE	LC1D150A(6)KUE	LC1D150A(6)LSE					

- (1)** For screw terminal type, no need of "6" in the commercial reference. For lug terminal type, add "6" in the commercial reference, before the coil code.  
For example, LC1D40ABBE is for screw terminal, LC1D40A6BBE is for lug type terminal. For reverser contactors LC2D, please see pages A1/9 to A1/12.
- (2)** For the highest ratings, LC1D115A & LC1D150A, please note a slight contactor width difference between the screw terminal and the lug terminal type (97 mm versus 99 mm between the 3-pole types and 132 mm versus 134 mm between the 4-pole types).  
No assembly width difference (contactor + 2 auxiliary blocks) when using left and right side-mounted auxiliary blocks.  
For more details, please refer to page A1/39.
- (3)** LC1D40A...D80ABBE & LC1DT60A...DT80ABBE & LC1D09...D38BNE for PLC direct control.



# TeSys Control

## Deca Advanced Contactors

### Product references



Deca Advanced contactors have a dark grey casing and a 3-character code voltage.

### 3-pole & 4-pole contactors - Motor control up to 37 kW/400 V - Category AC-3/AC-3e

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3/AC-3e ( $\theta \leq 60^\circ\text{C}$ )						Rated operational current in AC-3/AC-3e 440 V up to	Instantaneous auxiliary contacts 	Basic reference, to be completed by adding the control voltage code <sup>(1)</sup>  Fixing <sup>(2)</sup>	Weight
220 V 230 V	380 V 400 V	415 V	440 V	500 V	660 V 690 V				

kW	kW	kW	kW	kW	kW	A				kg
<b>Connection by screw clamp terminals</b>										
2.2	4	4	4	5.5	5.5	9	1	1	LC1D09●●●	0.368
3	5.5	5.5	5.5	7.5	7.5	12	1	1	LC1D12●●●	0.373
4	7.5	9	9	10	10	18	1	1	LC1D18●●●	0.378
5.5	11	11	11	15	15	25	1	1	LC1D25●●●	0.433
7.5	15	15	15	18.5	18.5	32	1	1	LC1D32●●●	0.438
9	18.5	18.5	18.5	18.5	18.5	38	1	1	LC1D38●●●	0.442

<b>Power connections by EverLink<sup>®</sup> BTR <sup>(3)</sup> screw connectors and control by screw clamp terminal</b>										
11	18.5	22	22	22	30	40	1	1	LC1D40A●●●, LC1DT60A●●● <sup>(4)</sup>	0.992
15	22	25	30	30	33	50	1	1	LC1D50A●●●	0.997
18.5	30	37	37	37	37	65	1	1	LC1D65A●●●	1.002
22	37	37	37	37	37	66	1	1	LC1D80A●●●, LC1DT80A●●● <sup>(4)</sup>	1.002
30	55	59	59	75	80	115	1	1	LC1D115A●●●, LC1DT200A●●●	2.600
40	75	80	90	90	100	150	1	1	LC1D150A●●●	2.600

### Connection for lugs or bars

For LC1D40A to LC1D150A, insert a figure 6 before the voltage code.  
Example: LC1D40A●●● becomes LC1D40A6●●●

### Auxiliary contact blocks and add-on modules

See pages A1/14 to A1/19.

### Control voltage codes

AC/DC or 24 V DC supply					
Volts	24 (PLC control)	24...60	48...130	100...250	200...500
<b>LC1D09 ...D38</b>					
U 0.85...1.1 Uc	BNE <sup>(5)</sup>	BNE	EHE	KUE	
<b>LC1D40A ... D80A</b>					
U 0.85...1.1 Uc	BBE <sup>(6)</sup>	BNE	EHE	KUE	
<b>LC1D115A...150A</b>					
U 0.8...1.1 Uc		BNE	EHE	KUE	LSE

- <sup>(1)</sup> Please check the availability of your variant in the index page A1/23. The SEARCH function of your viewer can be used.
- <sup>(2)</sup> LC1D09 to D80A: clip-on mounting on 35 mm  $\perp$  rail NSYS DR or screw fixing.
- <sup>(3)</sup> BTR screws: hexagon socket head. In accordance with local electrical wiring regulations, a size 4 insulated Allen key must be used (reference LADALLEN4, please refer to page A1/19).
- <sup>(4)</sup> AC-3 category for LC1DT60A & LC1DT80A. For AC-3e category please contact your technical support.
- <sup>(5)</sup> BNE: U 0.8...1.1 Uc (when DC).
- <sup>(6)</sup> BBE: U 0.8...1.2 Uc (DC only).

Contactors

# TeSys Control

## Deca Advanced Contactors

### Product references



Deca Advanced contactors have a dark grey casing and a 3-character code voltage.

3-pole contactors - Load control from 25 to 200 A - Category AC-1					
Non inductive loads maximum current ( $\theta \leq 60^\circ\text{C}$ ) utilisation category AC-1	Number of poles	Instantaneous auxiliary contacts		Partial reference, to be completed by adding the control voltage code <sup>(1)</sup> Fixing <sup>(2)</sup>	Weight
<b>A</b>					<b>kg</b>
<b>Connection by screw clamp terminals</b>					
25	3	1	1	LC1D09●●● or LC1D12●●● LC1D18●●●	0.368 0.373 0.378
32	3	1	1	LC1D25●●●	0.433
40	3	1	1	LC1D32●●● or LC1D38●●●	0.438 0.442
<b>Connection by EverLink®, BTR screw connectors <sup>(3)</sup></b>					
60	3	1	1	LC1D40A●●●	0.992
80	3	1	1	LC1D50A●●● or LC1D65A●●● <sup>(4)</sup> or LC1D80A●●● <sup>(4)</sup>	0.997 1.002 1.002
200	3	1	1	LC1D115A●●● or LC1D150A●●●	2.600 2.600

#### Connection for lugs or bars

For LC1D40A to LC1D150A, insert a figure 6 before the voltage code.  
Example: LC1D40A●●● becomes LC1D40A6●●●

4-pole contactors					
Connection by EverLink®, BTR <sup>(3)</sup> screw connectors					
60	4	1	1	LC1DT60A●●●	1.230
80	4	1	1	LC1DT80A●●●	1.290
200	4	1	1	LC1DT200A●●●	3.300

#### Connection for lugs or bars

For LC1DT60A to LC1DT200A, insert a figure 6 before the voltage code.  
Example: LC1DT60A●●● becomes LC1DT60A6●●●

Control voltage codes					
AC/DC or 24 V DC supply					
Volts	24 (PLC control)	24...60	48...130	100...250	200...500
<b>LC1D09 ... D38</b>					
U 0.85...1.1 Uc	BNE <sup>(5)</sup>	BNE	EHE	KUE	
<b>LC1D40 to LC1D80A, LC●DT60A to LC●DT80A</b>					
U 0.85...1.1 Uc	BBE <sup>(6)</sup>	BNE	EHE	KUE	
<b>LC1D115A to 150A, LC1DT200A</b>					
U 0.8...1.1 Uc		BNE	EHE	KUE	LSE

<sup>(1)</sup> Please check the availability of your variant in the index page A1/23 The SEARCH function of your viewer can be used.

<sup>(2)</sup> LC1D09 to D80A, LC●DT60A and LC●DT80A: clip-on mounting on 35 mm  $\perp$  rail NSYS DR or screw fixing.

<sup>(3)</sup> BTR screws: hexagon socket head. In accordance with local electrical wiring regulations, a size 4 insulated Allen key must be used (reference LADALLEN4, please refer to page A1/19).

<sup>(4)</sup> Coordination tables according to the number of operation cycles, consult online datasheets for values.

<sup>(5)</sup> BNE: U 0.8...1.1 Uc (when DC).

<sup>(6)</sup> BBE: U 0.8...1.2 Uc (DC only).

# TeSys Control

## Deca Advanced Contactors

### Product references

LC1D09BNE.eps



LC1D09●●●

LC1D40ABNE.eps



LC1D40A●●●

LC1D115ALSE\_image.eps



LC1D115A●●●

Deca Advanced contactors have a dark grey casing and a 3-character code voltage.

### 3-pole contactors conforming to UL and CSA standards (North American market) - 25 to 200 A

Standard power ratings of motors 50/60 Hz						Associated cable type 75 °C-Cu	Continuous current	Type of contactor required Partial reference, to be completed by adding the control voltage code <sup>(1)</sup> Fixing, connection <sup>(2)</sup>
Single-phase 1 Ø		3-phase 3 Ø						
115 V	230 V	200 V	230 V	460 V	575 V			
	240 V	208 V	240 V	480 V	600 V			
HP	HP	HP	HP	HP	HP		A	

### Connection by screw clamp terminals

1/3	1	2	2	5	7.5	AWG 18 - 10	25	LC1D09●●●
0.5	2	3	3	7.5	10	AWG 18 - 10	25	LC1D12●●●
1	3	5	5	10	15	AWG 18 - 8	32	LC1D18●●●
2	3	7.5	7.5	15	20	AWG 14 - 6	40	LC1D25●●●
2	5	10	10	20	25	AWG 14 - 6	50	LC1D32●●●

### Power connections by EverLink® BTR <sup>(3)</sup> screw connectors

3	5	10	10	30	30	AWG 16 - 2	60	LC1D40A●●●
3	7.5	15	15	40	40	AWG 16 - 2	70	LC1D50A●●●
5	10	20	20	40	50	AWG 16 - 2	80	LC1D65A●●●
5	10	20	20	40	50	AWG 16 - 2	80	LC1D80A●●●
		30	40	75	100	AWG 8 - 250kcmil	160	LC1D115A●●●
		40	50	100	125	AWG 8 - 250kcmil	160	LC1D150A●●●

### Connection for lugs or bars

For LC1D40A to LC1D150A, insert a figure 6 before the voltage code.  
Example: LC1D40A●●● becomes LC1D40A6●●●

### Applications with High-Fault Short-Circuit Current ratings

High-fault short-circuit current ratings are: 100 kA at 600 V with Class J fuses and 85 kA (D09...D38), 100 kA (D40A...D65A, D115A...D150A) at 480 V and 50 kA at 600 V with circuit breakers.

### Control voltage codes

#### AC/DC or 24 V DC supply

Volts	24 (PLC control)	24...60	48...130	100...250	200...500
<b>LC1D09 ... D32</b>					
U 0.85...1.1 Uc	BNE <sup>(4)</sup>	BNE	EHE	KUE	
<b>LC1D40A ... D80A</b>					
U 0.85...1.1 Uc	BBE <sup>(5)</sup>	BNE	EHE	KUE	
<b>LC1D115A to 150A</b>					
U 0.8...1.1 Uc		BNE	EHE	KUE	LSE

<sup>(1)</sup> Please check the availability of your variant in the index page A1/23. The SEARCH function of your viewer can be used.

<sup>(2)</sup> LC1D09 to D80: clip-on mounting on 35 mm rail NSYS DR or screw fixing.

<sup>(3)</sup> BTR screws: hexagon socket head. In accordance with local electrical wiring regulations, a size 4 insulated Allen key must be used (reference LADALLEN4, please refer to page A1/19).

<sup>(4)</sup> BNE: U 0.8...1.1 Uc (when DC).

<sup>(5)</sup> BBE: U 0.8...1.2 Uc (DC only).

# TeSys Control

## Deca Advanced Reversing Contactors

### Product references

LC2D09BNE eps



LC2D40AENE eps



Deca Advanced contactors have a dark grey casing and a 3-character code voltage.

### 3-pole reversing contactors - Motors up to 37 kW / 400 V in category AC-3/AC-3e

#### Pre-wired power connections

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3/AC-3e ( $\theta \leq 60^\circ\text{C}$ )							Rated operational current in AC-3/AC-3e 440 V up to	Instan- taneous auxiliary contacts per contactor	Contactors supplied with coil Partial reference, to be completed by adding the control voltage code <sup>(1)</sup>	Weight
220 V 230 V	380 V 400 V	415 V	440 V	500 V	660 V 690 V	kg				
kW	kW	kW	kW	kW	kW	A			Fixing <sup>(2)</sup>	

#### With mechanical interlock, without electrical interlocking, for connection by screw clamp terminals or Everlink BTR screw connectors <sup>(3) (4)</sup>

2.2	4	4	4	5.5	5.5	9	1	1	LC2D09●●●	0.783
3	5.5	5.5	5.5	7.5	7.5	12	1	1	LC2D12●●●	0.793
4	7.5	9	9	10	10	18	1	1	LC2D18●●●	0.803
5.5	11	11	11	15	15	25	1	1	LC2D25●●●	0.913
7.5	15	15	15	18.5	18.5	32	1	1	LC2D32●●●	0.923
9	18.5	18.5	18.5	18.5	18.5	38	1	1	LC2D38●●●	0.933
11	18.5	22	22	22	30	40	1	1	LC2D40A●●● <sup>(3)</sup>	2.154
15	22	25	30	30	33	50	1	1	LC2D50A●●● <sup>(3)</sup>	2.164
18.5	30	37	37	37	37	65	1	1	LC2D65A●●● <sup>(3)</sup>	2.174
22	37	37	37	37	37	66	1	1	LC2D80A●●● <sup>(3)</sup>	2.174

### Auxiliary contact blocks and add-on modules

See pages A1/14 to A1/19.

#### Coil voltage codes

##### AC/DC or 24 V DC supply

Volts	24 (PLC control)	24...60	48...130	100...250
<b>LC2D09...D38</b>				
U 0.85...1.1 Uc	BNE <sup>(5)</sup>	BNE	EHE	KUE
<b>LC2D40A...D80A</b>				
U 0.85...1.1 Uc	BBE <sup>(6)</sup>	BNE	EHE	KUE

<sup>(1)</sup> Please check the availability of your variant in the index page A1/23. The SEARCH function of your viewer can be used.

<sup>(2)</sup> LC2D09 to D80A: clip-on mounting on 35 mm rail NSYSR or screw fixing.

<sup>(3)</sup> BTR screws: hexagon socket head. In accordance with local electrical wiring regulations, a size 4 insulated Allen key must be used (reference LADALLEN4, please refer to page A1/19).

<sup>(4)</sup> Electrical interlocking is recommended when 2 orders (direct and reverse) could appear at the same time.

<sup>(5)</sup> BNE: U 0.8...1.1 Uc (when DC).

<sup>(6)</sup> BBE: U 0.8...1.2 Uc (DC only).

Deca Advanced contactors - Coordination with PLC output modules  
(static/relay/triac)

### Selection of PLC coordinated contactors

Laboratory tests have been carried out in order to validate trouble free contactor closings and openings with different PLC output modules.  
The coil must be defined according to the contactor rating range and output module.  
See selection table below.

The PLC your are using				>>>	Compatible contactors <sup>(1)</sup>	Coil code
PLC type	Output type	Output I (A)	Output module commercial reference			
M221 / M241 / M251	Static output: 24 V DC	0.5	TM3DQ8●●● and Q16●●● (T, TG, U, UG)	>>>	LC1D09●● to LC1D38●●, LC1D40A●●● to LC1D80A●●●, LC1DT60A●●● to LC1DT80A●●●	BL, BNE BBE
		0.3 (sealed) 0.8 (inrush)	TM3XTYS4	>>>	LC1D40A●●● to LC1D80A●●●, LC1DT60A●●● to LC1DT80A●●●	BBE, BD, BNE
		0.1	TM3DQ16●● and Q32●● (TK, UK)	>>>	LC1D09●● to LC1D38●●	BL
	Relay output: 24 V DC / 230 V AC	2	TM3DQ8 and DQ16 (R, RG), TM3DM8 and DM24 (R, RG)	>>>	LC1D09●● to LC1D38●●, LC1D40A●●● to LC1D80A●●●, LC1DT60A●●● to LC1DT80A●●●	Code of any DC coil up to 24 V or any AC coil up to 230 V
M340 / M580	Static output: 24 V DC	0.5	BMXDDO1602 and DM16022	>>>	LC1D09●● to LC1D38●●, LC1D40A●●● to LC1D80A●●●, LC1DT60A●●● to LC1DT80A●●●	BL, BNE BBE
		0.1	BMXDDO3202, BMXDDM3202K, BMXDDO6402K	>>>	LC1D09●● to LC1D38●●	BL
	Relay output: 24 V DC / 230 V AC	2	BMXDRA0805H and DM16025	>>>	LC1D09●● to LC1D38●●, LC1D40A●●● to LC1D80A●●●, LC1DT60A●●● to LC1DT80A●●●	Code of any DC coil up to 24 V or any AC coil up to 230 V
	Triac output: 230 V AC	0.6	BMXDAO1605	>>>	LC1D09●● to LC1D38●●, LC1D40●●● to LC1D80A●●●, LC1DT60A●●● to LC1DT80A●●●	Code of any AC coil up to 230 V (P7 code = 230 V)
ADVANTYS	Static output: 24 V DC	0.5	STBDDO3200K	>>>	LC1D09●● to LC1D38●●, LC1D40A●●● to LC1D80A●●●, LC1DT60A●●● to LC1DT80A●●●	BL, BNE BBE
	Triac output: 230 V AC	2	STBDAO8210K	>>>	LC1D09●● to LC1D38●●, LC1D40A●●● to LC1D80A●●●, LC1DT60A●●● to LC1DT80A●●●	Code of any AC coil up to 230 V (P7 code = 230 V AC)

### Coils consumption characteristics

Coil type	Uc DC - min - max	Average consumption at Uc DC / 20 °C	
		Inrush	Sealed
BL	24 V - 0.8 Uc to 1.1 Uc	2.4 W - 2.4 VA	2.4 W - 2.4 VA
BNE		14 W - 14 VA	0.7 W - 0.7 VA
BBE		11 W - 12 VA	0.5 W - 0.5 VA

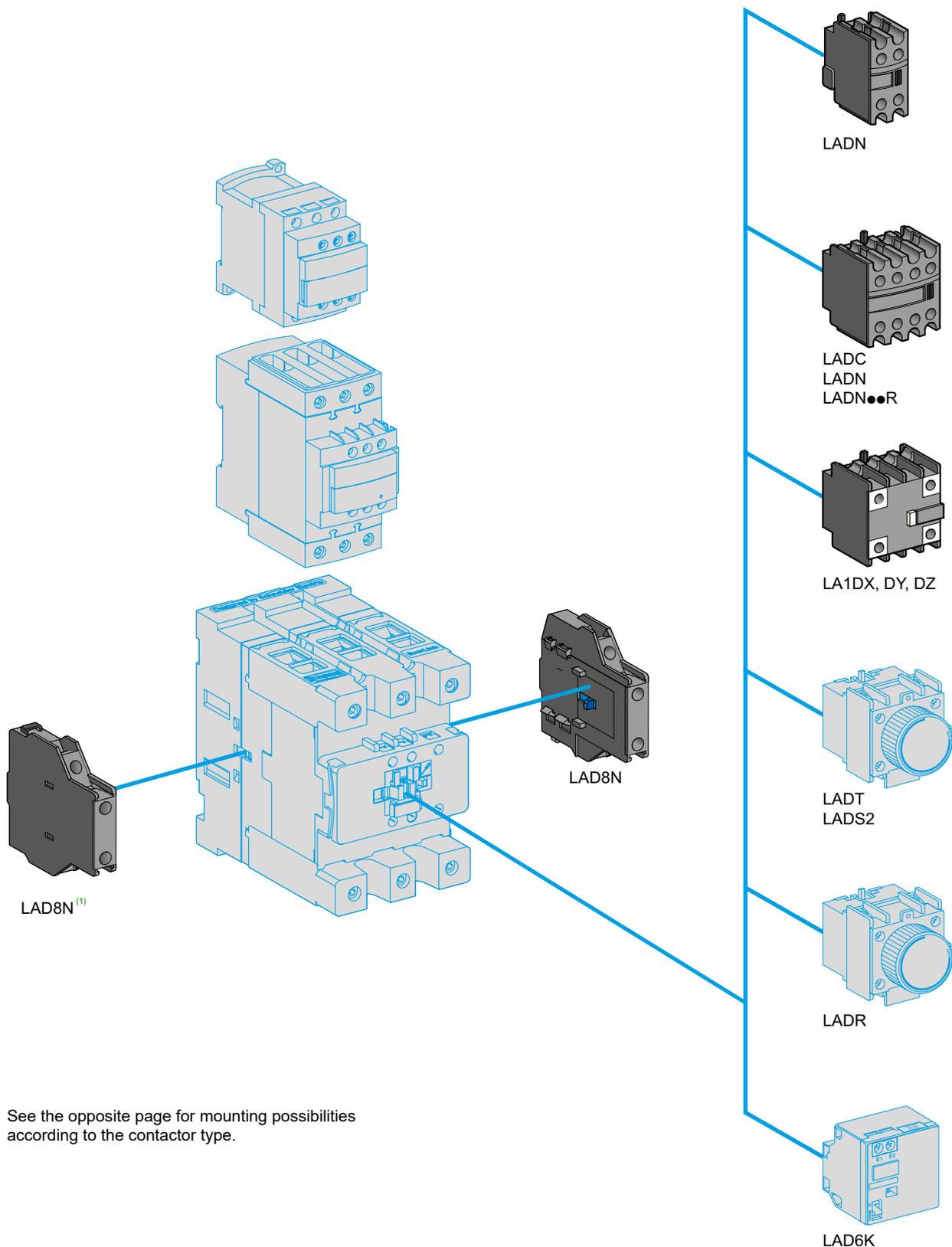
(1) Replace dot by coil code. Ex LC1D09●● becomes LC1D09BL.

# TeSys Control

## Deca Advanced Contactors

### Product references

DE-33943 eps



See the opposite page for mounting possibilities according to the contactor type.

(1) No left side mounting on Deca Advanced contactors up to LC1D38.

# TeSys Control

## Deca Advanced Contactors - Auxiliary Contact Blocks

### Product references



LADN22



LAD8N11



LADN22R



LA1DX●●, LA1DZ●●

### Instantaneous auxiliary contact blocks for connection by screw clamp terminals

For use in normal operating environments

Clip-on mounting	Number of contacts per block	Composition					Reference	
Front	2	-	-	-	1	1	LADN11	
		-	-	-	2	-	LADN20	
	4	-	-	-	-	2	LADN02	
		-	-	-	2	2	LADN22 LADN22S <sup>(1)</sup>	
		-	-	-	1	3	LADN13	
		-	-	-	4	-	LADN40	
		-	-	-	-	4	LADN04	
		-	-	-	3	1	LADN31	
		4 incl. 1 N/O & 1 N/C make before break	-	-	-	2	2	LADC22
		Side (contact blocks compatible with AC coil and AC/DC Deca Advanced contactors)	2	-	-	-	1	1
-	-			-	2	-	LAD8N20	
-	-			-	-	2	LAD8N02	

### For use in harsh industrial environment

Front	2	-	-	-	1	1	LADN11R
		-	-	-	2	-	LADN20R
	4	-	-	-	2	2	LADN22R
		-	-	-	4	-	LADN40R
		-	-	-	3	1	LADN31R

### For terminal referencing conforming to EN 50012

Front on 3P contactors and	2	-	-	-	1	1	LADN11G
4P contactors 60 A, 80 A, 200 A	4	-	-	-	2	2	LADN22G

### With dust and damp protected contacts, for use in harsh industrial environment

Front	2	2	-	-	-	-	LA1DX20
		1	1	-	-	-	LA1DX11
	-	2	-	-	-	LA1DX02	
	4	2	-	2	-	-	LA1DY20 <sup>(2)</sup>
		2	-	-	2	-	LA1DZ40
		2	-	-	1	1	LA1DZ31

### Instantaneous auxiliary contact blocks for connection by lugs

This type of connection is not possible for blocks with 1 contact or blocks with dust and damp protected contacts. For all other instantaneous auxiliary contact blocks, add the figure 6 to the end of the references selected above. Example: LADN11 becomes LADN116.

### Instantaneous auxiliary contact blocks for connection by spring terminals

This type of connection is not possible for LAD8, LADN with 1 contact or blocks with dust and damp protected contacts. For all other contact blocks, add the figure 3 to the end of the references selected above. Example: LADN11 becomes LADN113.

Maximum number of auxiliary contacts that can be fitted:

Contactors	Instantaneous auxiliary contacts	Time delay						
			Type	Number of poles and size	Side mounted	Front mounted		
					1 contact	2 contacts	4 contacts	1 block
AC/DC 3P	LC1D09...D38	1 on RH side	and	-	1	or 1	or 1	or 1
	LC1D40A...D80A	1 on LH or 1 on RH side	and	-	1	or 1	or 1	or 1
	LC1D115A and D150A	1 on each side	and	-	1	or 1	or 1	or 1
4P	LC1DT60A and DT80A	1 on LH or 1 on RH side	and	-	1	or 1	or 1	or 1
	LC1DT200A	1 on each side	and	-	1	or 1	or 1	or 1
		1 on LH or 1 on RH side	and	-	1	or 1	or 1	or 1

(1) With red front face - for safety chain indication.

(2) Device fitted with 4 earth screen continuity terminals.

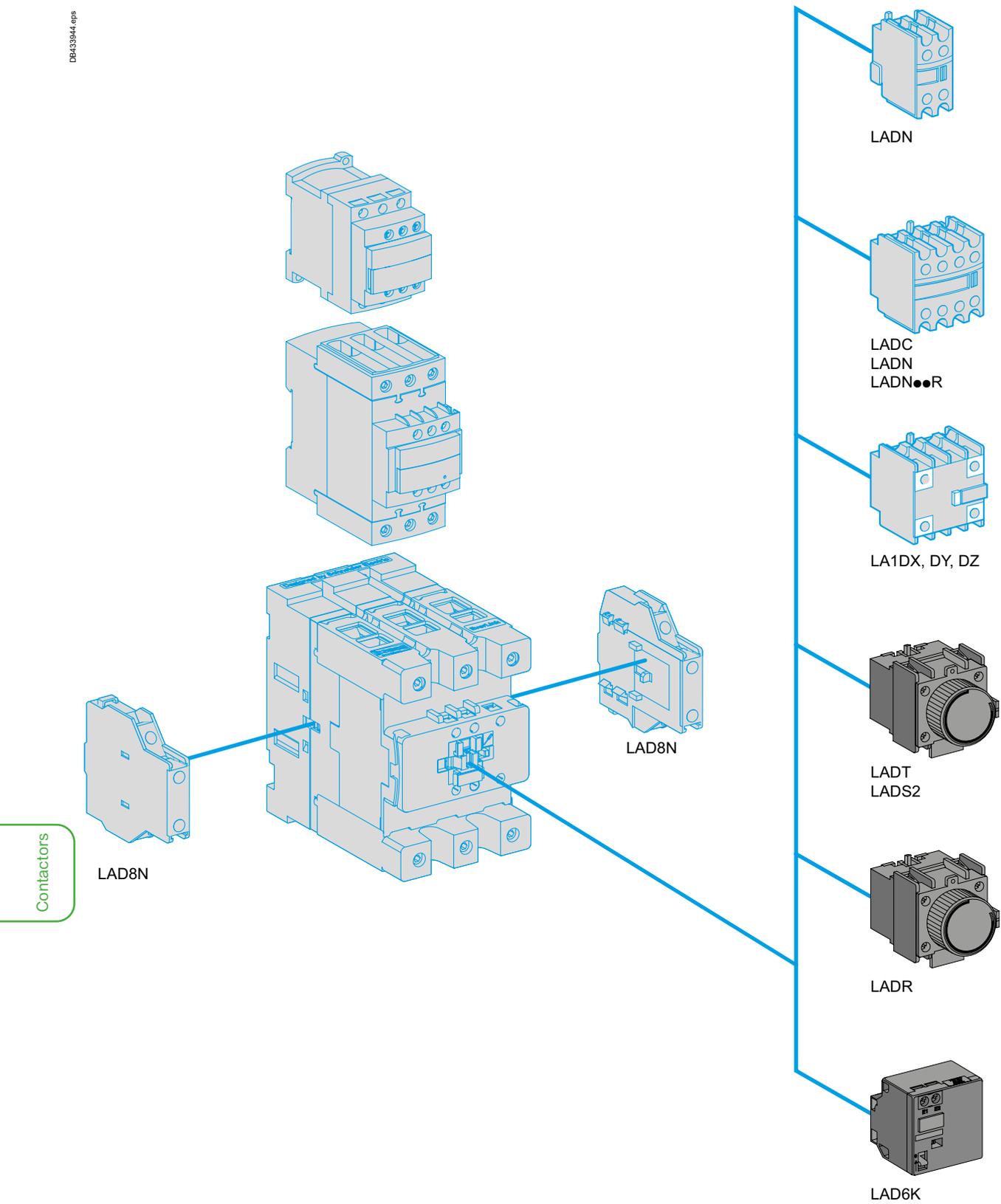
Contactors

# TeSys Control

## Deca Advanced Contactors - Time Delay Auxiliary Contact Blocks

### Product references

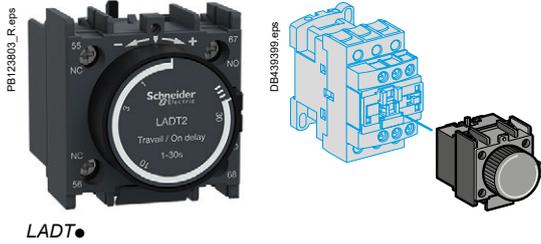
DB433844.eps



# TeSys Control

## Deca Advanced Contactors - Time Delay Auxiliary Contact Blocks

### Product references



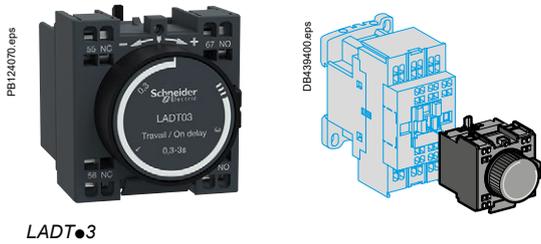
#### Time delay auxiliary contact blocks for connection by screw clamp terminals

Maximum number of auxiliary contact blocks that can be fitted per contactor, see page A1/15.

Sealing cover to be ordered separately, see page A1/19.

LADS2: with switching time of 40 ms ± 15 ms between opening of the N/C contact and closing of the N/O contact.

Clip-on mounting	Number of contacts	Time delay		Reference
		Type	Setting range	
Front	1 N/O + 1 N/C	On-delay	0.3...3 s <sup>(4)</sup>	LADT0
			1...30 s	LADT2
			10...180 s	LADT4
		Off-delay	1...30 s	LADS2
			0.3...3 s <sup>(4)</sup>	LADR0
			1...30 s	LADR2
		10...180 s	LADR4	



#### Time delay auxiliary contact blocks for connection by lugs

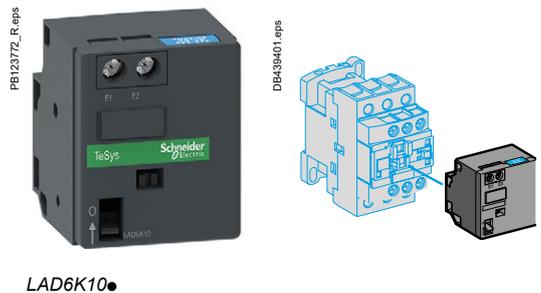
Add the figure 6 to the end of the references selected above. Example: LADT0 becomes LADT06.

#### Time delay auxiliary contact blocks for connection by spring terminals

Add the figure 3 to the end of the references selected above. Example: LADT0 becomes LADT03.

#### Time delay auxiliary contact blocks for connection by Faston connectors

Add the figure 9 to the end of the references selected above. Example: LADT0 becomes LADT09.



#### Mechanical latch blocks <sup>(1)</sup>

Clip-on mounting	Unlatching control	For use on contactor	Basic reference, to be completed by adding the control voltage code <sup>(2) (3)</sup>
Front	Manual or electric	LC1D09...D38 (AC/DC)	LAD6K10●
		LC1D40A...D80A (3P AC/DC)	LAD6K10●
		LC1DT60A and DT80A (4P AC/DC)	
		LC1D115A...D150A (3P AC/DC)	LAD6K20● <sup>(5)</sup>
		LC1DT200A (4P AC/DC)	

<sup>(1)</sup> The mechanical latch block must not be powered up at the same time as the contactor. The duration of the control signal for the mechanical latch block and the contactor should be: ≥ 100 ms for a contactor operating on an a.c. supply, ≥ 250 ms for a contactor operating on a d.c. supply. Maximum impulse duration for the mechanical latch block: 10 seconds.

<sup>(2)</sup> Standard control circuit voltages (for other voltages, please consult your Local Schneider Electric Technical Support):

Volts 50/60 Hz, 24	32/36	42/48	60/72	100	110/127	220/240	256/277	380/415	
---									
Code	B	C	E	EN	K	F	M	U	Q

<sup>(3)</sup> Please check the availability of your variant in the index page A1/23. The SEARCH function of your viewer can be used.

<sup>(4)</sup> With extended scale from 0.1 to 6 s.

<sup>(5)</sup> Available in 2026.



### Accessories for main pole and control connections

Description		For use with contactors LC1 AC/DC	Sold in lots of	Unit reference
Connectors for cable, size (1 connector)	3-pole 6...25 mm <sup>2</sup>	D09...D38	1	LA9D3260
EverLink® terminal block <sup>(2)</sup>	3-pole	D40A...D80A	1	LAD96560
	3-pole	D115A...D150A	1	LAD91503A
	4-pole	DT200A	1	LAD91154A
Connectors for lug type terminals (2 connectors)	3-pole	D115A6, D150A6	1	LAD915036
	4-pole	DT200A6	1	LAD911546
Protective covers for connectors for lug type terminals	3-pole	D40A6...D80A6	1	LAD96570
	4-pole	DT60A6...DT80A6	1	LAD96580
IP20 covers for lug type terminals (for mounting with circuit breakers GV3 P●●6 and GV3 L●●6)	3 poles	D40A6...D80A6	1	LAD96575
Links for parallel connection of	2 poles	D09...D38	10	LA9D2561
		D40A...D80A	1	LAD9P32
	3 poles	D09...D38	10	LAD9P3 <sup>(1)</sup>
		D40A...D80A	1	LAD9P33
Control circuit take-off from main pole		D115A, D150A	10	LA9D11567
Spreaders for increasing the pole pitch to 45 mm		D115A, D150A	1	GV7AC03
Flexible terminal extensions to connect with GV5, NSX160...NSX250	3 poles	D115A, D150A	1	LAD91503111
Flexible terminal extensions to connect with NSX160...NSX250	4 poles	DT200A	1	LAD91154111
Flexible terminal extensions to connect with LR9G115...LR9G225	3 poles	D115A, D150A	1	LAD91503211

<sup>(1)</sup> Separate connecting bar for connecting 2 poles in parallel.

<sup>(2)</sup> 1 connector within LAD96560, 2 connectors within LAD91503A and LAD91154A.

LAD96570

LA9D80962

LA9D11567

# TeSys Control

## Deca Advanced Contactors - Accessories

### Product references



LAD9150801



GV2G245



GV1G09

GV3S



LAD9ET1



LAD9ET1S



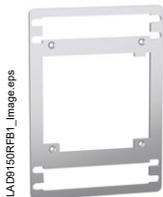
LAD21...22



LAD90



LAD7X3



LAD9150RFB1



LAD9150RFT

### Power terminal accessories

Description	Suitable for	Compatible with contactors	Sold in lots of	Reference
Phase separators <sup>(1)</sup>	3P	LC1D115A...D150A	3	LAD9150801
	4P	LC1DT200A		

### Power connection accessories

Terminal block	For supply to one or more GV2G busbar sets			GV1G09
Set of 63 A busbars for paralleling of contactors	2 contactors LC1D09...D18 or D25...D38			GV2G245
	4 contactors LC1D09...D18 or D25...D38			GV2G445
Set of 115 A busbars for paralleling of contactors	2 contactors LC1D40A...D80A			GV3G264
	3 contactors LC1D40A...D80A			GV3G364 <sup>(2)</sup>
Set of S-shape busbars	For circuit breakers GV3P●● and GV3L●● <sup>(3)</sup> and contactors LC1D40A...D65A			GV3S

### Protection accessories

Description	Use	Sold in lots of	Reference
Sealing cover	For LADT, LADR	1	LA9D901
Safety cover preventing access to the moving contact carrier	LC1D09...D80A and DT60A...DT80A	1	LAD9ET1
	Red cover (for safety chain indication)	1	LAD9ET1S
	LC1D115A...D150A, LC1DT200A	1	LAD9ET5
	Red cover (for safety chain indication)	1	LAD9ET5S

### Marking accessories

Description	Use	Sold in lots of	Unit reference
Sheet of 64 blank legends, self-adhesive, 8 x 33 mm <sup>(4)</sup>	LADN (4 contacts), LA6DK	10	LAD21
Sheet of 112 blank legends, self-adhesive, 8 x 12 mm <sup>(4)</sup>	LADN (2 contacts), LADT, LADR, LRD	10	LAD22
Marker holder snap-in, 8 x 22 mm	LC1D115A...D150A, LC1DT200A	100	LA9D92
Marker holder snap-in, 8 x 18 mm	LC1D09...D65A, LC1DT60A...DT80A, LADN (4 contacts), LADT, LADR	100	LAD90
Bag of 300 blank legends self-adhesive, 7 x 21 mm	On holder LA9D92	1	LA9D93

### Mounting accessories

Description	Use	Sold in lots of	Reference
Retrofit plate for screw fixing	For replacement of LC1D40 to D80 with LC1D40A to D80A	1	LAD7X3
	For replacement of LC1D115 or D150 with LC1D115A or LC1D150A	1	LAD9150RFB1
	For replacement of LC2D115 or D150 with LC1D115A or LC1D150A	1	LAD9150RFB2
Retrofit connection terminal for bar upstream & downstream	For terminal adaptation from LC1D1156 or D1506 to LC1D115A6 or 150A6	1	LAD9150RFT
Size 4 Allen key, insulated, 1000 V	For use on contactors LC1D40A to LC1D150A	5	LADALLEN4

<sup>(1)</sup> The use of phase separators is mandatory for operational voltages  $U_e \geq 690$  V.

<sup>(2)</sup> With this set of busbars, any one contactor can be supplied directly by its EverLink® double cage power terminal block. The other two contactors are supplied by the busbar set. The 115 A limitation is therefore applied to these two contactors. Example: 1 LC1D65A supplied directly + 1 contactor LC1D65A and 1 contactor LC1D50A supplied via the busbar set = 115 A. This combination is compatible with busbar set GV3G364.

<sup>(3)</sup> With 73 A current limit for GV3L73, GV3P73.

<sup>(4)</sup> These legends are for sticking onto the safety cover of the contactors or add-on block, if fitted.

# TeSys Control

## Deca Advanced Contactors - Assembly Kits

### Product references

PB121375.eps



LAD9R1

PB121376.eps



LAD9R3

PB121377.eps



LA9D8069

PB123826.eps



LAD91217

Contactors

PB121378.eps



LAD91218

### For 3-pole reversing contactors for motor control

Contactors with screw clamp terminals or connectors. Horizontally mounted, assembled by customer.

Description	For contactors <sup>(1)</sup> (2 identical contactors)	Reference
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#### Kits for assembly of reversing contactors

Kit comprising: ■ a mechanical interlock <b>LAD9V2</b> with electrical interlocking <b>LAD9V1</b> ■ a set of power connections <b>LAD9V5</b> (parallel) and <b>LAD9V6</b> (reversing).	LC1D09 to D38	<b>LAD9R1V</b>
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Kit comprising: ■ a mechanical interlock <b>LAD9V2</b> without electrical interlocking ■ a set of power connections <b>LAD9V5</b> (parallel) and <b>LAD9V6</b> (reversing).	LC1D09 to D38	<b>LAD9R1</b>
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Kit comprising: ■ a mechanical interlock <b>LAD4CM</b> ■ a set of power connections <b>LA9D65A69</b> .	LC1D40A to D80A	<b>LAD9R3</b>
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#### Mechanical interlocks

Mechanical interlock without integral electrical interlocking	LC1D09 to D38	<b>LAD9V2</b>
	LC1D40A to D80A	<b>LAD4CM</b>
	LC1D115A to D150A	<b>LAD5CM</b>

#### Sets of power connections

Comprising: ■ a set of parallel bars ■ a set of reverser bars.	LC1D09 to D38 with screw clamp terminals or connectors	<b>LAD9V5 + LAD9V6</b>
	LC1D09...D32 with spring terminal connections	<b>LAD9V12 + LAD9V13</b>
	LC1D40A to D80A	<b>LA9D65A69</b>
	LC1D115A and D150A	<b>LAD9150369</b>

### For Star-Delta starter

Description	For contactors	Kit with timer	Kit without timer LADS2
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#### Kits for assembly of Star-Delta contactors

Mounting kit comprising: ■ 1 time delay contact block <b>LADS2</b> (LC1D09...D95), ■ power circuit connections (LC1D09...D95), ■ hardware required for fixing the contactors onto the mounting plate, ■ mechanical interlocks, ■ electrical interlocks.	LC1D09 to D38 <sup>(3)</sup> LC1D25 to D38 <sup>(4)</sup> LC1D40A to D80A	<b>LAD91217</b> <b>LAD93217</b> <b>LAD9SD3</b> <sup>(2)</sup>	<b>LAD91218</b> <b>LAD93218</b> -
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#### Mechanical interlocks

Mechanical interlock without integral electrical interlocking	LC1D09 to D38	<b>LAD9V2</b>
	LC1D40A to D80A	<b>LAD4CM</b>
	LC1D115A to D150A	<b>LAD5CM</b>

#### Sets of power connections

Comprising: ■ a short circuit bar ■ 2 sets of reverser bars.	LC1D40A to D150A <sup>(5)</sup> LC1D115A and D150A <sup>(3)</sup>	<b>LAD9150SD17</b> <b>LAD9150SD19</b>
--	--	--

<sup>(1)</sup> To order the 2 contactors: see pages A1/9 and A1/11.

<sup>(2)</sup> LAD9SD3 without electrical interlocks.

<sup>(3)</sup> For assembly of 3 contactors of the same physical size (depth).

<sup>(4)</sup> For assembly of Main + Delta contactors LC1D25 to LC1D38 with Star contactor LC1D09 to LC1D18.

<sup>(5)</sup> For assembly of Main + Delta contactors LC1D115A to LC1D150A with Star contactor LC1D40A to LC1D65A.

LAD5CM\_image.eps



LAD5CM

PE121382.eps



LAD9R3S

LAD9150371\_image.eps



LAD9150371

#### For 4-pole changeover contactor pairs (3-phase distribution + neutral)

Contactors with screw clamp terminals or connectors. Horizontally mounted, assembled by customer.

Description	For contactors <sup>(1)</sup> (2 identical contactors)	Reference
<b>Mechanical interlocks</b>		
Without integral electrical interlocking	LC1DT60A and DT80A	<b>LAD4CM</b>
	LC1DT200A	<b>LAD5CM</b>

#### Sets of power connections

Comprising a set of parallel bars	LC1DT200A	<b>LAD9115471</b>
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#### For 3-pole changeover contactor pairs

Contactors with screw clamp terminals or connectors. Horizontally mounted, assembled by customer.

Description	For contactors <sup>(1)</sup> (2 identical contactors)	Reference
<b>Kits for assembly of changeover contactor pairs</b>		
Kit comprising: ■ a mechanical interlock LAD4CM ■ a set of parallel bars LA9D65A6	LC1D40A...D80A	<b>LAD9R3S</b>

#### Mechanical interlocks

Without integral electrical interlocking	LC1D40A...D80A	<b>LAD4CM</b>
With integral electrical interlocking	LC1D115A and D150A	<b>LAD5CM</b>

#### Sets of power connections

Comprising a set of parallel bars	LC1D40A...D80A	<b>LA9D65A6</b>
	LC1D115A...D150A	<b>LAD9150371</b>

(1) To order the 2 contactors: see pages A1/9 and A1/11.

(2) Order 2 contact blocks **LADN●1** to build the electrical interlock, see page A1/15.

### Control module

**Wide band electronic control**  
**24 V...500 V 50/60 Hz or DC control input**  
**Accessible for easy and quick replacement**

The range of control modules is organized:

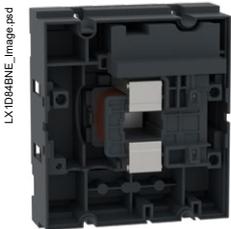
- per contactor size and for each rating,
- per control voltage range.

#### Control modules

Description	For contactors	References per voltage range (V AC/DC)				
		24...60	48...130	100...250	200...500	
Control modules	3-pole	LC1D115A...D150A	<b>LX1D83BNE</b>	<b>LX1D83EHE</b>	<b>LX1D83KUE</b>	<b>LX1D83LSE</b>
	4-pole	LC1DT200A	<b>LX1D84BNE</b>	<b>LX1D84EHE</b>	<b>LX1D84KUE</b>	<b>LX1D84LSE</b>



LX1D83BNE



LX1D84BNE

### Replaceable switching modules

- Replace worn-out poles with a new switching module in minutes, without having to disassemble the whole product
- No special tools are needed for the replacement.

#### Switching modules for TeSys Deca Advanced contactors

Description	For contactors	Quantity Set of	Reference
3 or 4 switching module kits	3-pole	1	<b>LA5D1153SM</b>
		1	<b>LA5D1503SM</b>
	4-pole	1	<b>LA5D1154SM</b>

<sup>(1)</sup> Available in Q2 2025.



LA5D1153SM

# TeSys Control

## Deca Advanced Contactors

### Product references

A9A15922	LAD4BB	LAD9722	LADN13G	LC1D115ALSE <sup>(1)</sup>	LC1DT200AKUE <sup>(1)</sup>
A9A15923	LAD4BB3	LAD9723	LADN13P	LC1D12BNE	LC1DT200ALSE <sup>(1)</sup>
GV3S	LAD4BBVE	LAD9744	LADN20	LC1D12EHE	LC1DT60A6BBE
GV7AC03	LAD4BBVG	LAD9BB18	LADN203	LC1D12KUE	LC1DT60A6BNE
LA1DX02	LAD4BBVU	LAD9BB32	LADN206	LC1D150A6BNE <sup>(1)</sup>	LC1DT60A6EHE
LA1DX11	LAD4CM	LAD9ET1	LADN20R	LC1D150A6EHE <sup>(1)</sup>	LC1DT60A6KUE
LA1DX20	LAD5CM <sup>(1)</sup>	LAD9ET1S	LADN22	LC1D150A6KUE <sup>(1)</sup>	LC1DT60ABBE
LA1DY20	LAD6K10B	LAD9ET2	LADN223	LC1D150A6LSE <sup>(1)</sup>	LC1DT60ABNE
LA1DZ31	LAD6K10E	LAD9ET3S	LADN223G	LC1D150ABNE <sup>(1)</sup>	LC1DT60AEHE
LA1DZ40	LAD6K10F	LAD9ET4	LADN226	LC1D150AEHE <sup>(1)</sup>	LC1DT60AKUE
LA1KN223M	LAD6K10J	LAD9ET4S	LADN22G	LC1D150AKUE <sup>(1)</sup>	LC1DT80A6BBE
LA1KN316	LAD6K10K	LAD9ET5 <sup>(1)</sup>	LADN22P	LC1D150ALSE <sup>(1)</sup>	LC1DT80A6BNE
LA4DBL	LAD6K10M	LAD9ET5S <sup>(1)</sup>	LADN22R	LC1D18BNE	LC1DT80A6EHE
LA4DFB	LAD6K20B <sup>(3)</sup>	LAD9P3	LADN22S	LC1D18EHE	LC1DT80A6KUE
LA4DT0U	LAD6K20E <sup>(3)</sup>	LAD9P32	LADN31	LC1D18KUE	LC1DT80ABBE
LA4DT2U	LAD6K20F <sup>(3)</sup>	LAD9P33	LADN313	LC1D25BNE	LC1DT80ABNE
LA4DT4U	LAD6K20J <sup>(3)</sup>	LAD9R1	LADN313G	LC1D25EHE	LC1DT80AEHE
LA4DWB	LAD6K20M <sup>(3)</sup>	LAD9R11	LADN316	LC1D25KUE	LC1DT80AKUE
LA5D1153SM <sup>(2)</sup>	LAD6K20Q <sup>(3)</sup>	LAD9R1V	LADN31G	LC1D32BNE	LC2D09BNE
LA5D1154SM <sup>(2)</sup>	LAD7X3	LAD9R3	LADN31P	LC1D32EHE	LC2D09EHE
LA5D1503SM <sup>(2)</sup>	LAD8N02	LAD9R3S	LADN31R	LC1D32KUE	LC2D09KUE
LA6DK10C	LAD8N026	LAD9SD3	LADN40	LC1D38BNE	LC2D12BNE
LA6DK10J	LAD8N11	LAD9SD3S	LADN403	LC1D38EHE	LC2D12EHE
LA6DK10U	LAD8N116	LAD9V1	LADN403G	LC1D38KUE	LC2D12KUE
LA7D902	LAD8N11G	LAD9V10	LADN406	LC1D40A6BBE	LC2D18BNE
LA9D0921	LAD8N20	LAD9V11	LADN40G	LC1D40A6BNE	LC2D18EHE
LA9D09966	LAD8N206	LAD9V12	LADN40R	LC1D40A6EHE	LC2D18KUE
LA9D09976	LAD90	LAD9V13	LADR0	LC1D40A6KUE	LC2D25BNE
LA9D09981	LAD901	LAD9V14	LADR03	LC1D40ABBE	LC2D25EHE
LA9D1263	LAD9011	LAD9V15	LADR06	LC1D40ABNE	LC2D25KUE
LA9D1269	LAD903	LAD9V16	LADR2	LC1D40AEHE	LC2D32BNE
LA9D12974	LAD904	LAD9V17	LADR23	LC1D40AKUE	LC2D32EHE
LA9D15017	LAD91154111 <sup>(1)</sup>	LAD9V2	LADR26	LC1D50A6BBE	LC2D32KUE
LA9D16906	LAD911546 <sup>(1)</sup>	LAD9V5	LADR4	LC1D50A6BNE	LC2D38BNE
LA9D1860	LAD9115470 <sup>(1)</sup>	LAD9V6	LADR43	LC1D50A6EHE	LC2D38EHE
LA9D1869	LAD9115471 <sup>(1)</sup>	LAD9VP1	LADR46	LC1D50A6KUE	LC2D38KUE
LA9D2561	LAD91154A <sup>(1)</sup>	LAD9VP2	LADS2	LC1D50ABBE	LC2D40ABBE
LA9D2569	LAD91209	LAD9VP3	LADS23	LC1D50ABNE	LC2D40ABNE
LA9D3260	LAD91217	LAD9VP4	LADS26	LC1D50AEHE	LC2D40AEHE
LA9D3269	LAD91218	LADALLEN4	LADT0	LC1D50AKUE	LC2D40AKUE
LA9D32974	LAD912GV	LADC22	LADT03	LC1D65A6BBE	LC2D50ABBE
LA9D4002	LAD91503111 <sup>(1)</sup>	LADC223	LADT06	LC1D65A6BNE	LC2D50ABNE
LA9D40961	LAD91503211 <sup>(1)</sup>	LADC226	LADT2	LC1D65A6EHE	LC2D50AEHE
LA9D40963	LAD915036 <sup>(1)</sup>	LADN01	LADT23	LC1D65A6KUE	LC2D50AKUE
LA9D5017	LAD9150369 <sup>(1)</sup>	LADN02	LADT26	LC1D65ABBE	LC2D65ABBE
LA9D50978	LAD9150370 <sup>(1)</sup>	LADN023	LADT4	LC1D65ABNE	LC2D65ABNE
LA9D511	LAD9150371 <sup>(1)</sup>	LADN026	LADT46	LC1D65AEHE	LC2D65AEHE
LA9D6567	LAD91503A <sup>(1)</sup>	LADN04	LADT9R1	LC1D65AKUE	LC2D65AKUE
LA9D65A6	LAD9150RFB1 <sup>(1)</sup>	LADN043	LADT9R1V	LC1D80A6BBE	LC2D80ABBE
LA9D65A69	LAD9150RFB2 <sup>(1)</sup>	LADN046	LAZR90M	LC1D80A6BNE	LC2D80ABNE
LA9D730	LAD9150RFT <sup>(1)</sup>	LADN10	LAZR90Q	LC1D80A6EHE	LC2D80AEHE
LA9D894	LAD9150SD17 <sup>(1)</sup>	LADN11	LAZR91F	LC1D80A6KUE	LC2D80AKUE
LA9D898	LAD9150SD19 <sup>(1)</sup>	LADN113	LC1D09BNE	LC1D80ABBE	LX1D83BNE <sup>(2)</sup>
LA9D90	LAD92560	LADN113G	LC1D09EHE	LC1D80ABNE	LX1D83EHE <sup>(2)</sup>
LA9D901	LAD93217	LADN113P	LC1D09KUE	LC1D80AEHE	LX1D83KUE <sup>(2)</sup>
LA9D92	LAD93218	LADN116	LC1D115A6BNE <sup>(1)</sup>	LC1D80AKUE	LX1D83LSE <sup>(2)</sup>
LA9D93	LAD96061	LADN11G	LC1D115A6EHE <sup>(1)</sup>	LC1DT200A6BNE <sup>(1)</sup>	LX1D84BNE <sup>(2)</sup>
LA9D99	LAD96560	LADN11P	LC1D115A6KUE <sup>(1)</sup>	LC1DT200A6EHE <sup>(1)</sup>	LX1D84EHE <sup>(2)</sup>
LA9E01	LAD96566	LADN11R	LC1D115A6LSE <sup>(1)</sup>	LC1DT200A6KUE <sup>(1)</sup>	LX1D84KUE <sup>(2)</sup>
LA9E02	LAD96570	LADN13	LC1D115ABNE <sup>(1)</sup>	LC1DT200A6LSE <sup>(1)</sup>	LX1D84LSE <sup>(2)</sup>
LAD21	LAD96575	LADN133	LC1D115AEHE <sup>(1)</sup>	LC1DT200ABNE <sup>(1)</sup>	
LAD22	LAD96580	LADN136	LC1D115AKUE <sup>(1)</sup>	LC1DT200AEHE <sup>(1)</sup>	

<sup>(1)</sup> China available in October 2024. Europe, the Americas, the Middle East, India, East Asia and other regions available in January 2025.

<sup>(2)</sup> Available in 2026.

<sup>(3)</sup> Available in 2026.

This document is current.  Click on the product reference to get the most recent availability status (hyperlink to [se.com](https://www.se.com) product datasheet). If your product variant is no longer available, please consult your distributor or regional sales office.



# Technical Data for Designers

## Contents

### Deca Advanced Contactors:

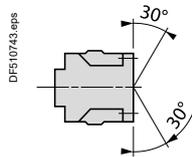
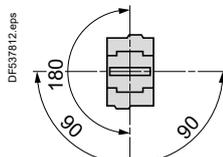
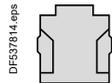
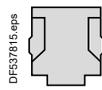
- > characteristics.....A1/28 to A1/37
- > dimensions.....A1/38 to A1/40



# TeSys Control

## Deca Advanced Contactors

### Characteristics

Environment						
Contactor type LC1			D09...D18	D25...D38	D40A...D80A DT60A and DT80A	D115A...D150A and DT200A
Rated insulation voltage (Ui)	Conforming to IEC 60947-4-1, overvoltage category III, degree of pollution: 3	V	690			
	Conforming to UL, CSA	V	600			
Rated impulse withstand voltage (Uimp)	Conforming to IEC 60947	kV	6			8
Conforming to standards			IEC/EN 60947-4-1, UL 60947-4-1, CSA C22.2 n° 60947-4-1, GB/T 14048.4			
Product certifications			CB scheme, CCC, cULus (UL + CSA standards compliance), EAC, EU-RO-MR by DNV, CE and UKCA markings			
Voltage sag immunity (in complete product as well)			Conforming to SEMI-F47			
Degree of protection <sup>(1)</sup> (front face)	Conforming to IEC 60529					
	Power circuit connections		Protection against direct finger contact IP20			
	Coil connection		Protection against direct finger contact IP20			
Climatic withstand			IACS E10, IEC 60947-1 Annex Q category C & D			
Ambient air temperature around the device	Storage	°C	-60...+80			
	Operation <sup>(2)</sup>	°C	-40...+60			
	Allowed with derating <sup>(2) (3)</sup>	°C	+60...+70			
Maximum operating altitude	Without derating	m	3000			
Operating positions <sup>(4)</sup>	Without derating in the following positions		AC/DC and "BBE" coils		AC/DC and "BBE" coils	
						
	With derating in the following position					
	Positions that are not allowed					
Flame resistance	Conforming to IEC 60695-2-11	°C	850			
Shock resistance <sup>(5)</sup> 1/2 sine wave = 11 ms Conforming to IEC/EN 60068-2-27	Contactor open		10 gn	8 gn	10 gn	10 gn
	Contactor closed		15 gn	15 gn	15 gn	15 gn
Vibration resistance <sup>(5)</sup> 5...300 Hz Conforming to IEC/EN 60068-2-6	Contactor open		2 gn			
	Contactor closed		4 gn	4 gn	4 gn	4 gn

<sup>(1)</sup> Protection provided for the cabling c.s.a.'s indicated on the next page and for connection by cable. For lug type: add a protective cover.

<sup>(2)</sup> As per IEC60947-4-1, operating time and drop out voltage given and tested for -5...+40 °C.

<sup>(3)</sup> Refer to operational current in AC1 (page A3/44).

<sup>(4)</sup> When mounting on a vertical rail, use a stop.

<sup>(5)</sup> Without modifying the power contact states, in the most unfavourable direction (coil energised at Ue).

In case of vibration, it is recommended to mount the devices separately by screws on metal plate.

#### Pole characteristics Deca Advanced contactors

Contactor type		LC1	D09	D12	D18	D25	
Rated operational current (Ie) (Ue ≤ 440 V)	In AC-3/AC-3e, θ ≤ 60 °C	<b>A</b>	9	12	18	25	
	In AC-1, θ ≤ 60 °C	<b>A</b>	25 <sup>(1)</sup>	25 <sup>(1)</sup>	32 <sup>(1)</sup>	40 <sup>(1)</sup>	
Rated operational voltage (Ue)	Up to (as per IEC 60947-1)	<b>V</b>	690	690	690	690	
Frequency limits	Of the operational current	<b>Hz</b>	25...400	25...400	25...400	25...400	
Conventional thermal current (Ith)	θ ≤ 60 °C	<b>A</b>	25 <sup>(1)</sup>	25 <sup>(1)</sup>	32 <sup>(1)</sup>	40 <sup>(1)</sup>	
Rated making capacity (440 V)	Conforming to IEC 60947	<b>A</b>	250	250	300	450	
Rated breaking capacity (440 V)	Conforming to IEC 60947	<b>A</b>	250	250	300	450	
Permissible short time rating No current flowing for preceding 15 minutes with θ ≤ 40 °C	For 1 s	<b>A</b>	210	210	240	380	
	For 10 s	<b>A</b>	105	105	145	240	
	For 1 min	<b>A</b>	61	61	84	120	
	For 10 min	<b>A</b>	30	30	40	50	
Fuse protection against short-circuits (U ≤ 690 V)	Without thermal overload relay, gG fuse	type 1	<b>A</b>	25	40	50	63
		type 2	<b>A</b>	20	25	35	40
	With thermal overload relay	<b>A</b>	See pages B11/4 and B11/5 of TeSys Catalog, ref. MKTED210011EN, for aM or gG fuse ratings corresponding to the associated thermal overload relay				
Average impedance per pole	At Ith and 50 Hz	<b>mΩ</b>	2.5	2.5	2.5	2	
Power dissipation per pole for the above operational currents	AC-3/AC-3e	<b>W</b>	0.20	0.36	0.8	1.25	
	AC-1	<b>W</b>	1.56	1.56	2.5	3.2	

(1) The closing time "C" is measured from the moment the coil supply is switched on to closure of the main poles. The opening time "O" is measured from the moment the coil supply is switched off to the moment the main poles separate

(2) AC-3 category for LC1DT60A & LC1DT80A. For AC-3e category please contact your technical support.

# TeSys Control

## Deca Advanced Contactors

### Characteristics

	D32	D38	D40A	DT60A	D50A	D65A	D80A	DT80A	D115A	D150A	DT200A
	32	38	40	40 <sup>(2)</sup>	50	65	66	50 <sup>(2)</sup>	115	150	115
	50 <sup>(1)</sup>	50	60	60	80	80	80	80	200	200	200
	690	690	690	690	690	690	690	690	1000	1000	1000
	25...400	25...400	25...400	25...400	25...400	25...400	25...400	25...400	16.67...400	16.67...400	16.67...400
	50	50	60	60	80	80	80	80	200	200	200
	550	550	800	800	900	1000	1000	1000	1560	1885	1260
	550	550	800	800	900	1000	1000	1000	1100	1440	1100
	430	430	720	720	810	900	900	900	1800	1800	1800
	260	310	320	320	400	640	640	640	1280	1280	1280
	138	150	165	165	208	260	260	260	600	600	600
	60	60	72	72	84	110	110	110	350	350	350
	63	63	80	80	100	125	125	125	250	315	315
	63	63	80	80	100	125	125	125	200	250	250
See pages B11/4 and B11/5 of TeSys Catalog, ref. MKTED210011EN, for aM or gG fuse ratings corresponding to the associated thermal overload relay											
	2	2	1.5	1.6	1.5	1.5	1.5	1.6	0.45	0.45	0.45
	2	3	2.4	2.4 <sup>(2)</sup>	3.7	6.3	6.3	6.3 <sup>(2)</sup>	6	8	6
	5	5	5.4	5.8	9.6	9.6	9.6	10.2	22	22	28

<sup>(1)</sup> The closing time "C" is measured from the moment the coil supply is switched on to closure of the main poles. The opening time "O" is measured from the moment the coil supply is switched off to the moment the main poles separate.

<sup>(2)</sup> AC-3 category for LC1DT60A & LC1DT80A. For AC-3e category please contact your technical support.

# TeSys Control

## Deca Advanced Contactors

### Characteristics

Wide band Deca Advanced contactors AC/DC coil circuit characteristics									
Rated control circuit voltage (Uc)	V	AC/DC 24...250 for <b>LC1D09...D38, LC1D40A...D80A, LC1DT60A, LC1DT80A</b> AC/DC 24...500 for <b>LC1D115A...D150A, LC1DT200A</b>							
Operation	V	<b>LC1D09...D80A</b> : 0.85 Uc...1.1 Uc at 60 °C in AC or DC <sup>(1)</sup> <b>LC1D115A...D150A, LC1DT200A</b> : 0.8 Uc...1.1 Uc at 60 °C in AC or DC.							
Drop-out	V	0.1 Uc maxi (e.g. 100 to 250 V = 25 V at 60 °C)							
<b>Contactor type</b>		<b>LC1D09...D38</b>			<b>LC1D40A...D80A, LC1DT60A, LC1DT80A</b>				
<b>Coil code</b>		<b>BNE</b>	<b>EHE</b>	<b>KUE</b>	<b>BBE</b>	<b>BNE</b>	<b>EHE</b>	<b>KUE</b>	
Rated control circuit voltage (Uc)		24...60	48...130	100...250	24 DC	24...60	48...130	100...250	
Rated operational voltage	Conforming to IEC 60947-1	V 250 max							
	Conforming to UL, CSA	V 250 max							
AC supply at 20°C	Consumption inrush	VA	15	25	25	-	18	25	22
	Consumption sealed	VA	0.9	1.3	1.6	-	1.2	1.8	2.1
	Consumption sealed	mA	28	15	9	-	38	21	11.3
	Heat dissipation	W	0.6	0.8	1.1	-	0.8	0.9	1.3
DC supply at 20°C	Consumption inrush	W	14	24	18	11.5	18	20	20
	Consumption sealed	mA	23	13	7	22	33	18	10.7
	Heat dissipation	W	0.6	0.8	1.1	0.5	0.7	0.9	1.2
Max operating time <sup>(3)</sup>	Closing "C"	ms	50 ±5			60 ±5			
	Opening "O"	ms	20...90			20...80			
EMC immunity			Meets IEC 60947-4-1 standard, table 12						
EMC emission	IEC 60947-4-1 §9.4.3		Environment A <sup>(2)</sup>						
Maximum operating rate at ambient temperature ≤ 60°C	cycle/h		3600						
Mechanical durability at Uc In millions of operating cycles			15			10			

<b>Contactor type</b>		<b>LC1D115A...D150A, LC1DT200A</b>				
<b>Coil code</b>		<b>BNE</b>	<b>EHE</b>	<b>KUE</b>	<b>LSE</b>	
Rated control circuit voltage (Uc)		24...60	48...130	100...250	200...500	
Rated operational voltage	Conforming to IEC 60947-1	V 500 max				
	Conforming to UL, CSA	V 500 max				
AC supply at 20°C	Consumption inrush	VA	170	170	170	170
	Consumption sealed	VA	7.5	7.5	8	16.5
	Consumption sealed	mA	200	109	40	38
	Heat dissipation	W	2.2	1.5	1.1	3
DC supply at 20°C	Consumption inrush	W	136	120	105	120
	Consumption sealed	mA	130	76	25	26
	Heat dissipation	W	2.2	1.5	1.1	3
Max operating time <sup>(3)</sup>	Closing "C"	ms	20...90			
	Opening "O"	ms	10...90	25...90	10...90	
EMC immunity			Meets IEC 60947-4-1 standard, table 12			
EMC emission	IEC 60947-4-1 §9.4.3		Environment A <sup>(2)</sup>			
Maximum operating rate at ambient temperature ≤ 60°C	cycle/h		2400			
Mechanical durability at Uc In millions of operating cycles			8			

(1) **LC1D09...D38: BNE coil**: 0.8 Uc mini at 24 V DC, 0.85 Uc mini in AC  
**LC1D40A...D80A, LC1DT60A, LC1DT80A: BBE coil**: 0.8 Uc mini.

(2) Use of this product in EMC environment B may require mitigation measures to avoid unwanted disturbance.

(3) The closing time "C" is measured from the moment the coil supply is switched on to closure of the main poles. The opening time "O" is measured from the moment the coil supply is switched off to the moment the main poles separates.

# TeSys Control

## Deca Advanced Contactors

### Characteristics

Power circuit connections										
Screw clamp terminal connections Deca, Deca Advanced contactors										
Contactor type		LC1	D09 and D12	D18 (3P)	D25 (3P)	D32	D38	D18	D40A to D80A DT60A and DT80A <sup>(1)</sup>	D115A, D150A and DT200A
Tightening			Screw clamp terminals					Connector 2 inputs	Screw clamp terminals	Connector 2 inputs
Flexible cable without cable end	1 conductor	mm <sup>2</sup>	1...4	1.5...6	2.5...10		2.5...10	1...35	10...120	
	2 conductors	mm <sup>2</sup>	1...4	1.5...6	2.5...10		2.5...10	1...25 and 1...35	10...120 + 10...50	
Flexible cable with cable end	1 conductor	mm <sup>2</sup>	1...4	1...6	1...10		2.5...10	1...35	10...120	
	2 conductors	mm <sup>2</sup>	1...2.5	1...4	1.5...6		2.5...10	1...25 and 1...35	10...120 + 10...50	
Solid cable without cable end	1 conductor	mm <sup>2</sup>	1...4	1.5...6	1.5...10		2.5...16	1...35	10...120	
	2 conductors	mm <sup>2</sup>	1...4	1.5...6	2.5...10		2.5...16	1...25 and 1...35	10...120 + 10...50	
Screwdriver	Phillips / Pozidriv		N° 2	N° 2	N° 2		N° 2	–	–	
	Flat screwdriver Ø		Ø6	Ø6	Ø6		Ø6	–	–	
Hexagonal key			–	–	–		–	4	4	
Tightening torque		N.m	1.7	1.7	2.5		1.8	5: ≤ 25 mm <sup>2</sup> 8: 35 mm <sup>2</sup>	12	
Spring terminal connections <sup>(2)</sup> Deca contactors										
Flexible cable without cable end	1 conductor	mm <sup>2</sup>	2.5 (4: DT25)	4	4	4	–	10	–	
	2 conductors	mm <sup>2</sup>	2.5 (except DT25)	4	4	4	–	–	–	
Connection by bars or lugs Deca contactors										
Bar c.s.a.			–	–	–	–	–	–	–	5 x 25
Lug external Ø		mm	8	8	10	10	8	16.5	25	
Ø of screw		mm	M3.5	M3.5	M4	M4	M3.5	M6	M8	
Screwdriver	Phillips / Pozidriv		N° 2	N° 2	N° 2	N° 2	N° 2	–	–	
	Flat screwdriver Ø		Ø6	Ø6	Ø6	Ø6	Ø6	–	–	
Key for hexagonal headed screw			–	–	–	–	–	10	–	
Hexagonal key			–	–	–	–	–	–	6	
Tightening torque		N.m	1.7	1.7	2.5	2.5	1.8	6	12	
Control circuit connections										
Connection by cable (tightening via screw clamps) Deca, Deca Advanced contactors										
Flexible cable without cable end	1 conductor	mm <sup>2</sup>	1...4	1...4	1...4	1...4	1...4	1...4	1...4	1...4
	2 conductors	mm <sup>2</sup>	1...4	1...4	1...4	1...4	1...4	1...4	1...4	1...4
Flexible cable with cable end	1 conductor	mm <sup>2</sup>	1...4	1...4	1...4	1...4	1...4	1...4	1...4	1...4
	2 conductors	mm <sup>2</sup>	1...2.5	1...2.5	1...2.5	1...2.5	1...2.5	1...2.5	1...2.5	1...2.5
Solid cable without cable end	1 conductor	mm <sup>2</sup>	1...4	1...4	1...4	1...4	1...4	1...4	1...4	1...4
	2 conductors	mm <sup>2</sup>	1...4	1...4	1...4	1...4	1...4	1...4	1...4	1...4
Screwdriver	Phillips / Pozidriv		N° 2	N° 2	N° 2	N° 2	N° 2	N° 2	N° 2	N° 2
	Flat screwdriver Ø		Ø6	Ø6	Ø6	Ø6	Ø6	Ø6	Ø6	Ø6
Tightening torque		N.m	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Spring terminal connections <sup>(2)</sup> Deca contactors										
Flexible cable without cable end	1 conductor	mm <sup>2</sup>	2.5	2.5	2.5	2.5	–	2.5	0.75...2.5	–
	2 conductors	mm <sup>2</sup>	2.5	2.5	2.5	2.5	–	2.5	0.75...2.5	–
Connection by bars or lugs Deca contactors										
Lug external Ø		mm	8	8	8	8	8	8	–	
Ø of screw		mm	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5	–	
Screwdriver	Phillips / Pozidriv		N° 2	N° 2	N° 2	N° 2	N° 2	N° 2	–	
	Flat screwdriver Ø		Ø6	Ø6	Ø6	Ø6	Ø6	Ø6	–	
Tightening torque		N.m	1.7	1.7	1.7	1.7	1.7	1.7	–	

(1) BTR screws: hexagon socket head. In accordance with local electrical wiring regulations, a size 4 insulated Allen key must be used (reference **LADALLEN4**, see page A1/19).

(2) If cable ends are used, choose the next size down (example: for 2.5 mm<sup>2</sup>, use 1.5 mm<sup>2</sup>) and square crimp the cable ends using a special tool.

#### Characteristics of auxiliary contacts incorporated in the contactor

Mechanically linked contacts	Conforming to IEC 60947-5-1		Each contactor has 2 N/O and N/C contacts mechanically linked on the same movable contact holder
Mirror contact	Conforming to IEC 60947-4-1		The N/C contact on each contactor represents the state of the power contacts and can be connected to a PREVENTA safety module
Rated operational voltage (Ue)	Up to	<b>V</b>	690 <sup>(2)</sup>
Rated insulation voltage (Ui)	Conforming to IEC 60947-1	<b>V</b>	690
	Conforming to UL, CSA	<b>V</b>	600
Conventional thermal current (Ith)	For ambient temperature ≤ 60 °C	<b>A</b>	10
Frequency of the operational current		<b>Hz</b>	25...400
Minimum switching capacity λ = 10 <sup>-8</sup>	U min	<b>V</b>	17
	I min	<b>mA</b>	5
Short-circuit protection	Conforming to IEC 60947-5-1		gG fuse: 10 A
Rated making capacity	Conforming to IEC 60947-5-1, I rms	<b>A</b>	~: 140, ---: 250
Short-time rating	Permissible for	1 s	<b>A</b> 100
		500 ms	<b>A</b> 120
		100 ms	<b>A</b> 140
Insulation resistance		<b>MΩ</b>	> 10
Non-overlap time	Guaranteed between N/C and N/O contacts	<b>ms</b>	1.5 (on energisation and on de-energisation)
Tightening torque	Pozidriv / Philips head n° 2 and Ø6	<b>N.m</b>	1.7

#### Operational power of contacts conforming to IEC 60947-5-1

##### a.c. supply, categories AC-14 and AC-15

Electrical durability (valid for up to 3600 operating cycles/hour) on an inductive load such as the coil of an electromagnet: making current (cos φ 0.7) = 10 times the power broken (cos φ 0.4).

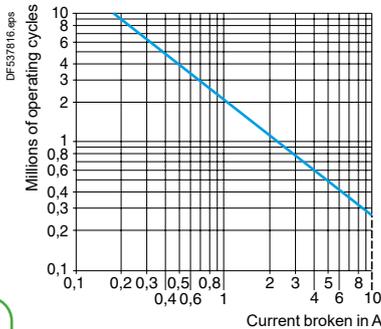
Operating cycles	V	24	48	115	230	400	440	600
1 million	<b>VA</b>	60	120	280	560	960 <sup>(1)</sup>	1050	1440
3 million	<b>VA</b>	16	32	80	160	280	300	420
10 million	<b>VA</b>	4	8	20	40	70	80	100

##### d.c. supply, category DC-13

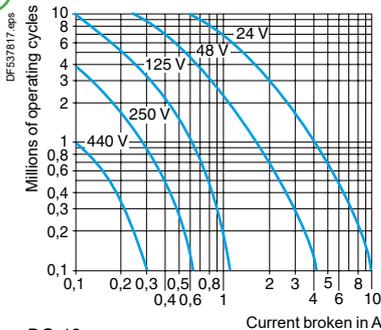
Electrical durability (valid for up to 1200 operating cycles/hour) on an inductive load such as the coil of an electromagnet, without economy resistor, the time constant increasing with the load.

Operating cycles	V	24	48	125	250	440
1 million	<b>W</b>	96	76	76	76	44
3 million	<b>W</b>	48	38	38	32	–
10 million	<b>W</b>	14	12	12	–	–

- (1) LC1D115A, D150A and DT200A are validated under 780 VA up to 1200 operating cycles/hour.  
 (2) LC1D115A, D150A and DT200A are currently certified for Ue up to 600 V, with the design capabilities for Ue up to 690 V. Certification process is ongoing for Ue = 690 V.



AC-15



DC-13

# TeSys Control

## Deca Advanced Contactors - Auxiliary Contact Blocks

### Characteristics

Environment								
Contact block type			LADN or LADC	LADT and LADS	LADR	LAD8	LADN●●R	
			Non protected				Protected	
Conforming to standards			IEC/EN 60947-5-1, UL 60947-5-1, CSA C22.2 n° 60947-5-1, GB/T 14048.5					
Product certifications			UL, CSA, CCC, EAC, UKCA, CB certification					
Degree of protection	Conforming to IEC 60529		Protection against direct finger contact IP 2X					
Ambient air temperature around the device	Storage	°C	-60...+80					
	Operation	°C	-5...+60				-25...+70 <sup>(1)</sup>	
Maximum operating altitude	Without derating	m	3000					
Connection by cable	Phillips n° 2 and Ø6 mm Flexible or solid cable with or without cable end	mm <sup>2</sup>	Min: 1 x 1; Max: 2 x 2.5				Max: 2 x 2.5	
Tightening torque		N.m	1.7					
Spring terminal connections	Flexible or solid cable without cable end	mm <sup>2</sup>	Max: 2 x 2.5					
Instantaneous and time delay contact characteristics								
Number of contacts			1, 2 or 4	2	2	2	2 or 4	
Rated operational voltage (U <sub>e</sub> )	Up to	V	690					
Rated insulation voltage (U <sub>i</sub> )	Conforming to IEC 60947-5-1	V	690					
	Conforming to UL, CSA	V	600					
Conventional thermal current (I <sub>th</sub> )	For ambient temperature ≤ 60 °C	A	10					
Frequency of the operational current		Hz	25...400					
Minimum switching capacity	U min	V	17					
	I min	mA	5				1	
Short-circuit protection	Conforming to IEC 60947-5-1 gG fuse	A	10					
Rated making capacity	Conforming to IEC 60947-5-1 I rms	A	~: 140; ---: 250					
Short-time rating	Permissible for	1 s	A	100				
		500 ms	A	120				
		100 ms	A	140				
Insulation resistance		MΩ	> 10					
Non-overlap time	Guaranteed between N/C and N/O contacts	ms	1.5 (on energisation and on de-energisation)					
Overlap time	Guaranteed between N/C and N/O contacts on LADC22	ms	1.5	–	–	–	–	
Time delay (LADT, R and S contact blocks) Accuracy only valid for setting range indicated on the front face	Ambient air temperature for operation	°C	–	-40...+70	-40...+70	–	–	
	Repeat accuracy		–	±2 %	±2 %	–	–	
	Drift up to 0.5 million operating cycles		–	+15 %	+15 %	–	–	
	Drift depending on ambient air temperature		–	0.25 % per °C	0.25 % per °C	–	–	
Mechanical durability	In millions of operating cycles		30	5	5	30	30	
Operational power of contacts			See page A1/35				See page A1/36	
Degree of pollution			IP20				IP50 <sup>(2)</sup>	

(1) NC on-delay up to 200 ms under extreme low temperature: -40 to -25 °C.  
 (2) IP50 for the contacts only, after installed on contactor.

Contactors

# TeSys Control

## Deca Advanced Contactors - Auxiliary Contact Blocks

### Characteristics

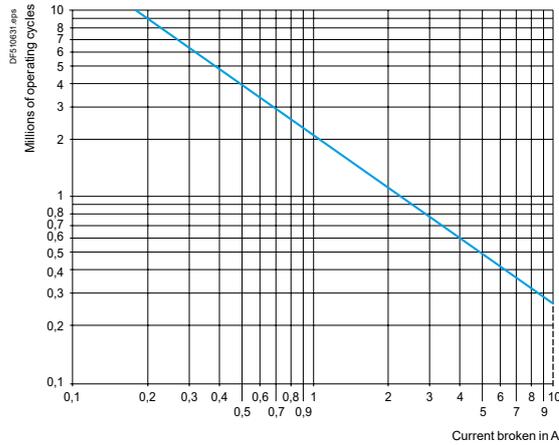
Environment							
Contact block type (dust/damp protected)			LA1DX	LA1DZ (4 contacts: 2 protected + 2 non protected)		LA1DY	
			Protected	Protected	Non protected	Protected	
Conforming to standards			IEC/EN 60947-5-1, UL 60947-5-1, CSA C22.2 n° 60947-5-1, GB/T 14048.5				
Product certifications			UL, CSA, CCC, EAC, UKCA, CB certification				
Degree of protection	Conforming to IEC 60529		Protection against direct finger contact IP 2X				
Ambient air temperature	Storage and operation		°C	-25...+70			
Cabling	Phillips n° 2 and Ø6 mm Flexible or solid conductor with or without cable end		mm <sup>2</sup>	Min: 1 x 1; max: 2 x 2.5			
Tightening torque			N.m	1.7			
Number of contacts				2	2	2	
Contact characteristics							
Rated operational voltage (Ue)	Up to		V AC	125	125	690	125
			V DC	30	30		30
Rated insulation voltage (Ui)	Conforming to IEC 60947-5-1		V	250	250	690	250
	Conforming to UL, CSA		V	–	–	600	–
Conventional thermal current (Ith)	For ambient temperature ≤ 40 °C		A	–	–	10	–
Maximum operational current (Ie)			mA	100	100	–	100
Frequency of the operational current			Hz	–	–	25...400	–
Minimum switching capacity		U min	V	5	5	17	5
		I min	mA	1	1	5	1
Short-circuit protection	Conforming to IEC 60947-1 gG fuse		A	–	–	10	–
Rated making capacity	Conforming to IEC 60947-1		I rms	A	–	–	~: 140; ---: 250
Short-time rating	Permissible for	1 s	A	–	–	100	–
		500 ms	A	–	–	120	–
		100 ms	A	–	–	140	–
Insulation resistance			MΩ	> 10	> 10	> 10	> 10
Mechanical durability	In millions of operating cycles			5	5	30	5
Materials and technology used for dust and damp protected contacts				Gold alloy - Single break	Gold alloy - Single break	–	Gold alloy - Single break with crossed bars

**Rated operational power of not dust/damp protected contacts (conforming to IEC 60947-5-1)**

a.c. supply, categories AC-14 and AC-15

Electrical durability (valid for up to 3600 operating cycles/hour) on an inductive load such as the coil of an electromagnet: making current ( $\cos \phi 0.7$ ) = 10 times the power broken ( $\cos \phi 0.4$ ).

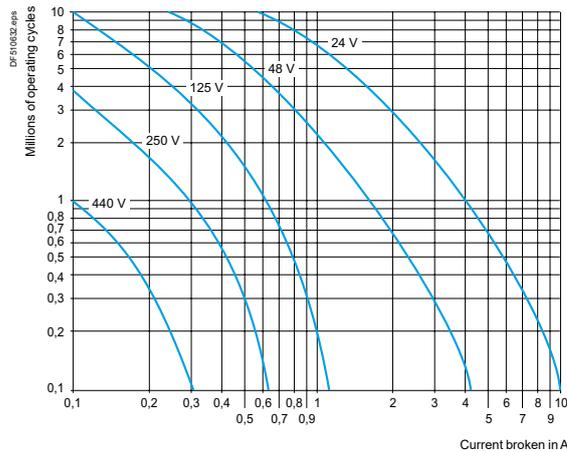
Operating cycles	V	24	48	115	230	400	440	600
1 million	VA	60	120	280	560	960	1050	1440
3 million	VA	16	32	80	160	280	300	420
10 million	VA	4	8	20	40	70	80	100



d.c. supply, category DC-13

Electrical durability (valid for up to 1200 operating cycles/hour) on an inductive load such as the coil of an electromagnet, without economy resistor, the time constant increasing with the load.

Operating cycles	V	24	48	125	250	440
1 million	W	96	76	76	76	44
3 million	W	48	38	38	32	—
10 million	W	14	12	12	—	—



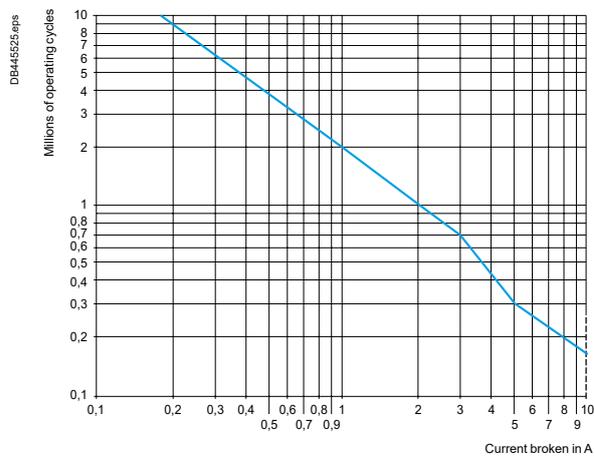
Contactors

### LADN...R Rated operational power of dust/damp protected contacts (conforming to IEC 60947-5-1)

a.c. supply, categories AC-14 and AC-15

Electrical durability (valid for up to 3600 operating cycles/hour when current less than 1A, up to 1800 operation cycles/hour when current more than 1A) on an inductive load such as the coil of an electromagnet: making current ( $\cos \phi 0.7$ ) = 10 times the power broken ( $\cos \phi 0.4$ ) same with LADN

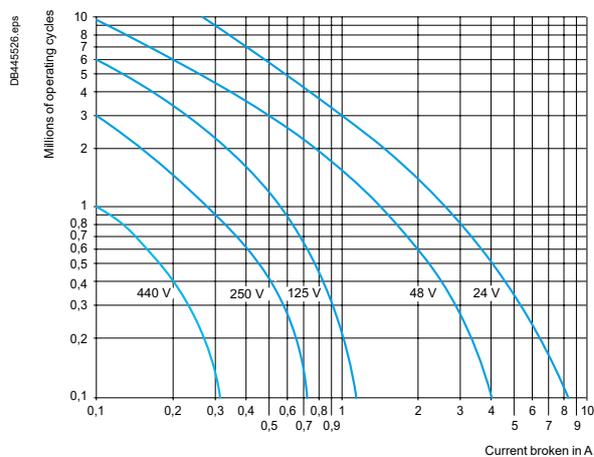
Operating cycles	V	24	48	115	230	400	440	600
1 million	VA	60	120	280	560	800	880	1200
2 million	VA	20	40	92	184	320	352	480
3 million	VA	16	32	80	160	280	300	420



d.c. supply, category DC-13

Electrical durability (valid for up to 1200 operating cycles/hour) on an inductive load such as the coil of an electromagnet, without economy resistor, the time constant increasing with the load.

Operating cycles	V	24	48	125	250	440
0.5 million	W	96	100	95	110	70
1 million	W	54	60	60	60	44
2 million	W	34	36	38	38	—
3 million	W	24	24	25	25	—



# TeSys Control

## Deca Advanced Contactors - Mechanical Latches

### Characteristics

Environment			
Conforming to standards			IEC/EN 60947-5-1, UL 60947-5-1, CSA C22.2 n° 60947-5-1, GB/T 14048.5
Product certifications			UL, CSA
Degree of protection	Conforming to IEC 60529		Protection against direct finger contact IP2X
Ambient air temperature around the device	Storage	°C	-40...+80
	Operation	°C	-25...+55
	Permissible for operation at U <sub>c</sub>	°C	-25...+70

Mechanical latch blocks <sup>(1)</sup> Deca Advanced contactors				
Mechanical latch block type			LAD6K10	LAD6K20
For use on contactor			LC1D09...D80A LC1DT60A...DT80A	LC1D115A...D150A LC1DT200A
Product certifications			UL, CSA	UL, CSA
Rated insulation voltage	Conforming to IEC 60947-5-1	V	690	690
Rated control circuit voltage	~ 50/60 Hz and ≡	V	24...415	24...415
Power required	For unlatching	~	VA	25
		≡	W	30
Maximum operating rate	In operating cycles/hour		1200	1200
On-load factor			10 %	10 %
Mechanical durability at U <sub>c</sub>	In millions of operating cycles		0.5	0.1

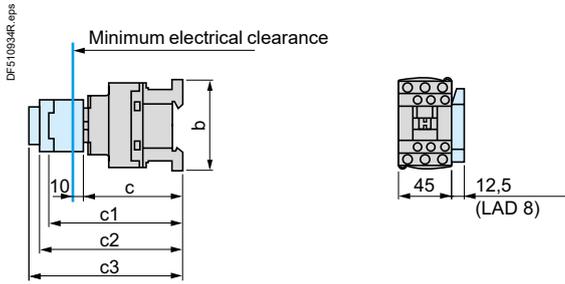
<sup>(1)</sup> Unlatching can be manually operated or electrically controlled (pulsed).  
The LAD6K latch coil and the LC1D operating coil must not be energised simultaneously.  
The duration of the LAD6K and LC1D control signals must be ≥ 100 ms.

# TeSys Control

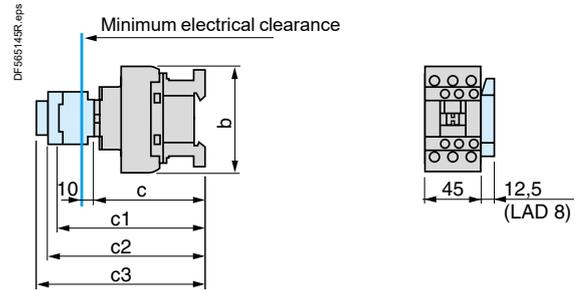
## Deca Advanced Contactors

### Dimensions

#### LC1D09...D18 (3-pole), with AC/DC compatible coil

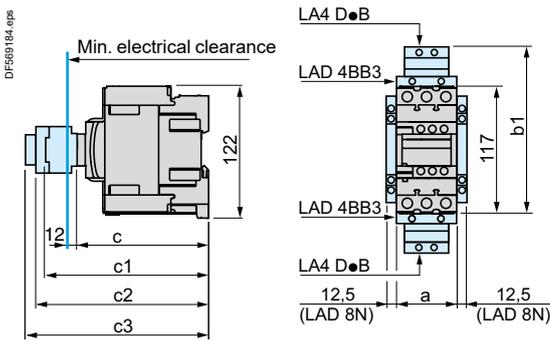


#### LC1D25...D38 (3-pole), with AC/DC compatible coil



LC1	D09...D18	D25...D38
b without add-on blocks	77	85
c without cover or add-on blocks	84	90
with cover, without add-on blocks	86	92
c1 with LADN or C (2 or 4 contacts)	117	123
c2 with LAD6K10	129	135
c3 with LADT, R, S	137	143
with LADT, R, S and sealing cover	141	147

#### LC1D40A...D80A (3-pole), LC1DT60A...DT80A (4-pole), with AC/DC compatible coil



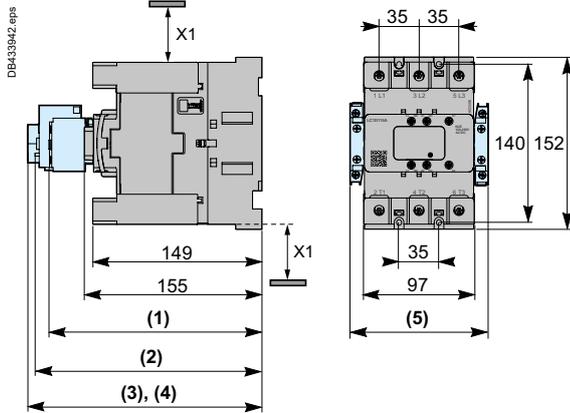
LC1	D40A...D80A	DT60A...DT80A
a	55	70
b1 LAD4BB3	136	–
c without cover or add-on blocks	118	118
with cover, without add-on blocks	120	120
c1 with LADN (1 contact)	–	–
with LADN or C (2 or 4 contacts)	150	150
c2 with LAD6K10	163	163
c3 with LADT, R, S	171	171
with LADT, R, S and sealing cover	175	175

# TeSys Control

## Deca Advanced Contactors

### Dimensions

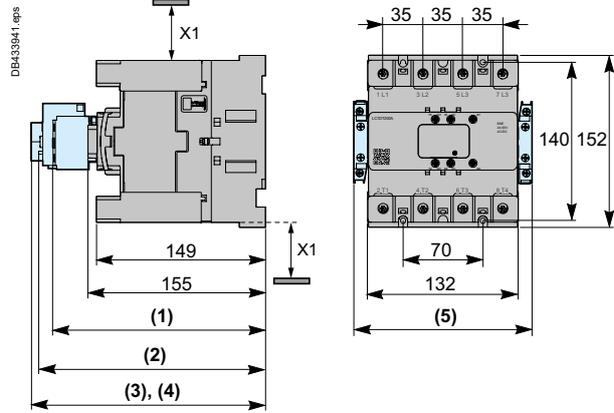
#### LC1D115A & D150A (3-pole)



All dimensions are in mm.

(1)	LC1D●●●A+LADN+LADC	187
(2)	LC1D●●●A+LAD6K20	196
(3)	LC1D●●●A+LADT+LADR+LADS	205
(4)	LC1D●●●A+LADT+LADR+LADS+LA9D901	209
(5)	LC1D●●●A+(2x LAD8N)	120
X1	Minimum electrical clearance	40

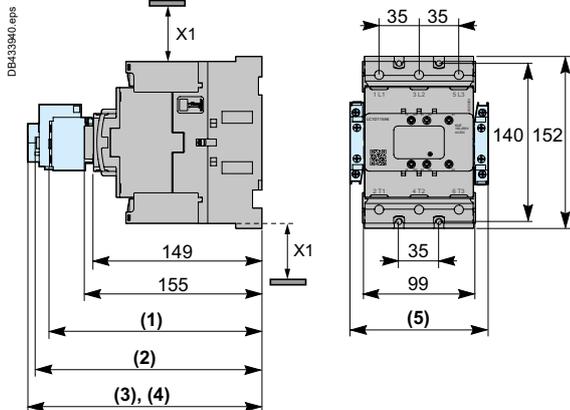
#### LC1DT200A (4-pole)



All dimensions are in mm.

(1)	LC1DT200A+LADN+LADC	187
(2)	LC1DT200A+LAD6K20	196
(3)	LC1DT200A+LADT+LADR+LADS	205
(4)	LC1DT200A+LADT+LADR+LADS+LA9D901	209
(5)	LC1DT200A+(2x LAD8N)	155
X1	Minimum electrical clearance	40

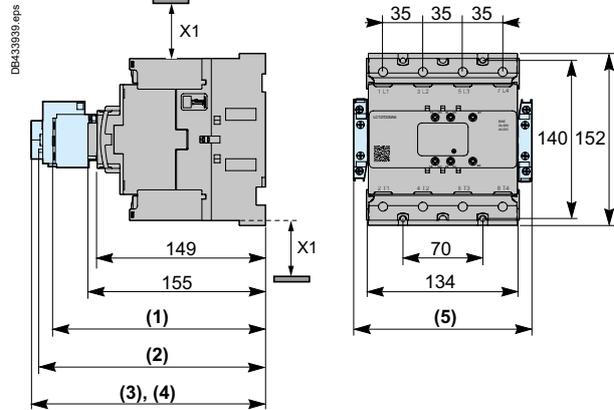
#### LC1D115A6 & D150A6 (3-pole)



All dimensions are in mm.

(1)	LC1D●●●A6+LADN+LADC	187
(2)	LC1D●●●A6+LAD6K20	196
(3)	LC1D●●●A6+LADT+LADR+LADS	205
(4)	LC1D●●●A6+LADT+LADR+LADS+LA9D901	209
(5)	LC1D●●●A6+(2x LAD8N)	120
X1	Minimum electrical clearance	40

#### LC1DT200A6 (4-pole)



All dimensions are in mm.

(1)	LC1DT200A6+LADN+LADC	187
(2)	LC1DT200A6+LA6DK20	196
(3)	LC1DT200A6+LADT+LADR+LADS	205
(4)	LC1DT200A6+LADT+LADR+LADS+LA9D901	209
(5)	LC1DT200A6+(2x LAD8N)	155
X1	Minimum electrical clearance	40

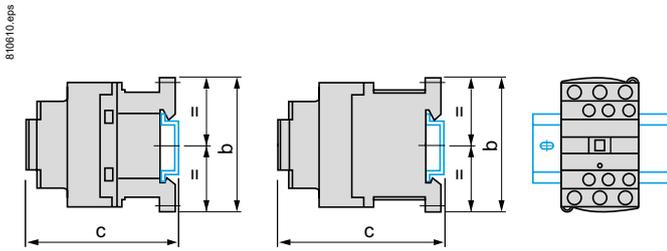
# TeSys Control

## Deca Advanced Contactors

### Mounting

#### LC1D09...D38 (3-pole), with AC/DC compatible coil

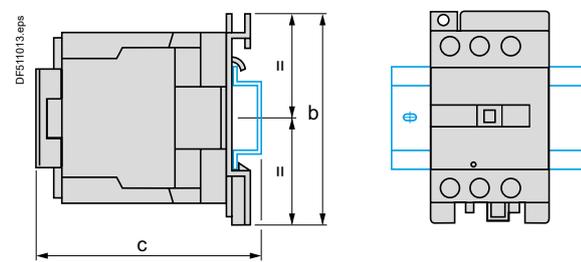
On mounting rail NSYSR200B, NSYSR200BD or NSYSR200  
(width 35 mm)



LC1	D09...D18	D25...D38
b	77	85
c (NSYSR200B or NSYSR200BD)	88	94
c (NSYSR200)	96	102

#### LC1D40A...D80A (3-pole), LC1DT60A and DT80A (4-pole), with AC/DC compatible coil

On mounting rail AM1DL201 (width 75 mm) <sup>(2)</sup>  
On mounting rail NSSDPR●● or NSYSR200 (width 35 mm)



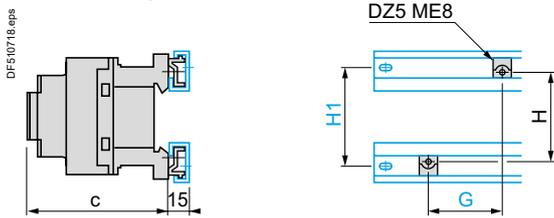
LC1	D40A...D80A DT60A...DT80A
b	122
c	–
c (AM1DL201)	–
c (NSSDPR●● or NSYSR200)	128

# TeSys Control

## Deca Advanced Contactors

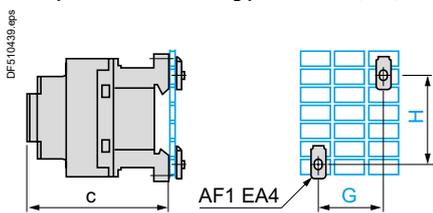
### Mounting

#### LC1D09...D38 (3-pole), with AC/DC compatible coil On 2 mounting rails DZ5MB



LC1	D09...D18	D25...D38
c with cover	86	92
G	35	35
H	60	60
H1	70	70

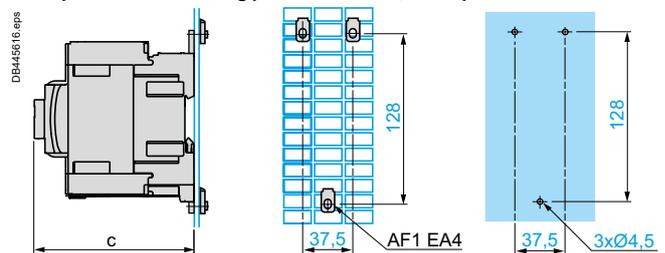
#### LC1D09...D38 (3-pole), with AC/DC compatible coil On pre-slotted mounting plate AM1PA, PB, PC



LC1	D09...D18	D25...D38
c with cover	86	92
G	35	35
H	60/70	60/70

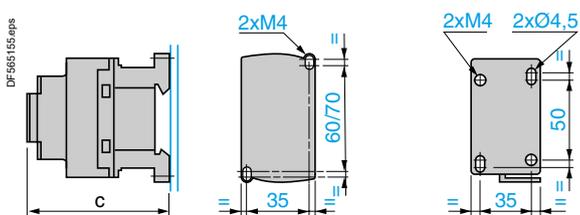
#### LC1D40A...D80A (3-pole), LC1DT60A...DT80A (4-pole), with AC/DC compatible coil

On pre-slotted mounting plate AM1PA, PB, PC or panel mounted



LC1	D40A...D80A, DT60A...DT80A
c with cover	120

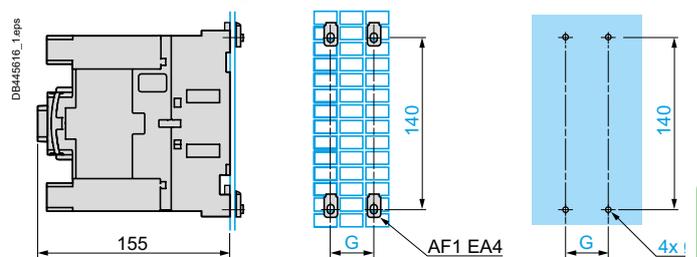
#### LC1D09...D38 (3-pole), with AC/DC compatible coil Panel mounted



LC1	D09...D18	D25...D38
c with cover	86	92

#### LC1D115A...D150A (3-pole), LC1DT200A (4-pole), with AC/DC compatible coil

On pre-slotted mounting plate AM1PA, PB, PC and panel mounted

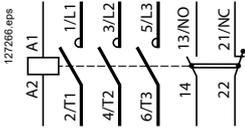


LC1	D115A	D115A6	D150A	D150A6	DT200A	DT200A6
G (3-pole)	35	35	35	35		
G (4-pole)					70	70

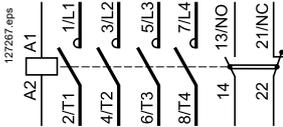
Contactors

#### Contactors

**Deca Advanced 3-pole contactors** (References: pages A1/9 to A1/10)  
**LC1D09 to D150A**



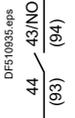
**Deca 4-pole contactors** (References: page A1/10)  
**LC1DT60 to DT200A**



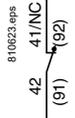
#### Front mounting add-on contact blocks

**Instantaneous auxiliary contacts for Deca Advanced contactors** (References: page A1/15)

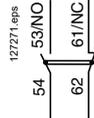
**1 N/O LADN10<sup>(1)</sup>**



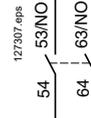
**1 N/C LADN01<sup>(1)</sup>**



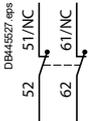
**1 N/O + 1 N/C LADN11, LADN11R**



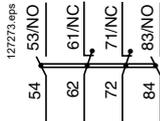
**2 N/O LADN20, LADN20R**



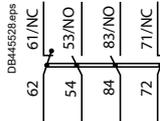
**2 N/C LADN02**



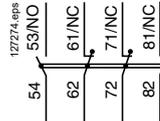
**2 N/O + 2 N/C LADN22**



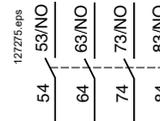
**2 N/O + 2 N/C LADN22R**



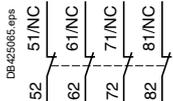
**1 N/O + 3 N/C LADN13**



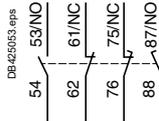
**4 N/O LADN40, LADN40R**



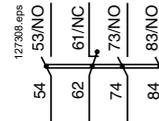
**4 N/C LADN04**



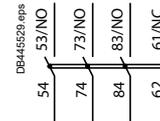
**2 N/O + 2 N/C including 1 N/O + 1 N/C make before break LADC22**



**3 N/O + 1 N/C LADN31**



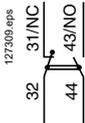
**3 N/O + 1 N/C LADN31R**



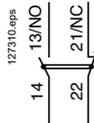
Contactors

**Instantaneous auxiliary contacts conforming to standard EN 50012 for Deca Advanced contactors** (References: page A1/15)

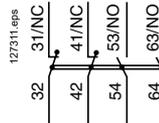
**1 N/O + 1 N/C LADN11G**



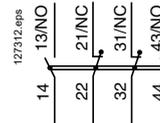
**1 N/O + 1 N/C LADN11P**



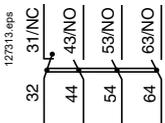
**2 N/O + 2 N/C LADN22G**



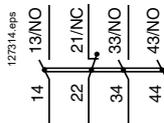
**2 N/O + 2 N/C LADN22P**



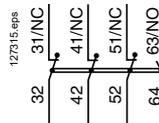
**3 N/O + 1 N/C LADN31G**



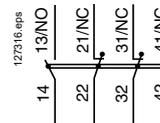
**3 N/O + 1 N/C LADN31P**



**1 N/O + 3 N/C LADN13G**



**1 N/O + 3 N/C LADN13P**



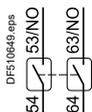
<sup>(1)</sup> Items in brackets refer to blocks mounted on right-hand side of contactor.

#### Front mounting add-on contact blocks for Deca Advanced contactors

Dust and damp protected instantaneous auxiliary contacts (References: page A1/15)

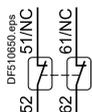
2 N/O (24-50 V)

LA1DX20



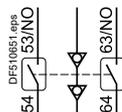
2 N/C (24-50 V)

LA1DX02



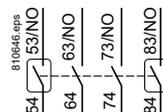
2 N/O (5-24V) with 2 cable screen terminals

LA1DY20



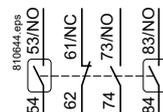
2 N/O protected (24-50 V)  
2 N/O standard

LA1DZ40



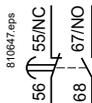
2 N/O protected (24-50 V)  
+ 1 N/O + 1 N/C standard

LA1DZ31

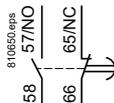


Time delay auxiliary contacts (References: page A1/17)

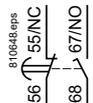
On-delay 1 N/O + 1 N/C  
LADT



Off-delay 1 N/O + 1 N/C  
LADR

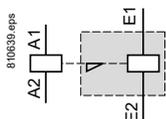


On-delay 1 N/C + 1 N/O break before make  
LADS



#### Mechanical latch blocks for Deca Advanced contactors (References: page A1/17)

LAD6K10 and LA6DK20



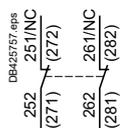
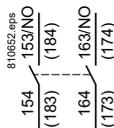
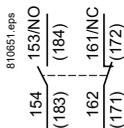
#### Side mounting add-on contact blocks for Deca Advanced contactors

Instantaneous auxiliary contacts (References: page A1/15)

1 N/O + 1 N/C LAD8N11 <sup>(1)</sup>

2 N/O LAD8N20 <sup>(1)</sup>

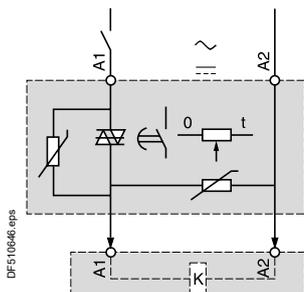
2 N/C LAD8N02 <sup>(1)</sup>



<sup>(1)</sup> Items in brackets refer to blocks mounted on right-hand side of contactor.

#### Electronic serial timer modules for Deca Advanced contactors

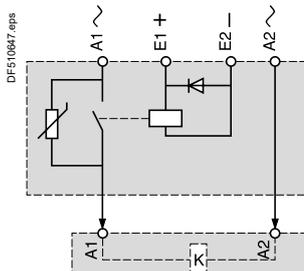
On-delay LA4DTeU



#### Interface modules

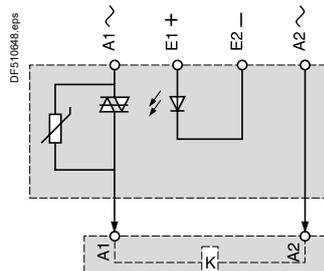
Relay output for Deca contactors

LA4DFB



Solid state for Deca Advanced contactors

LA4DWB



References: page A1/43.

Contactors

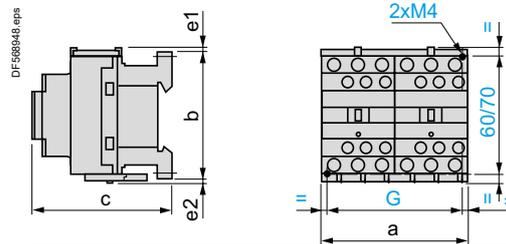
# TeSys Control

## Deca Advanced Reversing and Changeover Contactors

### Dimensions

#### LC2D09 to D38 Deca Advanced contactors

2 x LC1D09 to D38



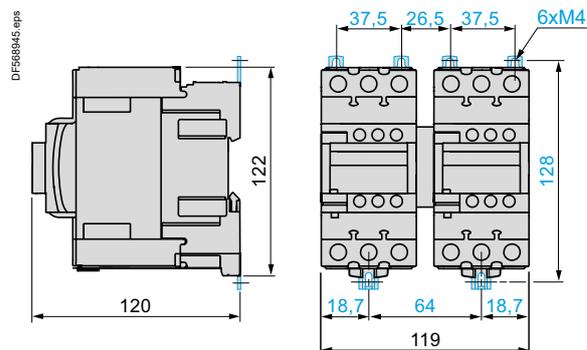
LC2 or 2 x LC1	a	b	c <sup>(1)</sup>	e1	e2	G
<b>D09 to D18 AC, AC/DC</b>	90	77	86	4	1.5	80
<b>D093 to D123 AC</b>	90	99	86	–	–	80
<b>D09 to D18 DC</b>	90	77	95	4	1.5	80
<b>D093 to D123 DC</b>	90	99	95	–	–	80
<b>D25 to D38 AC, AC/DC</b>	90	85	92	9	5	80
<b>D183 to D383 AC</b>	90	99	92	–	–	80
<b>D25 to D32 DC</b>	90	85	101	9	5	80
<b>D183 to D383 DC</b>	90	99	101	–	–	80

e1 and e2: including cabling.

(1) With safety cover, without add-on block.

#### LC2D40A to D80A for Deca Advanced contactors

2 x LC1D40A to D80A



# TeSys Control

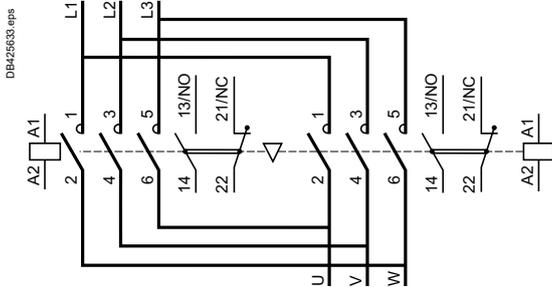
## Deca Advanced Reversing and Changeover Contactors

### Schemes

#### Reversing contactors for motor control

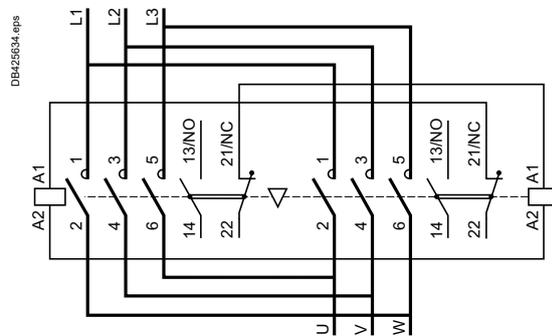
##### LC2D09...D80A Deca Advanced contactors

Horizontally mounted



##### LAD9R1V, Deca Advanced contactors

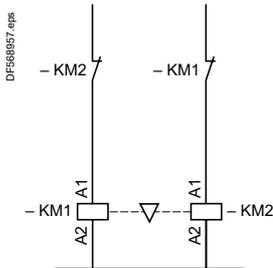
With integral electrical interlocking



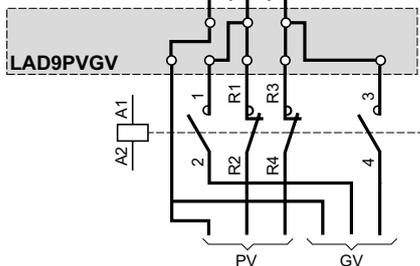
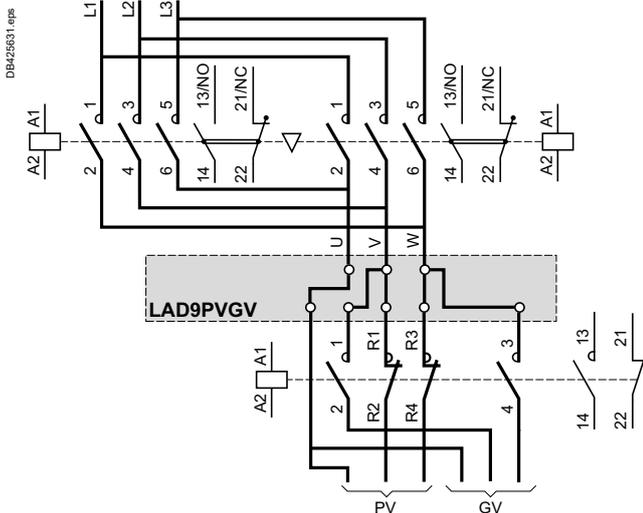
#### Electrical interlocking of Deca Advanced reversing contactors fitted with:

Mechanical interlock without integral electrical contacts

##### LAD9V2, LAD4CM, LAD5CM



#### Low speed - High speed cabling kit, screw clamp terminals for LC1D09... D38 contactors (Deca Advanced)



Contactors



## Introduction

A2/3

## TeSys Giga High power contactors

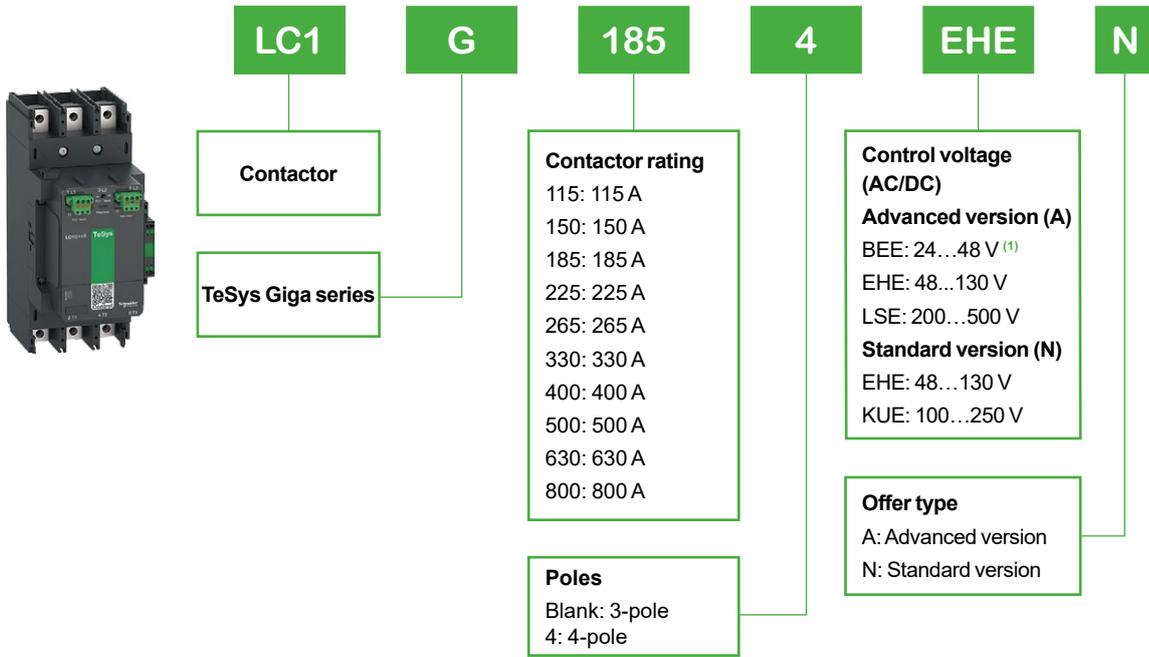
Type of product	Range		Pages
TeSys Giga High power contactors Advanced version - 3 and 4-pole	3-pole from 115 to 800 A – AC-3 3-pole and 4-pole from 250 to 1050 A – AC-1		A2/10
TeSys Giga High power contactors Standard version - 3 and 4-pole	3-pole from 115 to 800 A – AC-3 3-pole and 4-pole from 250 to 1050 A – AC-1		A2/12
Auxiliary modules, Accessories, Retrofit kits for TeSys Giga High power contactors			A2/14
Spare parts for TeSys Giga High power contactors			A2/20

## Technical Data for Designers

A2/23

# Product references – coding principle

## > TeSys Giga Contactors



### Example:

LC1G4004LSEA - TeSys Giga Contactor Advanced version 400 A, 4-pole, 200...500 V AC/DC coil, with PLC control.

LC1G1854EHEN - TeSys Giga Contactor Standard version 185 A, 4-pole, 48...130 V AC/DC coil, without PLC control.

<sup>(1)</sup> 24...48 V AC/DC control voltage option is available for LC1G115...LC1G500 ratings.

## > Quality and Performance as high priority

### TeSys Giga A new Generation series with digital innovation

Over more than 4 decades, the TeSys F range of contactors has built a high reputation for performance, reliability, and quality. The TeSys F range set the industrial standard for high power contactors with an installed base of millions of products. TeSys F contactors were the first choice of many OEMs, control panel builders and industrial users.

But industry requirements have evolved to demand process performance monitoring through data networks and online expert services.

TeSys Giga is Schneider Electric's new range of contactors that answer these evolving needs. TeSys Giga High power contactors support the evolution of processes and offer new services to reduce non-production time to a minimum. Replacing TeSys F Contactors, TeSys Giga High power contactors address a wide range of demanding applications with built-in advanced features and functionalities.



### Futuristic ready...

TeSys Giga High power contactors are designed to work with components and accessories with advanced performance. The characteristics of robustness and longevity are maintained, both in the connectors and in the switching.

Continuous local and remote monitoring of contact wear optimizes predictive maintenance by allowing you to replace contacts only when necessary, facilitated by diagnostic visual indicator.

Every customer will benefit from the innovative design and feature, including the compact size, wideband electronic coils, embedded auxiliary contact blocks, ergonomic design, or flexibility in connections.

High power  
contactors

## > Applications



AC-3/AC-3e utilization category



AC-1 utilization category

- TeSys Giga High power contactors provide robust control solutions for AC-3/AC-3e applications up to 800 A and AC-1 applications up to 1050 A.
- TeSys Giga High power contactors can be part of a direct-on-line motor starter, reversing motor starter or a Star-Delta motor starter and power switching application.
- TeSys Giga High power contactors provide contact wear diagnostic and wideband AC/DC control.
- Suitable for type 2 coordination as per IEC 60947-4-1.

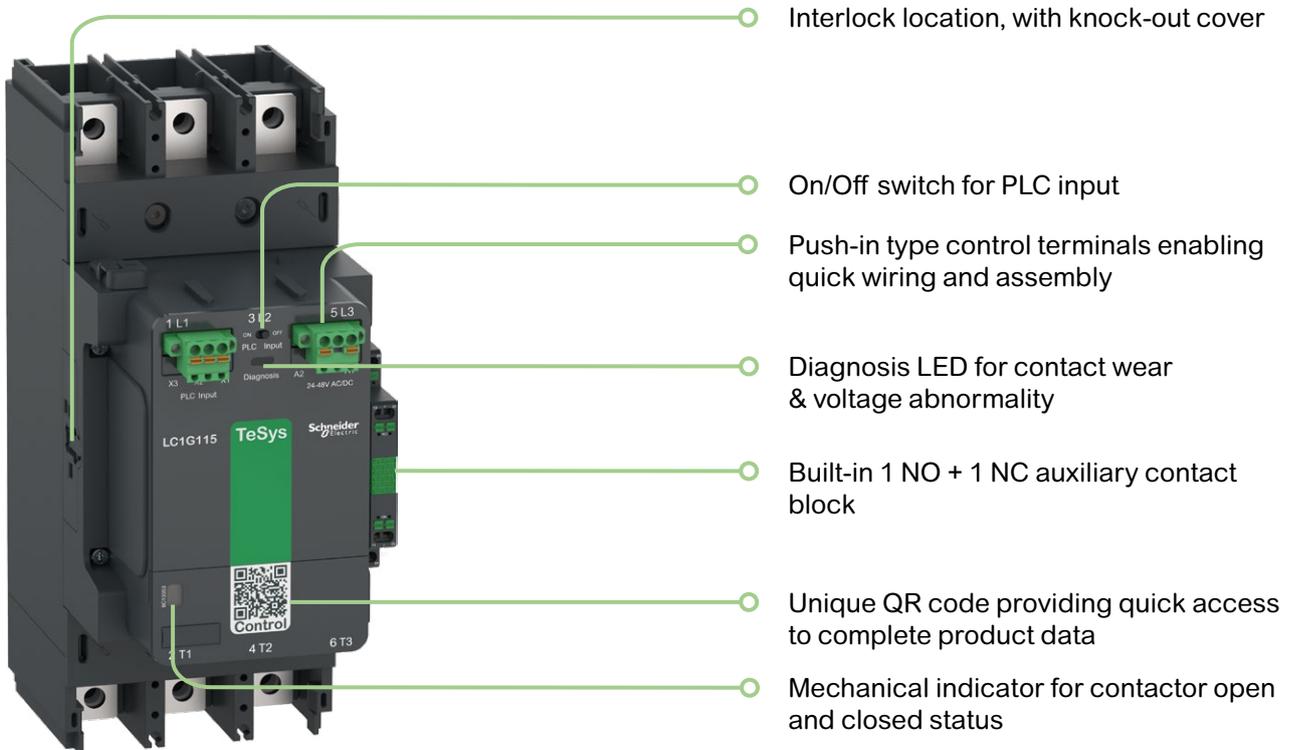
## > Right choice for a wide range of demanding applications



TeSys Giga High power contactors' unique design meets the common requirements of demanding high power applications:

- Conform to multi standards to suit global needs
- Long life expectancy in harsh environments
- Suitable for high efficiency motors
- Very good resistance to vibrations
- High uptime thanks to predictive maintenance
- Optimized installation and maintainability.

## > Intelligent design for greater advantages



### Higher flexibility

TeSys Giga High power contactors can be mounted in different orientation without derating, providing high flexibility of your panel design.

Control wiring, auxiliary contacts and control module are accessible from the front.



### Contact wear diagnostic and predictive maintenance

Contact wear is monitored by a dedicated module and shown in the front panel through LED, therefore the, predictive maintenance can be planned for replacing the complete set of switching modules, thus avoiding breakdown maintenance. Switching modules <sup>(1)</sup> can be replaced quickly and easily thanks to their Plug and Play design.

<sup>(1)</sup> Refer to page A2/21 for details on switching modules.

## > Key features

### Advanced contactor control

- The electronic control module provides wideband AC/DC coil control voltage, from 24 V to 500 V, allowing quick adaptation of existing industrial processes as well as new projects.
- The low power consumption of the coils could lead to significant savings on automation equipment. It's now possible to use interface relays with a lower rating, resulting in lower heat emission in the panel.
- The low power consumption of the coils also takes up less space in the panel and simplifies the diagrams by connecting these coils directly to the output cards of the PLCs.

### Simplified wiring

- The pole pitch of the power terminals allows direct mounting and connection to TeSys Giga Electronic Overload Relays. Standardization of panel mounting and assembly reduces costs and assembly time.
- Push-in connection for control terminals provides flexibility, ease of connections, and reduced assembly and installation time.

### Enhanced durability

- Durability is a top priority. TeSys Giga High power contactors are designed to offer uncompromising robustness and maintenance accessibility to site technicians. The duration of production down-time is reduced, resulting in improved profitability on your investment.

### Advanced diagnostic features

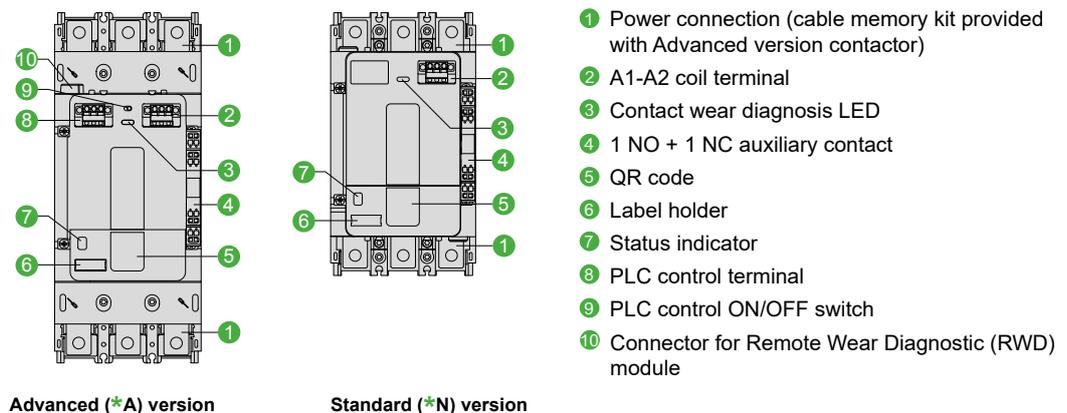
- On-board diagnostics is a new feature in our latest generation of high power contactors. Counting the number of operations as well as monitoring duration of use and pole condition provides numerous benefits for the customer and improves reliability and maintenance planning.

### Compact size

- Compact size provides easy access to power connections for connecting cables and busbars.

### Easy maintenance

- The poles are designed as replaceable switching modules, so the performance of a used contactor can be fully restored. The modular design allows a quick and long-lasting replacement.
- Coils are accessible from the front and maintained with very low down times.



\*: contactor references finishing by A or by N.

# TeSys Control

## Giga High power contactors

### Introduction

A comprehensive range of TeSys Giga High power contactors that are available in 'Advanced' and 'Standard' versions, in 3 sizes, covering several ratings.  
A common range of auxiliary contacts and accessories, enabling high flexibility and simplicity.

## > TeSys Giga High power contactors – Advanced version



115...225 A



265...500 A



630...800 A

#### Power & control

- 3 or 4 power poles
- 115 to 800 A (AC-3)
- 250 to 1050 A (AC-1)
- Embedded 1 NO + 1 NC auxiliary contacts
- Push-in type terminals for coils & control

#### Remote control

- 24-48 V, 48-130 V, 200-500 V AC/DC coils
- Low consumption coils
- Wide voltage range coils (direct coil control)
- Digital control input (PLC output digital coil control)
- Embedded surge suppressor

#### Diagnostic

- Embedded wear diagnostic
- Embedded control voltages diagnostic
- Self diagnosis function
- Local alarm signaling (LED)
- Remote wear diagnostic signaling kit (accessory)

#### Mounting

- 'Cable memory' adapter enables maintenance without removing power cables and busbar connections.

#### Standards and Certifications

- Multiple standards
- International certifications

## > TeSys Giga High power contactors – Standard version



115...225 A



265...500 A



630...800 A

#### Power & control

- 3 or 4 power poles
- 115 to 800 A (AC-3)
- 250 to 1050 A (AC-1)
- Embedded 1 NO + 1 NC auxiliary contacts
- Push-in type terminals for coils & control

#### Remote control

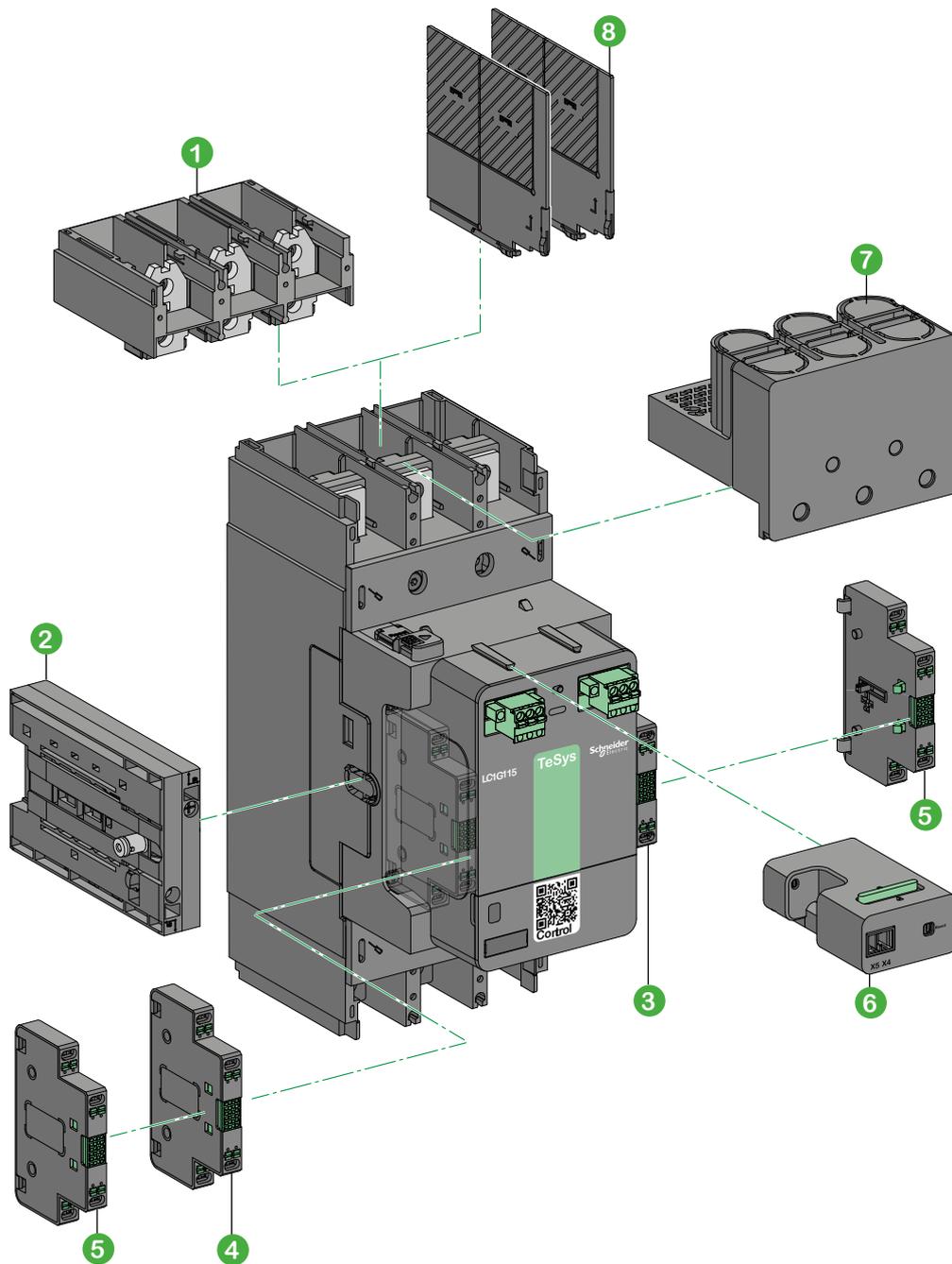
- 48-130 V, 100-250 V AC/DC coils
- Wide voltage range coils (direct coil control)
- Embedded surge-suppressor

#### Diagnostic

- Embedded wear diagnostic
- Embedded control voltages diagnostic
- Self diagnosis function
- Local alarm signaling (LED)

#### Certifications

- Multiple standards
- International certifications



High power contactors

- ① Cable memory kit **LA9G3102**, is always supplied along with Advanced version, and it's an optional accessory for Standard version.
- ② Mechanical interlock **LA9G970**, can be installed on either side of the contactor.
- ③ Auxiliary contact module **LAG8N113P** (1 NO + 1 NC) supplied with LC1G contactor.
- ④ Auxiliary contact modules **LAG8N113P / LAG8N203P**, can be installed on the contactor lateral faces <sup>(1)</sup>
- ⑤ Auxiliary contact modules **LAG8N113 / LAG8N203**, can be installed on either side as 2<sup>nd</sup> set of contacts.
- ⑥ Remote Wear Diagnostic (RWD) Module **LA9GRD01 / LA9GRD10**, can be installed and used only in Advanced version.
- ⑦ IP20 terminal shroud **LA9G3701**.
- ⑧ Phase separators **LA9G3801**, please refer to pages A2/14 to A2/18 for complete details of available accessories.

**Note:** a maximum of 2 auxiliary contact modules can be mounted on each side of the contactor.  
<sup>(1)</sup> Does not increase the contactor dimensions when fitted on both sides.

High power  
contactors

# TeSys Control

## Giga High power contactors – Advanced – 3-pole and 4-pole

### Product references

#### TeSys Giga 3-pole Advanced contactors – For motor control (115 to 800 A)



Motor ratings (kW)  $\theta \leq 60^\circ\text{C}$

IEC																				
AC-3							AC-3e <sup>(1)</sup>							AC-4						
230 V	400 V	415 V	440 V	500 V	690 V	1000 V	230 V	400 V	415 V	440 V	500 V	690 V	1000 V	230 V	400 V	415 V	440 V	500 V	690 V	1000 V
kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW						
30	55	55	75	75	75	-	30	55	55	75	75	75	-	30	55	55	65	65	75	-
37	75	75	90	90	90	75	37	75	75	90	90	90	75	37	75	75	80	90	90	75
55	90	90	110	110	110	75	55	90	90	110	110	110	75	55	90	90	100	110	110	75
55	110	110	132	132	160	132	55	110	110	132	132	160	132	55	110	110	129	132	132	110
75	132	132	160	160	200	160	75	132	132	160	160	200	160	75	132	132	150	160	160	160
90	160	160	200	200	220	185	90	160	160	185	200	220	185	90	160	160	185	200	220	185
110	200	200	250	250	315	220	110	200	200	250	250	315	220	110	200	200	220	250	315	220
160	250	250	315	355	355	335	147	250	250	280	315	355	335	150	250	250	295	295	355	280
200	335	375	400	400	500	450	180	315	335	355	375	500	450	180	315	335	355	375	450	355
250	450	450	450	500	560	450	200	335	355	375	425	560	450	200	375	355	375	400	475	400



Double Page Table

#### TeSys Giga 3-pole and 4-pole Advanced contactors for load control only (non motor) – (250 to 1050 A)



High power contactors

Maximum current (A) ( $\theta \leq 40^\circ\text{C}$ )	General purpose continuous current (A)	Reference					
		Advanced version contactors					
		AC/DC coil voltage					
IEC	UL	3-pole			4-pole		
AC-1		24...48 V	48...130 V	200...500 V	24...48 V	48...130 V	200...500 V
250	210	LC1G115BEEA	LC1G115EHEA	LC1G115LSEA	LC1G1154BEEA	LC1G1154EHEA	LC1G1154LSEA
275	230	LC1G150BEEA	LC1G150EHEA	LC1G150LSEA	LC1G1504BEEA	LC1G1504EHEA	LC1G1504LSEA
305	250	LC1G185BEEA	LC1G185EHEA	LC1G185LSEA	LC1G1854BEEA	LC1G1854EHEA	LC1G1854LSEA
330	290	LC1G225BEEA	LC1G225EHEA	LC1G225LSEA	LC1G2254BEEA	LC1G2254EHEA	LC1G2254LSEA
385	340	LC1G265BEEA	LC1G265EHEA	LC1G265LSEA	LC1G2654BEEA	LC1G2654EHEA	LC1G2654LSEA
440	390	LC1G330BEEA	LC1G330EHEA	LC1G330LSEA	LC1G3304BEEA	LC1G3304EHEA	LC1G3304LSEA
550	490	LC1G400BEEA	LC1G400EHEA	LC1G400LSEA	LC1G4004BEEA	LC1G4004EHEA	LC1G4004LSEA
700	630	LC1G500BEEA	LC1G500EHEA	LC1G500LSEA	LC1G5004BEEA	LC1G5004EHEA	LC1G5004LSEA
1050	850	-	LC1G630EHEA	LC1G630LSEA	-	LC1G6304EHEA	LC1G6304LSEA
1050	900	-	LC1G800EHEA	LC1G800LSEA	-	LC1G8004EHEA	LC1G8004LSEA

(1) Switching of IE3/IE4 high efficiency squirrel-cage motors.

# TeSys Control

## Giga High power contactors – Advanced – 3-pole and 4-pole

### Product references

	Motor ratings (HP) UL- 3-phase				Reference Advanced version contactors AC/DC coil voltage 3-pole		
	200/208 V	230/240 V	460/480 V	575/600 V	24-48 V	48-130 V	200-500 V
	30	40	75	100	LC1G115BEEA	LC1G115EHEA	LC1G115LSEA
40	50	100	125	LC1G150BEEA	LC1G150EHEA	LC1G150LSEA	
50	60	125	150	LC1G185BEEA	LC1G185EHEA	LC1G185LSEA	
60	75	150	150	LC1G225BEEA	LC1G225EHEA	LC1G225LSEA	
75	100	200	200	LC1G265BEEA	LC1G265EHEA	LC1G265LSEA	
100	125	250	300	LC1G330BEEA	LC1G330EHEA	LC1G330LSEA	
125	150	300	400	LC1G400BEEA	LC1G400EHEA	LC1G400LSEA	
150	200	400	450	LC1G500BEEA	LC1G500EHEA	LC1G500LSEA	
250	300	600	700	-	LC1G630EHEA	LC1G630LSEA	
300	350	700	800	-	LC1G800EHEA	LC1G800LSEA	

High power  
contactors

# TeSys Control

## Giga High power contactors – Standard – 3-pole and 4-pole

### Product references

#### TeSys Giga 3-pole Standard contactors – For motor control – (115 to 800 A)



Motor ratings (kW)  $\theta \leq 60^\circ\text{C}$

IEC																				
AC-3							AC-3e <sup>(1)</sup>							AC-4						
230 V	400 V	415 V	440 V	500 V	690 V	1000 V	230 V	400 V	415 V	440 V	500 V	690 V	1000 V	230 V	400 V	415 V	440 V	500 V	690 V	1000 V
kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW						
30	55	55	75	75	75	-	30	55	55	75	75	75	-	30	55	55	65	65	75	-
37	75	75	90	90	90	75	37	75	75	90	90	90	75	37	75	75	80	90	90	75
55	90	90	110	110	110	75	55	90	90	110	110	110	75	55	90	90	100	110	110	75
55	110	110	132	132	160	132	55	110	110	132	132	160	132	55	110	110	129	132	132	110
75	132	132	160	160	200	160	75	132	132	160	160	200	160	75	132	132	150	160	160	160
90	160	160	200	200	220	185	90	160	160	185	200	220	185	90	160	160	185	200	220	185
110	200	200	250	250	315	220	110	200	200	250	250	315	220	110	200	200	220	250	315	220
160	250	250	315	355	355	335	147	250	250	280	315	355	335	150	250	250	295	295	355	280
200	335	375	400	400	500	450	180	315	335	355	375	500	450	180	315	335	355	375	450	355
250	450	450	450	500	560	450	200	335	355	375	425	560	450	200	375	355	375	400	475	400



Double Page Table

#### TeSys Giga 3-pole and 4-pole Standard contactors for load control only (non motor) – (250 to 1050 A)



High power contactors

Maximum current (A) ( $\theta \leq 40^\circ\text{C}$ )	General purpose continuous current (A)	Reference Standard version contactors			
		AC/DC coil voltage		4-pole	
		3-pole		100...250 V	
IEC	UL	48...130 V	100...250 V	48...130 V	100...250 V
AC-1					
250	210	LC1G115EHEN	LC1G115KUEH	LC1G1154EHEN	LC1G1154KUEH
275	230	LC1G150EHEN	LC1G150KUEH	LC1G1504EHEN	LC1G1504KUEH
305	250	LC1G185EHEN	LC1G185KUEH	LC1G1854EHEN	LC1G1854KUEH
330	290	LC1G225EHEN	LC1G225KUEH	LC1G2254EHEN	LC1G2254KUEH
385	340	LC1G265EHEN	LC1G265KUEH	LC1G2654EHEN	LC1G2654KUEH
440	390	LC1G330EHEN	LC1G330KUEH	LC1G3304EHEN	LC1G3304KUEH
550	490	LC1G400EHEN	LC1G400KUEH	LC1G4004EHEN	LC1G4004KUEH
700	630	LC1G500EHEN	LC1G500KUEH	LC1G5004EHEN	LC1G5004KUEH
1050	850	LC1G630EHEN	LC1G630KUEH	LC1G6304EHEN	LC1G6304KUEH
1050	900	LC1G800EHEN	LC1G800KUEH	LC1G8004EHEN	LC1G8004KUEH

(1) Switching of IE3/IE4 high efficiency squirrel-cage motors.

# TeSys Control

## Giga High power contactors – Standard – 3-pole and 4-pole

### Product references

	Motor ratings (HP) UL- 3-phase				Reference Standard version contactors AC/DC coil voltage 3-pole	
	200/208 V	230/240 V	460/480 V	575/600 V	48-130 V	100-250 V
	30	40	75	100	LC1G115EHEN	LC1G115KUEN
	40	50	100	125	LC1G150EHEN	LC1G150KUEN
	50	60	125	150	LC1G185EHEN	LC1G185KUEN
	60	75	150	150	LC1G225EHEN	LC1G225KUEN
	75	100	200	200	LC1G265EHEN	LC1G265KUEN
	100	125	250	300	LC1G330EHEN	LC1G330KUEN
	125	150	300	400	LC1G400EHEN	LC1G400KUEN
	150	200	400	450	LC1G500EHEN	LC1G500KUEN
	250	300	600	700	LC1G630EHEN	LC1G630KUEN
	300	350	700	800	LC1G800EHEN	LC1G800KUEN

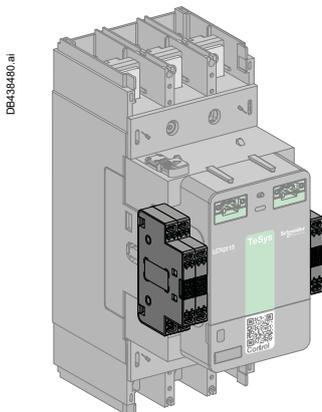
# TeSys Control

## Giga High power contactors – Auxiliary contact modules

### Product references



LAG8N113



Side mounting – maximum 2 per side

### Auxiliary contact modules

Auxiliary contacts give an indication of the contactor status. They can be used for remote visual signaling, alarming, electrical locking, relay activation, etc...

Each contactor is equipped with 1 NO + 1 NC auxiliary contact block as standard.

■ Mechanically linked mirror contacts

The NC contact of the auxiliary contact block is mirror contact in conformity to IEC 60947-4-1 and it is mechanically linked to reliably represent the state of the main power contacts and wherever auxiliary contact state reliability is essential. The main power contacts and the NC of the auxiliary contact can't be closed at the same time.

Types of connections:

■ Push-in type.

### Wide contactor compatibility

TeSys Giga auxiliary contact module is compatible with the whole range of TeSys Giga High power contactors .

Each TeSys Giga Contactor can be equipped with up to 4 auxiliary contact modules.

### Electrical characteristics

Characteristics	
Rated thermal current (A)	10
Minimum load	1 mA at 17 V DC
Contact reliability	Failure rate <10 <sup>-8</sup>

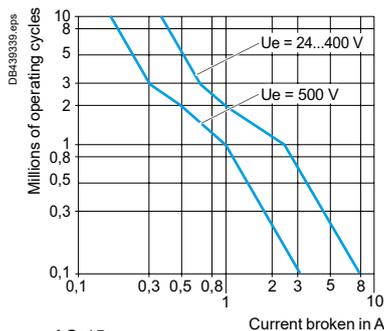
### Operational power of contacts conforming to IEC 60947-5-1 - Electrical durability

#### Category AC-15

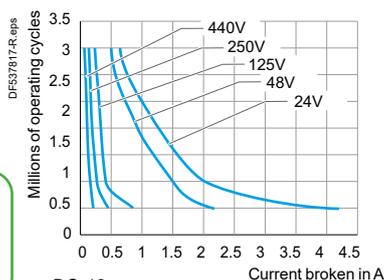
Operating cycles	V	24	48	115	230	400	500
1 million	VA	60	120	280	560	800	500
2 million	VA	24	48	115	230	400	250
3 million	VA	16	32	80	160	280	150

#### Category DC-13

Operating cycles	V	24	48	125	250	440
0.5 million	W	100	100	105	110	88
1 million	W	48	72	54	54	55
2 million	W	24	36	38	38	39
3 million	W	16	24	25	25	33



AC-15



DC-13

### Connector characteristics

Push-in connection - Dual input			mm <sup>2</sup>	Min/max c.s.a.
Flexible cable per input	1 conductor with cable end		0.75...2.5	
	2 conductors with Dual Sleeve		0.75...2.5	
Stripping length			10	
Solid cable per input	1 conductor		0.75...2.5	
	Stripping length		12	

### Auxiliary contact modules

Description	Terminal type	Position	Type of contacts	Sold in lots of	Reference
Auxiliary contact module	Push-in	1 <sup>st</sup> left or right	1 NO + 1 NC	1	LAG8N113P <sup>(1)</sup>
			2 NO	1	LAG8N203P
		2 <sup>nd</sup> left or right	1 NO + 1 NC	1	LAG8N113
			2 NO	1	LAG8N203

<sup>(1)</sup> Always supplied with TeSys Giga LC1G contactors, fitted to the right side lateral face.

High power contactors

## Power terminals

### ‘Cable Memory’ connection blocks

Cables or busbars can be connected to the contactor by means of the optional cable memory connection blocks. When the contactor is removed for maintenance, the cables or busbars remain connected to these connection blocks, making reinstallation faster and easier.



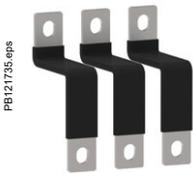
LA9G3101

Cable memory <sup>(1)</sup>			
Description	Compatible with contactors	Quantity Set of	Reference
'Cable memory' for 3-pole contactors – for holding cables in place	LC1G115...LC1G225	2	LA9G3101
	LC1G265...LC1G500	2	LA9G3102
	LC1G630...LC1G800	2	LA9G3103
'Cable memory' for 4-pole contactors – for holding cables in place	LC1G115...LC1G225	2	LA9G4101
	LC1G265...LC1G500	2	LA9G4102
	LC1G630...LC1G800	2	LA9G4103

(1) 'Cable memory' connection blocks are always supplied with Advanced contactor version.

### Flexible terminal extensions

Flexible connecting bars to connect TeSys Giga High power contactors with MCCBs mounted in the same plane and orientation. These bars can be used along with Advanced or Standard version contactors. They help to get a quick and easy connection between contactor and MCCB with saving in installation time.



LA9G3111

'Flexible terminal extensions' for MCCBs				
Description	Compatible with contactors	To connect with NSX/NS MCCBs	Quantity Set of	Reference
Flexible terminal extensions 3-pole	LC1G115...LC1G225	NSX100...NSX250	3	LA9G3111
	LC1G265...LC1G500	NSX400...NSX630	3	LA9G3112
	LC1G630...LC1G800	NS800...NS1250	3	LA9G3113
Flexible terminal extensions 4-pole	LC1G115...LC1G225	NSX100...NSX250	4	LA9G4111
	LC1G265...LC1G500	NSX400...NSX630	4	LA9G4112
	LC1G630...LC1G800	NS800...NS1250	4	LA9G4113

### Straight terminal extensions



LA9G3601

Description	Suitable for	Compatible with contactors	Quantity Set of	Reference
Straight terminal extension	3P	LC1G115...LC1G225	3	LA9G3601
		LC1G265...LC1G500	3	LA9G3602
		LC1G630...LC1G800	3	LA9G3603
	4P	LC1G115...LC1G225	4	LA9G4601
		LC1G265...LC1G500	4	LA9G4602
		LC1G630...LC1G800	4	LA9G4603

### Right angled terminal extensions



LA9G3682

Description	Suitable for	Compatible with contactors	Quantity Set of	Reference
Right angled side terminal extension	3P	LC1G115...LC1G225	3	LA9G3661
		LC1G265...LC1G500	3	LA9G3662
		LC1G630...LC1G800	3	LA9G3663
Right angled large terminal extension	3P	LC1G115...LC1G225	3	LA9G3671
		LC1G265...LC1G500	3	LA9G3672
		LC1G630...LC1G800	3	LA9G3673
Right angled rear terminal extension	3P	LC1G115...LC1G225	3	LA9G3681
		LC1G265...LC1G500	3	LA9G3682
		LC1G630...LC1G800	3	LA9G3683

### Edgewise terminal extensions



LA9G3631

Description	Suitable for	Compatible with contactors	Quantity Set of	Reference
Edgewise terminal extension	3P	LC1G115...LC1G225	3	LA9G3631
		LC1G265...LC1G500	3	LA9G3632
		LC1G630...LC1G800	3	LA9G3633
	4P	LC1G115...LC1G225	4	LA9G4631
		LC1G265...LC1G500	4	LA9G4632
		LC1G630...LC1G800	4	LA9G4633

# TeSys Control

## Giga High power contactors – Power wiring accessories

### Product references

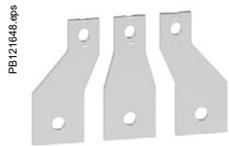


LA9G3611

### Power terminals

#### Spreader kits

Description	Suitable for	Compatible with contactors	Increase of Pole pitch	Quantity Set of	Reference
Spreader kits	3P	LC1G115...LC1G225	35 to 45 mm	3	LA9G3611
		LC1G265...LC1G500	45 to 70 mm	3	LA9G3612
	4P	LC1G115...LC1G225	35 to 45 mm	4	LA9G4611
		LC1G265...LC1G500	45 to 70 mm	4	LA9G4612



LA9G3613

#### Terminal extensions for larger power connections

Description	Suitable for	Compatible with contactors	Power connection size	Quantity Set of	Reference
Terminal connections	3P	LC1G400...LC1G500	50 mm width	3	LA9G3613
		LC1G630...LC1G800	80 mm width	3	LA9G3614
	4P	LC1G400...LC1G500	50 mm width	4	LA9G4613
		LC1G630...LC1G800	80 mm width	4	LA9G4614



LA9G4711

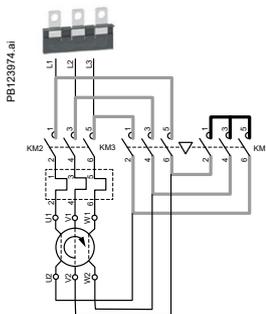
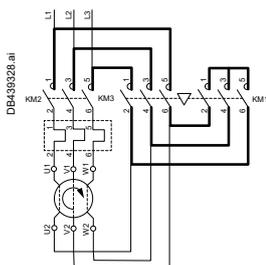
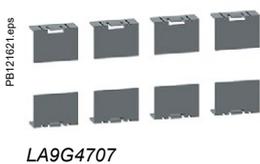
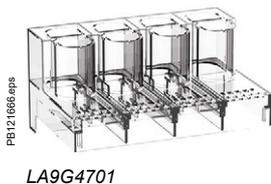
#### Spreader kits suitable for box type connectors

Description	Suitable for	Compatible with contactors	Increase of Pole pitch	Suitable for box connectors	Quantity Set of	Reference
Spreader kits for box connectors	3P	LC1G115...LC1G225	35 to 45 mm	DZ2FJ1/FH1 & AL400	3	LA9G3711
		LC1G265...LC1G500	45 to 70 mm	DZ2FJ1/FK1 & AL400/AL600	3	LA9G3712
		LC1G630...LC1G800	70 to 80 mm	DZ2FL1/FK1 & Type S/AL600	3	LA9G3714
	4P	LC1G115...LC1G225	35 to 45 mm	DZ2FJ1/FH1 & AL400	4	LA9G4711
		LC1G265...LC1G500	45 to 70 mm	DZ2FJ1/FK1 & AL400/AL600	4	LA9G4712
		LC1G630...LC1G800	70 to 80 mm	DZ2FL1/FK1 & Type S/AL600	4	LA9G4714

# TeSys Control

## Giga High power contactors – Power wiring accessories

### Product references



## Power terminal accessories

### Phase separators

Description	Suitable for	Compatible with contactors	Quantity Set of	Reference
Phase separators <sup>(1)</sup>	3P	LC1G115...LC1G800	2	LA9G3801
	4P	LC1G115...LC1G800	3	LA9G4801
	3P – with 50/80 mm spreaders	LC1G400...LC1G800	2	LA9G3803 <sup>(2)</sup>
	4P – with 50/80 mm spreaders	LC1G400...LC1G800	3	LA9G4803 <sup>(3)</sup>

### Terminal shrouds

Description	Compatible with contactors	Quantity Set of	Reference	
			3P	4P
IP 20 Terminal shrouds <sup>(1)</sup>	LC1G115...LC1G225	1	LA9G3701	LA9G4701
	LC1G265...LC1G500	1	LA9G3702	LA9G4702
	LC1G630...LC1G800	1	LA9G3703	LA9G4703

## IP20 Lug cover for connection kits <sup>(4)</sup>

Lug covers are used along with IP 20 terminal shrouds and Star-Delta, reverser and changeover connection kit assemblies to improve insulation of the coupling bars and achieve IP 20 for the complete assembly.

### IP20 Lug cover for connection kits

Description	Suitable for	Compatible with contactors	Quantity Set of	Reference
IP 20 Lug cover	3P	LC1G115...LC1G800 <sup>(4)</sup>	6	LA9G3707
	4P	LC1G115...LC1G800 <sup>(4)</sup>	8	LA9G4707

### Lugs for cable set

Description	Compatible with contactors	Cable section	Reference	
			Set of 3 for 3P	Set of 4 for 4P
Lugs for cable	LC1G115...LC1G225	120 mm <sup>2</sup>	LV429252	LV429256
	LC1G115...LC1G225	150 mm <sup>2</sup>	LV429253	LV429257
	LC1G115...LC1G225	185 mm <sup>2</sup>	LV429254	LV429258
	LC1G265...LC1G500	240 mm <sup>2</sup>	LV432500	LV432501
	LC1G265...LC1G500	300 mm <sup>2</sup>	LV432502	LV432503

### Star-Delta (Wye-Delta) connection kits <sup>(5)</sup>

Description	Suitable for	for Line (KM2) and Delta (KM3) contactor	+ Star contactor (KM1)	Reference
Connection kit: bars for Line-Delta-Star contactor assembly	3P	LC1G115...LC1G225	LC1G115...LC1G225	LA9GQQ330
		LC1G265...LC1G500	LC1G115...LC1G225	LA9GSQ330
		LC1G265...LC1G500	LC1G265...LC1G500	LA9GSS330
		LC1G630...LC1G800	LC1G265...LC1G500	LA9GTS330
with cable memory kit	3P	LC1G630...LC1G800	LC1G630...LC1G800	LA9GTT330
		LC1G265...LC1G500	LC1G115...LC1G225	LA9GSQ331
		LC1G630...LC1G800	LC1G265...LC1G500	LA9GTS331

### Star (Wye) connection kits <sup>(5)</sup>

Description	Suitable for	Star contactor (KM1)	Reference
Connection kit for star contactor	3P	LC1G115...LC1G225	LA9GQW601
		LC1G265...LC1G500	LA9GSW601
		LC1G630...LC1G800	LA9GTW601

**Note:** RE17RMMWS timer to be used for Star-Delta starter application.

<sup>(1)</sup> Either phase separators or terminal shrouds can only be mounted. Phase separators or terminal shrouds are mandatory for operational voltage,  $U_e \geq 690$  V.

<sup>(2)</sup> To be used with LA9G3613 and LA9G3614.

<sup>(3)</sup> To be used with LA9G4613 and LA9G4614.

<sup>(4)</sup> LC1G630 & LC1G800 contactors need 2 pcs. of IP20 covers per pole. So 2 x LA9G3707 or 2 x LA9G4707 need to be ordered for these contactor assemblies. Please contact your technical support for more details.

<sup>(5)</sup> UL listed.

<sup>(6)</sup> Maximum 3 auxiliary contacts can be installed between 2 contactors with mechanical interlock kit.

High power contactors

# TeSys Control

## Giga High power contactors – Power wiring accessories

### Product references



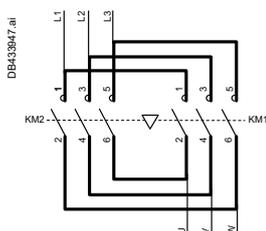
#### Mechanical interlock

Description	Suitable for	Compatible with contactors Contactor 1	Contactor 2	Reference
Mechanical interlock between contactors (6)	3P and 4P	LC1G115...225	LC1G115...225	LA9G970
		LC1G265...500	LC1G265...500	LA9G970
		LC1G265...500	LC1G115...225	LA9G971
3P	LC1G630...800	LC1G265...500	LA9G972	
	LC1G630...800	LC1G630...800	LA9G973	



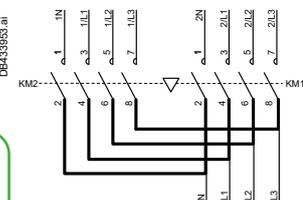
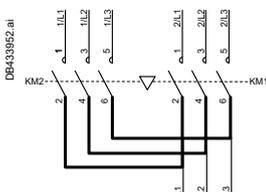
#### Reverser connection kits

Description	Suitable for	Compatible with contactors	Reference
Connection kit: bars for reverser contactor assembly	3P	LC1G115...LC1G225	LA9G3760
		LC1G265...LC1G500	LA9G3761
		LC1G630...LC1G800	LA9G3762



#### Changeover connection kits

Description	Suitable for	Compatible with contactors	Reference
Connection kit: bars for changeover contactor assembly	3P	LC1G115...LC1G225	LA9G3750
		LC1G265...LC1G500	LA9G3751
		LC1G630...LC1G800	LA9G3752
	4P	LC1G115...LC1G225	LA9G4750
		LC1G265...LC1G500	LA9G4751
		LC1G630...LC1G800	LA9G4752



High power contactors



#### Modular timer relay for Star-Delta starters

- 8 A, 1 CO, multifunction with spring terminals, 12...240 V AC/DC
- 17.5 mm width same size as a 1-pole circuit breaker
- Covers 0.1 s to 100 h timing
- Transparent cover to protect settings from being tampered
- Multi functional gives flexibility in maintenance

#### Modular timer relay for Star-Delta starters

Description	Suitable for	Compatible with contactors	Reference
Harmony, Modular timing relay	3P	LC1G115...LC1G800	RE17RMMWS

# TeSys Control

## Giga High power contactors – Mounting accessories

### Product references



PB121741.eps

LA9GRFB1



PB121742.eps

LA9GRFB2

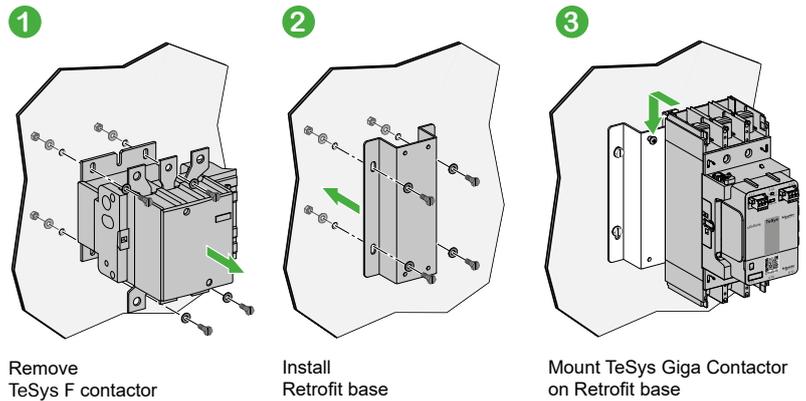


PB121743.eps

LA9GRFB3

### Retrofit bases

- Suitable for 3 pole contactors
- Retrofit bases to replace similar ratings of TeSys F contactors with TeSys Giga High power contactors
- Enables quick and simple replacement in the existing installation
- 3 references to cover ranges from LC1F115 to F800



TeSys Giga retrofit bases are designed for integrating new TeSys Giga High power contactors into installations using TeSys F contactors. The retrofit bases help reduce replacement and reinstallation time when you upgrade your system with the new range of contactors. The bases come in two frame sizes.

#### Retrofit bases

Description		Reference
Accessory used to replace	LC1F115-225 replaced by LC1G115-225	LA9GRFB1
TeSys F contactors	LC1F265-500 replaced by LC1G265-500	LA9GRFB2
	LC1F630-800 replaced by LC1G630-800	LA9GRFB3

High power contactors



LX1G3QLSEA

## Control module

**Wide band electronic control**  
**24 V...500 V 50/60 Hz or DC control input**  
**Advanced and standard versions**  
**Accessible from the front for easy and quick replacement**

The control module is needed for the operation of the contactor. It performs the following functions:

- proper functioning of contactor based on the input control voltage
- monitoring and diagnostics of the pole condition
- generation of signaling commands.

The range of control modules is organized:

- per contactor size and for each rating,
- per control voltage range.

Each module has connectors for connecting:

- the coil control A1, A2 circuit & PLC output control (advanced version)
- pole status and diagnostic signaling circuits.



Control module replacement on a 3-pole contactor

Control modules					
Description	For contactors	References per voltage range (V AC/DC)	References per voltage range		
			24 - 48	48 - 130	200 - 500
Control modules for Advanced contactors	3-pole	LC1G115...LC1G225	LX1G3QBEEA	LX1G3QEHEA	LX1G3QLSEA
		LC1G265...LC1G330	LX1G3RBEEA	LX1G3REHEA	LX1G3RLSEA
		LC1G400...LC1G500	LX1G3SBEEA	LX1G3SEHEA	LX1G3SLSEA
		LC1G630...LC1G800	-	LX1G3TEHEA	LX1G3TLSEA
Control modules for Advanced contactors	4-pole	LC1G115...LC1G225	LX1G4QBEEA	LX1G4QEHEA	LX1G4QLSEA
		LC1G265...LC1G330	LX1G4RBEEA	LX1G4REHEA	LX1G4RLSEA
		LC1G400...LC1G500	LX1G4SBEEA	LX1G4SEHEA	LX1G4SLSEA
		LC1G630...LC1G800	-	LX1G4TEHEA	LX1G4TLSEA
Control modules for Standard contactors	3-pole	LC1G115...LC1G225	LX1G3QEHEN	LX1G3QKUEN	
		LC1G265...LC1G330	LX1G3REHEN	LX1G3RKUEN	
		LC1G400...LC1G500	LX1G3SEHEN	LX1G3SKUEN	
		LC1G630...LC1G800	LX1G3TEHEN	LX1G3TKUEN	
	4-pole	LC1G115...LC1G225	LX1G4QEHEN	LX1G4QKUEN	
		LC1G265...LC1G330	LX1G4REHEN	LX1G4RKUEN	
		LC1G400...LC1G500	LX1G4SEHEN	LX1G4SKUEN	
		LC1G630...LC1G800	LX1G4TEHEN	LX1G4TKUEN	

Connector for control module		
Description	Reference	
Push-in terminal connector for control module	LA9G81	

Remote wear diagnostic (RWD) module		
Description	Reference	
Remote wear diagnostic module for TeSys Giga Contactor - 1 NO	LA9GRD10 <sup>(1)</sup>	
Remote wear diagnostic module for TeSys Giga Contactor - 1 NC	LA9GRD01 <sup>(1)</sup>	

<sup>(1)</sup> Remote Wear Diagnostic (RWD) Module, can be installed and used only on Advanced version.

High power contactors



LA9G81



LA9GRD10

PB121588.eps



Switching module kits

## Replaceable switching modules

- Innovative contact switching modules for TeSys Giga High power contactors
- Replace worn-out poles with a new switching module in minutes, without having to disassemble the whole product
- No special tools are needed for the replacement.

### TeSys Giga - Switching modules for TeSys Giga High power contactors , Advanced and Standard versions

Description	For contactors	Quantity Set of	Reference
3 or 4 switching module kits	3-pole	LC1G115...LC1G225	3 LA9G3QA
		LC1G265...LC1G330	3 LA9G3RA
		LC1G400...LC1G500	3 LA9G3SA
		LC1G630...LC1G800	3 LA9G3TA
	4-pole	LC1G115...LC1G225	4 LA9G4QA
		LC1G265...LC1G330	4 LA9G4RA
		LC1G400...LC1G500	4 LA9G4SA
		LC1G630...LC1G800	4 LA9G4TA

**Note:** In the event of replacement, replace all switching modules. After replacement, change the position of RESET button on the control module from A to B or B to A.

# TeSys Control

## Giga High power contactors

### Product references

LA9G3101	LA9G3TA	LA9GTT330	LC1G265BEEA	LC1G800LSEA
LA9G3102	LA9G4101	LAG8N113	LC1G265EHEA	LV429252
LA9G3103	LA9G4102	LAG8N113P	LC1G265EHEN	LV429253
LA9G3111	LA9G4103	LAG8N203	LC1G265KUEN	LV429254
LA9G3112	LA9G4111	LAG8N203P	LC1G265LSEA	LV429256
LA9G3113	LA9G4112	LC1G1154BEEA	LC1G3304BEEA	LV429257
LA9G3601	LA9G4113	LC1G1154EHEA	LC1G3304EHEA	LV429258
LA9G3602	LA9G4601	LC1G1154EHEN	LC1G3304EHEN	LV432500
LA9G3603	LA9G4602	LC1G1154KUEN	LC1G3304KUEN	LV432501
LA9G3611	LA9G4603	LC1G1154LSEA	LC1G3304LSEA	LV432502
LA9G3612	LA9G4611	LC1G115BEEA	LC1G330BEEA	LV432503
LA9G3613	LA9G4612	LC1G115EHEA	LC1G330EHEA	LX1G3QBEEA
LA9G3614	LA9G4613	LC1G115EHEN	LC1G330EHEN	LX1G3QEHEA
LA9G3631	LA9G4614	LC1G115KUEN	LC1G330KUEN	LX1G3QEHEN
LA9G3632	LA9G4631	LC1G115LSEA	LC1G330LSEA	LX1G3QKUEN
LA9G3633	LA9G4632	LC1G1504BEEA	LC1G4004BEEA	LX1G3QLSEA
LA9G3650	LA9G4633	LC1G1504EHEA	LC1G4004EHEA	LX1G3RBEEA
LA9G3651	LA9G4701	LC1G1504EHEN	LC1G4004EHEN	LX1G3REHEA
LA9G3652	LA9G4702	LC1G1504KUEN	LC1G4004KUEN	LX1G3REHEN
LA9G3653	LA9G4703	LC1G1504LSEA	LC1G4004LSEA	LX1G3RKUEN
LA9G3661	LA9G4707	LC1G150BEEA	LC1G400BEEA	LX1G3RLSEA
LA9G3662	LA9G4711	LC1G150EHEA	LC1G400EHEA	LX1G3SBEEA
LA9G3663	LA9G4712	LC1G150EHEN	LC1G400EHEN	LX1G3SEHEA
LA9G3671	LA9G4714	LC1G150KUEN	LC1G400KUEN	LX1G3SEHEN
LA9G3672	LA9G4750	LC1G150LSEA	LC1G400LSEA	LX1G3SKUEN
LA9G3673	LA9G4751	LC1G1854BEEA	LC1G5004BEEA	LX1G3SLSEA
LA9G3681	LA9G4752	LC1G1854EHEA	LC1G5004EHEA	LX1G3TEHEA
LA9G3682	LA9G4801	LC1G1854EHEN	LC1G5004EHEN	LX1G3TEHEN
LA9G3683	LA9G4803	LC1G1854KUEN	LC1G5004KUEN	LX1G3TKUEN
LA9G3701	LA9G4QA	LC1G1854LSEA	LC1G5004LSEA	LX1G3TLSEA
LA9G3702	LA9G4RA	LC1G185BEEA	LC1G500BEEA	LX1G4QBEEA
LA9G3703	LA9G4SA	LC1G185EHEA	LC1G500EHEA	LX1G4QEHEA
LA9G3704	LA9G4TA	LC1G185EHEN	LC1G500EHEN	LX1G4QEHEN
LA9G3705	LA9G81	LC1G185KUEN	LC1G500KUEN	LX1G4QKUEN
LA9G3706	LA9G82	LC1G185LSEA	LC1G500LSEA	LX1G4QLSEA
LA9G3707	LA9G970	LC1G2254BEEA	LC1G6304EHEA	LX1G4RBEEA
LA9G3711	LA9G971	LC1G2254EHEA	LC1G6304EHEN	LX1G4REHEA
LA9G3712	LA9G972	LC1G2254EHEN	LC1G6304KUEN	LX1G4REHEN
LA9G3714	LA9G973	LC1G2254KUEN	LC1G6304LSEA	LX1G4RKUEN
LA9G3750	LA9GQQ330	LC1G2254LSEA	LC1G630EHEA	LX1G4RLSEA
LA9G3751	LA9GRD01	LC1G225BEEA	LC1G630EHEN	LX1G4SBEEA
LA9G3752	LA9GRD10	LC1G225EHEA	LC1G630KUEN	LX1G4SEHEA
LA9G3760	LA9GRFB1	LC1G225EHEN	LC1G630LSEA	LX1G4SEHEN
LA9G3761	LA9GRFB2	LC1G225KUEN	LC1G8004EHEA	LX1G4SKUEN
LA9G3762	LA9GRFB3	LC1G225LSEA	LC1G8004EHEN	LX1G4SLSEA
LA9G3801	LA9GSQ330	LC1G2654BEEA	LC1G8004KUEN	LX1G4TEHEA
LA9G3803	LA9GSQ331	LC1G2654EHEA	LC1G8004LSEA	LX1G4TEHEN
LA9G3QA	LA9GSS330	LC1G2654EHEN	LC1G800EHEA	LX1G4TKUEN
LA9G3RA	LA9GTS330	LC1G2654KUEN	LC1G800EHEN	LX1G4TLSEA
LA9G3SA	LA9GTS331	LC1G2654LSEA	LC1G800KUEN	

This document is current. Click on the product reference to get the most recent availability status (hyperlink to [se.com](https://www.se.com) product datasheet). If your product variant is no longer available, please consult your distributor or regional sales office.

# Technical Data for Designers

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TeSys Giga High power contactors:

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- > Dimensions .....A2/30 to A2/33
- > Diagrams .....A2/34

High power  
contactors

High power  
contactors

# TeSys Control

## Giga High power contactors

### Characteristics

Environment					LC1G115... 225	LC1G265... 500	LC1G630... 800
Contactor type							
Rated insulation voltage (Ui)	Conforming to IEC 60947-4-1. Over-voltage category III, degree of pollution: 3		<b>V</b>	1000	1000	1000	
Rated impulse withstand voltage (Uimp)	Coil not connected to the power circuit		<b>kV</b>	8	8	8	
Conforming to standards				IEC/EN 60947-4-1, UL 60947-4-1, CSA C22.2 n° 60947-4-1, JIS C 8201-4-1, GB/T 14048.4, IEC 60721-3-3 3C3			
Product certifications				CB scheme, CCC, cULus, UKCA, EAC, EU-RO-MR by DNV			
Electromagnetic compatibility				IEC 60947-4-1			
Immunity				Following IEC 60947-4-1 Table 16			
Emission				Environment A according to IEC 60947-4-1			
Immunity to radiated electromagnetic interference				20 V/m according to IEC/EN 61000-4-3			
Voltage sag immunity (in complete product as well)				Conforming to SEMI-F47			
Degree of protection	Conforming to IEC 60529 / VDE 0106			IP2x with terminal shrouds LA9G37●●/ LA9G47●●			
Climatic withstand				According to IACS E10			
Ambient air temperature around the device	Storage		<b>°C</b>	-60...+80			
	Operation		<b>°C</b>	-25...+60			
	Permissible at Uc		<b>°C</b>	-40...+70			
Net weight	Standard	3P	<b>kg</b>	3.5	7	14.2	
		4P	<b>kg</b>	4.2	8.3	18	
	Advanced	3P	<b>kg</b>	4.1	7.8	17.3	
		4P	<b>kg</b>	5.1	8.9	22	
Maximum operating altitude	Without derating		<b>m</b>	3000			
Operating positions	Without derating						
	With derating <sup>(1)</sup>						
Shock resistance 1/2 sine wave = 11 ms Conforming to IEC 60068-2-27	Contactor open			10 gn	10 gn	10 gn	
	Contactor closed			15 gn	15 gn	15 gn	
Vibration resistance 5...300 Hz Conforming to IEC 60068-2-6	Contactor open			2 gn	2 gn	2 gn	
	Contactor closed			4 gn	4 gn	4 gn	

<sup>(1)</sup> For derating details, please contact technical support.

High power contactors

# TeSys Control

## Giga High power contactors

### Characteristics

Pole characteristics				LC1G115	LC1G150	LC1G185	LC1G225	
Contactor type								
Number of poles				3 or 4	3 or 4	3 or 4	3 or 4	
Rated operational current (I <sub>e</sub> )	U <sub>e</sub> ≤ 440 V	In AC-3 / AC-3e, θ ≤ 60 °C	<b>A</b>	115 / 115	150 / 145	185 / 177	225 / 209	
	U <sub>e</sub> ≤ 1000 V	In AC-1, θ ≤ 40 °C	<b>A</b>	250	275	305	330	
Rated operational voltage (U <sub>e</sub> )		Up to	<b>V</b>	1000 <sup>(1)</sup>	1000	1000	1000	
Rated frequency (f) <sup>(2)</sup>			<b>Hz</b>	50 / 60	50 / 60	50 / 60	50 / 60	
Frequency operating limits		With derating <sup>(3)</sup>	<b>Hz</b>	16 2/3 ...400	16 2/3 ...400	16 2/3 ...400	16 2/3 ...400	
Conventional thermal current		θ ≤ 40 °C	<b>A</b>	250	275	305	330	
Rated making capacity		I rms conforming to IEC 60947-4-1	<b>A</b>	Making current: 10 x I in AC-3 or 12 x I in AC-4 Making current: 13 x I in AC-3e				
Rated breaking capacity		I rms conforming to IEC 60947-4-1	<b>A</b>	Making and breaking current: 8 x I in AC-3 or 10 x I in AC-4 Making and breaking current: 8.5 x I in AC-3e				
Maximum permissible current No current flowing for previous 60 minutes, at θ ≤ 40 °C		For 10 s	<b>A</b>	1100	1200	1500	1800	
		For 30 s	<b>A</b>	640	700	920	1000	
		For 1 min	<b>A</b>	520	600	740	850	
		For 3 min	<b>A</b>	400	450	500	560	
		For 10 min	<b>A</b>	320	350	400	440	
Short-circuit protection by fuses		Fuses for motor: type aM - U <sub>e</sub> ≤ 440 V	<b>A</b>	125	160	200	250	
		Fuses for motor: type aM - U <sub>e</sub> ≤ 690 V	<b>A</b>	125	160	160	200	
		Fuses for general application: type gG - U <sub>e</sub> ≤ 690 V	<b>A</b>	315	315	315	400	
Average impedance per pole		At I <sub>th</sub> and 50 Hz	<b>mΩ</b>	0.18	0.18	0.17	0.15	
Power dissipation per pole for the above operational currents		AC-3 / AC-3e	<b>W</b>	3	5	6	8	
		AC-1	<b>W</b>	10	10	20	20	
Connection				Maximum c.s.a.				
		Bar	Number of bars		2	2	2	2
			Bar	<b>mm</b>	25 x 6	25 x 6	25 x 6	25 x 6
			Cable with lug	<b>mm<sup>2</sup></b>	185	185	185	185
			Cable with connector	<b>mm<sup>2</sup></b>	185	185	185	185
	Bolt diameter	<b>mm</b>	Ø8.5	Ø8.5	Ø8.5	Ø8.5		
Tightening torque		Power circuit connections	<b>N.m</b>	18	18	18	18	

<sup>(1)</sup> U<sub>e</sub> ≤ 1000 V for AC-1 / U<sub>e</sub> ≤ 690 V for AC-3 / AC-3e / AC-4.

<sup>(2)</sup> Please consult your technical support team for application with frequencies other than 50/60 Hz.

<sup>(3)</sup> For derating details, please contact technical support.

# TeSys Control

## Giga High power contactors

### Characteristics

Pole characteristics					
LC1G265	LC1G330	LC1G400	LC1G500	LC1G630	LC1G800
3 or 4	3 or 4	3 or 4	3 or 4	3 or 4	3 or 4
265 / 255	330 / 294	400 / 391	500 / 437	630 / 555	800 / 587
385	440	550	700	1050	1050
1000	1000	1000	1000	1000	1000
50 / 60	50 / 60	50 / 60	50 / 60	50 / 60	50 / 60
16 2/3...400	16 2/3...400	16 2/3...400	16 2/3...400	16 2/3...400	16 2/3...400
385	440	550	700	1050	1050
Making current: 10 x I in AC-3 or 12 x I in AC-4 Making current: 13 x I in AC-3e					
Making and breaking current: 8 x I in AC-3 or 10 x I in AC-4 Making and breaking current: 8.5 x I in AC-3e					
2200	2650	3600	4000	5050	5500
1230	1800	2400	2800	4400	4600
950	1300	1700	2200	3400	3600
620	900	1200	1500	2200	2600
480	750	1000	1200	1600	1700
315	400	500	500	630	800
250	250	315	400	500	630
400	500	630	800	1250	1250
0.144	0.144	0.1	0.08	0.065	0.065
11	16	16	20	26	42
20	30	30	40	70	70
Maximum c.s.a.					
2	2	2	2	2	2
30 x 10	30 x 10	30 x 10	30 x 10	50 x 10	50 x 10
240	2 x 150	2 x 185	2 x 240	-	-
240	-	-	-	-	-
Ø10.6	Ø10.6	Ø10.6	Ø10.6	Ø13	Ø13
35	35	35	35	58	58

# TeSys Control

## Giga High power contactors

### Characteristics

TeSys Giga High power contactors - Advanced version - Control circuit characteristics with AC/DC coils								
Contactor type				LC1G115...225	LC1G265...330	LC1G400...500	LC1G630...800	
Rated control circuit voltage (Uc)				<b>V</b>	24...48 AC/DC, 48...130 AC/DC, 200...500 AC/DC <sup>(1)</sup>			
Control voltage limits (θ ≤ 60 °C)	AC input (50/60 Hz) <sup>(2)</sup> /DC input	Operation			0.8 Uc Min...1.1 Uc Max			
		Drop-out			0.1 Uc Max...0.45 Uc Min			
Inputs compatibility PLC digital output 24 V DC Type 3 IEC61131-2	Off-state		<b>V DC</b>	0...5				
	On-state		<b>V DC</b>	11...30				
Average consumption at 20 °C and at Uc (3 and 4-pole contactors)	24...48 V AC/DC coil (BEE)	Inrush	50/60 Hz coil	<b>VA</b>	290	540	490	-
			DC	<b>W</b>	220	380	350	-
		Sealed	50/60 Hz coil	<b>VA</b>	10	17.9	17.9	-
			DC	<b>W</b>	5.7	6.4	6	-
	48...130 V AC/DC coil (EHE)	Inrush	50/60, 400 Hz coil	<b>VA</b>	260	430	450	560
			DC	<b>W</b>	190	360	360	440
		Sealed	50/60, 400 Hz coil	<b>VA</b>	8.9	11.7	11.7	12
			DC	<b>W</b>	5	9	8.3	8.8
	200...500 V AC/DC coil (LSE)	Inrush	50/60 Hz coil	<b>VA</b>	295	530	535	670
			DC	<b>W</b>	215	300	300	390
		Sealed	50/60 Hz coil	<b>VA</b>	13	16.1	15.4	17
			DC	<b>W</b>	8	9	8.6	11
Heat dissipation				<b>W</b>	4...5	5...6	5...6	5...6
Operating time	Closing "C"		<b>ms</b>	40...70	40...70	40...70	40...70	
	Opening "O"		<b>ms</b>	15...50	15...50	15...50	15...50	
Mechanical durability at Uc		In millions of operating cycles (max)			8	8	8	5
Maximum operating rate at ambient temperature ≤ 60 °C	In operating cycles per hour	AC-1			300	300	300	300
		AC-3/AC-3e			600	600	600	600
		AC-4			150	150	60	60
Coil control and PLC input connection (Push-in type)					Min/max c.s.a.			
Flexible cable	1 conductor with cable end		<b>mm<sup>2</sup></b> 	0.25...2.5	0.25...2.5	0.25...2.5	0.25...2.5	
	2 conductors with Dual Sleeve		<b>mm<sup>2</sup></b> 	0.5...1	0.5...1	0.5...1	0.5...1	
Solid cable	1 conductor		<b>mm<sup>2</sup></b> 	0.2...2.5	0.2...2.5	0.2...2.5	0.2...2.5	
	Stripping length		<b>mm</b> 	12	12	12	12	

<sup>(1)</sup> 24...48 V AC/DC control voltage option is available for LC1G115...LC1G500 ratings.

<sup>(2)</sup> AC input (50/60, 400 Hz)/DC input is available for EHE advanced coil.

# TeSys Control

## Giga High power contactors

### Characteristics

TeSys Giga High power contactors - Standard version control circuit characteristics with AC/DC coils						LC1G115...225	LC1G265...330	LC1G400...500	LC1G630...800
Contactor type					V	48...130 AC/DC, 100...250 AC/DC			
Control voltage limits ( $\theta \leq 60^\circ\text{C}$ )	AC input (50/60 Hz) /DC input	Operation			0.8 Uc Min...1.1 Uc Max <sup>(1)</sup>				
		Drop-out			0.1 Uc Max...0.45 Uc Min				
Average consumption at 20 °C and at Uc (3 and 4-pole contactors)	48...130 V AC/DC coil (EHE)	Inrush	50/60 Hz coil	VA	640	780	965	990	
			DC	W	445	695	760	790	
		Sealed	50/60 Hz coil	VA	18.7	17.6	17.6	18.7	
			DC	W	7.8	7.8	7.8	9.5	
	100...250 V AC/DC coil (KUE)	Inrush	50/60 Hz coil	VA	540	700	750	800	
			DC	W	380	645	660	680	
		Sealed	50/60 Hz coil	VA	12.4	15	15.5	15	
			DC	W	7.8	9.1	9.3	9.5	
Heat dissipation			W	5...6	6...7	6...7	6...7		
Operating time	Closing "C"			ms	40...70	40...70	40...70	40...70	
	Opening "O"			ms	15...50	15...50	15...50	15...50	
Mechanical durability at Uc	In millions of operating cycles (max)				8	8	8	5	
Maximum operating rate at ambient temperature $\leq 60^\circ\text{C}$	In operating cycles per hour	AC-1			300	300	300	300	
		AC-3/AC-3e			600	600	600	600	
		AC-4			150	150	60	60	
Coil control connection (Push-in type)						Min/max c.s.a.			
Flexible cable	1 conductor with cable end			mm <sup>2</sup> 	0.25...2.5	0.25...2.5	0.25...2.5	0.25...2.5	
	2 conductors with Dual Sleeve			mm <sup>2</sup> 	0.5...1	0.5...1	0.5...1	0.5...1	
Solid cable	1 conductor			mm <sup>2</sup> 	0.2...2.5	0.2...2.5	0.2...2.5	0.2...2.5	
	Stripping length			mm 	12	12	12	12	

(1) 0.7 Uc Min for 110 V DC input (with KUE coil).

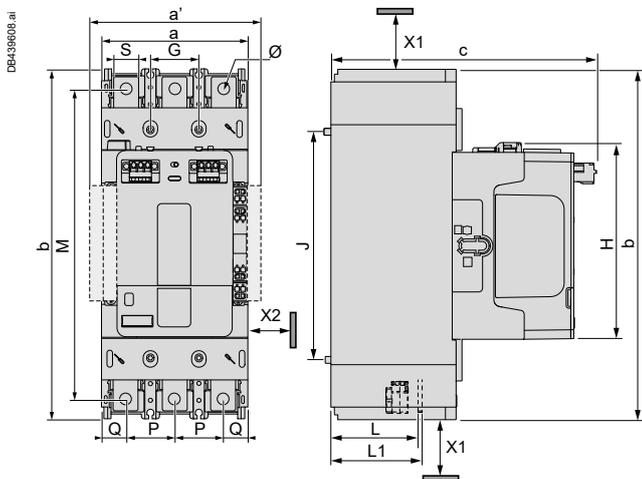
# TeSys Control

## Giga High power contactors

### Dimensions

#### Advanced LC1G115...225 TeSys Giga High power contactors

3-pole



All dimensions are in mm.

a	b	c	G	J	M	H	L	L1	P	Q	S	Ø
107.7	254.7	192.9	35	166	225.7	144.1	63.9	66.9	35	18.9	18	8.5

X1 (mm) = Minimum electrical clearance.

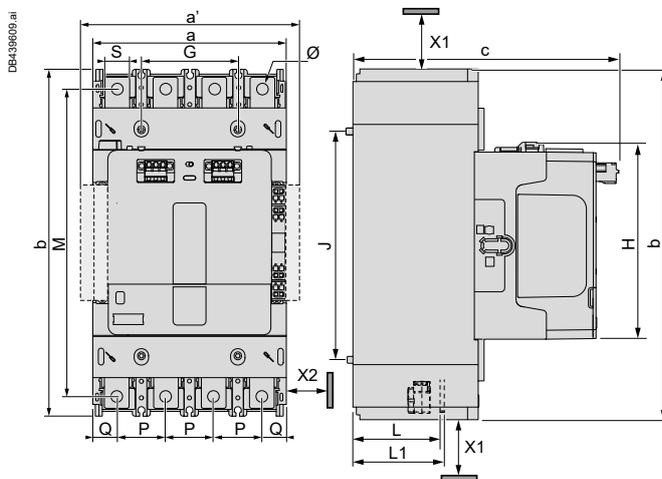
LC1G115...800, up to 1000 V: 40 mm

X2 (mm) = Minimum electrical clearance according to operating voltage inside metallic cabinets / adjacent installation of contactors.

LC1G115...800: 5 mm.

a' = a + 20 mm with additional auxiliary contact blocks on both sides (externally).

4-pole

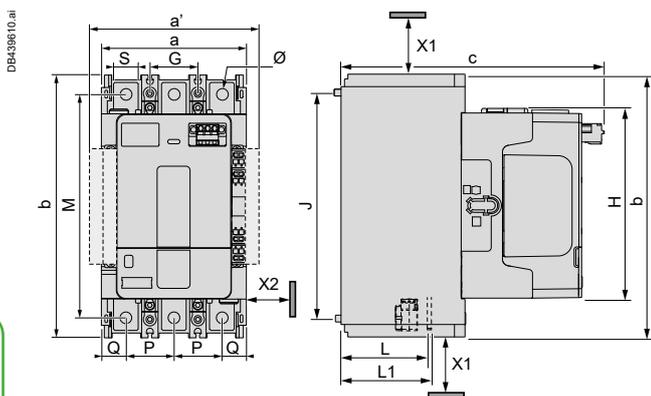


All dimensions are in mm.

a	b	c	G	J	M	H	L	L1	P	Q	S	Ø
142.7	254.7	192.9	70	166	225.7	144.1	63.9	66.9	35	18.9	18	8.5

#### Standard LC1G115...225 TeSys Giga High power contactors

3-pole



All dimensions are in mm.

a	b	c	G	J	M	H	L	L1	P	Q	S	Ø
107.7	193	192.9	35	166	164.1	139.4	66.9	69.9	35	18.9	18	8.5

X1 (mm) = Minimum electrical clearance.

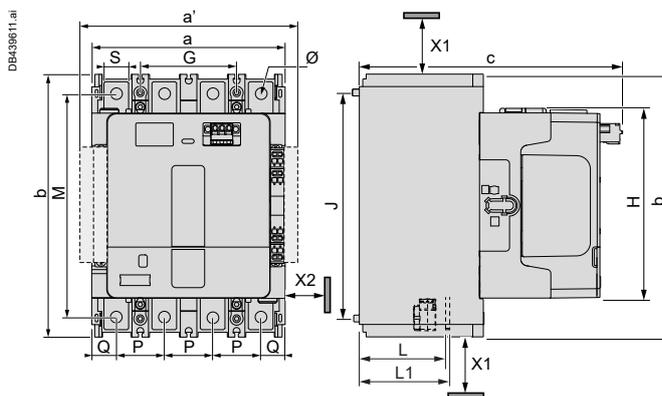
LC1G115...800, up to 1000 V: 40 mm

X2 (mm) = Minimum electrical clearance according to operating voltage inside metallic cabinets / adjacent installation of contactors.

LC1G115...800: 5 mm.

a' = a + 20 mm with additional auxiliary contact blocks on both sides (externally).

4-pole



All dimensions are in mm.

a	b	c	G	J	M	H	L	L1	P	Q	S	Ø
142.7	193	192.9	70	166	164.1	139.4	66.9	69.9	35	18.9	18	8.5

High power contactors

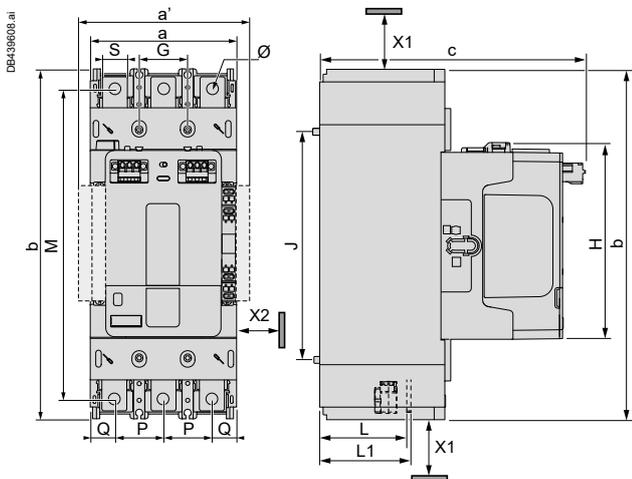
# TeSys Control

## Giga High power contactors

### Dimensions

#### Advanced LC1G265...500 TeSys Giga High power contactors

3-pole



All dimensions are in mm.

a	b	c	G	J	M	H	L	L1	P	Q	S	Ø
140	290	225.5	45	187	261.6	166.7	72.8	78.8	45	25	30	10.6

X1 (mm) = Minimum electrical clearance.

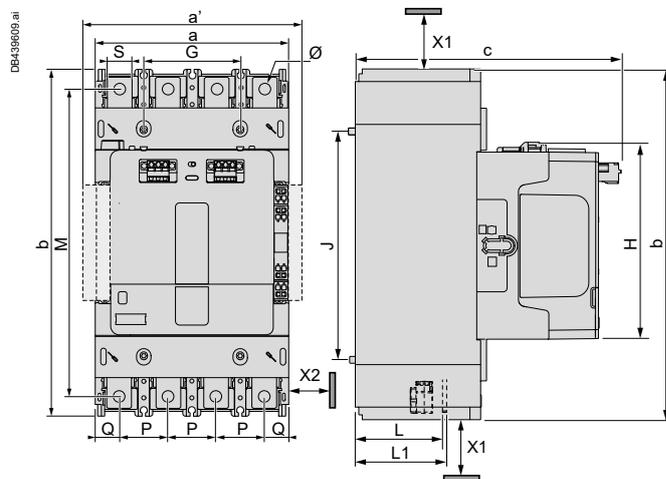
LC1G115...800, up to 1000 V: 40 mm.

X2 (mm) = Minimum electrical clearance according to operating voltage inside metallic cabinets / adjacent installation of contactors.

LC1G115...800: 5 mm.

a' = a + 20 mm with additional auxiliary contact blocks on both sides (externally).

4-pole

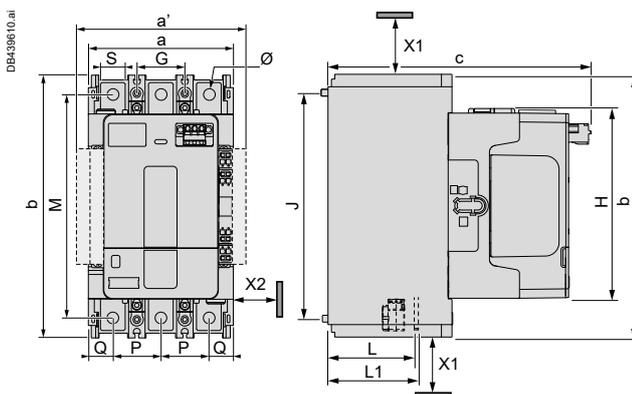


All dimensions are in mm.

a	b	c	G	J	M	H	L	L1	P	Q	S	Ø
185	290	225.5	90	187	261.6	166.7	72.8	78.8	45	25	30	10.6

#### Standard LC1G265...500 TeSys Giga High power contactors

3-pole



All dimensions are in mm.

a	b	c	G	J	M	H	L	L1
140	225	225.5	45	187	197	161.8	78.8	LC1G265-330: 81.8
								LC1G400: 82.8
								LC1G500: 83.8

P	Q	S	Ø
45	25	30	10.6

X1 (mm) = Minimum electrical clearance.

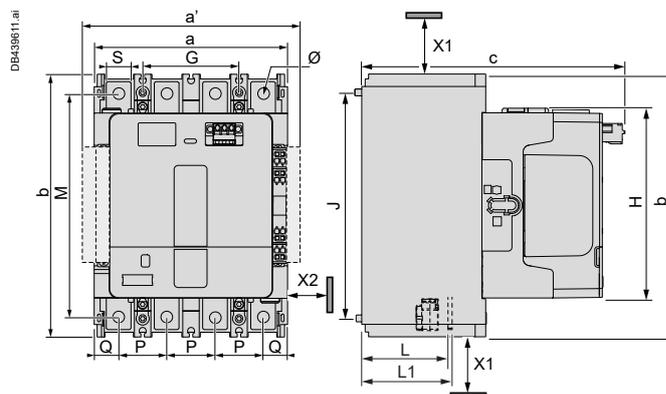
LC1G115...800, up to 1000 V: 40 mm.

X2 (mm) = Minimum electrical clearance according to operating voltage inside metallic cabinets / adjacent installation of contactors.

LC1G115...800: 5 mm.

a' = a + 20 mm with additional auxiliary contact blocks on both sides (externally).

4-pole



All dimensions are in mm.

a	b	c	G	J	M	H	L	L1
185	225	225.5	90	187	197	161.8	78.8	LC1G265-330: 81.8
								LC1G400: 82.8
								LC1G500: 83.8

P	Q	S	Ø
45	25	30	10.6

High power contactors

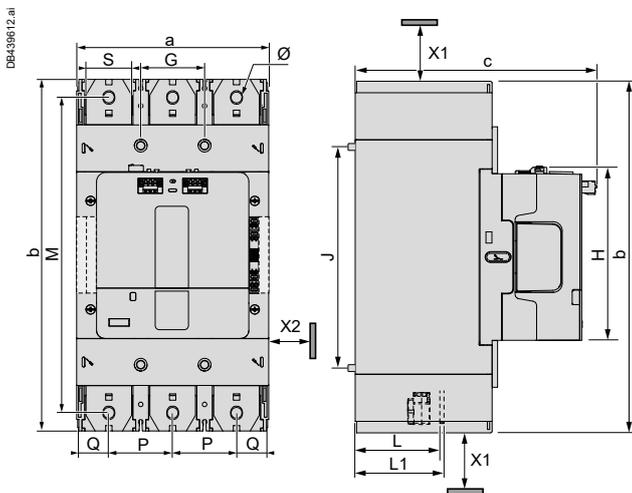
# TeSys Control

## Giga High power contactors

### Dimensions

#### Advanced LC1G630...800 TeSys Giga High power contactors

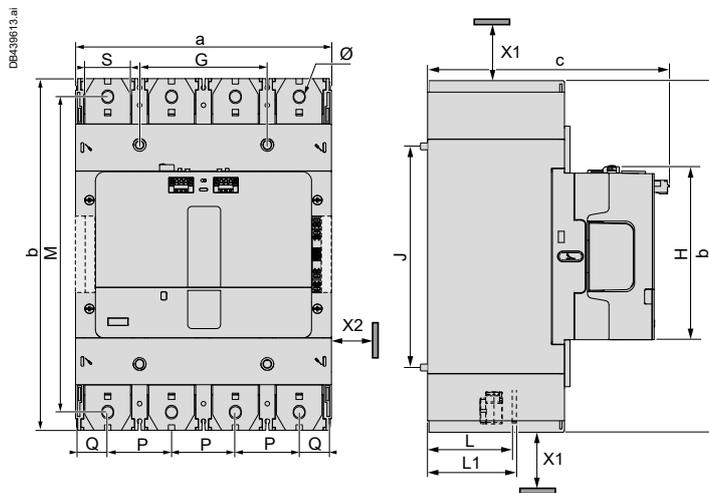
3-pole



All dimensions are in mm.

a	b	c	G	J	M	H	L	L1	P	Q	S	Ø
210.6	388.5	265.6	70	242	348.5	192.1	99	107	70	35.3	48	13

4-pole



All dimensions are in mm.

a	b	c	G	J	M	H	L	L1	P	Q	S	Ø
280.6	388.5	265.6	140	242	348.5	192.1	99	107	70	35.3	48	13

X1 (mm) = Minimum electrical clearance.

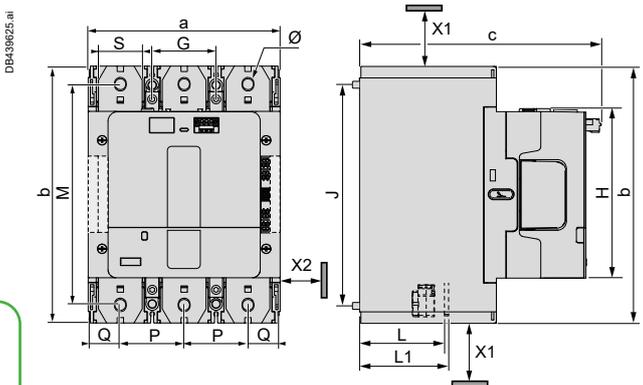
LC1G115...800, up to 1000 V: 40 mm.

X2 (mm) = Minimum electrical clearance according to operating voltage inside metallic cabinets / adjacent installation of contactors.

LC1G115...800: 5 mm.

#### Standard LC1G630...800 TeSys Giga High power contactors

3-pole



All dimensions are in mm.

a	b	c	G	J	M	H	L	L1	P	Q	S	Ø
210.6	284	265.6	70	242	244	187.4	107	113	70	35.3	48	13

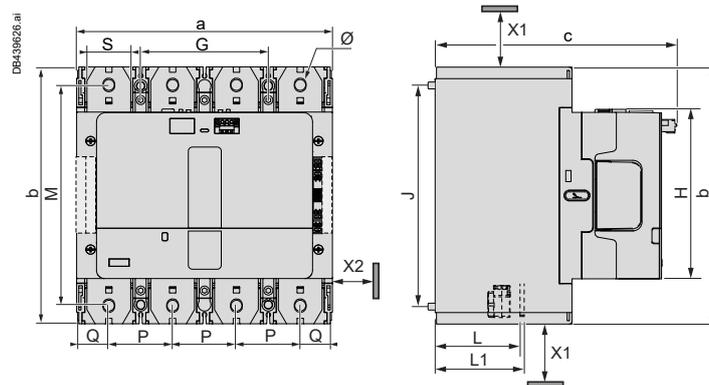
X1 (mm) = Minimum electrical clearance.

LC1G115...800, up to 1000 V: 40 mm.

X2 (mm) = Minimum electrical clearance according to operating voltage inside metallic cabinets / adjacent installation of contactors.

LC1G115...800: 5 mm.

4-pole



All dimensions are in mm.

a	b	c	G	J	M	H	L	L1	P	Q	S	Ø
280.6	284	265.6	140	242	244	187.4	107	113	70	35.3	48	13

High power contactors

# TeSys Control

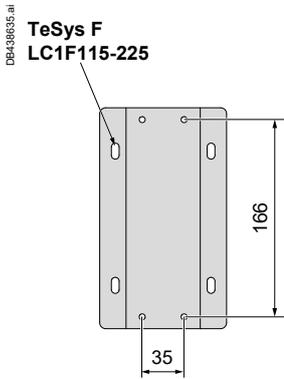
## Retrofit base plates to replace TeSys F contactors

### Dimensions/mounting

#### Dimensions

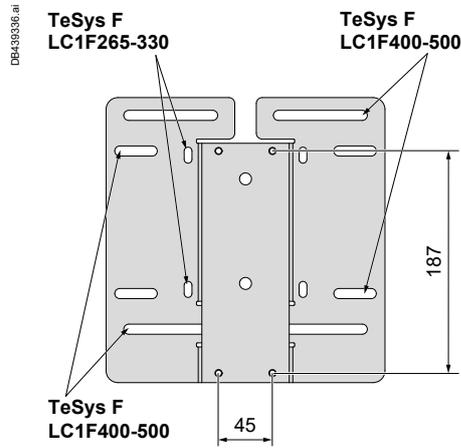
##### LA9GRFB1

For replacement of F115-225



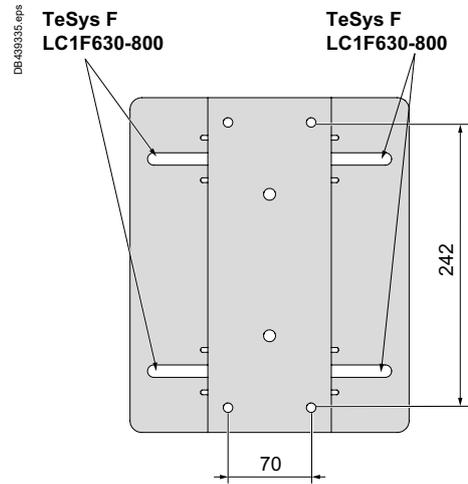
##### LA9GRFB2

For replacement of F265-500



##### LA9GRFB3

For replacement of F630 and F800



**Note:** All dimensions are in mm.

High power  
contactors

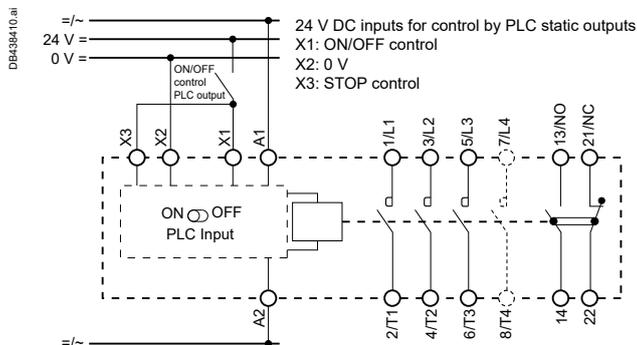
# TeSys Control

## Giga High power contactors

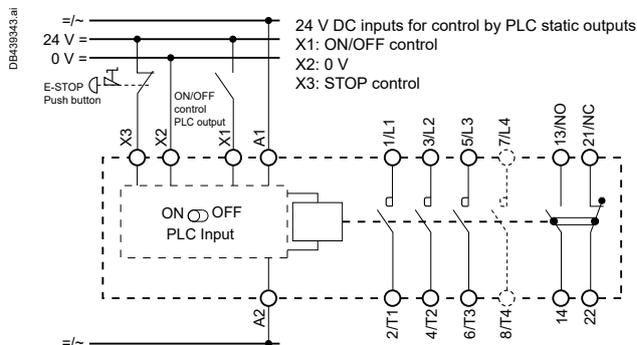
### Diagrams

#### TeSys Giga High power contactors

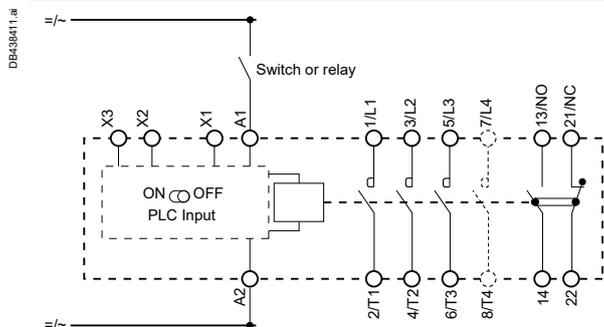
##### Advanced version - ON/OFF control by PLC



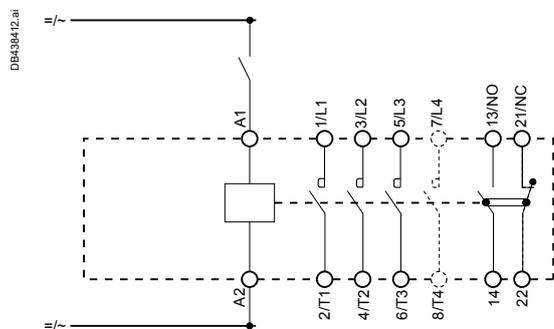
##### Advanced version - ON/OFF control by PLC in safety application



##### Advanced version - Control by switch



##### Standard version

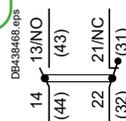


#### Add-on blocks

##### Instantaneous auxiliary contacts

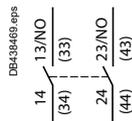
1 N/O + 1 N/C

**LAG8N113P**  
mirror contacts



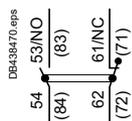
2 N/O

**LAG8N203P**



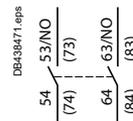
1 N/O + 1 N/C

**LAG8N113**  
mirror contacts



2 N/O

**LAG8N203**



(1) Terminal numbers in brackets refer to blocks when mounted upside down, on left-hand side of contactor.

High power contactors

### Suggested coordinated Direct-On-Line motor starter combinations

Fuses + Contactor + Overload relay	A3/2
Thermal magnetic circuit breaker + Contactor	A3/7
Magnetic circuit breaker + Contactor + Overload relay	A3/13

### Suggested coordinated Star-Delta motor starter combinations

Fuses + Contactors + Overload relay	A3/20
Thermal magnetic circuit breaker + Contactors	A3/23
Magnetic circuit breaker + Contactors + Overload relay	A3/28

### Suggested coordinated TeSys T motor management system combinations

Fuses + Contactor + TeSys T + Current transformers	A3/31
Magnetic circuit breaker + Contactor + TeSys T + Current transformers	A3/33
Star-Delta motor starters - Common circuit diagrams	A3/36

### Suggested coordinated Resistive load protection and control

Fuses + Contactors	A3/38
Thermal magnetic circuit breakers + Contactors	A3/39

### Contactors: Selection tables per category<sup>(1)</sup>

Contactor selection tables per utilisation category	A3/40
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### Contactors for specific application – Design information

Selection of contactors for lighting circuits	A3/52
Selection of contactors for heating circuits	A3/58
Selection of contactors for switching primaries of 3P LV/LV transformers	A3/60
Selection of contactors for switching 3P capacitor banks (factor correction)	A3/61
Selection of contactors auto-transformer starting	A3/62
Contactors for rotor circuits of slip-ring motors	A3/63

<sup>(1)</sup> For full definition of contactor utilization categories, please refer to page A5/105 of TeSys Catalog, ref. MKTED210011EN.

0.06 to 90 kW at 400/415, 440 and 500 V: type 2 coordination											
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e						Switch-disconnector Reference <sup>(1)</sup>	aM fuses		Contactor Reference <sup>(2)</sup>	Thermal overload relay class 10	
400/415 V		440 V		500 V			Size	Rating A		Reference	Reference
P kW	I <sub>e</sub> A	P kW	I <sub>e</sub> A	P kW	I <sub>e</sub> A						
0.06	0.2	0.06	0.19	–	–	GS1DD	10 x 38	2	LC1D09	LRD02	0.16...0.25
–	–	0.09	0.28	–	–	GS1DD	10 x 38	2	LC1D09	LRD03	0.25...0.4
0.09	0.3	–	–	–	–	–	–	–	–	–	–
0.12	0.44	0.12	0.37	–	–	GS1DD	10 x 38	2	LC1D09	LRD04	0.4...0.63
0.18	0.6	0.18	0.55	–	–	–	–	–	–	–	–
–	–	0.25	0.76	–	–	GS1DD	10 x 38	2	LC1D09	LRD05	0.63...1
0.25	0.85	–	–	0.37	0.88	–	–	–	–	–	–
0.37	1.1	0.37	1	0.55	1.2	–	–	–	–	–	–
0.55	1.5	0.55	1.36	0.75	1.5	GS1DD	10 x 38	2	LC1D09	LRD06	1...1.7
0.75	1.9	0.75	1.7	–	–	–	–	–	–	–	–
–	–	1.1	2.5	1.1	2.2	GS1DD	10 x 38	4	LC1D09	LRD07	1.6...2.5
1.1	2.7	–	–	1.5	2.9	–	–	–	–	–	–
1.5	3.6	1.5	3.3	2.2	3.9	GS1DD	10 x 38	4	LC1D09	LRD08	2.5...4
2.2	4.9	2.2	4.5	3	5.2	GS1DD	10 x 38	6	LC1D09	LRD10	4...6
3	6.5	3	5.9	4	6.8	GS1DD	10 x 38	8	LC1D09	LRD12	5.5...8
4	8.5	4	7.8	5.5	9.2	GS1DD	10 x 38	10	LC1D09	LRD14	7...10
5.5	11.5	5.5	10.5	7.5	12.4	GS1DD	10 x 38	16	LC1D12	LRD16	9...13
7.5	15.5	7.5	14.1	9	14.7	GS1DD	10 x 38	16	LC1D18	LRD21	12...18
–	–	9	16.7	–	–	GS●F	14 x 51	20	LC1D25	LRD21	12...18
9	18.4	11	20	11	17.6	–	–	–	–	–	–
11	22	–	–	15	23	GS●F	14 x 51	25	LC1D25	LRD22	16...24
15	29	15	27	18.5	28	GS●F	14 x 51	32	LC1D32	LRD32	23...32
18.5	35	18.5	32	22	33	GS●F	14 x 51	40	LC1D40A	LRD340	30...40
22	41	22	39	30	44	GS●J	22 x 58	50	LC1D50A	LRD350	37...50
–	–	30	50	–	–	GS●J	22 x 58	80	LC1D65A	LRD365	48...65
–	–	–	–	37	53	GS●J	22 x 58	80	LC1D65A	LRD365	48...65
30	55	37	60	–	–	GS●J	22 x 58	80	LC1D65A	LRD365	48...65
–	–	–	–	45	64	GS●J	22 x 58	80	LC1D95 <sup>(3)</sup>	LRD3361	55...70
37	66	45	73	–	–	GS●J	22 x 58	100	LC1D80 <sup>(3)</sup>	LRD3363	63...80
45	80	–	–	–	–	GS●J	22 x 58	100	LC1D115A	LRD4365	80...104
–	–	–	–	55	78	GS●J	22 x 58	100	LC1D115A	LR9G115	28...115
55	97	55	88.2	75	105.6	GS●L	T0	125	LC1D115A	LR9G115	28...115
75	132	75	125	90	128	GS●L	T0	160	LC1D150A	LR9G225	57...225

(1) GS●: GS1 for direct operator or GS2 for external operator.  
 (2) For reversing operation, replace the prefix LC1 with LC2.  
 (3) Only electromechanical coils are available for this contactor rating.

Coordination and standards

# TeSys

## Complementary technical information

### Coordination: Fuses (NFC, DIN type aM) + Contactor + Overload relay

55 to 335 kW at 400/415 V: type 2 coordination								
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Switch-disconnector	aM fuses		Contactor	Electronic thermal overload relay	
400/415 V			Product type	Size	Rating	Product type	Product type	Ir setting <sup>(1)</sup>
P	I <sub>e</sub>	I <sub>q</sub> (max)						
kW	A	kA			A			A
55	97	80	GS <sub>0</sub> L	0	125	LC1G115	LR9G115	97
75	132	80	GS <sub>0</sub> L	0	160	LC1G150	LR9G225	132
90	160	80	GS <sub>0</sub> N	1	200	LC1G185	LR9G225	160
110	195	80	GS <sub>0</sub> N	1	250	LC1G225	LR9G225	195
132	230	80	GS <sub>0</sub> QQ	2	315	LC1G265	LR9G500	230
160	280	80	GS <sub>0</sub> QQ	2	400	LC1G330	LR9G500	280
200	350	80	GS2S	3	500	LC1G400	LR9G500	350
220	380	80	GS2S	3	500	LC1G500	LR9G500	380
250	430	80	GS2S	3	500	LC1G500	LR9G500	430
315	540	80	GS2S	3	630	LC1G630	LR9G630	540
335	575	80	GS2V	4	800	LC1G630	LR9G630	575

75 to 355 kW at 440 V: type 2 coordination								
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Switch-disconnector	aM fuses		Contactor	Electronic thermal overload relay	
440 V			Product type	Size	Rating	Product type	Product type	Ir setting <sup>(1)</sup>
P	I <sub>e</sub>	I <sub>q</sub> (max)						
kW	A	kA			A			A
75	115	80	GS <sub>0</sub> L	0	125	LC1G115	LR9G115	115
90	145	80	GS <sub>0</sub> L	0	160	LC1G150	LR9G225	145
110	177	80	GS <sub>0</sub> N	1	200	LC1G185	LR9G225	177
132	209	80	GS <sub>0</sub> N	1	250	LC1G225	LR9G225	209
160	255	80	GS <sub>0</sub> QQ	2	315	LC1G265	LR9G500	255
200	318	80	GS <sub>0</sub> QQ	2	400	LC1G330	LR9G500	318
220	343	80	GS2S	3	500	LC1G400	LR9G500	343
250	390	80	GS2S	3	500	LC1G500	LR9G500	390
315	490	80	GS2S	3	500	LC1G500	LR9G500	490
355	554	80	GS2S	3	630	LC1G630	LR9G630	554

65 to 375 kW at 500 V: type 2 coordination								
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Switch-disconnector	aM fuses		Contactor	Electronic thermal overload relay	
500 V			Product type	Size	Rating	Product type	Product type	Ir setting <sup>(1)</sup>
P	I <sub>e</sub>	I <sub>q</sub> (max)						
kW	A	kA			A			A
65	92	80	GS <sub>0</sub> L	0	125	LC1G115	LR9G115	92
90	128	80	GS <sub>0</sub> L	0	160	LC1G150	LR9G225	128
110	156	80	GS <sub>0</sub> N	1	200	LC1G185	LR9G225	156
132	184	80	GS <sub>0</sub> N	1	250	LC1G225	LR9G225	184
160	224	80	GS <sub>0</sub> QQ	2	315	LC1G265	LR9G500	224
200	280	80	GS <sub>0</sub> QQ	2	400	LC1G330	LR9G500	280
250	344	80	GS2S	3	500	LC1G400	LR9G500	344
295	405	80	GS2S	3	500	LC1G500	LR9G500	405
375	516	80	GS2S	3	630	LC1G630	LR9G630	516

<sup>(1)</sup> This setting is a general guidance, Ir should be adjusted according to motor characteristics and conditions of use.

0.75 to 90 kW at 690 V: type 2 coordination								
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Switch-disconnector	aM fuses		Contactor	Thermal overload relay class 10	
P	I <sub>e</sub>		Reference <sup>(1)</sup>	Size	Rating	Reference <sup>(2)</sup>	Reference	Setting range
kW	A				A			A
0.75	1.1		GS●F	14 x 51	2	LC1D09	LRD06	1...1.6
1.1	1.6		GS●F	14 x 51	2	LC1D09	LRD06	1...1.6
1.5	2.2		GS●F	14 x 51	4	LC1D09	LRD07	1.6...2.5
2.2	2.9		GS●F	14 x 51	4	LC1D09	LRD08	2.5...4
3	4		GS●F	14 x 51	6	LC1D09	LRD08	2.5...4
4	5		GS●F	14 x 51	6	LC1D09	LRD10	4...6
5.5	7		GS●F	14 x 51	8	LC1D09	LRD12	5.5...8
7.5	9.3		GS●F	14 x 51	10	LC1D25	LRD16	9...13
11	13		GS●F	14 x 51	16	LC1D25	LRD16	9...13
15	16.5		GS●F	14 x 51	20	LC1D25	LRD22	16...24
18.5	21		GS●F	14 x 51	25	LC1D32	LRD22	16...24
22	25		GS●J	22 x 58	32	LC1D40A	LRD332	23...32
30	33		GS●J	22 x 58	40	LC1D40A	LRD340	30...40
37	40		GS●J	22 x 58	50	LC1D65A	LRD350	37...50
45	49		GS●J	22 x 58	63	LC1D80 <sup>(3)</sup>	LRD3357	37...50
55	57		GS●J	22 x 58	80	LC1D115A	LRD3359 + LA7D3058	48...65
75	77		GS●KK	T00	100	LC1D115A	LRD3363 + LA7D3058	63...80
90	93		GS●KK	T00	125	LC1D150A	LRD4365	80...104

55 to 500 kW at 690 V: type 2 coordination								
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Switch-disconnector	aM fuses		Contactor	Thermal overload relay	
690 V			Product type	Size	Rating	Product type	Product type	I <sub>r</sub> setting <sup>(4)</sup>
P	I <sub>e</sub>	I <sub>q</sub> (max)						
kW	A	kA			A			A
55	57	80	GS●J	22 x 58	80	LC1G115	LR9G225	57
75	77	80	GS●KK	00	100	LC1G115	LR9G225	77
90	93	80	GS●KK	00	125	LC1G150	LR9G225	93
110	113	80	GS●KK	00	160	LC1G185	LR9G225	113
132	134	80	GS●L	0	160	LC1G225	LR9G225	134
160	162	80	GS●N	1	200	LC1G225	LR9G225	162
200	203	80	GS●N	1	250	LC1G265	LR9G500	203
220	223	80	GS●QQ	2	250	LC1G330	LR9G500	223
250	250	80	GS●QQ	2	315	LC1G330	LR9G500	250
315	313	80	GS●QQ	2	400	LC1G400	LR9G500	313
355	354	80	GS●QQ	3	500	LC1G500	LR9G500	354
500	493	80	GS●S	3	630	LC1G630	LR9G630	493

(1) GS●: GS1 for direct operator or GS2 for external operator.

(2) For reversing operation, replace the prefix LC1 with LC2.

(3) Only electromechanical coils are available for this contactor rating.

(4) This setting is a general guidance, I<sub>r</sub> should be adjusted according to motor characteristics and conditions of use.

0.18 to 55 kW at 400/415 and 690 V: type 2 coordination											
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e						Switch- disconnecter	aM fuses		Contactor	Electronic thermal overload relay	
400/415 V			690 V				Reference	Size		Rating	Reference
P	I <sub>e</sub>	I <sub>q</sub>	P	I <sub>e</sub>	I <sub>q</sub>						
kW	A	kA	kW	A	kA			A			A
0.18	0.6	100	–	–	–	GS1DD	10 x 38	2	LC1D09	LR9D02	0.4...2.0
0.25	0.85	100	–	–	–	GS1DD	10 x 38	2	LC1D09	LR9D02	0.4...2.0
0.37	1.1	100	–	–	–	GS1DD	10 x 38	2	LC1D09	LR9D02	0.4...2.0
0.55	1.5	100	–	–	–	GS1DD	10 x 38	2	LC1D09	LR9D02	0.4...2.0
0.75	1.9	100	–	–	–	GS1DD	10 x 38	4	LC1D09	LR9D02	0.4...2.0
1.1	2.7	100	–	–	–	GS1DD	10 x 38	4	LC1D18	LR9D08	1.6...8.0
1.5	3.6	100	–	–	–	GS1DD	10 x 38	4	LC1D18	LR9D08	1.6...8.0
2.2	4.9	100	–	–	–	GS1DD	10 x 38	6	LC1D18	LR9D08	1.6...8.0
3	6.5	100	–	–	–	GS1DD	10 x 38	8	LC1D18	LR9D32	6.4...32
4	8.5	100	–	–	–	GS1DD	10 x 38	10	LC1D18	LR9D32	6.4...32
5.5	11.5	100	–	–	–	GS1DD	10 x 38	16	LC1D25	LR9D32	6.4...32
7.5	15.5	50	–	–	–	GS1DD	10 x 38	16	LC1D25	LR9D32	6.4...32
11	22	50	–	–	–	GS●F	14 x 51	25	LC1D25	LR9D32	6.4...32
15	29	50	–	–	–	GS●J	22 x 58	32	LC1D65A	LR9D110S	22...110
18.5	35	50	–	–	–	GS●J	22 x 58	40	LC1D65A	LR9D110S	22...110
22	41	50	–	–	–	GS●J	22 x 58	50	LC1D65A	LR9D110S	22...110
45 <sup>(1)</sup>	80	100	–	–	–	GS●N	T 1	100	LC1D150A	LR9D110S	22...110
55 <sup>(1)</sup>	97	100	–	–	–	GS●N	T 1	125	LC1D150A	LR9D110S	22...110
–	–	–	0.37	0.64	100	GS●F	14 x 51	2	LC1D09	LR9D02	0.4...2.0
–	–	–	0.55	0.87	100	GS●F	14 x 51	2	LC1D09	LR9D02	0.4...2.0
–	–	–	0.75	1.1	100	GS●F	14 x 51	2	LC1D09	LR9D02	0.4...2.0
–	–	–	1.1	1.6	100	GS●F	14 x 51	2	LC1D25	LR9D08	1.6...8.0
–	–	–	1.5	2.2	100	GS●F	14 x 51	4	LC1D25	LR9D08	1.6...8.0
–	–	–	2.2	2.9	100	GS●F	14 x 51	4	LC1D25	LR9D08	1.6...8.0
–	–	–	3	4	100	GS●F	14 x 51	6	LC1D25	LR9D08	1.6...8.0
–	–	–	4	5	100	GS●F	14 x 51	6	LC1D25	LR9D08	1.6...8.0
–	–	–	5.5	7	50	GS●F	14 x 51	8	LC1D25	LR9D32	6.4...32
–	–	–	7.5	9.3	50	GS●F	14 x 51	10	LC1D25	LR9D32	6.4...32
–	–	–	11	13	50	GS●F	14 x 51	16	LC1D32	LR9D32	6.4...32
–	–	–	15	16.5	50	GS●F	14 x 51	20	LC1D32	LR9D32	6.4...32
–	–	–	18.5	21	50	GS●F	14 x 51	25	LC1D65A	LR9D32	6.4...32
–	–	–	22	25	50	GS●F	14 x 51	32	LC1D65A	LR9D32	6.4...32
–	–	–	30	33	100	GS●F	14 x 51	40	LC1D95 <sup>(2)</sup>	LR9D110S	22...110
–	–	–	37	40	100	GS●F	14 x 51	50	LC1D95 <sup>(2)</sup>	LR9D110S	22...110
–	–	–	45	49	100	GS●J	22 x 58	63	LC1D95 <sup>(2)</sup>	LR9D110S	22...110

(1) Ratings valid up to 400 V AC only.

(2) Only electromechanical coils are available for this contactor rating.

0.06 to 80 kW at 415, 440 and 500 V: type 2 coordination											
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e						Switch-disconnector-fuse	BS fuses		Contactor	Thermal overload relay	
415 V		440 V		500 V			Reference	Size		Rating	Reference <sup>(1)</sup>
P	I <sub>e</sub>	P	I <sub>e</sub>	P	I <sub>e</sub>			A			A
kW	A	kW	A	kW	kA						
0.06	0.22	0.06	0.19	–	–	GS1DDB	A1	NIT 2	LC1D09	LRD02	0.16...0.25
–	–	0.09	0.28	–	–	GS1DDB	A1	NIT 2	LC1D09	LRD03	0.25...0.4
0.09	0.36	–	–	–	–						
0.12	0.44	0.12	0.37	–	–	GS1DDB	A1	NIT 2	LC1D09	LRD04	0.4...0.63
0.18	0.6	0.18	0.55	–	–	GS1DDB	A1	NIT 2	LC1D09	LRD05	0.63...1
–	–	0.25	0.76	–	–	GS1DDB	A1	NIT 4	LC1D09	LRD05	0.63...1
0.25	0.85	0.37	1	0.37	0.88						
0.37	1.1	0.55	1.36	0.55	1.2						
0.55	1.5	0.75	1.7	0.75	1.5	GS1DDB	A1	NIT 6	LC1D09	LRD06	1...1.7
0.75	1.9	–	–	–	–	GS1DDB	A1	NIT 10	LC1D09	LRD07	1.6...2.5
–	–	–	–	1.5	2.9	GS1DDB	A1	NIT 10	LC1D09	LRD08	2.5...4
1.5	3.6	1.5	3.3	2.2	3.9	GS1DDB	A1	NIT 16	LC1D09	LRD08	2.5...4
2.2	4.9	2.2	4.5	3	5.2	GS1DDB	A1	NIT 16	LC1D09	LRD10	4...6
3	6.5	3	5.9	4	6.8	GS1DDB	A1	NIT 20	LC1D09	LRD12	5.5...8
4	8.5	4	7.8	5.5	9.2	GS1DDB	A1	NIT 20	LC1D09	LRD14	7...10
5.5	11.5	5.5	10.5	7.5	12.4	GS1DDB	A1	NIT 20M25	LC1D12	LRD16	9...13
7.5	15.5	7.5	14.1	9	14.7	GS1DDB	A1	NIT 20M32	LC1D18	LRD21	12...18
9	18.4	9	16.7	–	–	GS2GB	A2	TIA 32M35	LC1D18	LRD21	12...18
11	22	11	20	11	17.6						
–	–	–	–	15	23	GS2GB	A2	TIA 32M50	LC1D25	LRD22	16...24
15	29	15	27	–	–	GS2GB	A2	TIA 32M63	LC1D32	LRD32	23...32
18.5	35	18.5	32	–	–	GS2GB	A3	TIS 63M80	LC1D40A	LRD340	25...40
22	41	22	39	–	–	GS2GB	A3	TIS 63M80	LC1D50A	LRD350	37...50
30	55	30	50	–	–	GS2GB	A3	TIS 63M100	LC1D65A	LRD365	48...65
–	–	37	60	–	–	GS2GB	A3	TIS 63M100	LC1D65A	LRD365	48...65
–	–	45	73	45	64	GS2LLB	A4	TCP 100M125	LC1D80 <sup>(2)</sup>	LRD3363	63...80
45	80	–	–	55	78	GS2LLB	A4	TCP 100M125	LC1D95 <sup>(2)</sup>	LRD3365	80...104
55	97	–	–	–	–	GS2LLB	A4	TCP 100M160	LC1D115A	LR9D5369	90...150
–	–	55	90	–	–	GS2LLB	A4	TCP 100M160	LC1D115A	LR9D5367	60...100
–	–	–	–	80	113	GS2LB	B2	TF 200	LC1D150A	LR9D5369	90...150
80	141.3	80	128.4	–	–	GS2LB	B2	TF 200M250	LC1D150A	LR9D5369	90...150

(1) For reversing operation, replace the prefix LC1 with LC2.

(2) Only electromechanical coils are available for this contactor rating.

0.06 to 90 kW at 400/415, 440 and 500 V: type 2 coordination												
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e									Circuit breaker	Setting range of thermal trips	Contactor Reference <sup>(2)</sup>	
400/415 V			440 V			500 V			Reference <i>References in italics are available in CEE zone only</i>	A		
P kW	I <sub>e</sub> A	I <sub>q</sub> <sup>(1)</sup> kA	P kW	I <sub>e</sub> A	I <sub>q</sub> <sup>(1)</sup> kA	P kW	I <sub>e</sub> A	I <sub>q</sub> <sup>(1)</sup> kA				
0.06	0.2	130	0.06	0.19	130	–	–	–	GV2P02 or GV2ME02 or GV2ME02AP	0.16...0.25	LC1D09	
0.09	0.3	130	0.09	0.28	130	–	–	–	GV2P03 or GV2ME03 or GV2ME03AP	0.25...0.4	LC1D09	
0.12	0.44	130	0.12	0.37	130	–	–	–	GV2P04 or GV2ME04 or GV2ME04AP	0.4...0.63	LC1D09	
0.18	0.6	130	–	–	–	–	–	–	GV2P05 or GV2ME05 or GV2ME05AP	0.63...1	LC1D09	
0.25	0.85	130	0.25	0.76	130	–	–	–	GV2P06 or GV2ME06 or GV2ME06AP	1...1.6	LC1D09	
0.37	1.1	130	0.37	0.99	130	0.37	0.88	130	GV2P06 or GV2ME06 or GV2ME06AP	1...1.6	LC1D09	
0.55	1.5	130	0.55	1.36	130	0.55	1.2	130	GV2P06 or GV2ME06 or GV2ME06AP	1...1.6	LC1D09	
–	–	–	–	–	–	0.75	1.5	130	GV2P06 or GV2ME06 or GV2ME06AP	1...1.6	LC1D09	
0.75	1.9	130	0.75	1.68	130	1.1	2.2	130	GV2P07 or GV2ME07 or GV2ME07AP	1.6...2.5	LC1D09	
1.1	2.7	130	1.1	2.5	130	1.5	2.9	130	GV2P08 or GV2ME08 or GV2ME08AP	2.5...4	LC1D09	
1.5	3.6	130	1.5	3.3	130	2.2	3.9	130	GV2P08 or GV2ME08 or GV2ME08AP	2.5...4	LC1D09	
2.2	4.9	130	–	–	–	–	–	–	GV2P10 or GV2ME10 or GV2ME10AP	4...6.3	LC1D09	
–	–	–	2.2	4.5	50	3	5.2	50	GV2ME10 or GV2ME10AP	4...6.3	LC1D09	
–	–	–	2.2	4.5	130	–	–	–	GV2P10	4...6.3	LC1D09	
–	–	–	–	–	–	3	5.2	130	GV2P10	4...6.3	LC1D09	
3	6.5	130	3	5.9	130 or 50	–	–	–	GV2P14 or GV2ME14 or GV2ME14AP	6...10	LC1D09	
4	8.5	130	–	–	50	–	–	–	GV2P14 or GV2ME14 or GV2ME14AP	6...10	LC1D09	
–	–	–	4	7.8	15	4	6.8	10	GV2ME14 or GV2ME14AP	6...10	LC1D09	
–	–	–	–	–	–	5.5	9.2	10	GV2ME14 or GV2ME14AP	6...10	LC1D09	
–	–	–	–	–	–	4	6.8	50	GV2P14	6...10	LC1D12	
–	–	–	4	7.8	130	5.5	9.2	50	GV2P14	6...10	LC1D12	
5.5	11.5	130	5.5	10.5	50 or 8	7.5	12.4	42 or 6	GV2P16 or GV2ME16 or GV2ME16AP	9...14	LC1D25	
–	–	–	7.5	14.1	50 or 8	9	13.9	42 or 6	GV2P16 or GV2ME16 or GV2ME16AP	9...14	LC1D25	
7.5	15.5	50 or 15	9	16.9	20 or 8	–	–	–	GV2P20 or GV2ME20 or GV2ME20AP	13...18	LC1D25	
9	18.1	50 or 15	11	20	20 or 6	11	17.6	10 or 6	GV2P21 or GV2ME21 or GV2ME21AP	17...23	LC1D25	
11	22	50 or 15	–	–	–	–	–	–	GV2P22 or GV2ME22 or GV2ME22AP	20...25	LC1D25	
–	–	–	–	–	–	15	23	10 or 6	GV2P22	20...25	LC1D32	
15	29	50 or 10	15	27	20 or 6	18.5	28	10 or 4	GV2P32 or GV2ME32 or GV2ME32AP	24...32	LC1D32	
18.5	35	50	–	–	–	–	–	–	GV3P40	30...40	LC1D50A	
–	–	–	18.5	32	50	22	33	10	GV3P40	30...40	LC1D65A	
22	41	50	–	–	–	–	–	–	GV3P50	37...50	LC1D50A	
–	–	–	22	39	50	30	44	10	GV3P50	37...50	LC1D65A	
30	55	50	30	50	50	–	–	–	GV3P65	48...65	LC1D65A	
–	–	–	–	–	–	37	53	10	GV3P65	48...65	LC1D65A	
37	66	50	–	–	–	–	–	–	GV3P73	62...73	LC1D80A	
–	–	–	37	60	70	–	–	–	GV4P80	40...80	LC1D65A	
37	66	100	–	–	–	45	73	70	GV4P80	40...80	LC1D65A	
45	80	100	55	88	70	55	78	<sup>(3)</sup>	GV4P115S	65...115	LC1D115A	
55	97	100	–	–	–	–	75	106	<sup>(3)</sup>	GV4P115S	65...115	LC1D115A
75	132	70	75	120	65	–	–	–	GV5P150H	70...150	LC1D150A	
–	–	–	90	146	65	90	128	–	GV5P150H	70...150	LC1D150A	

(1) The breaking performance of circuit breakers GV2P can be increased by adding a current limiter GV1L3.

(2) Combinations with circuit breaker GV2ME are type 2 coordinated only at 400/415 V and 440 V.

(3) Please consult your Local Schneider Electric Technical Support.

#### 45 to 220 kW at 400/415 V: type 2 coordination (with TeSys GV4/GV5/GV6 circuit breakers)

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker			Contactor
400/415 V			Product type <sup>(1)</sup>	I <sub>r</sub> setting <sup>(2)</sup>	I <sub>rm</sub> <sup>(2)</sup>	Product type
P	I <sub>e</sub>	I <sub>q</sub> (max)		A	A	
kW	A	kA				
45	80	100	GV4P/GV4PE/GV4PEM115●	86	774	LC1G115
55	97	100	GV4P/GV4PE/GV4PEM115●	100	900	LC1G115
55	97	70	GV5P150●	100	1300	LC1G115
75	132	70	GV5P220●	140	1820	LC1G150
90	160	70	GV5P220●	170	2210	LC1G185
110	195	70	GV6P320●	200	2600	LC1G225
110	195	70	GV6P320●	200	2600	LC1G265
132	230	70	GV6P320●	240	3120	LC1G265
160	280	70	GV6P500●	300	3900	LC1G330
200	350	70	GV6P500●	380	4940	LC1G400
220	380	70	GV6P500●	400	5720	LC1G500

(1) Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	GV4P/GV4PE/GV4PEM115●			GV5P150●/ 220● GV6P320●/ 500●	
Breaking performance code	B	N	S	F	H
400/415 V	25	50	100	36	70

#### 45 to 400 kW at 400/415 V: type 2 coordination (with ComPact NSX/NS circuit breakers)

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker			Contactor
400/415 V			Product type <sup>(1)</sup>	I <sub>r</sub> setting <sup>(2)</sup>	I <sub>rm</sub> <sup>(2)</sup>	Product type
P	I <sub>e</sub>	I <sub>q</sub> (max)		A	A	
kW	A	kA				
45	80	130	NSX100● + MicroLogic 2.2 M	85	1105	LC1G115
55	97	130	NSX160● + MicroLogic 2.2 M <sup>(3)</sup>	100	1300	LC1G115
75	132	130	NSX250● + MicroLogic 2.2 M <sup>(3)</sup>	140	1820	LC1G150
90	160	130	NSX250● + MicroLogic 2.2 M <sup>(3)</sup>	170	2210	LC1G185
110	195	130	NSX400● + MicroLogic 2.3 M <sup>(3)</sup>	200	2600	LC1G225
132	230	130	NSX400● + MicroLogic 2.3 M <sup>(3)</sup>	240	3120	LC1G265
160	280	130	NSX630● + MicroLogic 2.3 M <sup>(3)</sup>	300	3900	LC1G330
200	350	130	NSX630● + MicroLogic 2.3 M <sup>(3)</sup>	380	4940	LC1G400
220	380	130	NS800● + MicroLogic 5.0	400	5200	LC1G500
250	430	130	NS800● + MicroLogic 5.0	440	5720	LC1G500
300	500	130	NS800● + MicroLogic 5.0	560	5040	LC1G630
335	575	130	NS800● + MicroLogic 5.0	640	5760	LC1G630
355	610	130	NS800● + MicroLogic 5.0	640	5760	LC1G800
400	690	130	NS800● + MicroLogic 5.0	720	6480	LC1G800

(1) Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	NSX100●/ NSX160●/ NSX250●/ NSX400●/ NSX630●					NS800●/ NS1000●
Breaking performance code	F	N	H	S	L	L
400/415 V	36	50	70	100	130	150

(2) This setting is a general guidance, I<sub>r</sub> and I<sub>rm</sub> should be adjusted according to motor characteristics and conditions of use.

(3) Applicable also with MicroLogic 6.2 E-M and 6.3 E-M trip units.

55 to 250 kW at 440 V: type 2 coordination (with TeSys GV4 / GV5 / GV6 circuit breakers)						
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker			Contactor
440 V			Product type <sup>(1)</sup>	Ir setting <sup>(2)</sup>	Irm <sup>(2)</sup>	Product type
P	Ie	Iq (max)		A	A	
kW	A	kA				
55	88	100	GV4P/GV4PE/GV4PEM115●	93	837	LC1G115
55	88	70	GV5P150●	90	1170	LC1G115
75	120	70	GV5P150●	130	1690	LC1G150
90	145	70	GV5P220●	150	1950	LC1G150
110	177	70	GV5P220●	185	2405	LC1G185
132	209	70	GV6P320●	210	2730	LC1G225
160	255	70	GV6P320●	260	3380	LC1G265
200	318	70	GV6P500●	320	4160	LC1G330
220	343	70	GV6P500●	350	4550	LC1G400
250	390	65	GV6P500●	400	5200	LC1G400

<sup>(1)</sup> Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	GV4P/GV4PE/GV4PEM115●			GV5P150●/ 220●		GV6P320●/ 500●	
Breaking performance code	B	N	S	F	H	F	H
440 V	20	50	70	35	65	30	65

Coordination and standards

55 to 450 kW at 440 V: type 2 coordination (with ComPact NSX/NS circuit breakers)						
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker			Contactor
440 V			Product type <sup>(1)</sup>	Ir setting <sup>(2)</sup>	Irm <sup>(2)</sup>	Product type
P	Ie	Iq (max)		A	A	
kW	A	kA				
55	88	130	NSX100● + MicroLogic 2.2 M	90	1170	LC1G115
75	120	130	NSX160● + MicroLogic 2.2 M <sup>(3)</sup>	130	1690	LC1G150
90	145	130	NSX250● + MicroLogic 2.2 M <sup>(3)</sup>	150	1950	LC1G150
110	177	130	NSX250● + MicroLogic 2.2 M <sup>(3)</sup>	185	2405	LC1G185
132	209	130	NSX400● + MicroLogic 2.3 M <sup>(3)</sup>	210	2730	LC1G225
160	255	130	NSX400● + MicroLogic 2.3 M <sup>(3)</sup>	260	3380	LC1G265
200	318	130	NSX630● + MicroLogic 2.3 M <sup>(3)</sup>	320	4160	LC1G330
220	343	130	NSX630● + MicroLogic 2.3 M <sup>(3)</sup>	350	4550	LC1G400
250	390	130	NSX630● + MicroLogic 2.3 M <sup>(3)</sup>	400	5200	LC1G400
300	466	130	NS800● + MicroLogic 5.0	470	6110	LC1G500
335	521	130	NS800● + MicroLogic 5.0	560	5040	LC1G630
355	554	130	NS800● + MicroLogic 5.0	560	5040	LC1G630
400	627	130	NS800● + MicroLogic 5.0	640	5760	LC1G800
450	695	130	NS800● + MicroLogic 5.0	720	6480	LC1G800

<sup>(1)</sup> Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	NSX100●/ NSX160●/ NSX250●					NSX400●/ NSX630●					NS800●
Breaking performance code	F	N	H	S	L	F	N	H	S	L	L
440 V	35	50	65	90	130	30	42	65	90	130	130

<sup>(2)</sup> This setting is a general guidance, Ir and Irm should be adjusted according to motor characteristics and conditions of use.

<sup>(3)</sup> Applicable also with MicroLogic 6.2 E-M and 6.3 E-M trip units.

#### 65 to 295 kW at 500 V: type 2 coordination (with TeSys GV4/GV5/GV6 circuit breakers)

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker			Contactor
500 V			Product type <sup>(1)</sup>	I <sub>r</sub> setting <sup>(2)</sup>	I <sub>rm</sub> <sup>(2)</sup>	Product type
P	I <sub>e</sub>	I <sub>q</sub> (max)		A	A	
kW	A	kA				
65	92	100	GV4P/GV4PE/GV4PEM115●	93	837	LC1G115
65	92	50	GV5P150●	100	1300	LC1G115
110	156	50	GV5P220●	170	2210	LC1G185
132	184	50	GV5P220●	185	2405	LC1G225
160	224	50	GV6P320●	240	3120	LC1G265
200	280	50	GV6P500●	300	3900	LC1G330
250	344	50	GV6P500●	350	4550	LC1G400
295	405	50	GV6P500●	440	5720	LC1G500

<sup>(1)</sup> Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	GV4P/GV4PE/GV4PEM115●			GV5P150●/ 220●		GV6P320●/ 500●	
	B	N	S	F	H	F	H
500 V	10	25	30	30	50	25	50

#### 65 to 425 kW at 500 V: type 2 coordination (with ComPacT NSX/NS circuit breakers)

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker			Contactor
500 V			Product type <sup>(1)</sup>	I <sub>r</sub> setting <sup>(2)</sup>	I <sub>rm</sub> <sup>(2)</sup>	Product type
P	I <sub>e</sub>	I <sub>q</sub> (max)		A	A	
kW	A	kA				
65	92	100	NSX100● + MicroLogic 2.2 M	95	1235	LC1G115
65	92	100	NSX160● + MicroLogic 2.2 M <sup>(3)</sup>	95	1235	LC1G115
90	128	70	NSX160● + MicroLogic 2.2 M <sup>(3)</sup>	130	1690	LC1G150
110	156	100	NSX250● + MicroLogic 2.2 M <sup>(3)</sup>	170	2210	LC1G185
132	184	100	NSX250● + MicroLogic 2.2 M <sup>(3)</sup>	185	2405	LC1G225
160	224	70	NSX400● + MicroLogic 2.3 M <sup>(3)</sup>	240	3120	LC1G265
200	280	70	NSX630● + MicroLogic 2.3 M <sup>(3)</sup>	300	3900	LC1G330
250	344	70	NSX630● + MicroLogic 2.3 M <sup>(3)</sup>	350	4550	LC1G400
295	405	70	NSX630● + MicroLogic 2.3 M <sup>(3)</sup>	440	5720	LC1G500
375	516	70	NS800● + MicroLogic 5.0	560	5040	LC1G630
425	584	70	NS800● + MicroLogic 5.0	640	5760	LC1G800

<sup>(1)</sup> Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	NSX100●					NSX160●/ NSX250●					NSX400●/ NSX630●					NS800●
	F	N	H	S	L	F	N	H	S	L	F	N	H	S	L	L
500 V	25	36	50	65	70	30	36	50	65	70	25	30	50	65	70	100

<sup>(2)</sup> This setting is a general guidance, I<sub>r</sub> and I<sub>rm</sub> should be adjusted according to motor characteristics and conditions of use.

<sup>(3)</sup> Applicable also with MicroLogic 6.2 E-M and 6.3 E-M trip units.

0.06 to 22 kW at 690 V: type 2 coordination							
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Limiting block	Circuit breaker		Contactor	
690 V			Product type	Product type	I <sub>r</sub> Setting <sup>(1)</sup>	I <sub>rm</sub> <sup>(1)</sup>	
P	I <sub>e</sub>	I <sub>q</sub>			A	A	
kW	A	kA					
0.06	0.12	100		GV2P01	0.16	1.5	LC1D09
0.09	0.17	100		GV2P02	0.25	2.4	LC1D09
0.12	0.23	100		GV2P03	0.4	2.5	LC1D09
0.18	0.35	100		GV2P03	0.4	5	LC1D09
0.25	0.49	100		GV2P04	0.63	8	LC1D09
0.37	0.64	100		GV2P05	1	13	LC1D09
0.55	0.87	100		GV2P05	1	13	LC1D09
0.75	1.1	100		GV2P06	1.6	22.5	LC1D09
1.1	1.6	100	LA9LB920	GV2P07	1.6	22.5	LC1D25
1.5	2.2	100	LA9LB920	GV2P07	2.5	33.5	LC1D25
2.2	2.9	50	LA9LB920	GV2P08	4	51	LC1D25
3	4	50	LA9LB920	GV2P08	4	51	LC1D25
4	5	50	LA9LB920	GV2P10	6.3	78	LC1D25
5.5	7	50	LA9LB920	GV2P14	10	138	LC1D25
7.5	9.3	50	LA9LB920	GV2P16	14	170	LC1D25
9	12.8	50	LA9LB920	GV2P16	14	170	LC1D25
11	13	50	LA9LB920	GV2P16	14	170	LC1D25
15	16.5	50	LA9LB920	GV2P20	18	223	LC1D25
18.5	21	50	LA9LB920	GV2P21	23	327	LC1D32
22	25	50	LA9LB920	GV2P32	32	416	LC1D40A

(1) This setting is a general guidance, I<sub>r</sub> and I<sub>rm</sub> should be adjusted according to motor characteristics and conditions of use.

Coordination and standards

30 to 560 kW at 690 V: type 2 coordination (with ComPacT NSX/NS circuit breakers)						
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker			Contactor
690 V			Product type <sup>(1)</sup>	I <sub>r</sub> Setting <sup>(2)</sup>	I <sub>rm</sub> <sup>(2)</sup>	Product type
P	I <sub>e</sub>	I <sub>q</sub> (max)		A	A	
kW	A	kA				
30	32	100	NSX100● + MicroLogic 2.2 M	36	468	LC1G115
37	39	100	NSX100● + MicroLogic 2.2 M	40	520	LC1G115
45	47	100	NSX100● + MicroLogic 2.2 M	50	650	LC1G115
55	57	100	NSX100● + MicroLogic 2.2 M	60	780	LC1G115
75	77	100	NSX100● + MicroLogic 2.2 M	80	1040	LC1G115
90	93	100	NSX250● + MicroLogic 2.2 M <sup>(3)</sup>	95	1235	LC1G150
110	113	100	NSX250● + MicroLogic 2.2 M <sup>(3)</sup>	115	1495	LC1G185
132	134	100	NSX250● + MicroLogic 2.2 M <sup>(3)</sup>	140	1820	LC1G225
160	162	100	NSX250● + MicroLogic 2.2 M <sup>(3)</sup>	170	2210	LC1G225
200	203	100	NSX400● + MicroLogic 2.3 M <sup>(3)</sup>	210	2730	LC1G265
220	223	100	NSX400● + MicroLogic 2.3 M <sup>(3)</sup>	240	3120	LC1G330
250	250	100	NSX400● + MicroLogic 2.3 M <sup>(3)</sup>	260	3380	LC1G400
315	313	100	NSX630● + MicroLogic 2.3 M <sup>(3)</sup>	320	4160	LC1G400
335	335	100	NSX630● + MicroLogic 2.3 M <sup>(3)</sup>	350	4550	LC1G500
355	354	100	NSX630● + MicroLogic 2.3 M <sup>(3)</sup>	380	4940	LC1G500
375	372	100	NSX630● + MicroLogic 2.3 M <sup>(3)</sup>	380	4940	LC1G630
400	400	100	NS800● + MicroLogic 5.0	440	5720	LC1G630
450	455	100	NS800● + MicroLogic 5.0	470	6110	LC1G630
475	475	100	NS800● + MicroLogic 5.0	500	6500	LC1G630
500	493	100	NS800● + MicroLogic 5.0	500	6500	LC1G630
560	551	75	NS800● + MicroLogic 5.0	560	7280	LC1G800

(1) Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	NSX100●/ NSX250●/ NSX400●/ NSX630●		NS800●
Breaking performance code	HB1	HB2	LB
690 V	75	100	75

(2) This setting is a general guidance, I<sub>r</sub> and I<sub>rm</sub> should be adjusted according to motor characteristics and conditions of use.

(3) Applicable also with MicroLogic 6.2 E-M and 6.3 E-M trip units.

#### ½ to 80 hp at 460 V - 3P

GV2P + contactor: compact, high SCCR solution.

GV3P + contactor: medium power, Everlink (long lasting power connection).

GV4PB + contactor: high power, advanced protection settings, Everlink (long lasting power connection), 18 (GV4PB●●●B), 35 (GV4PB●●●N) or 65 (GV4PB●●●S) kA SCCR.

Standard power ratings						Circuit breaker			Contactor			Circuit breaker			Contactor		
200 V 3P		230 V 3P		460 V 3P		Product reference (2)	Dial range	Product reference (3)	Comb. SCCR 480Y	Product reference (4)	Dial range	Product reference (3)	Comb. SCCR 480Y	Product reference	Dial range	Product reference (3)	SCCR 480Y As applied
HP	FLA (1)	HP	FLA (1)	HP	FLA (1)												
		½	1.1			GV2P06	1 to 1.6	LC1D09	100					GV4PB02S	0.8 to 2	LC1D09	65
		¾	1.6			GV2P06	1 to 1.6	LC1D09	100					GV4PB02S	0.8 to 2	LC1D09	65
½	2.5	½	2.2	1	2.1	GV2P07	1.6 to 2.5	LC1D09	100					GV4PB03S	1.4 to 3.5	LC1D09	65
		1½	3			GV2P08	2.5 to 4	LC1D09	100					GV4PB03S	1.4 to 3.5	LC1D09	65
¾	3.7	¾	3.2	2	3.4	GV2P08	2.5 to 4	LC1D09	100					GV4PB07S	2.9 to 7	LC1D09	65
1	4.6	1	4.2	3	4.8	GV2P10	4 to 6.3	LC1D09	100					GV4PB07S	2.9 to 7	LC1D09	65
		1½	6			GV2P10	4 to 6.3	LC1D09	100					GV4PB12S	5 to 12.5	LC1D12	65
1½	6.9	2	6.8			GV2P14	6 to 10	LC1D12	100					GV4PB12S	5 to 12.5	LC1D12	65
2	7.8			5	7.6	GV2P14	6 to 10	LC1D12	100					GV4PB12S	5 to 12.5	LC1D12	65
		3	9.6			GV2P14	6 to 10	LC1D12	100	GV3P13	9 to 13	LC1D18	65	GV4PB12S	5 to 12.5	LC1D12	65
3	11			7½	11	GV2P16	9 to 14	LC1D18	50 <sup>(5)</sup>	GV3P13	9 to 13	LC1D18	65	GV4PB25S	10 to 25	LC1D25	65
				10	14	GV2P16	9 to 14	LC1D18	50 <sup>(5)</sup>	GV3P18	12 to 18	LC1D18	65	GV4PB25S	10 to 25	LC1D25	65
5	17.5	5	15.2			GV2P20	13 to 18	LC1D18	50 <sup>(5)</sup>	GV3P18	12 to 18	LC1D18	65	GV4PB25S	10 to 25	LC1D25	65
		7½	22	15	21	GV2P21	17 to 23	LC1D25	50 <sup>(5)</sup>	GV3P25	17 to 25	LC1D25	65	GV4PB25S	10 to 25	LC1D25	65
7½	25.3					GV2P22	20 to 25	LC1D25	50 <sup>(5)</sup>	GV3P32	23 to 32	LC1D32	65	GV4PB50S	20 to 50	LC1D50A	65
		10	28	20	27					GV3P32	23 to 32	LC1D32	65	GV4PB50S	20 to 50	LC1D50A	65
10	32.2			25	34					GV3P40	30 to 40	LC1D40A	65	GV4PB50S	20 to 50	LC1D50A	65
		15	42	30	40					GV3P50	37 to 50	LC1D50A	65	GV4PB50S	20 to 50	LC1D50A	65
15	48									GV3P65	48 to 65	LC1D65A	65	GV4PB50S	20 to 50	LC1D50A	65
		20	54	40	52					GV3P65	48 to 65	LC1D65A	65	GV4PB80S	40 to 80	LC1D80	65
20	62.1													GV4PB115S	40 to 80	LC1D80	65
25	78.2	25	68	50	65									GV4PB115S	40 to 80	LC1D80	65
30	92	30	80	60	77									GV4PB115S	65 to 115	LC1D115A	65
30	92	40	104	75	96	JLL36250	114 to 217	LC1D115A	100								
40	120	50	130	100	124	LLL36400	90 to 348	LC1D150A	100								

(1) Motor Full Load Amp Sizes are based on NEC Table 430.250.

(2) Requires use of GV1G09 or GV2GH7 line spacer for Type F rating.

(3) Add coil suffix to complete reference part number. For example, an LC1D09G7 includes a 120 V AC coil.

(4) Requires use of GV3G66 line spacer and GVAM11 short-circuit signaling contact for Type F rating.

(5) SCCR is 42 kA at 480Y when using GV2G busbar links.

0.06 to 18.5 kW at 400/415, 440 and 500 V: type 2 coordination														
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e									Circuit breaker			Contactor	Thermal overload relay	
400/415 V			440 V			500 V			Reference	Rating	I <sub>rm</sub> <sup>(1)</sup>	Reference <sup>(2)</sup>	Reference	Setting range
P	I <sub>e</sub>	I <sub>q</sub>	P	I <sub>e</sub>	I <sub>q</sub>	P	I <sub>e</sub>	I <sub>q</sub>		A	A			A
kW	A	kA	kW	A	kA	kW	A	kA						
0.06	0.2	130	0.06	0.19	130	–	–	–	GV2L03 or LE03	0.4	5	LC1D09	LRD02	0.16...0.25
0.09	0.3	130	0.09	0.28	130	–	–	–	GV2L03 or LE03	0.4	5	LC1D09	LRD03	0.25...0.40
			0.12	0.37	130				GV2L04 or LE04	0.63	8	LC1D09	LRD03	0.25...0.40
0.12	0.44	130	0.18	0.55	130	–	–	–	GV2L04 or LE04	0.63	8	LC1D09	LRD04	0.4...0.63
0.18	0.6	130							GV2L05 or LE05	1	13	LC1D09	LRD04	0.4...0.63
0.25	0.85	130	0.25	0.76	130	–	–	–	GV2L05 or LE05	1	13	LC1D09	LRD05	0.63...1
–	–	–	–	–	–	0.37	0.88	130	GV2L05 or LE05	1	13	LC1D09	LRD06	1...1.7
0.37	1.1	130	0.37	1	130				GV2L06 or LE06	1.6	22.5	LC1D09	LRD05	0.63...1
0.55	1.5	130	0.55	1.36	130	0.55	1.2	130	GV2L06 or LE06	1.6	22.5	LC1D09	LRD06	1...1.7
						0.75	1.5	130						
0.75	1.9	130	0.75	1.7	130	1.1	2.2	130	GV2L07 or LE07	2.5	33.5	LC1D09	LRD07	1.6...2.5
1.1	2.7	130	1.1	2.5	130	1.5	2.9	130	GV2L08 or LE08	4	51	LC1D09	LRD08	2.5...4
1.5	3.6	130	–	–	–	2.2	3.9	130						
–	–	–	1.5	3.3	130	–	–	–	GV2L08 or LE08	4	51	LC1D09	LRD10	4...6
2.2	4.9	130	–	–	–	–	–	–	GV2L10 or LE10	6.3	78	LC1D09	LRD10	4...6
–	–	–	–	–	–	–	–	–						
–	–	–	2.2	4.5	50	–	–	–	GV2LE10	6.3	78	LC1D09	LRD10	4...6
–	–	–	–	–	–	3	5.2	50						
–	–	–	2.2	4.5	130	–	–	–	GV2L10	6.3	78	LC1D09	LRD10	4...6
–	–	–	–	–	–	3	5.2	130						
3	6.5	130	–	–	–	–	–	–	GV2L14 or LE14	10	10	LC1D09	LRD12	5.5...8
–	–	–	3	5.9	130/50				GV2L14 or LE14	10	10	LC1D09	LRD10	4...6
–	–	–	–	–	–	4	6.8	10	GV2LE14	10	138	LC1D12	LRD12	5.5...8
–	–	–	–	–	–	4	6.8	10	GV2L14	10	138	LC1D12	LRD12	5.5...8
4	8.5	130	–	–	–	–	–	–	GV2L14 or LE14	10	138	LC1D09	LRD14	7...10
–	–	–	4	7.8	15	–	–	–	GV2LE14	10	138	LC1D09	LRD14	7...10
–	–	–	4	7.8	20	–	–	–	GV2L14	10	138	LC1D09	LRD14	7...10
–	–	–	–	–	–	5.5	9.2	10	GV2LE14	10	138	LC1D09	LRD14	7...10
–	–	–	–	–	–	5.5	9.2	10	GV2L14	10	138	LC1D09	LRD14	7...10
5.5	11.5	130	5.5	10.4	50	7.5	12.4	10	GV2L16	14	170	LC1D25	LRD16	9...13
–	–	–	7.5	14.1	50	–	–	–	GV2L16	14	170	LC1D25	LRD21	12...18
7.5	15.5	50	9	16.9	20	9	13.9	10	GV2L20	18	223	LC1D25	LRD21	12...18
9	18.1	50	–	–	–	–	–	–	GV2L22	25	327	LC1D25	LRD22	16...24
11	22	50	11	20	20	–	–	–						
–	–	–	–	–	–	11	17.6	10	GV2L22	25	327	LC1D32	LRD22	16...24
–	–	–	–	–	–	15	23	10						
15	29	50	15	27	50	–	–	–	GV3L32	32	448	LC1D40A	LRD332	23...32
–	–	–	–	–	–	18.5	28	10	GV3L32	32	448	LC1D65A	LRD332	23...32

(1) I<sub>rm</sub>: setting current of the magnetic trip.

(2) For reversing operation, replace the prefix LC1 with LC2.

#### 0.18 to 22 kW at 690 V: type 2 coordination

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Limiting block	Circuit breaker			Contactor	Thermal overload relay	
690 V			Product type	Product type	Rating	I <sub>rm</sub> <sup>(1)</sup>	Product type	Product type	Setting range
P	I <sub>e</sub>	I <sub>q</sub>			A	A			A
kW	A	kA							
0.18	0.35	100	–	GV2L03	0.4	5	LC1D09	LRD03	0.25...0.4
0.25	0.49	100	–	GV2L04	0.63	8	LC1D09	LRD04	0.4...0.63
0.37	0.64	100	–	GV2L05	1	13	LC1D09	LRD05	0.63...1
0.55	0.87	100	–	GV2L05	1	13	LC1D09	LRD05	0.63...1
0.75	1.1	100	–	GV2L06	1.6	22.5	LC1D09	LRD06	1...1.6
1.1	1.6	100	–	GV2L06	1.6	22.5	LC1D09	LRD06	1...1.6
1.5	2.2	100	LA9LB920 <sup>(2)</sup>	GV2L07	2.5	33.5	LC1D25	LRD07	1.6...2.5
2.2	2.9	50	LA9LB920 <sup>(2)</sup>	GV2L08	4	51	LC1D25	LRD08	2.5...4
3	4	50	LA9LB920 <sup>(2)</sup>	GV2L08	4	51	LC1D25	LRD08	2.5...4
4	5	50	LA9LB920 <sup>(2)</sup>	GV2L10	6.3	78	LC1D25	LRD10	4...6
5.5	7	50	LA9LB920 <sup>(2)</sup>	GV2L14	10	138	LC1D32	LRD12	5.5...8
7.5	9.3	50	LA9LB920 <sup>(2)</sup>	GV2L16	14	170	LC1D32	LRD16	9...13
9	10.6	50	LA9LB920 <sup>(2)</sup>	GV2L16	14	170	LC1D32	LRD16	9...13
11	13	50	LA9LB920 <sup>(2)</sup>	GV2L16	14	170	LC1D32	LRD16	9...13
15	16.5	50	LA9LB920 <sup>(2)</sup>	GV2L20	18	223	LC1D32	LRD21	12...18
18.5	21	50	LA9LB920 <sup>(2)</sup>	GV2L22	25	327	LC1D32	LRD22	16...24
22	25	50	LA9LB920 <sup>(2)</sup>	GV2L32	32	416	LC1D32	LRD32	23...32
22	25	50	LA9LB920 <sup>(2)</sup>	GV2L32	32	416	LC1D40A	LRD332	23...32

(1) I<sub>rm</sub>: setting current of the magnetic trip.

(2) For more information about the current limiter LA9LB920, please refer to pages A4/31 and A4/61 of TeSys Catalog, ref. MKTED210011EN.

18.5 to 90 kW at 400/415, 440 and 500 V: type 2 coordination															
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e									Circuit breaker			Contactor		Thermal overload relay	
400/415 V			440 V			500 V			Reference	Rating	I <sub>rm</sub> <sup>(1)</sup>	Reference <sup>(2)</sup>	Reference	Setting range	
P	I <sub>e</sub>	I <sub>q</sub>	P	I <sub>e</sub>	I <sub>q</sub>	P	I <sub>e</sub>	I <sub>q</sub>		A	A			A	
kW	A	kA	kW	A	kA	kW	A	kA							
18.5	35	50	–	–	–	–	–	–	GV3L40	40	560	LC1D50A	LRD340	30...40	
–	–	–	18.5	32	50	–	–	–	GV3L40	40	560	LC1D65A	LRD340	30...40	
22	41	50	–	–	–	–	–	–	GV3L50	50	700	LC1D50A	LRD350	37...50	
–	–	–	22	39	50	30	44	10	GV3L50	50	700	LC1D65A	LRD350	37...50	
30	55	50	30	50	50	37	53	10	GV3L65	65	910	LC1D65A	LRD365	48...65	
37	66	50	–	–	–	–	–	–	GV3L73	73	1120	LC1D80A	LRD380	62...80	
–	–	–	37	60	70	–	–	–	GV4L80S	80	880	LC1D65A	LRD365	48...65	
37	66	100	45	73	70	<sup>(4)</sup>	<sup>(4)</sup>	<sup>(4)</sup>	GV4L80S	80	1040	LC1D80 <sup>(5)</sup>	LRD3363	63...80	
45	80	100	55	88	70	<sup>(4)</sup>	<sup>(4)</sup>	<sup>(4)</sup>	GV4L115S	115	1380	LC1D115A	LR9D5367	60...100	
55	97	100	–	–	–	<sup>(4)</sup>	<sup>(4)</sup>	<sup>(4)</sup>	GV4L115S	115	1495	LC1D115A	LR9D5369	90...150	
–	–	–	–	–	–	55	78	<sup>(4)</sup>	NSX100●MA <sup>(3)</sup>	100	1040	LC1D80 <sup>(5)</sup>	LRD3363	63...80	
45	80	<sup>(4)</sup>	55	88	<sup>(4)</sup>	–	–	–	NSX160●MA <sup>(3)</sup>	100	1300	LC1D115A	LR9G115	28...115	
55	97	<sup>(4)</sup>	–	–	–	–	–	–	NSX160●MA <sup>(3)</sup>	150	1500	LC1D115A	LR9G115	28...115	
–	–	–	–	–	–	75	106	<sup>(4)</sup>	NSX160●MA <sup>(3)</sup>	150	1950	LC1D115A	LR9G225	57...225	
75	132	<sup>(4)</sup>	75	125	<sup>(4)</sup>	–	–	–	NSX250●MA <sup>(3)</sup>	220	1950	LC1D150A	LR9G225	57...225	
–	–	–	90	146	<sup>(4)</sup>	–	–	–	NSX250●MA <sup>(3)</sup>	220	1950	LC1D150A	LR9G225	57...225	
–	–	–	–	–	–	90	128	<sup>(4)</sup>	NSX250●MA <sup>(3)</sup>	220	1950	LC1D150A	LR9G225	57...225	

<sup>(1)</sup> I<sub>rm</sub>: setting current of the magnetic trip.

<sup>(2)</sup> For reversing operation, replace the prefix LC1 with LC2.

<sup>(3)</sup> Reference to be completed by replacing the ● with the breaking performance code:

Breaking performance I <sub>q</sub> (kA)	NSX100●MA		NSX160●MA and NSX250●MA		NSX400● and NSX630●
400/415 V	36	70	36	70	70
440 V	35	65	35	65	65
500 V	25	50	25	50	50
660/690 V	8	10	8	10	20
Code	F	H	F	H	H

<sup>(4)</sup> Please consult your Local Schneider Electric Technical Support.

<sup>(5)</sup> Only electromechanical coils are available for this contactor rating.

#### 45 to 335 kW at 400/415 V: type 2 coordination (with TeSys GV4 or ComPacT NSX circuit breakers and LR9G overload relays)

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker	I <sub>rm</sub> <sup>(2)</sup>	Contactor	Electronic thermal overload relay	
400/415 V			Product type <sup>(1)</sup>		Product type	Product type	I <sub>r</sub> setting <sup>(2)</sup>
P	I <sub>e</sub>	I <sub>q</sub> (max)					
kW	A	kA		A			A
45	80	100	GV4L/GV4LE115●	1265	LC1G115	LR9G115	80
45	80	100	NSX100● + MA	1100	LC1G115	LR9G115	80
55	97	130	GV4L/GV4LE115●	1265	LC1G115	LR9G225	97
55	97	130	NSX160● + MA	1500	LC1G115	LR9G225	97
75	132	130	NSX250● + MA	1800	LC1G150	LR9G225	132
90	160	130	NSX250● + MA	2640	LC1G185	LR9G225	160
110	195	130	NSX400● + MicroLogic 1.3 M	2640	LC1G225	LR9G225	195
110	195	130	NSX400● + MicroLogic 1.3 M	3520	LC1G265	LR9G500	195
132	230	130	NSX400● + MicroLogic 1.3 M	3520	LC1G265	LR9G500	230
160	280	130	NSX630● + MicroLogic 1.3 M	3840	LC1G330	LR9G500	280
200	350	130	NSX630● + MicroLogic 1.3 M	5500	LC1G400	LR9G500	350
220	380	130	NSX630● + MicroLogic 1.3 M	5500	LC1G500	LR9G500	380
250	430	130	NS800● + MicroLogic 5.0 LR OFF	6000	LC1G500	LR9G500	430
300	500	130	NS800● + MicroLogic 5.0 LR OFF	6400	LC1G630	LR9G630	500
335	575	130	NS800● + MicroLogic 5.0 LR OFF	7200	LC1G630	LR9G630	575

(1) Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	GV4L115●/ GV4LE115●			NSX100●/ NSX160●/ NSX250●/ NSX400●/ NSX630●					NS800●
Breaking performance code	B	N	S	F	N	H	S	L	L
400/415 V	25	50	100	36	50	70	100	130	150

#### 55 to 355 kW at 440 V: type 2 coordination (with TeSys GV4 or ComPacT NSX/NS circuit breakers and LR9G overload relays)

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker	I <sub>rm</sub> <sup>(2)</sup>	Contactor	Electronic thermal overload relay	
440 V			Product type <sup>(1)</sup>		Product type	Product type	I <sub>r</sub> setting <sup>(2)</sup>
P	I <sub>e</sub>	I <sub>q</sub> (max)					
kW	A	kA		A			A
55	88	130	GV4L/GV4LE115●	1265	LC1G115	LR9G115	88
55	88	130	NSX160● + MA	1500	LC1G115	LR9G115	88
75	120	130	NSX160● + MA	1800	LC1G150	LR9G225	120
90	145	130	NSX250● + MA	2640	LC1G150	LR9G225	145
110	176	130	NSX250● + MA	2640	LC1G185	LR9G225	177
132	209	130	NSX400● + MicroLogic 1.3 M	2860	LC1G225	LR9G225	209
160	255	130	NSX400● + MicroLogic 1.3 M	3520	LC1G265	LR9G500	255
200	318	130	NSX630● + MicroLogic 1.3 M	4160	LC1G330	LR9G500	318
220	343	130	NSX630● + MicroLogic 1.3 M	5500	LC1G400	LR9G500	343
250	390	130	NSX630● + MicroLogic 1.3 M	5500	LC1G400	LR9G500	390
300	466	130	NS800● + MicroLogic 5.0 LR OFF	6500	LC1G500	LR9G500	466
335	521	130	NS800● + MicroLogic 5.0 LR OFF	6400	LC1G630	LR9G630	521
355	554	130	NS800● + MicroLogic 5.0 LR OFF	7200	LC1G630	LR9G630	554

(1) Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	GV4L115●/ GV4LE115●			NSX100●/ NSX160●/ NSX250●					NSX400●/ NSX630●					NS800●
Breaking performance code	B	N	S	F	N	H	S	L	F	N	H	S	L	L
440 V	20	50	70	35	50	65	100	130	30	42	65	100	130	150

(2) This setting is a general guidance, I<sub>r</sub> and I<sub>rm</sub> should be adjusted according to motor characteristics and conditions of use.

# TeSys

## Complementary technical information

### Coordination: Magnetic circuit breaker + Contactor + Overload relay

#### 65 to 425 kW at 500 V: type 2 coordination (with TeSys GV4 or ComPacT NSX/NS circuit breakers and LR9G overload relays)

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker		Contactor	Electronic thermal overload relay	
500 V			Product type <sup>(1)</sup>	I <sub>rm</sub> <sup>(2)</sup>	Product type	Product type	I <sub>r</sub> setting <sup>(2)</sup>
P	I <sub>e</sub>	I <sub>q</sub> (max)					
kW	A	kA					A
65	92	100	GV4L/GV4LE115●	1265	LC1G115	LR9G115	92
65	92	100	NSX160● + MA150	1300	LC1G115	LR9G115	92
90	128	100	NSX250● + MA220	1950	LC1G150	LR9G225	128
110	156	100	NSX250● + MA220	2200	LC1G185	LR9G225	156
132	184	100	NSX400● + MicroLogic 1.3 M	2560	LC1G225	LR9G225	184
160	224	70	NSX400● + MicroLogic 1.3 M	3200	LC1G265	LR9G500	224
200	280	70	NSX630● + MicroLogic 1.3 M	3840	LC1G330	LR9G500	280
250	344	70	NSX630● + MicroLogic 1.3 M	5500	LC1G400	LR9G500	344
295	405	70	NSX630● + MicroLogic 1.3 M	6500	LC1G500	LR9G500	405
375	516	70	NS800● + MicroLogic 5.0 LR OFF	6400	LC1G630	LR9G630	516
425	584	70	NS800● + MicroLogic 5.0 LR OFF	7200	LC1G800	LR9G630	584

(1) Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	GV4L115●/GV4LE115●			NSX100●					NSX160●/NSX250●					NSX400●/NSX630●					NS800●
Breaking performance code	B	N	S	F	N	H	S	L	F	N	H	S	L	F	N	H	S	L	L
500 V	10	25	30	25	36	50	65	70	30	36	50	65	70	25	30	50	65	70	100

(2) This setting is a general guidance, I<sub>r</sub> and I<sub>rm</sub> should be adjusted according to motor characteristics and conditions of use.

Coordination and standards

#### 0.06 to 30 kW at 400/415 and 690 V: type 2 coordination

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e						Circuit breaker			Contactor	Electronic thermal overload relay	
400/415 V			690 V			Reference	Rating	I <sub>rm</sub>	Reference	Reference	Setting range
P	I <sub>e</sub>	I <sub>q</sub>	P	I <sub>e</sub>	I <sub>q</sub>		A	A			A
kW	A	kA	kW	A	kA						
0.06	0.2	100	–	–	–	GV2L03	0.4	5	LC1D09	LR9D01	0.1...0.5
0.09	0.3	100	–	–	–	GV2L03	0.4	5	LC1D09	LR9D01	0.1...0.5
0.12	0.44	100	–	–	–	GV2L04	0.63	8	LC1D18	LR9D02	0.4...2.0
0.18	0.6	100	–	–	–	GV2L05	1	8	LC1D18	LR9D02	0.4...2.0
0.25	0.85	100	–	–	–	GV2L05	1	13	LC1D18	LR9D02	0.4...2.0
0.37	1.1	100	–	–	–	GV2L06	1.6	13	LC1D18	LR9D02	0.4...2.0
0.55	1.5	100	–	–	–	GV2L06	1.6	22.5	LC1D18	LR9D02	0.4...2.0
0.75	1.9	100	–	–	–	GV2L07	2.5	33.5	LC1D18	LR9D08	1.6...8.0
1.1	2.7	100	–	–	–	GV2L08	4	51	LC1D18	LR9D08	1.6...8.0
1.5	3.6	100	–	–	–	GV2L08	4	51	LC1D18	LR9D08	1.6...8.0
2.2	4.9	100	–	–	–	GV2L10	6.3	78	LC1D18	LR9D08	1.6...8.0
3	6.5	100	–	–	–	GV2L14	10	138	LC1D25	LR9D32	6.4...32
4	8.5	100	–	–	–	GV2L14	10	138	LC1D25	LR9D32	6.4...32
5.5	11.5	100	–	–	–	GV2L16	14	170	LC1D25	LR9D32	6.4...32
7.5	15.5	50	–	–	–	GV2L20	18	223	LC1D25	LR9D32	6.4...32
11	22	50	–	–	–	GV2L22	25	327	LC1D25	LR9D32	6.4...32
15	29	50	–	–	–	GV3L32	40	448	LC1D65A	LR9D110S	22...110
18.5	35	50	–	–	–	GV3L40	40	560	LC1D65A	LR9D110S	22...110
22	41	50	–	–	–	GV3L50	50	700	LC1D65A	LR9D110S	22...110
30	55	50	–	–	–	GV3L65	65	910	LC1D65A	LR9D110S	22...110
–	–	–	0.37	0.64	50	GV2L05	1	13	LC1D09	LR9D02	0.4...2.0
–	–	–	0.55	0.87	50	GV2L05	1	13	LC1D09	LR9D02	0.4...2.0
–	–	–	0.75	1.1	50	GV2L06	1.6	22.5	LC1D09	LR9D02	0.4...2.0
–	–	–	1.1	1.6	50	GV2L07 + LA9LB920 <sup>(1)</sup>	2.5	33.5	LC1D25	LR9D08	1.6...8.0
–	–	–	1.5	2.1	50	GV2L07 + LA9LB920 <sup>(1)</sup>	2.5	33.5	LC1D25	LR9D08	1.6...8.0
–	–	–	2.2	2.8	50	GV2L08 + LA9LB920 <sup>(1)</sup>	4	51	LC1D25	LR9D08	1.6...8.0
–	–	–	3	4	50	GV2L08 + LA9LB920 <sup>(1)</sup>	4	51	LC1D25	LR9D08	1.6...8.0
–	–	–	4	5	50	GV2L10 + LA9LB920 <sup>(1)</sup>	6.3	78	LC1D25	LR9D08	1.6...8.0
–	–	–	5.5	7	50	GV2L14 + LA9LB920 <sup>(1)</sup>	10	138	LC1D25	LR9D32	6.4...32
–	–	–	7.5	8.9	50	GV2L16 + LA9LB920 <sup>(1)</sup>	14	138	LC1D25	LR9D32	6.4...32
–	–	–	11	13	3	GV3L16 + LA9LB920 <sup>(1)</sup>	14	252	LC1D32	LR9D32	6.4...32
–	–	–	15	16.5	3	GV2L22 + LA9LB920 <sup>(1)</sup>	18	327	LC1D32	LR9D32	6.4...32
–	–	–	18.5	21	3	GV3L25 + LA9LB920 <sup>(1)</sup>	25	350	LC1D65A	LR9D32	6.4...32
–	–	–	22	25	3	GV2L32 + LA9LB920 <sup>(1)</sup>	32	416	LC1D65A	LR9D32	6.4...32

(1) For more information about the current limiter LA9LB920, please refer to pages A4/31 and A4/61 of TeSys Catalog, ref. MKTED210011EN.

Coordination and standards

#### 30 to 500 kW at 690 V: type 2 coordination (with ComPacT NSX/NS circuit breakers and LR9G overload relays)

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker		Contactor	Electronic thermal overload relay	
690 V			Product type <sup>(1)</sup>	I <sub>rm</sub> <sup>(2)</sup>	Product type	Product type	I <sub>r</sub> setting <sup>(2)</sup>
P	I <sub>e</sub>	I <sub>q</sub> (max)					
kW	A	kA		A			A
30	32	100	NSX100● + MA	550	LC1G115	LR9G115	32
37	39	100	NSX100● + MA	550	LC1G115	LR9G115	39
45	47	100	NSX100● + MA	650	LC1G115	LR9G115	47
55	57	100	NSX100● + MA	1100	LC1G115	LR9G115	57
75	77	100	NSX100● + MA	1100	LC1G115	LR9G225	77
90	93	100	NSX250● + MA	1650	LC1G150	LR9G225	93
110	113	100	NSX250● + MA	1650	LC1G185	LR9G225	113
132	134	100	NSX250● + MA	1800	LC1G225	LR9G225	134
160	162	100	NSX250● + MA	2420	LC1G225	LR9G225	162
200	203	100	NSX400● + MicroLogic 1.3 M	2640	LC1G265	LR9G500	203
220	223	100	NSX400● + MicroLogic 1.3 M	3520	LC1G330	LR9G500	223
250	250	100	NSX400● + MicroLogic 1.3 M	3520	LC1G400	LR9G500	250
315	313	100	NSX630● + MicroLogic 1.3 M	5500	LC1G400	LR9G500	313
335	335	100	NSX630● + MicroLogic 1.3 M	5500	LC1G500	LR9G500	335
355	354	100	NSX630● + MicroLogic 1.3 M	5500	LC1G500	LR9G500	354
375	374	100	NSX630● + MicroLogic 1.3 M	5500	LC1G630	LR9G630	374
400	400	100	NSX630● + MicroLogic 1.3 M	5500	LC1G630	LR9G630	400
450	455	100	NS800● + MicroLogic 5.0 LR OFF	6000	LC1G630	LR9G630	455
475	475	100	NS800● + MicroLogic 5.0 LR OFF	6500	LC1G630	LR9G630	475
500	493	100	NS800● + MicroLogic 5.0 LR OFF	6500	LC1G630	LR9G630	493

(1) Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	NSX100●/ NSX250●/ NSX400●/ NSX630●	
Breaking performance code	HB1	HB2
690 V	75	100

(2) This setting is a general guidance, I<sub>r</sub> and I<sub>rm</sub> should be adjusted according to motor characteristics and conditions of use.

#### 1.5 to 355 kW at 400/415 and 440 V: type 2 coordination

**Maximum operating rate:** LC1D: 30 starts/hour; LC1F: 12 starts/hour.

**Maximum starting time:** LC1D: 30 seconds; LC1F: 20 seconds.

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e						Switch-disconnector-fuse	aM fuses		Star-Delta contactors	Thermal overload relay	
400/415 V			440 V			Reference	Size	Rating	Reference	Reference	Setting range
P	I <sub>e</sub>	I <sub>q</sub>	P	I <sub>e</sub>	I <sub>q</sub>			A			A
kW	A	kA	kW	A	kA						
1.5	3.6	50	1.5	3.3	50	GS1DD	10 x 38	4	3 x LC1D09	LRD08	2.5...4
2.2	4.9	50	2.2	4.5	50	GS1DD	10 x 38	6	3 x LC1D09	LRD10	4...6
3	6.5	50	3	5.9	50	GS1DD	10 x 38	8	3 x LC1D09	LRD12	5.5...8
4	8.5	50	4	7.8	50	GS1DD	10 x 38	10	3 x LC1D09	LRD14	7...10
5.5	11.5	50	5.5	10.5	50	GS1DD	10 x 38	16	3 x LC1D12	LRD16	9...13
7.5	15.5	50	7.5	14.1	50	GS1DD	10 x 38	16	3 x LC1D18	LRD21	12...18
9	18.1	100	9	16.9	100	GS●F	14 x 51	25	3 x LC1D25	LRD22	16...24
11	22	100	11	20	100	GS●F	14 x 51	32	3 x LC1D32	LRD32	23...32
15	29	100	15	27	100	GS●F	14 x 51	40	3 x LC1D40A	LRD340	30...40
18.5	35	100	18.5	34	100	GS●F	14 x 51	40	3 x LC1D40A	LRD340	30...40
22	41	100	22	39	100	GS●J	22 x 58	50	3 x LC1D50A	LRD350	37...50
30	55	100	30	51	100	GS●J	22 x 58	80	3 x LC1D65A	LRD365	48...65
37	66	100	37	64	100	GS●J	22 x 58	80	3 x LC1D80	LRD3363	63...80
-	-	-	45	73	100	GS●J	22 x 58	80	3 x LC1D80	LRD3365	80...104
45	80	100	-	-	-	GS●J	22 x 58	100	2 x LC1D115A + LC1D40A	LR9D5367	60...100
-	-	-	55	88	100	GS●L	T0	125	2 x LC1D115A + LC1D40A	LR9G115	28...115
55	97	100	-	-	-	GS●L	T0	125	2 x LC1D115A + LC1D40A	LR9G115	28...115
-	-	-	75	120	100	GS●L	T0	160	2 x LC1D115A + LC1D50A	LR9G115	28...115

Coordination and standards

Contactor: **Maximum operating rate:** 30 starts/hour - **Maximum starting time:** 30 seconds.

The coordination table is for normal starting conditions (Class 10e/ 20e). For other heavy starting applications with long start times, please contact your technical support.

**RE17RMMWS** timer to be used for Star-Delta starter application.

90 to 335 kW at 400/415 V: type 2 coordination									
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Switch-disconnector	aM fuses		Contactor Line (KM2) / Delta (KM3) <sup>(1)</sup>	Contactor Star (KM1) <sup>(1)</sup>	Electronic thermal overload relay	
400/415 V			Product type	Size	Rating	Product type		Product type	Ir setting <sup>(2)</sup>
P	I <sub>e</sub>	I <sub>q</sub> (max)							
kW	A	kA		A					A
90	160	80	GS●N	1	200	LC1G115	LC1D65	LR9G115	92
110	195	80	GS●N	1	250	LC1G150	LC1D80	LR9G225	113
132	230	80	GS●QQ	2	315	LC1G185	LC1G115	LR9G225	133
160	280	80	GS●QQ	2	400	LC1G225	LC1G115	LR9G225	162
200	350	80	GS2●S	3	500	LC1G265	LC1G115	LR9G225	202
220	380	80	GS2●S	3	500	LC1G330	LC1G150	LR9G500	219
250	430	80	GS2●S	3	500	LC1G400	LC1G150	LR9G500	248
315	540	80	GS2●S	3	630	LC1G500	LC1G225	LR9G500	312
335	575	80	GS2●V	4	800	LC1G500	LC1G225	LR9G500	332

110 to 400 kW at 440 V: type 2 coordination									
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3			Switch-disconnector	aM fuses		Contactor Line (KM2) / Delta (KM3) <sup>(1)</sup>	Contactor Star (KM1) <sup>(1)</sup>	Electronic thermal overload relay	
440 V			Product type	Size	Rating	Product type		Product type	Ir setting <sup>(2)</sup>
P	I <sub>e</sub>	I <sub>q</sub> max							
kW	A	kA		A					A
110	177	80	GS●N	1	200	LC1G115	LC1D65	LR9G115	102
132	209	80	GS●N	1	250	LC1G150	LC1D80	LR9G225	121
160	255	80	GS●QQ	2	315	LC1G150	LC1G115	LR9G225	147
200	318	80	GS●QQ	2	400	LC1G185	LC1G115	LR9G225	184
220	343	80	GS2●S	3	500	LC1G225	LC1G115	LR9G225	198
250	390	80	GS2●S	3	500	LC1G265	LC1G150	LR9G500	225
315	490	80	GS2●S	3	500	LC1G330	LC1G185	LR9G500	283
355	554	80	GS2●S	3	630	LC1G330	LC1G225	LR9G500	320
400	627	80	GS2●V	4	800	LC1G400	LC1G225	LR9G500	362

90 to 315 kW at 500 V: type 2 coordination									
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3			Switch-disconnector	aM fuses		Contactor Line (KM2) / Delta (KM3) <sup>(1)</sup>	Contactor Star (KM1) <sup>(1)</sup>	Electronic thermal overload relay	
500 V			Product type	Size	Rating	Product type		Product type	Ir setting <sup>(2)</sup>
P	I <sub>e</sub>	I <sub>q</sub> max							
kW	A	kA		A					A
90	128	80	GS●N	1	200	LC1G115	LC1D65	LR9G115	74
110	156	80	GS●N	1	250	LC1G115	LC1D65	LR9G115	90
132	184	80	GS●QQ	2	315	LC1G115	LC1D65	LR9G225	106
160	224	80	GS●QQ	2	400	LC1G150	LC1D80	LR9G225	129
200	280	80	GS2●S	3	500	LC1G185	LC1G115	LR9G225	162
220	308	80	GS2●S	3	500	LC1G185	LC1G115	LR9G500	178
250	344	80	GS2●S	3	500	LC1G225	LC1G150	LR9G500	199
315	432	80	GS2●S	3	630	LC1G265	LC1G185	LR9G630	249

(1) Please refer to diagram page A3/37.

(2) This setting is a general guidance, Ir should be adjusted according to motor characteristics and conditions of use.

#### 1.5 to 80 kW at 400/415 and 440 V: type 2 coordination

Maximum operating rate: LC1D: 30 starts/hour.

Maximum starting time: LC1D: 30 seconds.

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e						Switch-disconnector-fuse Reference	BS fuses		Star-Delta contactors Reference	Thermal overload relay	
400/415 V			440 V				Size	Rating		Reference	Reference
P	I <sub>e</sub>	I <sub>q</sub>	P	I <sub>e</sub>	I <sub>q</sub>						
kW	A	kA	kW	A	kA			A			A
1.5	3.6	50	1.5	3.3	50	GS1DDB	A1	NIT 16	3 x LC1D09	LRD08	2.5...4
2.2	4.9	50	2.2	4.5	50	GS1DDB	A1	NIT 16	3 x LC1D09	LRD10	4...6
3	6.5	50	3	5.9	50	GS1DDB	A1	NIT 20	3 x LC1D09	LRD12	5.5...8
4	8.5	50	4	7.8	50	GS1DDB	A1	NIT 20	3 x LC1D09	LRD14	7...10
5.5	11.5	50	5.5	10.5	50	GS1DDB	A1	NIT 20M25	3 x LC1D12	LRD16	9...13
7.5	15.5	50	7.5	14.1	50	GS1DDB	A1	NIT 20M32	3 x LC1D18	LRD21	12...18
9	18.1	50	9	16.9	50	GS2GB	A2	TIA 32M35	3 x LC1D18	LRD21	12...18
11	22	80	11	20	50	GS2GB	A2	TIA 32M50	3 x LC1D25	LRD22	16...24
15	29	80	15	27	50	GS2GB	A2	TIA 32M63	3 x LC1D32	LRD32	23...32
-	-	-	30	51	50	GS2GB	A3	TIS 63M100	3 x LC1D65A	LRD365	48...65
30	55	50	-	-	-	GS2GB	A3	TIS 63M100	3 x LC1D65A	LRD365	48...65
45	80	50	45	73	50	GS2LLB	A4	TCP 100M125	3 x LC1D80 <sup>(1)</sup>	LRD3357 + LA7D3058	37...50
55	97	80	55	88	80	GS2LLB	A4	TCP 100M160	2 x LC1D115A + LC1D40A	LRD3359 + LA7D3058	48...65
80	141	80	80	128	80	GS2LB	B2	TF 200M250	2 x LC1D115A + LC1D50A	LRD3363 + LA7D3058	90...150

(1) Only electromechanical coils are available for this contactor rating.

#### 1.5 to 90 kW at 400/415 V and 440 V: type 2 coordination

**Maximum operating rate:** LC1D: 30 starts/hour.

**Maximum starting time:** LC1D: 30 seconds.

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3e								Circuit breaker		Star-delta contactors
400/415 V				440 V				Reference	Setting range of thermal trips	Reference
P	I <sub>e</sub>	I <sub>rD</sub> <sup>(6)</sup>	I <sub>q</sub>	P	I <sub>e</sub>	I <sub>rD</sub> <sup>(6)</sup>	I <sub>q</sub> <sup>(1)</sup>		A	
kW	A	A	kA	kW	A	A	kA			
1.5	3.6	–	130	1.5	3.3	–	130	GV2P08	2.5...4	3 x LC1D09 <sup>(2)</sup>
2.2	4.9	–	130	2.2	4.5	–	130	GV2P10	4...6.3	3 x LC1D18 <sup>(3)</sup>
–	–	–	–	3	5.9	–	130	GV2P10	4...6.3	3 x LC1D18 <sup>(3)</sup>
3	6.5	–	130	–	–	–	–	GV2P14	6...10	3 x LC1D18 <sup>(3)</sup>
4	8.5	–	130	4	7.8	–	130	GV2P14	6...10	3 x LC1D18 <sup>(3)</sup>
5.5	11.5	–	50	5.5	10.5	–	50	GV2P16	9...14	3 x LC1D25 <sup>(3)</sup>
–	–	–	–	7.5	14.1	–	50	GV2P16	9...14	3 x LC1D25 <sup>(3)</sup>
7.5	15.5	–	50	9	16.9	–	20	GV2P20	13...18	3 x LC1D25 <sup>(3)</sup>
9	18.1	–	50	11	20	–	20	GV2P21	17...23	3 x LC1D25 <sup>(3)</sup>
11	22	–	50	–	–	–	–	GV2P22	20...25	3 x LC1D25 <sup>(3)</sup>
15	29	–	50	15	27	–	50	GV3P32	23...32	3 x LC1D40A <sup>(4)</sup>
18.5	35	–	50	–	–	–	–	GV3P40	30...40	2 x LC1D50A + LC1D40A <sup>(3)</sup>
–	–	–	–	18.5	32	–	50	GV3P40	30...40	2 x LC1D65A + LC1D40A <sup>(4)</sup>
22	41	–	50	–	–	–	–	GV3P50	37...50	2 x LC1D50A + LC1D40A <sup>(3)</sup>
–	–	–	–	22	39	–	50	GV3P50	37...50	2 x LC1D65A + LC1D40A <sup>(4)</sup>
30	55	–	50	30	51	–	50	GV3P65	48...65	2 x LC1D65A + LC1D40A <sup>(4)</sup>
37	66	–	100	37	73	–	70	GV4P80S	40...80	3 x LC1D80 <sup>(7)</sup>
–	–	–	–	45	73	–	70	GV4P80S	40...80	3 x LC1D65A <sup>(4)</sup>
45	80	–	100	–	–	–	–	GV4P115S	65...115	2 x LC1D115A + LC1D40A
55	97	–	100	55	88	–	70	GV4P115S	65...115	2 x LC1D115A + LC1D50A
75	132	78	70	75	120	74	65	GV5P150H	70...150	2 x LC1D115A + LC1D50A
–	–	–	–	90	146	86	65	GV5P150H	70...150	2 x LC1D115A + LC1D50A

(1) The breaking performance of circuit breakers **GV2P** can be increased by adding a current limiter **GV1L3**, please refer to page B6/21 of TeSys Catalog - ref. MKTED210011EN.

(2) For mounting 3 contactors **LC1D09**, Star-Delta starter kit **LAD91217** must be ordered separately, please refer to page A1/20.

(3) For mounting 3 contactors **LC1D18** or **LC1D25**, Star-Delta starter kit **LAD93217** must be ordered separately, please refer to page A1/20.

(4) For mounting 3 contactors **LC1D65A**, Star-Delta starter kit **LAD9SD3** must be ordered separately, please refer to page A1/20.

(5) For mounting 3 contactors **LC1D80**, Star-Delta starter kit **LA9D8017** must be ordered separately, please refer to page A1/20.

(6) I<sub>rD</sub>: current in the motor windings in delta connection.

(7) Only electromechanical coils are available for this contactor rating.

Contactor: **Maximum operating rate:** 30 starts/hour - **Maximum starting time:** 30 seconds.

The coordination table is for normal starting conditions (Class 10e/ 20e). For other heavy starting applications with long start times, please contact your technical support.

**RE17RMMWS** timer to be used for Star-Delta starter application.

#### 90 to 250 kW at 400/415 V: type 2 coordination (with TeSys GV5/GV6 circuit breakers)

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker			Contactor Line (KM2) / Delta (KM3) <sup>(3)</sup>	Contactor Star (KM1) <sup>(3)</sup>
400/415 V			Product type <sup>(1)</sup>	I <sub>r</sub> setting <sup>(2)</sup>	I <sub>rm</sub> <sup>(2)</sup>	Product type	
P	I <sub>e</sub>	I <sub>q</sub> (max)		A	A		
kW	A	kA					
90	160	70	GV5P220●	170	1360	LC1G115	LC1D65
110	195	70	GV5P220●	200	1600	LC1G150	LC1D80
110	195	70	GV6P320●	200	1600	LC1G150	LC1D80
132	230	70	GV6P320●	240	1920	LC1G150	LC1D95
160	280	70	GV6P320●	300	2400	LC1G185	LC1G115
200	350	70	GV6P500●	380	3040	LC1G225	LC1G115
220	380	70	GV6P500●	400	3200	LC1G265	LC1G150
250	430	70	GV6P500●	440	3520	LC1G265	LC1G150

<sup>(1)</sup> Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	GV5P220● GV6P320●/GV6P500●
Breaking performance code	F H
400/415 V	36 70

#### 90 to 450 kW at 400/415 V: type 2 coordination (with ComPact NSX/NS circuit breakers)

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker			Contactor Line (KM2) / Delta (KM3) <sup>(3)</sup>	Contactor Star (KM1) <sup>(3)</sup>
400/415 V			Product type <sup>(1)</sup>	I <sub>r</sub> setting <sup>(2)</sup>	I <sub>rm</sub> <sup>(2)</sup>	Product type	
P	I <sub>e</sub>	I <sub>q</sub> (max)		A	A		
kW	A	kA					
90	160	130	NSX250● + MicroLogic 2.2 M	170	1360	LC1G115	LC1D65
110	195	130	NSX250● + MicroLogic 2.2 M	200	1600	LC1G150	LC1D80
110	195	130	NSX400● + MicroLogic 2.3 M	200	1600	LC1G150	LC1D80
132	230	130	NSX400● + MicroLogic 2.3 M	240	1920	LC1G150	LC1D95
160	280	130	NSX400● + MicroLogic 2.3 M	300	2400	LC1G185	LC1G115
200	350	130	NSX630● + MicroLogic 2.3 M	380	3040	LC1G225	LC1G115
220	380	130	NSX630● + MicroLogic 2.3 M	400	3200	LC1G265	LC1G150
250	430	130	NSX630● + MicroLogic 2.3 M	440	3520	LC1G265	LC1G150
300	500	130	NS800● + MicroLogic 5.0	480	4480	LC1G330	LC1G185
335	575	130	NS800● + MicroLogic 5.0	640	5120	LC1G400	LC1G225
355	610	130	NS800● + MicroLogic 5.0	640	5120	LC1G400	LC1G225
400	690	130	NS800● + MicroLogic 5.0	720	5760	LC1G500	LC1G265
450	770	130	NS1000● + MicroLogic 5.0	784	6272	LC1G500	LC1G330

<sup>(1)</sup> Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	NSX250●/ NSX400●/ NSX630●					NS800●/ NS1000●
Breaking performance code	F	N	H	S	L	L
400/415 V	36	50	70	100	150	150

<sup>(2)</sup> This setting is a general guidance, I<sub>r</sub> and I<sub>rm</sub> should be adjusted according to motor characteristics and conditions of use.

<sup>(3)</sup> Please refer to diagram page A3/37.

Contactor: **Maximum operating rate:** 30 starts/hour - **Maximum starting time:** 30 seconds.

The coordination table is for normal starting conditions (Class 10e/ 20e). For other heavy starting applications with long start times, please contact your technical support.

**RE17RMMWS** timer to be used for Star-Delta starter application.

110 to 300 kW at 440 V: type 2 coordination (with TeSys GV5/GV6 circuit breakers)							
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker			Contactor Line (KM2) / Delta (KM3) <sup>(3)</sup>	Contactor Star (KM1) <sup>(3)</sup>
440 V			Product type <sup>(1)</sup>	Ir setting <sup>(2)</sup>	Irm <sup>(2)</sup>	Product type	
P	Ie	Iq (max)		A	A		
kW	A	kA					
110	177	65	GV5P220●	185	1480	LC1G115	LC1D65
132	209	65	GV5P220●	210	1680	LC1G150	LC1D80
160	255	65	GV6P320●	260	2080	LC1G185	LC1G115
200	318	65	GV6P320●	320	2560	LC1G225	LC1G115
220	343	65	GV6P500●	350	2800	LC1G225	LC1G150
250	390	65	GV6P500●	400	3200	LC1G265	LC1G150
300	466	65	GV6P500●	470	3760	LC1G330	LC1G185

<sup>(1)</sup> Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	GV5P220●		GV6P320●/GV6P500●	
Breaking performance code	F	H	F	H
440 V	35	65	30	65

110 to 450 kW at 440 V: type 2 coordination (with ComPacT NSX/NS circuit breakers)							
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker			Contactor Line (KM2) / Delta (KM3) <sup>(3)</sup>	Contactor Star (KM1) <sup>(3)</sup>
440 V			Product type <sup>(1)</sup>	Ir setting <sup>(2)</sup>	Irm <sup>(2)</sup>	Product type	
P	Ie	Iq (max)		A	A		
kW	A	kA					
110	177	130	NSX250● + MicroLogic 2.2 M	185	1480	LC1G115	LC1D65
132	209	130	NSX250● + MicroLogic 2.2 M	210	1680	LC1G150	LC1D80
160	255	130	NSX400● + MicroLogic 2.3 M	260	2080	LC1G185	LC1G115
200	318	130	NSX400● + MicroLogic 2.3 M	320	2560	LC1G225	LC1G115
220	343	130	NSX630● + MicroLogic 2.3 M	350	2800	LC1G225	LC1G150
250	390	130	NSX630● + MicroLogic 2.3 M	400	3200	LC1G265	LC1G150
300	466	130	NSX630● + MicroLogic 2.3 M	470	3760	LC1G330	LC1G185
335	521	130	NS800● + MicroLogic 5.0	560	4480	LC1G330	LC1G185
355	554	130	NS800● + MicroLogic 5.0	560	4480	LC1G400	LC1G225
400	627	130	NS800● + MicroLogic 5.0	640	5120	LC1G400	LC1G225
450	695	130	NS800● + MicroLogic 5.0	720	5760	LC1G500	LC1G265

<sup>(1)</sup> Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	NSX250●					NSX400●/ NSX630●					NS800●
Breaking performance code	F	N	H	S	L	F	N	H	S	L	L
440 V	35	50	65	100	130	30	42	65	100	130	130

<sup>(2)</sup> This setting is a general guidance, Ir and Irm should be adjusted according to motor characteristics and conditions of use.

<sup>(3)</sup> Please refer to diagram page A3/37.

Contactor: **Maximum operating rate:** 30 starts/hour - **Maximum starting time:** 30 seconds.

The coordination table is for normal starting conditions (Class 10e/ 20e). For other heavy starting applications with long start times, please contact your technical support.

**RE17RMMWS** timer to be used for Star-Delta starter application.

#### 132 to 295 kW at 500 V: type 2 coordination (with TeSys GV5 / GV6 circuit breakers)

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker			Contactor Line (KM2) / Delta (KM3) <sup>(3)</sup>	Contactor Star (KM1) <sup>(3)</sup>
500 V			Product type <sup>(1)</sup>	Ir setting <sup>(2)</sup>	Irm <sup>(2)</sup>	Product type	
P	Ie	Iq (max)		A	A		
kW	A	kA					
132	184	50	GV5P220●	185	1480	LC1G115	LC1D65
160	224	50	GV6P320●	240	1920	LC1G150	LC1D80
200	280	50	GV6P320●	300	2400	LC1G185	LC1G115
250	344	50	GV6P500●	350	2800	LC1G225	LC1G115
295	405	50	GV6P500●	440	3520	LC1G265	LC1G150

<sup>(1)</sup> Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	GV5P220●		GV6P320● / 500●	
Breaking performance code	F	H	F	H
500 V	30	50	25	50

#### 132 to 425 kW at 500 V: type 2 coordination (with ComPact NSX / NS circuit breakers)

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker			Contactor Line (KM2) / Delta (KM3) <sup>(3)</sup>	Contactor Star (KM1) <sup>(3)</sup>
500 V			Product type <sup>(1)</sup>	Ir setting <sup>(2)</sup>	Irm <sup>(2)</sup>	Product type	
P	Ie	Iq (max)		A	A		
kW	A	kA					
132	184	70	NSX250● + MicroLogic 2.2 M	185	1480	LC1G115	LC1D65
160	224	70	NSX400● + MicroLogic 2.3 M <sup>(4)</sup>	240	1920	LC1G150	LC1D80
200	280	70	NSX400● + MicroLogic 2.3 M <sup>(4)</sup>	300	2400	LC1G185	LC1G115
250	344	70	NSX630● + MicroLogic 2.3 M <sup>(4)</sup>	350	2800	LC1G225	LC1G115
295	405	70	NSX630● + MicroLogic 2.3 M <sup>(4)</sup>	440	3520	LC1G265	LC1G150
375	516	70	NS800● + MicroLogic 5.0	560	4480	LC1G330	LC1G185
425	584	70	NS800● + MicroLogic 5.0	640	5120	LC1G400	LC1G225

<sup>(1)</sup> Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	NSX250●					NSX400● / NSX630●					NS800●
Breaking performance code	F	N	H	S	L	F	N	H	S	L	L
500 V	30	36	50	65	70	25	30	50	65	70	100

<sup>(2)</sup> This setting is a general guidance. Ir and Irm should be adjusted according to motor characteristics and conditions of use.

<sup>(3)</sup> Please refer to diagram page A3/37.

<sup>(4)</sup> Applicable also with MicroLogic 6.2 E-M and 6.3 E-M trip units.

Contactor: **Maximum operating rate:** 30 starts/hour - **Maximum starting time:** 30 seconds.

The coordination table is for normal starting conditions (Class 10e/ 20e). For other heavy starting applications with long start times, please contact your technical support.

**RE17RMMWS** timer to be used for Star-Delta starter application.

55 to 560 kW at 690 V: type 2 coordination (with ComPact NSX / NS circuit breakers)							
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker			Contactor Line (KM2) / Delta (KM3) <sup>(3)</sup>	Contactor Star (KM1) <sup>(3)</sup>
690 V			Product type <sup>(1)</sup>	I <sub>r</sub> setting <sup>(2)</sup>	I <sub>rm</sub> <sup>(2)</sup>	Product type	
P	I <sub>e</sub>	I <sub>q</sub> (max)		A	A		
kW	A	kA					
55	57	75	NSX100● + MicroLogic 2.2 M	60	1500	LC1G115	LC1G115
75	77	75	NSX100● + MicroLogic 2.2 M	80	1500	LC1G115	LC1G115
90	93	75	NSX250● + MicroLogic 2.2 M	95	1500	LC1G150	LC1G115
110	113	75	NSX250● + MicroLogic 2.2 M	115	2250	LC1G185	LC1G115
132	134	75	NSX250● + MicroLogic 2.2 M	140	2250	LC1G225	LC1G115
160	162	75	NSX250● + MicroLogic 2.2 M	170	3300	LC1G225	LC1G115
200	203	75	NSX250● + MicroLogic 2.2 M	210	3300	LC1G265	LC1G150
220	223	75	NSX400● + MicroLogic 2.3 M	240	4800	LC1G330	LC1G185
250	250	75	NSX400● + MicroLogic 2.3 M	260	4800	LC1G400	LC1G225
315	313	75	NSX630● + MicroLogic 2.3 M	320	4800	LC1G400	LC1G225
335	335	75	NSX630● + MicroLogic 2.3 M	350	6500	LC1G500	LC1G265
355	354	75	NSX630● + MicroLogic 2.3 M	380	6500	LC1G500	LC1G265
375	374	75	NSX630● + MicroLogic 2.3 M	380	6500	LC1G630	LC1G330
400	400	75	NSX630● + MicroLogic 2.3 M	440	6500	LC1G630	LC1G330
450	455	75	NSX630● + MicroLogic 2.3 M	470	6500	LC1G630	LC1G330
475	475	75	NSX630● + MicroLogic 2.3 M	500	6500	LC1G630	LC1G330
500	493	75	NSX630● + MicroLogic 2.3 M	500	6500	LC1G630	LC1G330
560	551	75	NS800● + MicroLogic 5.0	560	12000	LC1G800	LC1G400

<sup>(1)</sup> Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	NSX100●/ NSX250●/ NSX400●/ NSX630●		NS800●
Breaking performance code	HB1	HB2	LB
690 V	75	100	75

<sup>(2)</sup> This setting is a general guidance. I<sub>r</sub> and I<sub>rm</sub> should be adjusted according to motor characteristics and conditions of use.

<sup>(3)</sup> Please refer to diagram page A3/37.

#### 1.5 to 90 kW at 400/415 and 440 V: type 2 coordination

Maximum operating rate: LC3D: 30 starts/hour.

Maximum starting time: LC3D: 30 seconds.

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e						Circuit breaker			Star-Delta contactors	Thermal overload relay	
400/415 V			440 V			Reference	Rating	I <sub>rm</sub> <sup>(1)</sup>	Reference	Reference	Setting range
P	I <sub>e</sub>	I <sub>q</sub>	P	I <sub>e</sub>	I <sub>q</sub>		A	A			A
kW	A	kA	kW	A	kA						
1.5	3.6	130	1.5	3.3	130	GV2L08	4	51	3 x LC1D09	LRD08	2.5...4
2.2	4.9	130	2.2	4.5	130	GV2L10	6.3	78	3 x LC1D09	LRD10	4...6
3	6.5	130	3	5.9	130						
–	–	–	4	7.8	20	GV2L14	10	138	3 x LC1D18	LRD14	7...10
4	8.5	130	–	–	–	GV2L14	10	138	3 x LC1D18	LRD16	9...13
5.5	11.5	50	5.5	10.5	20	GV2L16	14	170	3 x LC1D25	LRD16	9...13
7.5	15.5	50	7.5	14.1	20	GV2L20	18	223	3 x LC1D25	LRD21	12...18
–	–	–	9	16.9	20	GV2L22	25	327	3 x LC1D25	LRD21	12...18
9	18.1	50	–	–	–	GV2L22	25	327	3 x LC1D25	LRD22	16...24
11	22	50	11	20	20						
15	29	50	15	27	50	GV3L32	32	448	3 x LC1D40A <sup>(2)</sup>	LRD332	23...32
18.5	35	50	–	–	–	GV3L40	40	560	2 x LC1D50A + LC1D40A <sup>(2)</sup>	LRD340	30...40
–	–	–	18.5	32	50	GV3L40	40	560	2 x LC1D65A + LC1D40A <sup>(2)</sup>	LRD340	30...40
22	41	50	–	–	–	GV3L50	50	700	2 x LC1D50A + LC1D40A <sup>(2)</sup>	LRD350	37...50
–	–	–	22	39	50	GV3L50	50	700	2 x LC1D65A + LC1D40A <sup>(2)</sup>	LRD350	37...50
30	55	50	30	51	50	GV3L65	65	910	2 x LC1D65A + LC1D40A <sup>(2)</sup>	LRD365	48...65
–	–	–	37	64	50	GV3L65	65	910	3 x LC1D80	LRD3359	48...65
37	66	100	–	–	–	GV4L80	80	640	3 x LC1D80	LRD3363	63...80
–	–	–	45	76	70	GV4L80	80	800	3 x LC1D80	LRD3363	63...80
45	80	100	–	–	–	GV4L115	115	805	2 x LC1D115A + LC1D40A	LRD3357 + LAD7D3058	37...50
–	–	–	55	88	70	GV4L115	115	920	2 x LC1D115A + LC1D40A	LRD3359 + LAD7D3058	48...65
55	97	100	–	–	–	GV4L115	115	920	2 x LC1D115A + LC1D40A	LRD3359 + LAD7D3058	48...65
55	97	<sup>(3)</sup>	–	–	–	NSX100●MA <sup>(3)</sup>	150	1200	2 x LC1D115A + LC1D40A	LRD3359 + LAD7D3058	48...65
–	–	–	75	120	<sup>(3)</sup>	NSX160●MA <sup>(3)</sup>	150	1200	2 x LC1D115A + LC1D50A	LR9G115	28...115
75	132	<sup>(3)</sup>	90	146	<sup>(3)</sup>	NSX160●MA <sup>(3)</sup>	150	1200	2 x LC1D115A + LC1D50A	LR9G115	28...115

(1) I<sub>rm</sub>: setting current of the magnetic trip.

(2) For mounting 3 contactors LC1D●●A, Star-Delta starter kit LAD9SD3 must be ordered separately, see page A1/20.

(3) Reference to be completed by replacing the ● with the breaking performance code:

Breaking performance I <sub>q</sub> (kA)	NSX100●MA		NSX160●MA, NSX250●MA		NSX400●, NSX630●	
400/415 V	36	70	36	70	70	150
440 V	35	65	35	65	65	130
Code	F	H	F	H	H	L

### Coordination: Star-Delta with Magnetic circuit breaker + Contactors + Overload relay

Contactor: **Maximum operating rate:** 30 starts/hour - **Maximum starting time:** 30 seconds.

The coordination table is for normal starting conditions (Class 10e/ 20e). For other heavy starting applications with long start times, please contact your technical support.

**RE17RMMWS** timer to be used for Star-Delta starter application.

#### 90 to 450 kW at 400/415 V: type 2 coordination (with ComPacT NSX/NS circuit breakers and LR9G overload relays)

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker	Contactor Line (KM2) / Delta (KM3) <sup>(3)</sup>	Contactor Star (KM1) <sup>(3)</sup>	Electronic thermal overload relay		
400/415 V			Product type <sup>(1)</sup>	I <sub>rm</sub> <sup>(2)</sup>	Product type	Product type	I <sub>r</sub> setting <sup>(2)</sup>	
P	I <sub>e</sub>	I <sub>q</sub> (max)		A			A	
kW	A	kA						
90	160	130	NSX250● + MA	1980	LC1G115	LC1D65	LR9G115	92
110	195	130	NSX250● + MA	1980	LC1G150	LC1D80	LR9G225	113
110	195	130	NSX400● + MicroLogic 1.3 M	1920	LC1G150	LC1D80	LR9G225	113
132	230	130	NSX400● + MicroLogic 1.3 M	1920	LC1G150	LC1D80	LR9G225	133
160	280	130	NSX400● + MicroLogic 1.3 M	2560	LC1G185	LC1G115	LR9G225	162
200	350	130	NSX630● + MicroLogic 1.3 M	3000	LC1G225	LC1G150	LR9G225	202
220	380	130	NSX630● + MicroLogic 1.3 M	3500	LC1G265	LC1G150	LR9G500	219
250	430	130	NSX630● + MicroLogic 1.3 M	3500	LC1G265	LC1G150	LR9G500	248
300	500	130	NS800● + MicroLogic 5.0 LR OFF	4800	LC1G330	LC1G185	LR9G500	266
335	575	130	NS800● + MicroLogic 5.0 LR OFF	4800	LC1G400	LC1G225	LR9G500	332
355	610	130	NS800● + MicroLogic 5.0 LR OFF	5600	LC1G400	LC1G225	LR9G500	352
400	690	130	NS800● + MicroLogic 5.0 LR OFF	5600	LC1G500	LC1G265	LR9G500	362
450	695	130	NS800● + MicroLogic 5.0 LR OFF	6400	LC1G500	LC1G265	LR9G500	401

<sup>(1)</sup> Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	NSX250●/ NSX400●/ NSX630●					NS800●
Breaking performance code	F	N	H	S	L	L
400/415 V	36	50	70	100	130	150

#### 110 to 355 kW at 440 V: type 2 coordination (with ComPacT NSX/NS circuit breakers and LR9G overload relays)

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker	Contactor Line (KM2) / Delta (KM3) <sup>(3)</sup>	Contactor Star (KM1) <sup>(3)</sup>	Electronic thermal overload relay		
440 V			Product type <sup>(1)</sup>	I <sub>rm</sub> <sup>(2)</sup>	Product type	Product type	I <sub>r</sub> setting <sup>(2)</sup>	
P	I <sub>e</sub>	I <sub>q</sub> (max)		A			A	
kW	A	kA						
110	177	130	NSX250● + MA	1980	LC1G115	LC1D65	LR9G115	102
132	209	130	NSX250● + MA	1980	LC1G150	LC1D80	LR9G225	121
160	255	130	NSX400● + MicroLogic 1.3 M	2240	LC1G185	LC1D95	LR9G225	147
200	318	130	NSX400● + MicroLogic 1.3 M	2560	LC1G225	LC1G115	LR9G225	184
220	343	130	NSX630● + MicroLogic 1.3 M	3000	LC1G225	LC1G150	LR9G225	198
250	390	130	NSX630● + MicroLogic 1.3 M	3500	LC1G265	LC1G150	LR9G500	225
300	466	130	NSX630● + MicroLogic 1.3 M	4000	LC1G330	LC1G185	LR9G500	269
335	521	130	NS800● + MicroLogic 5.0 LR OFF	4800	LC1G330	LC1G185	LR9G500	301
355	554	130	NS800● + MicroLogic 5.0 LR OFF	4800	LC1G400	LC1G225	LR9G500	320

<sup>(1)</sup> Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	NSX250●					NSX400●/ NSX630●				NS800●
Breaking performance code	F	N	H	S	L	F	N	S	L	L
440 V	35	50	65	100	130	30	42	100	130	130

<sup>(2)</sup> This setting is a general guidance, I<sub>r</sub> and I<sub>rm</sub> should be adjusted according to motor characteristics and conditions of use.

<sup>(3)</sup> Please refer to diagram page A3/37.

### Coordination: Star-Delta with Magnetic circuit breaker + Contactors + Overload relay

Contactor: **Maximum operating rate:** 30 starts/hour - **Maximum starting time:** 30 seconds.

The coordination table is for normal starting conditions (Class 10e/ 20e). For other heavy starting applications with long start times, please contact your technical support.

**RE17RMMWS** timer to be used for Star-Delta starter application.

#### 132 to 425 kW at 500 V: type 2 coordination (with ComPacT NSX/NS circuit breakers and LR9G overload relays)

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker	Contactor Line (KM2) / Delta (KM3) <sup>(3)</sup>	Contactor Star (KM1) <sup>(3)</sup>	Electronic thermal overload relay		
500 V			Product type <sup>(1)</sup>	I <sub>rm</sub> <sup>(2)</sup>	Product type	Product type	I <sub>r</sub> setting <sup>(2)</sup>	
P	I <sub>e</sub>	I <sub>q</sub> (max)						
kW	A	kA		A			A	
132	184	70	NSX400● + MicroLogic 1.3 M	1600	LC1G115	LC1D65	LR9G225	106
160	224	70	NSX400● + MicroLogic 1.3 M	1920	LC1G150	LC1D80	LR9G225	129
200	280	70	NSX400● + MicroLogic 1.3 M	2560	LC1G185	LC1G115	LR9G225	162
250	344	70	NSX630● + MicroLogic 1.3 M	3000	LC1G225	LC1G150	LR9G225	199
295	405	70	NSX630● + MicroLogic 1.3 M	3500	LC1G265	LC1G150	LR9G500	234
375	516	70	NS800● + MicroLogic 5.0	4800	LC1G330	LC1G185	LR9G500	298
425	584	70	NS800● + MicroLogic 5.0	4800	LC1G400	LC1G185	LR9G500	337

<sup>(1)</sup> Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	NSX400●/ NSX630●					NS800●
Breaking performance code	F	N	H	S	L	L
500 V	25	30	50	65	70	100

<sup>(2)</sup> This setting is a general guidance, I<sub>r</sub> and I<sub>rm</sub> should be adjusted according to motor characteristics and conditions of use.

<sup>(3)</sup> Please refer to diagram page A3/37.

#### 160 to 500 kW at 690 V: type 2 coordination (with ComPacT NSX circuit breakers and LR9G overload relays)

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker	Contactor Line (KM2) / Delta (KM3)	Contactor Star (KM1) <sup>(3)</sup>	Thermal overload relay		
690 V			Product type <sup>(1)</sup>	I <sub>rm</sub> <sup>(2)</sup>	Product type	Product type	I <sub>r</sub> setting <sup>(2)</sup>	
P	I <sub>e</sub>	I <sub>q</sub> (max)						
kW	A	kA		A			A	
160	162	75	NSX250● + MA	3080	LC1G115	LC1D65	LR9G115	94
200	203	75	NSX250● + MA	3080	LC1G150	LC1D80	LR9G225	117
220	223	75	NSX400● + MicroLogic 1.3 M	4800	LC1G150	LC1D80	LR9G225	129
250	250	75	NSX400● + MicroLogic 1.3 M	4800	LC1G185	LC1G115	LR9G225	144
315	313	75	NSX630● + MicroLogic 1.3 M	6500	LC1G225	LC1G115	LR9G225	181
335	335	75	NSX630● + MicroLogic 1.3 M	6500	LC1G225	LC1G150	LR9G225	193
355	354	75	NSX630● + MicroLogic 1.3 M	6500	LC1G225	LC1G150	LR9G225	204
375	374	75	NSX630● + MicroLogic 1.3 M	6500	LC1G265	LC1G150	LR9G225	216
400	400	75	NSX630● + MicroLogic 1.3 M	6500	LC1G265	LC1G150	LR9G500	231
450	455	75	NSX630● + MicroLogic 1.3 M	6500	LC1G330	LC1G185	LR9G500	263
475	475	75	NSX630● + MicroLogic 1.3 M	6500	LC1G330	LC1G185	LR9G500	274
500	493	75	NSX630● + MicroLogic 1.3 M	6500	LC1G330	LC1G185	LR9G500	285

<sup>(1)</sup> Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	NSX100●/ NSX250●/ NSX400●/ NSX630●	
Breaking performance code	HB1	HB2
690 V	75	100

<sup>(2)</sup> This setting is a general guidance, I<sub>r</sub> and I<sub>rm</sub> should be adjusted according to motor characteristics and conditions of use.

<sup>(3)</sup> Please refer to diagram page A3/37.

# TeSys Active

## T Motor management system

Coordination: fuses (NFC, DIN type aM) + contactor + TeSys T + current transformers

0.37 to 75 kW at 400/415 V: type 2 coordination								
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e 400/415 V			Switch-disconnector	aM fuses		Contactor	TeSys T controller	External current transformer
P	I <sub>e</sub>		Reference <sup>(1)</sup>	Size	Rating	Reference <sup>(2)</sup>	Reference	Reference
kW	A				A			
0.37	1.1		GS1DD	10 x 38	2	LC1D09	LTMR08●●	–
0.55	1.5		GS1DD	10 x 38	2	LC1D09	LTMR08●●	–
0.75	1.9		GS1DD	10 x 38	4	LC1D09	LTMR08●●	–
1.1	2.7		GS1DD	10 x 38	4	LC1D09	LTMR08●●	–
1.5	3.6		GS1DD	10 x 38	4	LC1D09	LTMR08●●	–
2.2	4.9		GS1DD	10 x 38	6	LC1D09	LTMR08●●	–
3	6.5		GS1DD	10 x 38	8	LC1D09	LTMR27●●	–
4	8.5		GS1DD	10 x 38	10	LC1D09	LTMR27●●	–
5.5	11.5		GS1DD	10 x 38	16	LC1D12	LTMR27●●	–
7.5	15.5		GS1DD	10 x 38	16	LC1D25	LTMR27●●	–
10	19		GS●F	14 x 51	25	LC1D25	LTMR27●●	–
11	22		GS●F	14 x 51	25	LC1D25	LTMR27●●	–
15	29		GS●F	14 x 51	32	LC1D32	LTMR100●●	–
18.5	35		GS●F	14 x 51	40	LC1D40A	LTMR100●●	–
22	41		GS●J	22 x 58	50	LC1D50A	LTMR100●●	–
30	55		GS●J	22 x 58	80	LC1D65A	LTMR100●●	–
37	66		GS●J	22 x 58	100	LC1D80 <sup>(3)</sup>	LTMR100●●	–
45	80		GS●J	22 x 58	100	LC1D95 <sup>(3)</sup>	LTMR100●●	–
55	97		GS●KK	T00	125	LC1D115A	LTMR08●●	LT6CT2001
75	132		GS●L	T0	160	LC1D150A	LTMR08●●	LT6CT2001

- (1) GS●: GS1 for direct operator, GS2 for external operator.  
 (2) For reversing operation, replace the prefix LC1 with LC2.  
 (3) Only electromechanical coils are available for this contactor rating.

90 to 355 kW at 400 V: type 2 coordination									
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Switch-disconnector	aM fuses		Contactor	TeSys T controller		External current transformer
400 V			Product type	Size	Rating	Product type	Product type <sup>(1)</sup>	I <sub>r</sub> setting <sup>(2)</sup>	Reference
P	I <sub>e</sub>	I <sub>q</sub>			A			A	
kW	A	kA			A			A	
90	160	80	GS●N	1	200	LC1G185	LTMR08●●●	160	LUTC2001
110	195	80	GS●N	1	250	LC1G225	LTMR08●●●	195	LUTC4001
132	230	80	GS●QQ	2	315	LC1G265	LTMR08●●●	230	LUTC4001
160	280	80	GS●QQ	2	400	LC1G330	LTMR08●●●	280	LUTC4001
200	350	80	GS2S	3	500	LC1G400	LTMR08●●●	350	LUTC8001
250	430	80	GS2S	3	500	LC1G500	LTMR08●●●	430	LUTC8001
315	540	80	GS2S	3	630	LC1G630	LTMR08●●●	540	LUTC8001
355	610	80	GS2V	4	800	LC1G630	LTMR08●●●	610	LUTC8001

- (1) Please refer to page C1/2 of TeSys Catalog, ref. MKTED210011EN, for selecting the complete reference for TeSys T motor management controller.  
 (2) This setting is a general guidance, I<sub>r</sub> should be adjusted according to motor characteristics and conditions of use.

Coordination and standards

# TeSys Active

## T Motor management system

Coordination: fuses (NFC, DIN type aM) + contactor + TeSys T + current transformers

Coordination and standards

0.37 to 75 kW at 690 V: type 2 coordination									
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Switch-disconnector <sup>(1)</sup>		aM fuses		Contactor	TeSys T controller	External current transformer
P	I <sub>e</sub>	Reference	Size	Rating	Reference	Reference	Reference	Reference	
kW	A			A					
0.37	0.64	GS●F	14 x 51	1	LC1D09	LTMR08●●	–		
0.55	0.87	GS●F	14 x 51	2	LC1D09	LTMR08●●	–		
0.75	1.1	GS●F	14 x 51	2	LC1D09	LTMR08●●	–		
1.1	1.6	GS●F	14 x 51	2	LC1D09	LTMR08●●	–		
1.5	2.2	GS●F	14 x 51	4	LC1D09	LTMR08●●	–		
2.2	2.9	GS●F	14 x 51	4	LC1D09	LTMR08●●	–		
3	4	GS●F	14 x 51	6	LC1D09	LTMR08●●	–		
4	5	GS●F	14 x 51	6	LC1D09	LTMR08●●	–		
5.5	7	GS●F	14 x 51	8	LC1D25	LTMR08●●	–		
7.5	9.3	GS●F	14 x 51	10	LC1D25	LTMR27●●	–		
11	13	GS●F	14 x 51	16	LC1D25	LTMR27●●	–		
15	16.5	GS●G	T000	20	LC1D32	LTMR27●●	–		
18.5	21	GS●G	T000	25	LC1D32	LTMR27●●	–		
22	25	GS●G	T000	32	LC1D40A	LTMR27●●	–		
30	33	GS●G	T000	40	LC1D50A	LTMR100●●	–		
37	40	GS●J	22 x 58	50	LC1D65A	LTMR100●●	–		
45	49	GS●J	22 x 58	63	LC1D80 <sup>(2)</sup>	LTMR100●●	–		
55	58	GS●J	22 x 58	80	LC1D115A	LTMR100●●	–		
75	77	GS●KK	T00	100	LC1D115A	LTMR100●●	–		

(1) GS●: GS1 for direct operator, GS2 for external operator.  
 (2) Only electromechanical coils are available for this contactor rating.

110 to 400 kW at 690 V: type 2 coordination									
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Switch-disconnector		aM fuses		Contactor	TeSys T controller	External current transformer
690 V			Product type	Size	Rating	Product type	Product type <sup>(1)</sup>	I <sub>r</sub> setting <sup>(2)</sup>	Reference
P	I <sub>e</sub>	I <sub>q</sub>			A			A	
kW	A	kA							
110	113	80	GS●KK	0	125	LC1G185	LTMR08●●●	113	LUTC2001
132	140	80	GS●L	0	160	LC1G265	LTMR08●●●	134	LUTC2001
160	165	80	GS●N	1	160	LC1G265	LTMR08●●●	162	LUTC2001
200	203	80	GS●N	1	200	LC1G330	LTMR08●●●	203	LUTC2001
220	233	80	GS●QQ	2	250	LC1G400	LTMR08●●●	224	LUTC4001
250	253	80	GS●QQ	2	250	LC1G400	LTMR08●●●	250	LUTC4001
290	292	80	GS●QQ	2	315	LC1G500	LTMR08●●●	292	LUTC4001
315	321	80	GS●QQ	2	400	LC1G500	LTMR08●●●	313	LUTC4001
355	354	80	GS2S	3	500	LC1G630	LTMR08●●●	354	LUTC4001
400	390	80	GS2S	3	630	LC1G630	LTMR08●●●	400	LUTC8001

(1) Please refer to page C1/2 of TeSys Catalog, ref. MKTED210011EN, for selecting the complete reference TeSys T motor management controller.  
 (2) This setting is a general guidance, I<sub>r</sub> and I<sub>rm</sub> should be adjusted according to motor characteristics and conditions of use.

# TeSys Active

## T Motor management system

Coordination: magnetic circuit breaker + contactor + TeSys T  
+ current transformers

0.06 to 75 kW at 400/415 V: type 2 coordination							
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e 400/415 V			Limiting block	Circuit breaker	Contactor	TeSys T controller	External current transformer
P	I <sub>e</sub>	I <sub>q</sub>	Reference	Reference	Reference	Reference	Reference
kW	A	kA					
0.06	0.2	130	–	GV2L03	LC1D09	LTMR08●●	–
0.09	0.3	130	–	GV2L03	LC1D09	LTMR08●●	–
0.12	0.44	130	–	GV2L04	LC1D09	LTMR08●●	–
0.18	0.6	130	–	GV2L05	LC1D09	LTMR08●●	–
0.25	0.85	130	–	GV2L05	LC1D09	LTMR08●●	–
0.37	1.1	130	–	GV2L06	LC1D09	LTMR08●●	–
0.4	1.1	130	–	GV2L07	LC1D09	LTMR08●●	–
0.55	1.5	130	–	GV2L06	LC1D09	LTMR08●●	–
0.6	1.5	130	–	GV2L06	LC1D09	LTMR08●●	–
0.75	1.9	130	–	GV2L07	LC1D09	LTMR08●●	–
0.8	1.9	130	–	GV2L07	LC1D09	LTMR08●●	–
1.1	2.7	130	–	GV2L08	LC1D18	LTMR08●●	–
1.5	3.6	130	–	GV2L08	LC1D18	LTMR08●●	–
2.2	4.9	130	–	GV2L10	LC1D18	LTMR08●●	–
3	6.5	130	–	GV2L14	LC1D18	LTMR08●●	–
4	8.5	130	–	GV2L14	LC1D18	LTMR27●●	–
5.5	11.5	130	–	GV2L16	LC1D25	LTMR27●●	–
7.5	15.5	50	–	GV2L20	LC1D25	LTMR27●●	–
9	18.1	50	–	GV2L22	LC1D25	LTMR27●●	–
11	22	50	–	GV2L22	LC1D25	LTMR27●●	–
15	29	50	–	GV3L32	LC1D40A	LTMR100●●	–
7.5	15.5	85	GV1L3	GV2L20	LC1D25	LTMR27●●	–
9	18.1	85	GV1L3	GV2L22	LC1D25	LTMR27●●	–
11	22	85	GV1L3	GV2L22	LC1D25	LTMR27●●	–
15	29	85	GV1L3	GV2L32	LC1D40A	LTMR100●●	–
18.5	35	50	–	GV3L40	LC1D50A	LTMR100●●	–
22	41	50	–	GV3L50	LC1D50A	LTMR100●●	–
30	55	50	–	GV3L65	LC1D65A	LTMR100●●	–
37	66	70	–	GV4LE80S	LC1D80 <sup>(1)</sup>	LTMR100●●	–
45	80	70	–	NSX100HMA	LC1D115A	LTMR100●●	–

(1) Only electromechanical coils are available for this contactor rating.

# TeSys Active

## T Motor management system

Coordination: magnetic circuit breaker + contactor + TeSys T  
+ current transformers

### 0.06 to 75 kW at 400/415 V: type 2 coordination

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e 400/415 V			Circuit breaker	Contactor	TeSys T controller	External current transformer
P	I <sub>e</sub>	I <sub>q</sub>	Reference	Reference	Reference	Reference
kW	A	kA				
55	97	50	NSX160NMA	LC1D115A	LTMR08●●	LT6CT2001
55	97	70	NSX160HMA	LC1D115A	LTMR08●●	LT6CT2001
75	132	50	NSX250NMA	LC1D150A	LTMR08●●	LT6CT2001
75	132	70	NSX250HMA	LC1D150A	LTMR08●●	LT6CT2001

### 90 to 335 kW at 400 V: type 2 coordination

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e			Circuit breaker	Contactor	TeSys T controller	External current transformer		
400 V			Product type <sup>(1)</sup>	I <sub>rm</sub> <sup>(2)</sup>	Product type	Product type <sup>(3)</sup>	I <sub>r</sub> setting <sup>(2)</sup>	Reference
P	I <sub>e</sub>	I <sub>q</sub>		A			A	
kW	A	kA						
90	160	130	NSX250● + MA	2200	LC1G185	LTMR08●●	160	LUTC2001
110	195	130	NSX400● + MicroLogic 1.3 M	2640	LC1G225	LTMR08●●	195	LUTC2001
132	230	130	NSX400● + MicroLogic 1.3 M	3200	LC1G265	LTMR08●●	230	LUTC4001
160	280	130	NSX630● + MicroLogic 1.3 M	3840	LC1G330	LTMR08●●	280	LUTC4001
200	350	130	NSX630● + MicroLogic 1.3 M	5000	LC1G400	LTMR08●●	350	LUTC4001
220	380	130	NSX630● + MicroLogic 1.3 M	5500	LC1G500	LTMR08●●	388	LUTC4001
250	430	130	NS800L● + MicroLogic 5.0 LR OFF	6000	LC1G500	LTMR08●●	430	LUTC8001
300	460	130	NS800L● + MicroLogic 5.0 LR OFF	8800	LC1G630	LTMR08●●	460	LUTC8001
335	575	130	NS800L● + MicroLogic 5.0 LR OFF	9600	LC1G630	LTMR08●●	575	LUTC8001

<sup>(1)</sup> Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	NSX250●/ NSX400●/ NSX630●					NS800●
Breaking performance code	F	N	H	S	L	L
400 V	36	50	70	100	130	150

<sup>(2)</sup> This setting is a general guidance, I<sub>r</sub> and I<sub>rm</sub> should be adjusted according to motor characteristics and conditions of use.

<sup>(3)</sup> Please refer to page C1/2 of TeSys Catalog, ref. MKTED210011EN, for selecting the complete reference for TeSys T motor management controller.

# TeSys Active

## T Motor management system

Coordination: magnetic circuit breaker + contactor + TeSys T  
+ current transformers

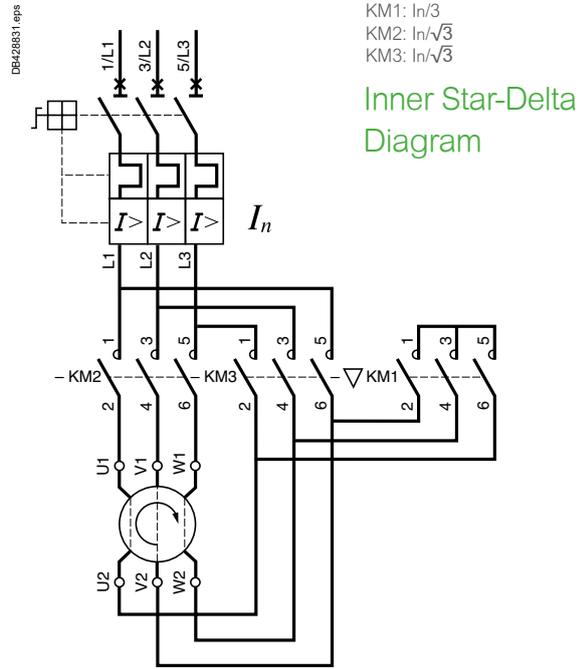
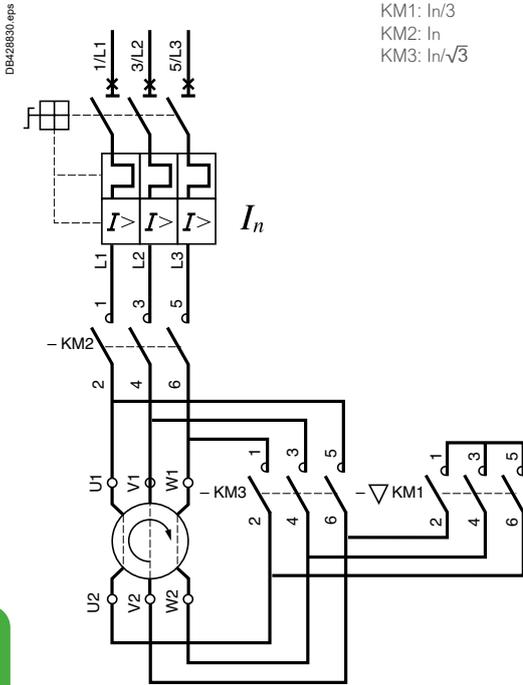
½ to 20 HP at 480 V - 3P							
Standard power ratings 480 V			Limiter block	Circuit breaker	Contactor	TeSys T controller	External current transformer
P	I <sub>e</sub>	I <sub>q</sub>	Reference	Reference	Reference	Reference	Reference
HP	A	kA					
–	0.49	100	–	GV2L04	LC1D09	LTMR08●●	–
–	0.64	100	–	GV2L05	LC1D09	LTMR08●●	–
–	0.87	100	–	GV2L05	LC1D09	LTMR08●●	–
0.5	1.1	100	–	GV2L06	LC1D09	LTMR08●●	–
0.75	1.6	100	–	GV2L06	LC1D25	LTMR08●●	–
1	2.1	65	GV1L3	GV2L07	LC1D25	LTMR08●●	–
1.5	3	65	GV1L3	GV2L08	LC1D25	LTMR08●●	–
2	3.4	65	GV1L3	GV2L08	LC1D25	LTMR08●●	–
3	4.8	65	GV1L3	GV2L10	LC1D25	LTMR08●●	–
5	7.6	65	GV1L3	GV2L14	LC1D25	LTMR08●●	–
7.5	11	65	GV1L3	GV2L16	LC1D25	LTMR27●●	–
10	14	65	GV1L3	GV2L16	LC1D25	LTMR27●●	–
10	14	100	LA9LB920	GV2L16	LC1D25	LTMR27●●	–
15	21	65	GV1L3	GV2L22	LC1D32	LTMR27●●	–
15	21	100	LA9LB920	GV2L22	LC1D32	LTMR27●●	–
20	27	65	GV1L3	GV2L32	LC1D40A	LTMR100●●	–
20	27	100	LA9LB920	GV2L32	LC1D40A	LTMR100●●	–

0.25 to 22 kW at 690 V: type 2 coordination							
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e 690 V			Limiter block	Circuit breaker	Contactor	TeSys T controller	External current transformer
P	I <sub>e</sub>	I <sub>q</sub>	Reference	Reference	Reference	Reference	Reference
kW	A	kA					
0.25	0.49	100	–	GV2L04	LC1D09	LTMR08●●	–
0.37	0.64	100	–	GV2L05	LC1D09	LTMR08●●	–
0.55	0.87	100	–	GV2L05	LC1D09	LTMR08●●	–
0.75	1.1	100	–	GV2L06	LC1D09	LTMR08●●	–
1.1	1.6	100	–	GV2L06	LC1D25	LTMR08●●	–
1.5	2.1	65	LA9LB920	GV2L07	LC1D25	LTMR08●●	–
2.2	2.8	65	LA9LB920	GV2L08	LC1D25	LTMR08●●	–
3	3.8	65	LA9LB920	GV2L08	LC1D25	LTMR08●●	–
4	4.9	65	LA9LB920	GV2L10	LC1D25	LTMR08●●	–
5.5	6.7	65	LA9LB920	GV2L14	LC1D25	LTMR08●●	–
7.5	8.9	65	LA9LB920	GV2L14	LC1D25	LTMR27●●	–
9	10.6	65	LA9LB920	GV2L16	LC1D25	LTMR27●●	–
11	12.8	65	LA9LB920	GV2L16	LC1D25	LTMR27●●	–
15	17	65	LA9LB920	GV2L20	LC1D32	LTMR27●●	–
18.5	21	65	LA9LB920	GV2L22	LC1D32	LTMR27●●	–
22	24	65	LA9LB920	GV2L32	LC1D40A	LTMR100●●	–

Coordination  
and  
standards

#### TeSys Deca Advanced Star-Delta motor starter 'Power' circuit diagram <sup>(3)</sup>

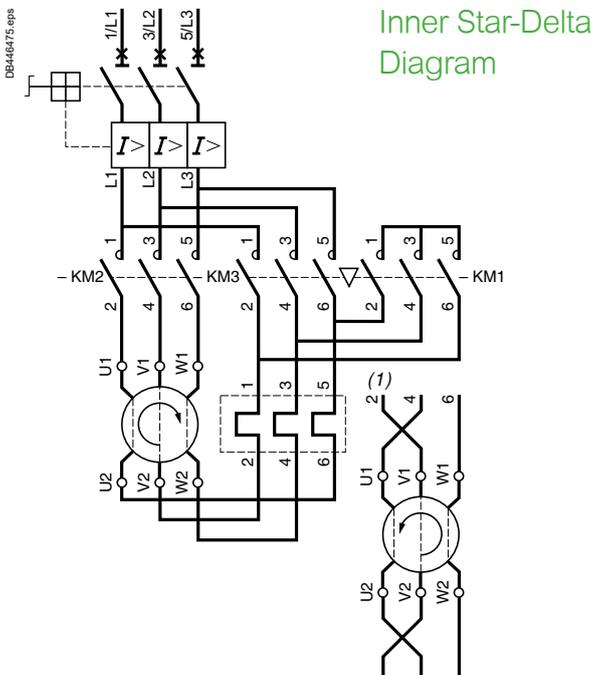
Thermal magnetic circuit breaker + contactors



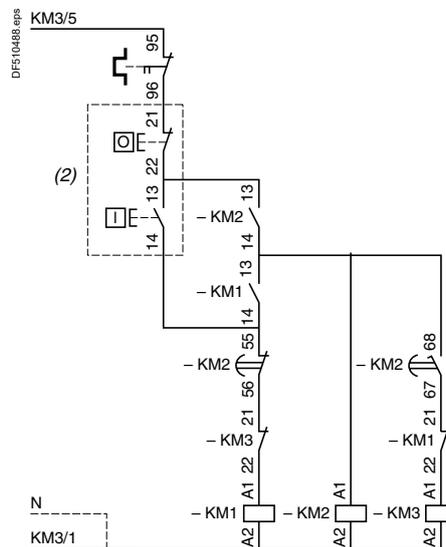
Coordination and standards

#### TeSys Deca Advanced Star-Delta motor starter 'Power' circuit diagram

Magnetic circuit breaker + contactors + overload relay



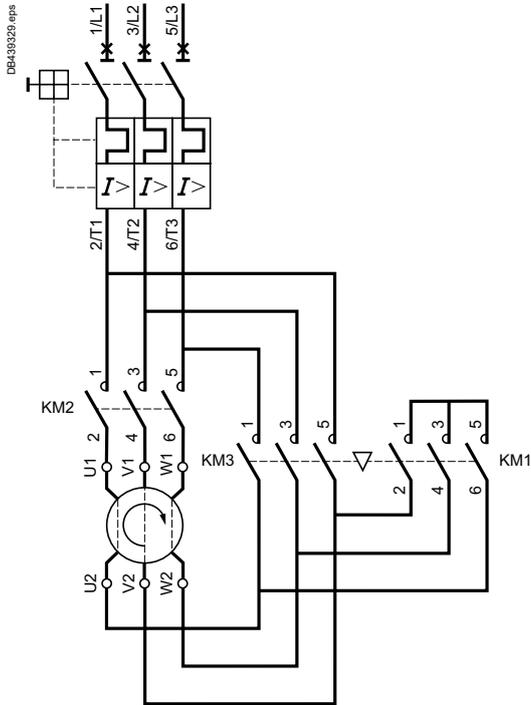
#### Star-Delta motor starter 'Control' circuit diagram



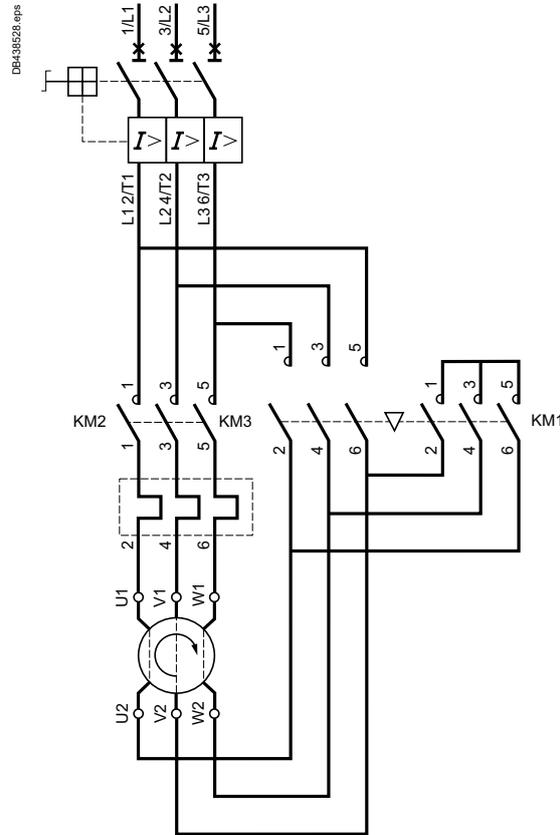
- (1) Recommended cabling for reversal of motor rotation (standard motor, viewed from shaft end).
- (2) Remote control.
- (3) Star-Delta coordination tables of LC1D115A - D150A contactors are based on inner Star-Delta diagram.

#### TeSys Giga Star-Delta motor starter 'Power' circuit diagram

Thermal magnetic circuit breaker + contactors

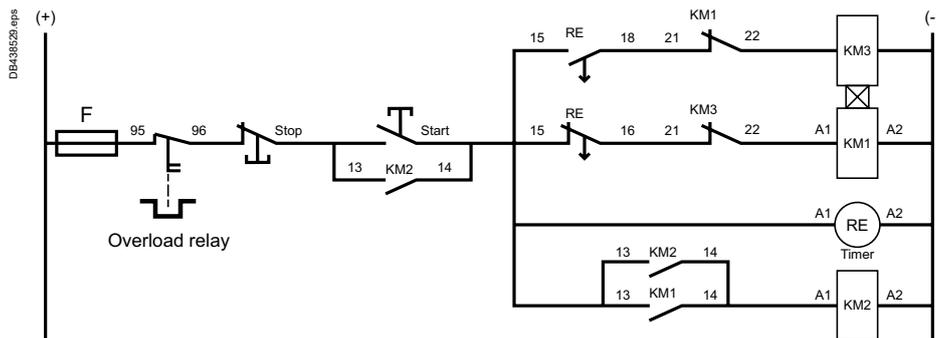


Magnetic circuit breaker + contactors + overload relay



Coordination  
and  
standards

#### TeSys Giga Star-Delta motor starter 'Control' circuit diagram



TeSys Giga recommended timing relay (RE): Zelio Timer ref. **RE17RMMWS** (12...240 V AC/DC 50/60 Hz – 8 AAC/DC contacts).

# TeSys

Complementary technical information

Resistive load protection and control

Coordination: Fuses (NFC, DIN, type gG) + Contactors

275 to 1050 A up to 690 V: type 2 coordination (with NFC, DIN, type gG fuses)					
Current ratings of 3-phase loads 50/60 Hz in category AC-1		Switch-disconnector	gG fuse		Contactors
Up to 690 V, temperature ≤ 40 °C		Product type	Size	Rating	Product type
I <sub>e</sub>	I <sub>q</sub> (max)				
A	kA			A	
160	80	GS●N	1	200	LC1D115A
200	80	GS●N	1	250	LC1D150A
250	80	GS●QQ	2	315	LC1D150A
250	80	GS●QQ	2	315	LC1G115
275	80	GS●QQ	2	315	LC1G150
305	80	GS●QQ	2	315	LC1G185
330	80	GS●QQ	2	400	LC1G225
385	80	GS●QQ	2	400	LC1G265
440	80	GS●S	3	500	LC1G330
550	80	GS●S	3	630	LC1G400
700	80	GS●V	4	800	LC1G500
1000	80	GS●V	4	1000	LC1G630
1050	80	GS●V	4	1250	LC1G800

Coordination  
and  
standards

275 to 1000 A up to 690 V: type 2 coordination (with LC1G and ComPact NSX or NS circuit breakers)				
Current ratings of 3-phase loads 50/60 Hz in category AC-1		Circuit breaker		Contactors
Up to 690 V, temperature ≤ 40 °C		Product type <sup>(1)</sup>	In	Product type
Ie	Iq (max)			
A	kA		A	
160	100	NSX160● + MicroLogic 2.2	160	LC1D115A
200	100	NSX250● + MicroLogic 2.2	250	LC1D150A
250	100	NSX250● + MicroLogic 2.2	250	LC1D150A
275	100	NSX400● + MicroLogic 2.3	400	LC1G150
305	100	NSX400● + MicroLogic 2.3	400	LC1G185
330	100	NSX400● + MicroLogic 2.3	400	LC1G225
385	100	NSX400● + MicroLogic 2.3	400	LC1G265
440	100	NSX630● + MicroLogic 2.3	630	LC1G330
550	100	NSX630● + MicroLogic 2.3	630	LC1G400
700	75	NS800● + MicroLogic 5.0	800	LC1G500
1000	100 <sup>(2)</sup>	NS1000● + MicroLogic 5.0	1000	LC1G630

(1) Product type to be completed by replacing the ● with the breaking performance code:

Rated conditional short-circuit (kA)	NSX400●/ NSX630●								NS800●/NS1000●	
	F	N	H	S	L	R	HB1	HB2	L	LB
400 V	36	50	70	100	150	200	-	-	150	200
440 V	30	42	65	90	130	200	-	-	130	200
500 V	25	30	50	65	70	80	85	100	100	100
690 V	10	10	20	25	35	45	75	100	-	75

(2) Up to 500 V AC.

# TeSys Control

## Contactors for utilisation category AC-3/AC-3e

### Selection - Coordination and standards

#### Operational current and power conforming to IEC ( $\theta \leq 60^\circ\text{C}$ ) - AC-3

Contactor size			LC1 D09	LC1 D12	LC1 D18	LC1 D25	LC1 D32	LC1 D38	LC1 D40A	LC1 D50A	LC1 D65A	LC1 D80A
Maximum operational current in AC-3	$\leq 440\text{ V}$	<b>A</b>	9	12	18	25	32	38	40	50	65	66
Rated operational power P (standard motor power ratings)	220/240 V <sup>(1)</sup>	<b>kW</b>	2.2	3	4	5.5	7.5	9	11	15	18.5	22
	380/400 V <sup>(2)</sup>	<b>kW</b>	4	5.5	7.5	11	15	18.5	18.5	22	30	37
	415 V	<b>kW</b>	4	5.5	9	11	15	18.5	22	25	37	37
	440 V	<b>kW</b>	4	5.5	9	11	15	18.5	22	30	37	37
	500 V	<b>kW</b>	5.5	7.5	10	15	18.5	18.5	22	30	37	37
	660/690 V <sup>(3)</sup>	<b>kW</b>	5.5	7.5	10	15	18.5	18.5	30	33	37	37
1000 V	<b>kW</b>	–	–	–	–	–	–	–	–	–	–	

#### Operational current and power conforming to IEC ( $\theta \leq 60^\circ\text{C}$ ) - AC-3e

Contactor size			LC1 D09	LC1 D12	LC1 D18	LC1 D25	LC1 D32	LC1 D38	LC1 D40A	LC1 D50A	LC1 D65A	LC1 D80A
Maximum operational current in AC-3e	$\leq 440\text{ V}$	<b>A</b>	9	12	18	25	32	38	40	50	65	66
Rated operational power P (standard motor power ratings)	220/240 V <sup>(1)</sup>	<b>kW</b>	2.2	3	4	5.5	7.5	9	11	15	18.5	22
	380/400 V <sup>(2)</sup>	<b>kW</b>	4	5.5	7.5	11	15	18.5	18.5	22	30	37
	415 V	<b>kW</b>	4	5.5	9	11	15	18.5	22	25	37	37
	440 V	<b>kW</b>	4	5.5	9	11	15	18.5	22	30	37	37
	500 V	<b>kW</b>	5.5	7.5	10	15	18.5	18.5	22	30	37	37
	660/690 V <sup>(3)</sup>	<b>kW</b>	5.5	7.5	10	15	18.5	18.5	30	33	37	37
1000 V	<b>kW</b>	–	–	–	–	–	–	–	–	–	–	

#### Maximum operating rate in operating cycles/hour <sup>(4)</sup>

On-load factor	Operational power	LC1 D09	LC1 D12	LC1 D18	LC1 D25	LC1 D32	LC1 D38	LC1 D40A	LC1 D50A	LC1 D65A	LC1 D80A
$\leq 85\%$	P	1200	1200	1200	1200	1000	1000	1000	1000	1000	1000
	0.5 P	3000	3000	2500	2500	2500	2500	2500	2500	2500	2500
$\leq 25\%$	P	1800	1800	1800	1800	1200	1200	1200	1200	1200	1200

#### Operational current and power conforming to UL, CSA ( $\theta \leq 60^\circ\text{C}$ )

Contactor size			LC1 D09	LC1 D12	LC1 D18	LC1 D25	LC1 D32	LC1 D38	LC1 D40A	LC1 D50A	LC1 D65A	LC1 D80A
Maximum operational current in AC-3	$\leq 440\text{ V}$	<b>A</b>	9	12	18	25	32	–	40	50	65	65
Rated operational power P (standard motor power ratings 60 Hz)	200/208 V	<b>HP</b>	2	3	5	7.5	10	–	10	15	20	20
	230/240 V	<b>HP</b>	2	3	5	7.5	10	–	10	15	20	20
	460/480 V	<b>HP</b>	5	7.5	10	15	20	–	30	40	40	40
	575/600 V	<b>HP</b>	7.5	10	15	20	25	–	30	40	50	50

<sup>(1)</sup> 230 V for LC1G115 to LC1G800 contactors.

<sup>(2)</sup> 400 V for LC1G115 to LC1G800 contactors.

<sup>(3)</sup> 690 V for LC1K/LP1K and LC1G115 to LC1G800 contactors.

<sup>(4)</sup> Depending on the operational power and the on-load factor ( $\theta \leq 60^\circ\text{C}$ ).

# TeSys Control

## Contactors for utilisation category AC-3/AC-3e

### Selection - Coordination and standards

LC1 D80	LC1 D95	LC1 D115A	LC1 D150A	LC1 G115	LC1 G150	LC1 G185	LC1 G225	LC1 G265	LC1 G330	LC1 G400	LC1 G500	LC1 G630	LC1 G800
80	95	115	150	115	150	185	225	265	330	400	500	630	800
22	25	30	40	30	37	55	55	75	90	110	160	200	250
37	45	55	75	55	75	90	110	132	160	200	250	335	450
45	45	59	80	55	75	90	110	132	160	200	250	375	450
45	45	59	90	75	90	110	132	160	200	250	315	400	450
55	55	75	90	75	90	110	132	160	200	250	355	400	500
45	45	80	100	75	90	110	160	200	220	315	355	500	560
-	-	-	-	-	75	75	132	160	185	220	335	450	450

LC1 D80	LC1 D95	LC1 D115A	LC1 D150A	LC1 G115	LC1 G150	LC1 G185	LC1 G225	LC1 G265	LC1 G330	LC1 G400	LC1 G500	LC1 G630	LC1 G800
80	95	115	150	115	145	177	209	255	294	391	437	555	587
22	25	30	40	30	37	55	55	75	90	110	147	180	200
37	45	55	75	55	75	90	110	132	160	200	250	315	335
45	45	59	80	55	75	90	110	132	160	200	250	335	355
45	45	59	90	75	90	110	132	160	185	250	280	355	375
55	55	75	90	75	90	110	132	160	200	250	315	375	425
45	45	80	100	75	90	110	160	200	220	315	355	500	560
-	-	-	-	-	75	75	132	160	185	220	335	450	450

LC1 D80	LC1 D95	LC1 D115A	LC1 D150A	LC1 G115	LC1 G150	LC1 G185	LC1 G225	LC1 G265	LC1 G330	LC1 G400	LC1 G500	LC1 G630	LC1 G800
750	750	750	750	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)
2000	2000	2000	1200	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)
1200	1200	1200	1200	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)

LC1 D80	LC1 D95	LC1 D115A	LC1 D150A	LC1 G115	LC1 G150	LC1 G185	LC1 G225	LC1 G265	LC1 G330	LC1 G400	LC1 G500	LC1 G630	LC1 G800
80	95	115	150	115	150	185	225	265	330	400	500	630	800
30	30	30	40	30	40	50	60	75	100	125	150	250	300
30	30	40	50	40	50	60	75	100	125	150	200	300	350
60	60	75	100	75	100	125	150	200	250	300	400	600	700
60	60	100	125	100	125	150	150	200	300	400	450	700	800

(5) Other values: please contact your Local Schneider Electric Technical Support.

Coordination  
and  
standards

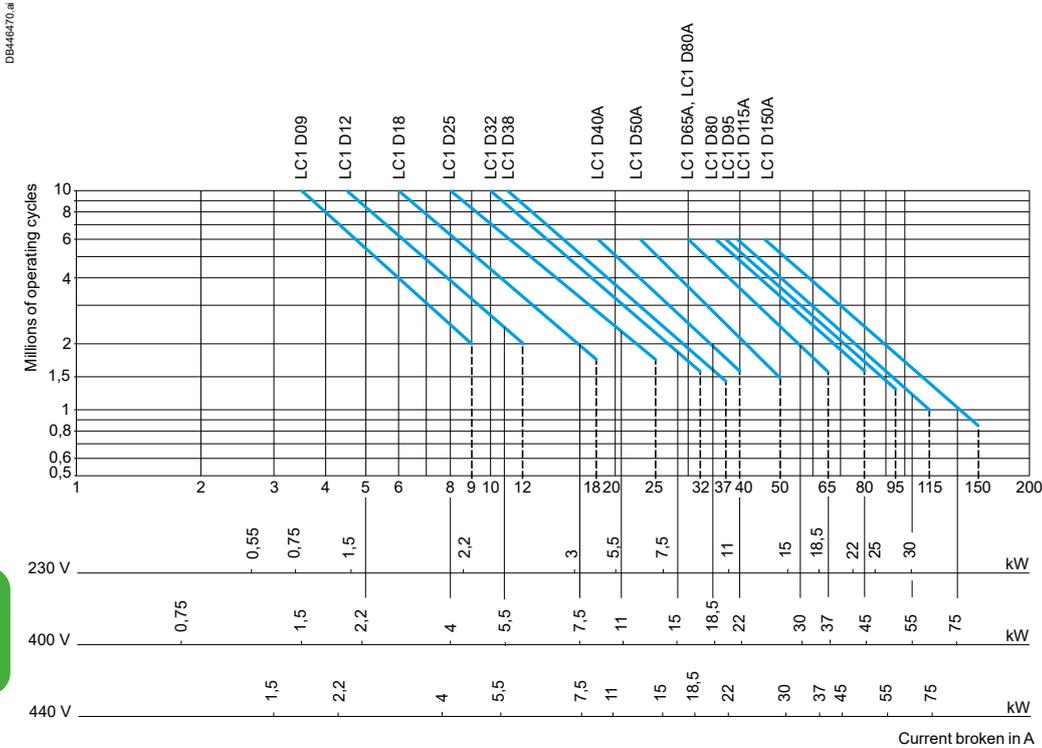
# TeSys Control

## Contactors for utilisation category AC-3/AC-3e

### Selection - Coordination and standards

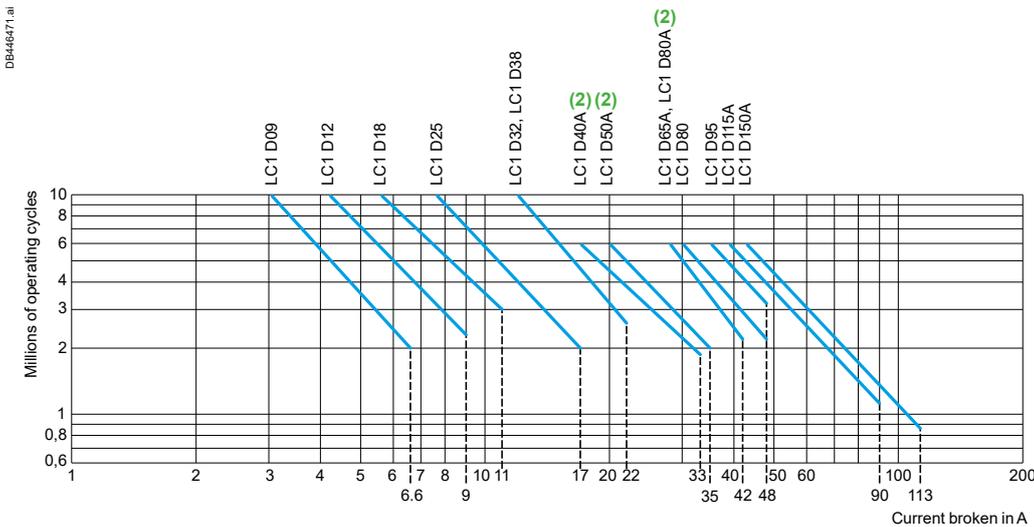
#### Selection according to required electrical durability, in category AC-3, AC-3e ( $U_e \leq 440$ V)

Control of 3-phase asynchronous squirrel cage motors with breaking whilst running.  
 The current broken ( $I_c$ ) in category AC-3 is equal to the rated operational current ( $I_e$ ) of the motor.



#### Selection according to required electrical durability, in category AC-3, AC-3e ( $U_e = 660/690$ V) <sup>(1)</sup>

Control of 3-phase asynchronous squirrel cage motors with breaking whilst running.  
 The current broken ( $I_c$ ) in category AC-3 is equal to the rated operational current ( $I_e$ ) of the motor.



(1) For  $U_e = 1000$  V, use the 660/690 V curves, but do not exceed the operational current at the operational power indicated for 1000 V in the table pages A3/40 & A3/41.  
 (2) For Deca Advanced Contactors, please contact your Local Schneider Electric Technical Support for values.

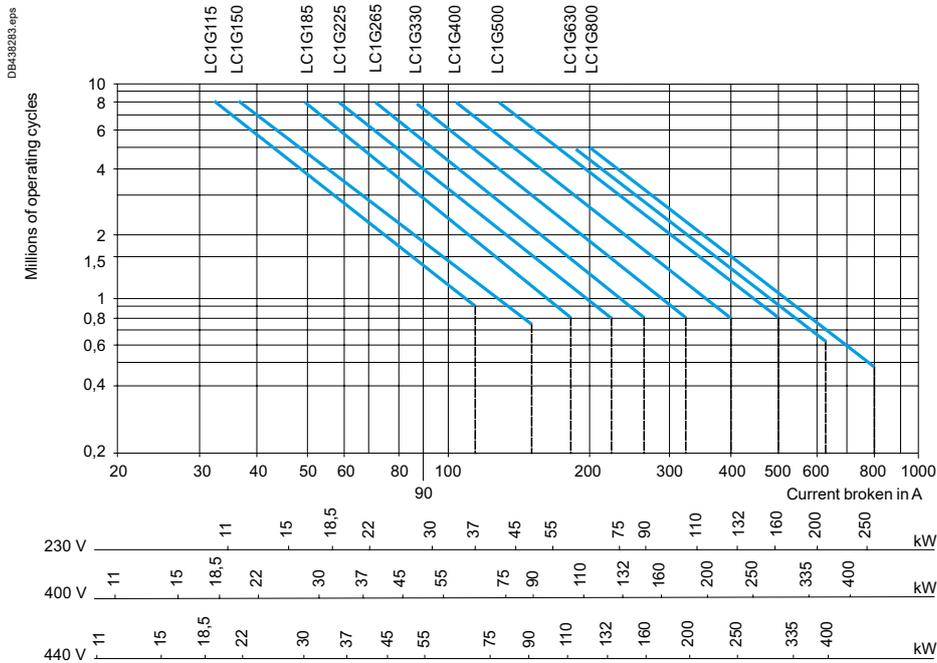
# TeSys Control

## Contactors for utilisation category AC-3/AC-3e

### Selection - Coordination and standards

#### Selection according to required electrical durability, in category AC-3 ( $U_e \leq 440$ V)

Control of 3-phase asynchronous squirrel cage motors with breaking whilst running. The current broken ( $I_c$ ) in category AC-3 is equal to the rated operational current ( $I_e$ ) of the motor.



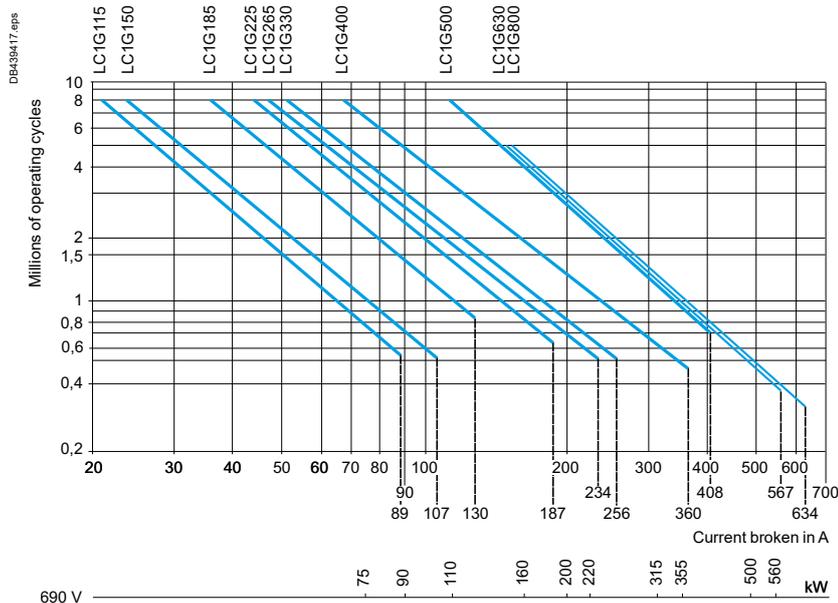
Operational power in kW-50 Hz.

**Example:**

Asynchronous motor with  $P = 132$  kW -  $U_e = 400$  V -  $I_e = 230$  A -  $I_c = I_e = 230$  A  
 1.8 million operating cycles required.  
 The above selection curves show the contactor rating needed: LC1G400.

#### Selection according to required electrical durability, in category AC-3 ( $U_e = 660/690$ V)

Control of 3-phase asynchronous squirrel cage motors with breaking whilst running.  
 The current broken ( $I_c$ ) in category AC-3 is equal to the rated operational current ( $I_e$ ) of the motor.



**Example:**

Asynchronous motor with  $P = 200$  kW -  $U_e = 690$  V -  $I_e = 203$  A -  $I_c = I_e = 203$  A  
 1 million operating cycles required.  
 The above selection curves show the contactor rating needed: LC1G400.

Coordination and standards

# TeSys Control

## Contactors for utilisation category AC-1

### Selection - Coordination and standards

#### Maximum operational current (open-mounted device)

Contactor size		LC1 D09	LC1 DT20	LC1 D12 DT25	LC1 D18 DT32	LC1 D25 DT40	LC1 D32	LC1 D38	LC1 D40A DT60A	LC1 D50A	LC1 D65A D80A DT80A	
Maximum operating rate in operating cycles/hour		600	600	600	600	600	600	600	600	600	600	
Connection conforming to IEC 60947-1	Cable c.s.a. <b>mm<sup>2</sup></b>	4	4	4	6	6	10	10	35	35	35	
	Bar c.s.a. <b>mm</b>	-	-	-	-	-	-	-	-	-	-	
Operational current in AC-1 in A, according to the ambient temperature conforming to IEC 60947-1	≤ 40 °C	<b>A</b>	25	20	25	32	40	50	50	60	80	80
	≤ 60 °C	<b>A<sup>(4)</sup></b>	25	20	25	32	40	50	50	60	80	80
	≤ 70 °C	<b>A<sup>(4)</sup></b>	17	<sup>(1)</sup>	17	22	28	35	35	42	56	56
Maximum operational power ≤ 60 °C	220/230 V	<b>kW</b>	9	8	9	11	14	18	18	21	29	29
	240 V	<b>kW</b>	9	8	9	12	15	19	19	23	31	31
	380/400 V	<b>kW</b>	15	14	15	20	25	31	31	37	50	50
	415 V	<b>kW</b>	17	14	17	21	27	34	34	41	54	54
	440 V	<b>kW</b>	18	15	18	23	29	36	36	43	58	58
	500 V	<b>kW</b>	20	17	20	23	33	41	41	49	65	65
	660/690 V	<b>kW</b>	27	22	27	34	43	54	54	65	80	80
	1000 V	<b>kW</b>	-	-	-	-	-	-	-	-	-	-

- (1) Please consult your Local Schneider Electric Technical Support.  
 (2) With set of right-angled connectors LA9F2100.  
 (3) With set of right-angled connectors LA9F2600.

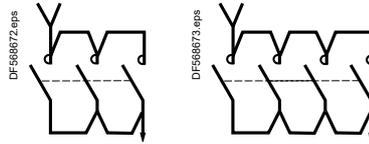
- (4) LC1G115 to LC1G800: the maximum control voltage must not exceed rated  $U_c$  for a temperature  $\theta$ ,  $60\text{ °C} \leq \theta \leq 70\text{ °C}$ .

Coordination and standards

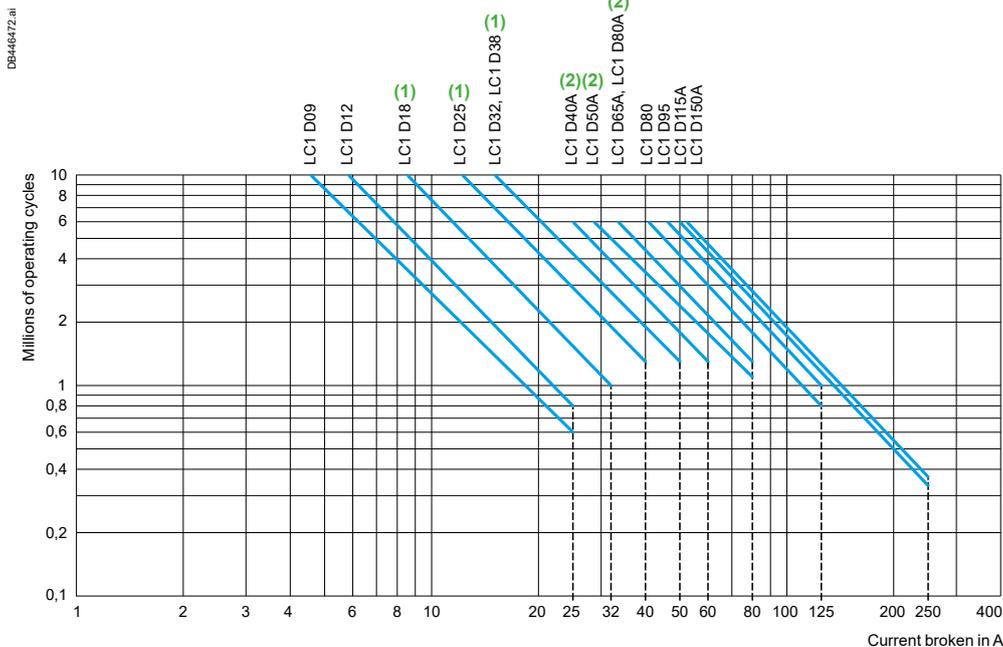
#### Increase in operational current by parallel connection of poles

Apply the following coefficients to the currents or power values given above; these coefficients take into account an often unbalanced current distribution between the poles:

- 2 poles in parallel: K = 1.6
- 3 poles in parallel: K = 2.25
- 4 poles in parallel: K = 2.8



#### Selection according to required electrical durability, in category AC-1 ( $U_e \leq 690\text{ V}$ )



- (1) For Deca Advanced, consult online data sheets for values.  
 (2) For Deca Advanced or DC coil, consult online data sheets for values.

Control of resistive circuits ( $\cos \phi \geq 0.95$ ).

The current broken ( $I_c$ ) in category AC-1 is equal to the current ( $I_e$ ) normally drawn by the load.

#### Example:

- $U_e = 220\text{ V}$  -  $I_e = 50\text{ A}$   $\theta \leq 40\text{ °C}$  -  $I_c = I_e = 50\text{ A}$
- 2 million operating cycles required
- the above selection curves show the contactor rating needed: LC1D50A.

# TeSys Control

## Contactors for utilisation category AC-1

### Selection - Coordination and standards

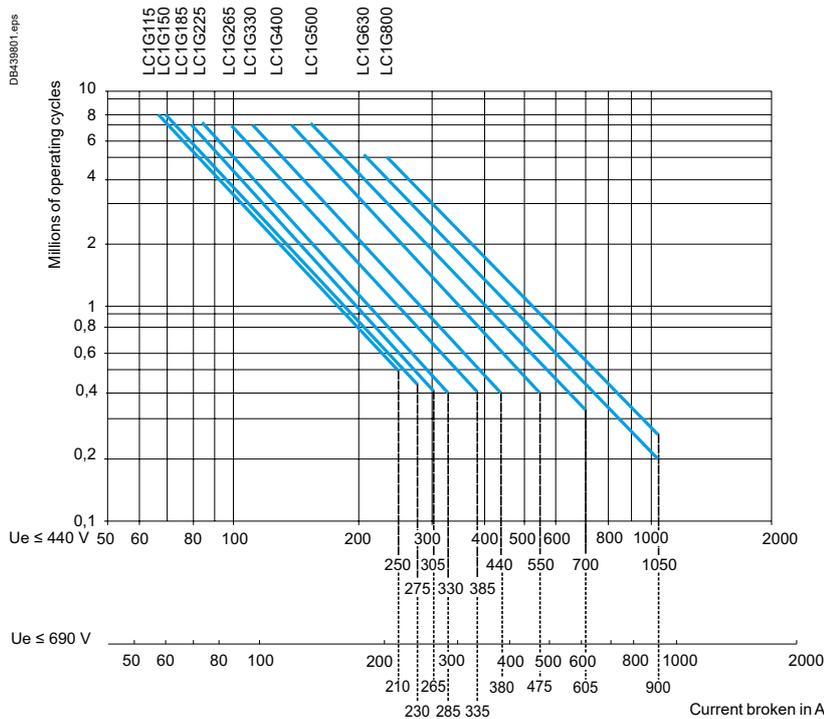
LC1/LP1 D80	LC1 D95	LC1 D115A	LC1 D150A	LC1 G115	LC1 G150	LC1 G185	LC1 G225	LC1 G265	LC1 G330	LC1 G400	LC1 G500	LC1 G630	LC1 G800
600	600	600	600	300	300	300	300	300	300	300	300	300	300
50	50	120	120	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
125	125	250	250	250	275	305	330	385	440	550	700	1050	1050
125	125	200	200	225	250	275	300	350	400	500	600	800	800
80	80	160	160	210	235	255	280	330	380	470	540	640	640
45	45	80	80	90	100	110	120	140	160	200	240	320	320
49	49	83	83	90	100	110	120	150	170	210	250	330	330
78	78	135	135	160	170	190	210	240	280	350	420	550	550
85	85	140	140	160	180	200	220	250	290	360	430	580	580
90	90	150	150	170	190	210	230	270	300	380	460	610	610
102	102	170	170	190	220	240	260	300	350	430	520	690	690
135	135	235	235	270	300	330	360	420	480	600	720	960	960
120	120	345	345	390	430	480	520	610	690	870	1040	1390	1390

- (1) Please consult your Local Schneider Electric Technical Support.
- (2) With set of right-angled connectors LA9F2100.
- (3) With set of right-angled connectors LA9F2600.

- (4) LC1G115 to LC1G800: the maximum control voltage must not exceed rated  $U_c$  for a temperature  $\theta$ ,  $60^\circ\text{C} \leq \theta \leq 70^\circ\text{C}$ .

Coordination and standards

### Selection according to required electrical durability, in category AC-1 ( $U_e \leq 690\text{ V}$ , $\theta \leq 40^\circ\text{C}$ )



#### Example:

- $U_e = 440\text{ V}$  -  $I_e = 500\text{ A}$  -  $\theta \leq 40^\circ\text{C}$  -  $I_c = I_e = 500\text{ A}$
- 0.8 million operating cycles required
- the above selection curves show the contactor rating needed: LC1G630.

#### Maximum breaking current

Category AC-2: slip ring motors - breaking the starting current.

Category AC-4: squirrel cage motors - breaking the starting current.

Contactor size			LC1 D09	LC1 D12	LC1 D18	LC1 D25	LC1 D32	LC1 D38	LC1 D40A	LC1 D50A	LC1 D65A	LC1 D80A
In category AC-4 (Ie max)	Ue ≤ 440 V Ie max broken = 6 x I motor	A	54	72	108	150	192	192	240	300	390	390
	440 V < Ue ≤ 690 V Ie max broken = 6 x I motor	A	40	50	70	90	105	105	150	170	210	210

#### Depending on the maximum operating rate <sup>(1)</sup> and the on-load factor, $\theta \leq 60^\circ\text{C}$ <sup>(2)</sup>

From 150 and 15 % to 300 and 10 %	A	30	40	45	75	80	80	110	140	160	160
From 150 and 20 % to 600 and 10 %	A	27	36	40	67	70	70	96	120	148	148
From 150 and 30 % to 1200 and 10 %	A	24	30	35	56	60	60	80	100	132	132
From 150 and 55 % to 2400 and 10 %	A	19	24	30	45	50	50	62	80	110	110
From 150 and 85 % to 3600 and 10 %	A	16	21	25	40	45	45	53	70	90	90

Contactor size			LC1 G115	LC1 G150	LC1 G185	LC1 G225	LC1 G265	LC1 G330	LC1 G400	LC1 G500	LC1 G630	LC1 G800
In category AC-4 (Ie max)	Ue ≤ 440 V Ie max broken = 6 x I motor	A	690	900	1110	1350	1590	1980	2400	3000	3780	4050
	440 V < Ue ≤ 690 V Ie max broken = 6 x I motor	A	530	640	780	1120	1400	1530	2160	2450	3400	3800

#### Depending on the maximum operating rate <sup>(1)</sup> and the on-load factor, $\theta \leq 60^\circ\text{C}$ <sup>(2)</sup>

Duty Cycle [Cycle/h]	Load Factor [%]		LC1 G115	LC1 G150	LC1 G185	LC1 G225	LC1 G265	LC1 G330	LC1 G400	LC1 G500	LC1 G630	LC1 G800
150	15	A	319	400	478	562	641	758	869	1001	1124	1204
300	10	A	250	314	375	441	502	593	679	779	870	923
150	20	A	304	383	457	538	613	726	834	962	1083	1165
600	10	A	183	230	275	324	369	437	502	579	653	703
150	30	A	280	352	421	495	565	668	766	883	993	1065
1200 <sup>(3)</sup>	10	A	131	164	196	230	262	309	353	404	449	473
150	55	A	239	300	358	421	480	568	652	750	842	902
2400 <sup>(3)</sup>	10	A	120	151	181	212	242	287	329	379	426	457
150	85	A	208	261	312	368	420	498	572	661	748	809
3600 <sup>(3)</sup>	10	A	120	151	181	212	242	287	329	379	426	457

<sup>(1)</sup> Do not exceed the maximum number of operating cycles.

<sup>(2)</sup> For temperatures higher than 60 °C, use a maximum operating rate value equal to 80 % of the actual value when selecting from the tables.

<sup>(3)</sup> Control Module can operate with higher duty cycle during limited time followed by proposed cooling time.

Operating cycles/hour	Cool time
1200	10 min
2400	30 min
3600	60 min

#### Counter current braking (plugging)

The current varies from the maximum plug-braking current to the rated motor current.

The making current must be compatible with the rated making and breaking capacities of the contactor.

As breaking normally takes place at a current value at or near the locked rotor current, the contactor can be selected using the criteria for categories AC-2 and AC-4.

#### Permissible AC-4 power rating for 200 000 operating cycles

Operational voltage		LC● D09	LC● D12	LC● D18	LC● D25	LC● D32	LC● D38	LC● D40A	LC● D50A	LC● D65A	LC1 D80A
220/230 V <sup>(4)</sup>	kW	1.5	1.5	2.2	3	4	4	4	5.5	7.5	7.5
380/400 V <sup>(5)</sup>	kW	2.2	3.7	4	5.5	7.5	7.5	9	11	11	11
415 V	kW	2.2	3	3.7	5.5	7.5	7.5	9	11	11	11
440 V	kW	2.2	3	3.7	5.5	7.5	7.5	11	11	15	15
500 V	kW	3	4	5.5	7.5	9	9	11	15	15	15
660/690 V <sup>(6)</sup>	kW	4	5.5	7.5	10	11	11	15	15	18.5	18.5

<sup>(4)</sup> 230 V for LC1G115 to LC1G800 contactors.

<sup>(5)</sup> 400 V for LC1G115 to LC1G800 contactors.

<sup>(6)</sup> 690 V for LC1G115 to LC1G800 contactors.

# TeSys Control

Contactors for utilisation categories AC-2 or AC-4

Selection - Coordination and standards

LC1 D80	LC1 D95	LC1 D115A	LC1 D150A
------------	------------	--------------	--------------

480	570	630	830
-----	-----	-----	-----

250	250	540	640
-----	-----	-----	-----

200	200	280	310
-----	-----	-----	-----

170	170	250	280
-----	-----	-----	-----

145	145	215	240
-----	-----	-----	-----

120	120	150	170
-----	-----	-----	-----

100	100	125	145
-----	-----	-----	-----

Coordination  
and  
standards

LC● D80	LC● D95	LC1 D115A	LC1 D150A	LC1 G115	LC1 G150	LC1 G185	LC1 G225	LC1 G265	LC1 G330	LC1 G400	LC1 G500	LC1 G630	LC1 G800
------------	------------	--------------	--------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------

7.5	9	9	11	11	11	15	18.5	22	22	30	37	37	37
-----	---	---	----	----	----	----	------	----	----	----	----	----	----

15	15	18.5	22	22	22	30	30	37	45	55	55	55	75
----	----	------	----	----	----	----	----	----	----	----	----	----	----

15	15	18.5	22	22	22	30	30	37	45	55	55	55	75
----	----	------	----	----	----	----	----	----	----	----	----	----	----

15	15	18.5	22	22	22	30	37	45	55	55	55	75	75
----	----	------	----	----	----	----	----	----	----	----	----	----	----

22	22	30	37	11	11	18.5	22	22	30	45	45	55	55
----	----	----	----	----	----	------	----	----	----	----	----	----	----

25	25	30	45	18.5	22	22	30	37	45	55	55	75	90
----	----	----	----	------	----	----	----	----	----	----	----	----	----

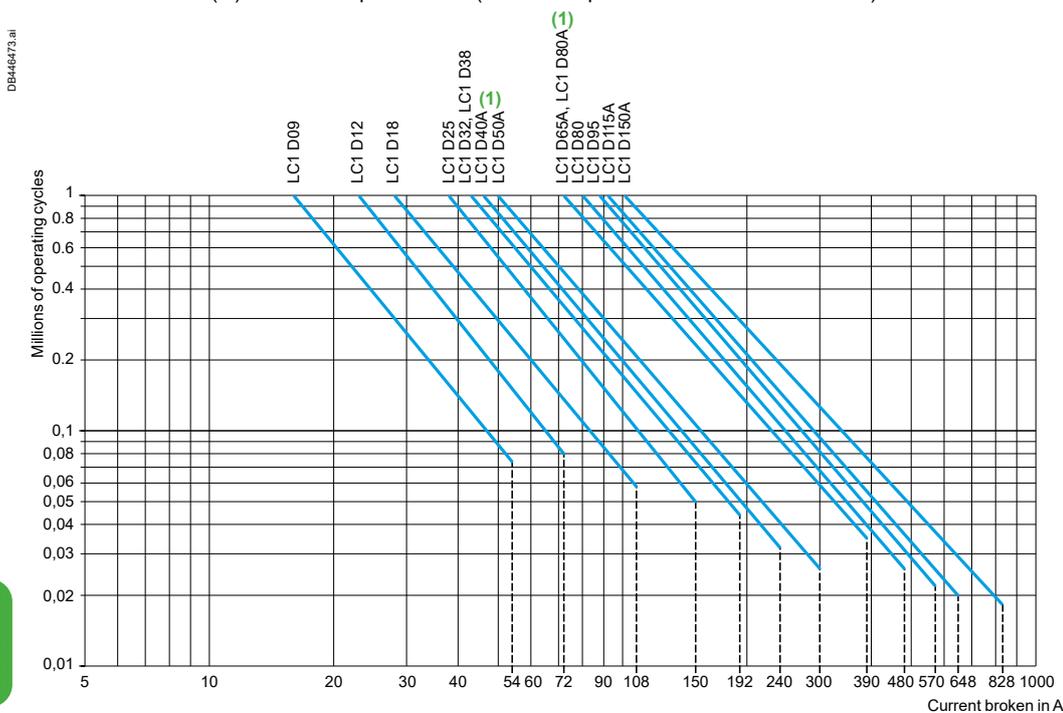
# TeSys Control

## Contactors for utilisation categories AC-2 or AC-4

### Selection - Coordination and standards

#### Selection according to required electrical durability, in categories AC-2 or AC-4 ( $U_e \leq 440\text{ V}$ )

Control of 3-phase asynchronous squirrel cage motors (AC-4) or slip ring motors (AC-2) with breaking whilst motor stalled.  
 The current broken ( $I_c$ ) in AC-2 is equal to  $2.5 \times I_e$ .  
 The current broken ( $I_c$ ) in AC-4 is equal to  $6 \times I_e$  ( $I_e$  = rated operational current of the motor).



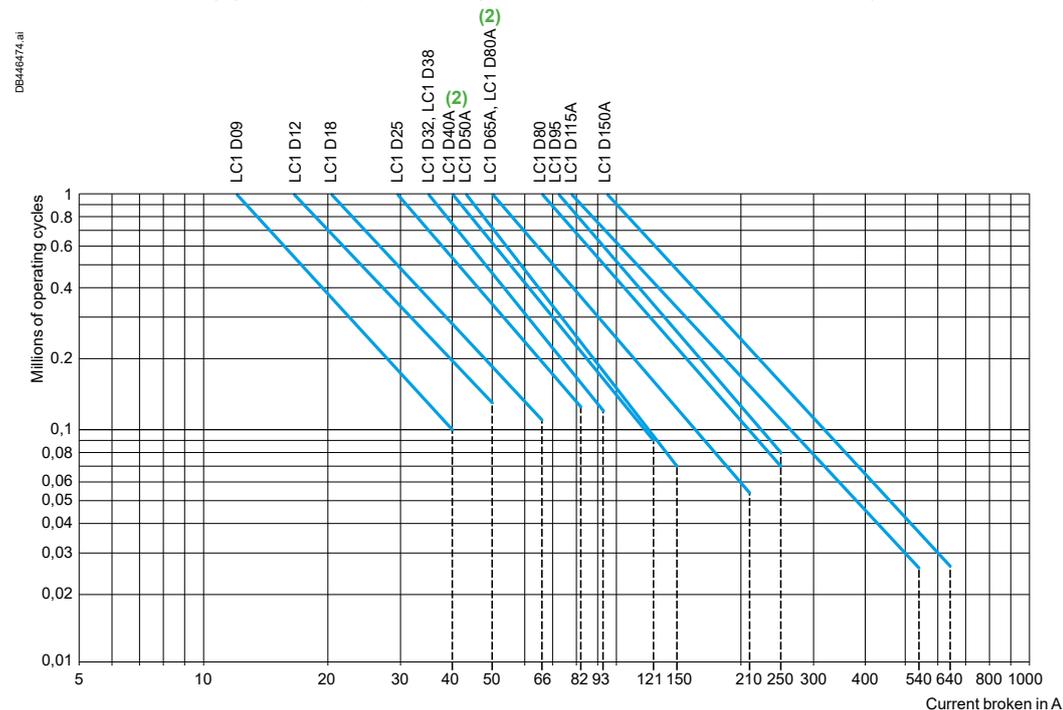
(1) For getting the values for installation with  $180^\circ$  rotation, please contact your Local Schneider Electric Technical Support.

#### Example:

- asynchronous motor with  $P = 5.5\text{ kW}$  -  $U_e = 400\text{ V}$  -  $I_e = 11\text{ A}$ .  $I_c = 6 \times I_e = 66\text{ A}$
- or asynchronous motor with  $P = 5.5\text{ kW}$  -  $U_e = 415\text{ V}$  -  $I_e = 11\text{ A}$ .  $I_c = 6 \times I_e = 66\text{ A}$
- 200 000 operating cycles required
- the above selection curves show the contactor rating needed: LC1D25.

#### Selection according to required electrical durability, use in category AC-4 ( $440\text{ V} < U_e \leq 690\text{ V}$ )

Control of 3-phase asynchronous squirrel cage motors with breaking whilst motor stalled.  
 The current broken ( $I_c$ ) in AC-2 is equal to  $2.5 \times I_e$ .  
 The current broken ( $I_c$ ) in AC-4 is equal to  $6 \times I_e$  ( $I_e$  = rated operational current of the motor).



(2) For Deca Advanced Contactors, please contact your Local Schneider Electric Technical Support for values.

# TeSys Control

## Contactors for utilisation categories AC-2 or AC-4

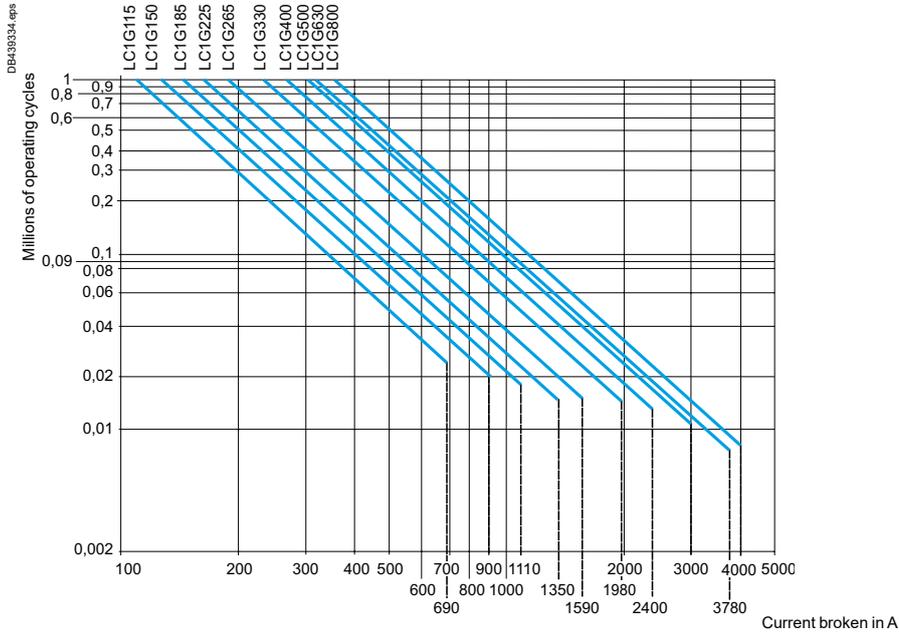
### Selection - Coordination and standards

#### Selection according to required electrical durability, in categories AC-2 or AC-4 ( $U_e \leq 440\text{ V}$ )

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

The current broken ( $I_c$ ) in AC-4 is equal to  $6 \times I_e$ .

( $I_e$  = rated operational current of the motor).



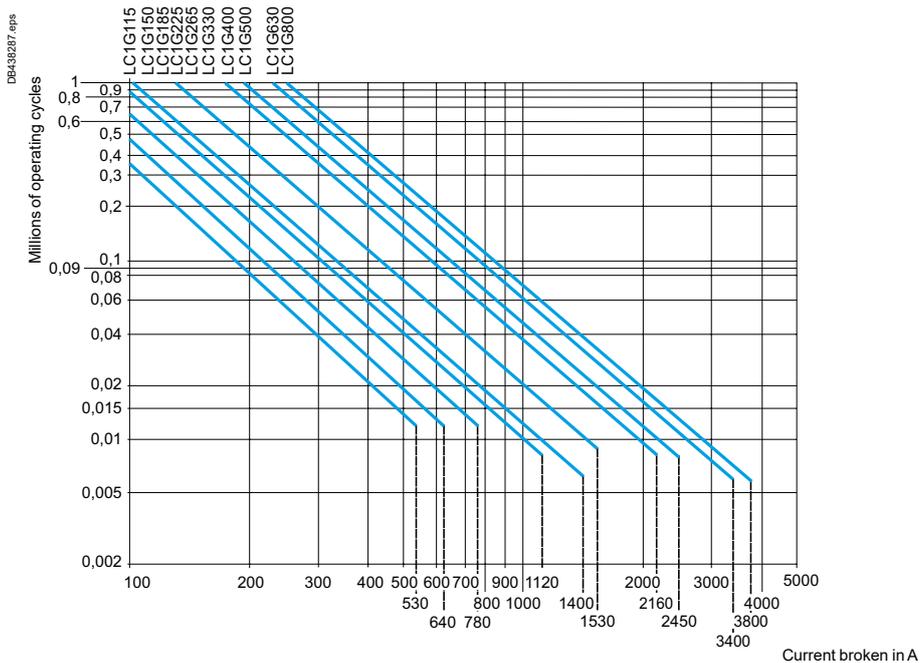
#### Example:

- asynchronous motor with  $P = 132\text{ kW}$  -  $U_e = 400\text{ V}$  -  $I_e = 230\text{ A}$ .  $I_c = 6 \times I_e = 1380\text{ A}$ .
- 30 000 operating cycles required.
- the above selection curves show the contactor rating needed: LC1G330.

#### Selection according to required electrical durability, use in category AC-4 ( $440\text{ V} < U_e \leq 690\text{ V}$ )

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

The current broken ( $I_c$ ) in AC-4 is equal to  $6 \times I_e$  ( $I_e$  = rated operational current of the motor).

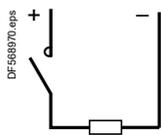


Coordination and standards

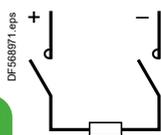
# TeSys Control

## Contactors for utilisation categories DC-1 to DC-5

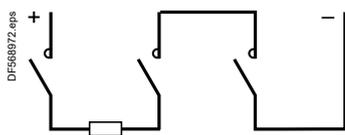
### Selection - Coordination and standards



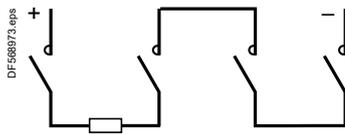
1 pole



2 poles



3 poles



4 poles

Coordination and standards

#### Rated operational current (Ie) in Amperes, in utilisation category DC-1<sup>(1)</sup>, resistive loads: time constant $\frac{L}{R} \leq 1$ ms, ambient temperature $\leq 60$ °C

Rated operational voltage Ue V	No. of poles connected in series	Contactor rating								
		LC1 D09	LC1 DT20	LC1 D12 DT25	LC1 D18 DT32	LC1 D25 DT40	LC1 D32	LC1 D38	LC1 D40A	LC1 DT60A
24	1	20	20	20	25	32	40	40	50	50
	2	20	20	20	25	32	40	40	50	50
	3	20	20	20	25	32	40	40	50	50
	4	–	20	20	25	32	–	–	–	50
48/75	1	20	20	20	25	32	40	40	50	50
	2	20	20	20	25	32	40	40	50	50
	3	20	20	20	25	32	40	40	50	50
	4	–	20	20	25	32	–	–	–	50
125	1	4	4	4	4	7	7	7	7	7
	2	20	20	20	25	32	40	40	50	50
	3	20	20	20	25	32	40	40	50	50
	4	–	20	20	25	32	–	–	–	50
250	1	1	1	1	1	1	1	1	1	1
	2	4	4	4	4	7	7	7	7	7
	3	20	20	20	25	32	40	40	50	50
	4	–	20	20	25	32	–	–	–	50
300	1	–	–	–	–	–	–	–	–	–
	2	–	–	–	–	–	–	–	–	–
	3	4	4	4	4	7	7	7	7	–
	4	–	20	20	25	32	–	–	–	50
460	1	–	–	–	–	–	–	–	–	–
	2	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–
	4	–	–	–	–	–	–	–	–	–

#### Rated operational current (Ie) in Amperes, in utilisation category DC-2 to DC-5<sup>(1)</sup>, inductive loads: time constant $\frac{L}{R} \leq 15$ ms, ambient temperature $\leq 60$ °C

Rated operational voltage Ue V	No. of poles connected in series	Contactor rating								
		LC1 D09	LC1 DT20	LC1 D12 DT25	LC1 D18 DT32	LC1 D25 DT40	LC1 D32	LC1 D38	LC1 D40A	LC1 DT60A
24	1	20	20	20	25	32	40	40	50	50
	2	20	20	20	25	32	40	40	50	50
	3	20	20	20	25	32	40	40	50	50
	4	–	20	20	25	32	–	–	–	50
48/75	1	20	20	20	25	32	40	40	50	50
	2	20	20	20	25	32	40	40	50	50
	3	20	20	20	25	32	40	40	50	50
	4	–	20	20	25	32	–	–	–	50
125	1	2	2	2	2	3	3	3	4	4
	2	20	20	20	25	32	40	40	50	50
	3	20	20	20	25	32	40	40	50	50
	4	–	20	20	25	32	–	–	–	50
250	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	1
	2	2	2	2	2	3	3	3	4	4
	3	8	8	8	8	32	40	40	50	50
	4	–	20	20	25	32	–	–	–	50
300	1	–	–	–	–	–	–	–	–	–
	2	–	–	–	–	–	–	–	–	–
	3	2	2	2	2	3	3	3	3	3
	4	–	8	8	8	32	–	–	–	50
460	1	–	–	–	–	–	–	–	–	–
	2	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–
	4	–	–	–	–	–	–	–	–	–

<sup>(1)</sup> In DC applications, lower current values than the ones specified in these tables may lead to durability performances lower than defined in the IEC 60947-4-1 (critical current). For applications with lower current than the values specified in these tables, please consult your Local Schneider Electric Technical Support.

# TeSys Control

## Contactors for utilisation categories DC-1 to DC-5

### Selection - Coordination and standards

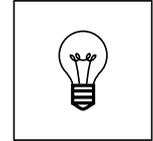
#### Contactors for utilisation categories DC-1 to DC-5

Contactors for utilisation categories DC-1 to DC-5																	
Contactor rating																	
LC1 D50A	LC1 D65A D80A	LC1 DT80A	LC1 D80	LC1 D95	LC1 D115A	LC1 D150A	LC1 G115	LC1 G150	LC1 G185	LC1 G225	LC1 G265	LC1 G330	LC1 G400	LC1 G500	LC1 G630	LC1 G800	LC1 F780
65	65	65	100	100	200	200	225	250	275	300	350	400	500	600	950	950	1300
65	65	65	100	100	200	200	225	250	275	300	350	400	500	600	950	950	1300
65	65	65	100	100	200	200	225	250	275	300	350	400	500	600	950	950	1300
-	-	65	100	-	200	-	225	250	275	300	350	400	500	600	950	950	1300
65	65	65	100	100	200	200	225	250	275	300	350	400	500	600	950	950	1300
65	65	65	100	100	200	200	225	250	275	300	350	400	500	600	950	950	1300
65	65	65	100	100	200	200	225	250	275	300	350	400	500	600	950	950	1300
-	-	65	100	-	200	-	225	250	275	300	350	400	500	600	950	950	1300
7	7	7	12	12	12	12	205	225	250	270	315	360	450	540	855	855	1180
65	65	65	100	100	200	200	205	225	250	270	315	360	450	540	855	855	1180
65	65	65	100	100	200	200	225	250	275	300	355	405	505	605	960	960	1300
-	-	65	100	-	200	-	225	250	275	300	355	405	505	605	960	960	1300
1	1.5	1.5	2	2	10	10	-	-	-	-	-	-	-	-	-	-	-
7	7	7	12	12	200	200	180	205	225	245	285	325	405	485	770	770	1000
65	65	65	100	100	200	200	225	250	275	300	350	400	500	600	950	950	1300
-	-	65	100	-	200	-	225	250	275	300	350	400	500	600	945	945	1300
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	7	7	12	12	200	200	185	205	225	250	290	330	415	495	785	785	1000
-	-	65	100	-	200	-	225	250	275	300	350	400	500	600	950	950	1000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	200	-	185	205	225	245	285	325	410	490	775	775	1000

Coordination and standards

#### Contactors for utilisation categories DC-1 to DC-5

Contactors for utilisation categories DC-1 to DC-5																	
Contactor rating																	
LC1 D50A	LC1 D65A D80A	LC1 DT80A	LC1 D80	LC1 D95	LC1 D115A	LC1 D150A	LC1 G115	LC1 G150	LC1 G185	LC1 G225	LC1 G265	LC1 G330	LC1 G400	LC1 G500	LC1 G630	LC1 G800	LC1 F780
65	65	65	100	100	200	200	225	250	275	300	350	400	500	600	950	950	1300
65	65	65	100	100	200	200	225	250	275	300	350	400	500	600	950	950	1300
65	65	65	100	100	200	200	225	250	275	300	350	400	500	600	950	950	1300
-	-	65	100	-	200	-	225	250	275	300	350	400	500	600	950	950	1300
65	65	65	100	100	200	200	225	250	275	300	350	400	500	600	950	950	1300
65	65	65	100	100	200	200	225	250	275	300	350	400	500	600	950	950	1300
65	65	65	100	100	200	200	225	250	275	300	350	400	500	600	950	950	1300
-	-	65	100	-	200	-	225	250	275	300	350	400	500	600	950	950	1300
4	4	4	5	5	10	10	-	-	-	-	-	-	-	-	-	-	-
65	65	65	100	100	200	200	190	210	230	250	290	335	420	500	795	795	1000
65	65	65	100	100	200	200	205	230	255	275	325	370	460	555	875	875	1000
-	-	65	100	-	200	-	205	230	255	275	325	370	460	555	875	875	1000
1	1.5	1.5	1	1	3	3	-	-	-	-	-	-	-	-	-	-	-
4	4	4	5	5	200	200	175	190	210	230	270	305	385	460	730	730	900
65	65	65	100	100	200	200	185	210	230	250	290	335	415	500	790	790	1000
-	-	65	100	-	200	-	225	250	275	300	355	405	505	605	960	960	1000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	3	3	5	5	200	200	175	195	210	230	270	310	385	465	730	730	900
-	-	65	100	-	200	-	225	250	275	300	350	400	500	600	950	950	1000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	200	-	175	190	210	230	270	310	385	460	730	730	800



## General

The operating conditions of lighting circuits have the following characteristics:

- continuous duty: the switching device can remain closed for several days or even months
- a dispersion factor of 1: all luminaires in the same group are switched on or off simultaneously
- a relatively high temperature around the device due to the enclosure, the presence of fuses, or an unventilated control panel location.

This is why the operational current for lighting is lower than the value given for AC-1 duty.

## Protection

The continuous duty current drawn by a lighting circuit is constant. In fact:

- it is unlikely that the number of luminaires of an existing circuit will be modified
- this type of circuit cannot create an overload of long duration.

It is therefore only necessary to provide short-circuit protection.

This can be provided by:

- gG type fuses, or
- modular circuit breakers.

Nevertheless, it is always possible and sometimes more economical (smaller cable size) to protect the circuit by a thermal overload relay and associated aM type uses.

## Distribution system

### Single-phase circuit, 220/240 V

The tables on pages A3/53 to A3/57 are based on a single-phase 220/240 V circuit and can therefore be applied directly in this case.

### 3-phase circuit, 380/415 V (with neutral)

The total number of lamps (N) to be switched simultaneously is divided into three equal groups, each connected between one phase and neutral. The contactor can then be selected from the 220/240 V single-phase tables for a number of lamps equal to  $\frac{N}{3}$  lamps.

### 3-phase circuit, 220/240 V

The total number of lamps (N) to be switched simultaneously is divided into three equal groups, each connected between 2 phases (L1-L2), (L2-L3), (L3-L1). The contactor can then be selected from the 220/240 V single-phase table for a number of lamps equal to  $\frac{N}{\sqrt{3}}$  lamps.

## Contactor selection tables

For the different types of lamps, the tables on pages A3/53 to A3/57 give the maximum number of lamps of unit power P (in Watts), which can be switched simultaneously for each size of contactor.

They are based on:

- a 220/240 V single-phase circuit
- an ambient temperature of 55 °C <sup>(1)</sup>, taking into account the operating conditions (see General paragraph)
- an electrical life of more than 10 years (200 days' operation per year).

They take into account:

- the total current drawn (including ballast)
- transient phenomena which occur at switch-on
- the starting currents and their duration
- the circulation of any harmonics which may be present.

### Lamps with compensating capacitor C (µF) connected in parallel

Parallel connected compensating capacitors C cause a current peak at the moment of switch-on. To ensure that the value of this current peak remains compatible with the making characteristics of the contactors, the unit value of the capacitance must not exceed the following:

Switching contactor rating	LC1 K09	LP1 K09	LC1 D09	LC1 D12	LC1 D18	LC1 D25	LC1 D32	LC1 D38	LC1 D40A	LC1 D50A	LC1 D65A	LC1 D80A	LC1 D80
Maximum unit value C (µF) of parallel connected compensating capacitor	7	3	18	18	25	60	96	96	120	120	240	240	240

Switching contactor rating	LC1 D80	LC1 D95	LC1 D115A	LC1 D150A	LC1 G185	LC1 G225	LC1 G265	LC1 G330	LC1 G400	LC1 G500	LC1 G630	LC1 G800
Maximum unit value C (µF) of parallel connected compensating capacitor	240	240	300	360	800	1200	1700	2500	4000	6000	9000	10800

This value is independent of the number of lamps switched by the contactor.

<sup>(1)</sup> For an ambient temperature of 40 °C, multiply the number by 1.2.



### Usual values

The tables show the following values:

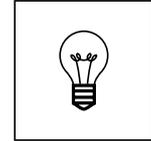
- IB: value of current drawn by each lamp at its rated voltage,
  - C: unit capacitance for each lamp,
- corresponding to the values normally quoted by lamp manufacturers.

These values are given for an ambient temperature of 55 °C (for 40 °C, multiply the number by 1.2).

Incandescent and halogen lamps										
P (W)	60	75	100	150	200	300	500	750	1000	
IB (A)	0.27	0.34	0.45	0.68	0.91	1.40	2.30	3.40	4.60	LC1
Max. no. of lamps according to P (W)	35	28	21	14	10	6	4	2	2	K09
	59	47	35	23	17	11	7	4	3	D09, D12
	77	61	46	30	23	15	9	6	4	D18
	92	73	55	36	27	18	11	7	5	D25
	129	103	77	51	38	25	15	10	7	D32, D38
	163	129	97	64	48	31	19	13	9	D40A
	207	164	124	82	62	40	24	16	12	D50A, D65A, D80A
	296	235	177	117	88	57	34	23	17	D80, D95
	520	410	310	200	150	100	60	40	30	D115A
	590	470	350	230	170	110	60	40	30	D150A
	710	564	426	282	210	136	82	56	40	G185
	770	610	462	304	228	148	90	60	44	G225
	888	704	532	352	262	170	104	70	52	G265
	1006	800	604	400	298	194	118	80	58	G330
	1274	1010	764	504	378	244	148	100	74	G400
	1718	1364	1030	682	508	330	200	136	100	G500
	2328	1850	1396	924	690	448	272	184	136	G630
	2776	2204	1666	1102	824	534	326	220	162	G800

Mixed lighting lamps						
P (W)	100	160	250	500	1000	
IB (A)	0.45	0.72	1.10	2.30	4.50	LC1
Max. no. of lamps according to P (W)	21	13	8	4	2	K09
	35	22	14	7	3	D09, D12
	46	29	18	9	4	D18
	55	36	23	11	5	D25
	77	48	30	15	7	D32, D38
	97	61	38	19	9	D40A
	124	77	49	24	12	D50A, D65A, D80A
	177	111	70	34	17	D80, D95
	310	190	120	60	30	D115A
	350	220	140	60	30	D150A
	426	266	174	82	42	G185
	462	288	188	90	46	G225
	532	332	218	104	52	G265
	604	378	246	118	60	G330
	764	478	312	150	76	G400
	1030	644	422	202	102	G500
	1398	874	572	272	140	G630
	1666	1040	680	326	166	G800

Coordination and standards



#### Usual values

The tables show the following values:

- IB: value of current drawn by each lamp at its rated voltage
- C: unit capacitance for each lamp corresponding to the values normally quoted by lamp manufacturers.

These values are given for an ambient temperature of 55 °C (for 40 °C, multiply the number by 1.2).

Fluorescent lamps with starter. Single fitting												
	Non corrected					With parallel correction					LC1	
	P (W)	20	40	65	80	110	20	40	65	80		110
	IB (A)	0.39	0.45	0.70	0.80	1.2	0.17	0.26	0.42	0.52		0.72
C (µF)	–	–	–	–	–	5	5	7	7	16		
Max. no. of lamps according to P (W)	24	21	13	12	8	56	36	22	18	–		K09
	41	35	22	20	13	94	61	38	30	22		D09, D12
	53	46	30	26	17	123	80	50	40	29		D18
	66	57	37	32	21	152	100	61	50	36		D25
	89	77	50	43	29	205	134	83	67	48		D32, D38
	112	97	62	55	36	258	169	104	84	61		D40A
	143	124	80	70	46	329	215	133	107	77		D50A, D65A, D80A
	205	177	114	100	66	470	367	190	153	111		D80, D95
	330	280	180	160	110	750	490	300	250	180		D115A, D150A
	492	426	274	240	160	1128	738	456	368	266		G185
	532	462	296	260	172	1224	800	490	400	288		G225
	614	532	342	300	200	1412	922	570	462	332		G265
	696	604	388	340	226	1600	1046	648	522	378		G330
	882	764	490	430	286	2024	1322	818	662	478		G400
	1190	1030	662	580	386	2728	1724	1104	892	644		G500
	1612	1398	698	786	524	3700	2418	1498	1210	874		G630, G800

Fluorescent lamps with starter. Twin fitting												
	Non corrected					With series correction					LC1	
	P (W)	2x20	2x40	2x65	2x80	2x110	2x20	2x40	2x65	2x80		2x110
	IB (A)	2x0.22	2x0.41	2x0.67	2x0.82	2x1.1	2x0.13	2x0.24	2x0.39	2x0.48		2x0.65
Max. no. of lamps according to P (W)	2x21	2x11	2x7	2x5	2x4	2x36	2x20	2x12	2x10	2x7		K09
	2x36	2x18	2x10	2x8	2x6	2x60	2x32	2x20	2x16	2x12		D09, D12
	2x46	2x24	2x14	2x12	2x8	2x80	2x42	2x26	2x20	2x16		D18
	2x58	2x30	2x18	2x14	2x10	2x100	2x54	2x32	2x26	2x20		D25
	2x78	2x42	2x26	2x20	2x14	2x134	2x72	2x44	2x36	2x26		D32, D38
	2x100	2x52	2x32	2x26	2x18	2x168	2x90	2x56	2x44	2x32		D40A
	2x126	2x68	2x40	2x34	2x24	2x214	2x116	2x70	2x58	2x42		D50A, D65A, D80A
	2x180	2x96	2x58	2x48	2x36	2x306	2x166	2x102	2x82	2x60		D80, D95
	2x290	2x160	2x100	2x80	2x60	2x490	2x270	2x160	2x130	2x100		D115A, D150A
	2x436	2x234	2x142	2x116	2x86	2x738	2x400	2x246	2x200	2x148		G185
	2x472	2x254	2x154	2x126	2x94	2x800	2x432	2x266	2x216	2x160		G225
	2x544	2x292	2x178	2x146	2x108	2x922	2x500	2x308	2x250	2x184		G265
	2x618	2x332	2x202	2x166	2x124	2x1046	2x566	2x348	2x282	2x208		G330
	2x782	2x420	2x256	2x210	2x156	2x1322	2x716	2x440	2x358	2x264		G400
	2x1054	2x566	2x346	2x282	2x210	2x1784	2x966	2x594	2x482	2x356		G500
	2x1430	2x766	2x468	2x384	2x286	2x2418	2x1310	2x806	2x654	2x484		G630, G800



**Usual values**

The tables show the following values:

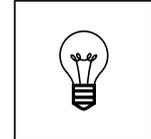
- IB: value of current drawn by each lamp at its rated voltage
- C: unit capacitance for each lamp corresponding to the values normally quoted by lamp manufacturers.

These values are given for an ambient temperature of 55 °C (for 40 °C, multiply the number by 1.2).

Fluorescent lamps without starter. Single fitting												
	Non corrected					With parallel correction					LC1	
	P (W)	20	40	65	80	110	20	40	65	80		110
	IB (A)	0.43	0.55	0.80	0.95	1.4	0.19	0.29	0.46	0.57		0.79
C (µF)	–	–	–	–	–	5	5	7	7	16		
Max. no. of lamps according to P (W)	22	17	12	10	6	50	33	20	16	–	K09	
	37	29	20	16	11	84	55	34	28	20	D09, D12	
	48	38	26	22	15	110	72	45	36	26	D18	
	60	47	32	27	18	136	89	56	45	32	D25	
	97	63	43	36	25	184	101	76	61	44	D32, D38	
	102	80	55	46	31	231	151	95	77	55	D40A	
	130	101	70	58	40	294	193	121	98	70	D50A, D65A, D80A	
	186	145	100	84	57	421	275	173	140	101	D80, D95	
	370	290	200	170	110	840	550	350	280	200	D115A, D150A	
	446	348	240	202	136	1010	662	416	336	242	G185	
	484	378	260	218	148	1094	716	452	364	262	G225	
	558	436	300	252	170	1262	828	522	420	304	G265	
	632	494	340	286	194	1432	938	590	476	344	G330	
	800	624	430	362	246	1810	1186	748	604	434	G400	
	1078	844	580	488	330	2442	1600	1008	814	586	G500	
	1462	1144	786	662	448	3310	2168	1366	1104	796	G630, G800	

Fluorescent lamps without starter. Twin fitting												
	Non corrected					With series correction					LC1	
	P (W)	2x20	2x40	2x65	2x80	2x110	2x20	2x40	2x65	2x80		2x110
	IB (A)	2x0.25	2x0.47	2x0.76	2x0.93	2x1.3	2x0.14	2x0.26	2x0.43	2x0.53		2x0.72
C (µF)	–	–	–	–	–	–	–	–	–	–		
Max. no. of lamps according to P (W)	2x19	2x10	2x6	2x5	2x3	2x34	2x18	2x11	2x9	2x6	K09	
	2x32	2x16	2x10	2x8	2x6	2x56	2x30	2x18	2x14	2x10	D09, D12	
	2x42	2x22	2x12	2x10	2x8	2x74	2x40	2x24	2x18	2x14	D18	
	2x52	2x26	2x16	2x12	2x10	2x92	2x50	2x30	2x24	2x18	D25	
	2x70	2x36	2x22	2x18	2x12	2x124	2x66	2x40	2x32	2x24	D32, D38	
	2x88	2x46	2x28	2x22	2x16	2x156	2x84	2x50	2x40	2x30	D40A	
	2x112	2x58	2x36	2x30	2x20	2x200	2x106	2x64	2x52	2x38	D50A, D65A, D80A	
	2x160	2x84	2x52	2x42	2x30	2x234	2x152	2x92	2x74	2x54	D80, D95	
	2x320	2x170	2x110	2x90	2x60	2x570	2x310	2x190	2x150	2x110	D115A, D150A	
	2x384	2x204	2x126	2x102	2x74	2x686	2x368	2x222	2x180	2x132	G185	
	2x416	2x220	2x136	2x112	2x80	2x742	2x400	2x242	2x196	2x144	G225	
	2x480	2x254	2x158	2x128	2x92	2x856	2x462	2x278	2x226	2x166	G265	
	2x544	2x288	2x178	2x146	2x104	2x970	2x522	2x316	2x256	2x188	G330	
	2x688	2x366	2x226	2x184	2x132	2x1228	2x662	2x400	2x324	2x238	G400	
	2x928	2x494	2x304	2x248	2x178	2x1656	2x892	2x540	2x438	2x322	G500	
	2x1258	2x668	2x414	2x338	2x242	2x2246	2x1210	2x730	2x592	2x436	G630, G800	

Coordination and standards



**Usual values**

The tables show the following values:

- IB: value of current drawn by each lamp at its rated voltage
- C: unit capacitance for each lamp corresponding to the values normally quoted by lamp manufacturers.

These values are given for an ambient temperature of 55 °C (for 40 °C, multiply the number by 1.2).

Low pressure sodium vapour lamps																
	Non corrected							With parallel correction								
	P (W)	35	55	90	135	150	180	200	35	55	90	135	150	180		200
	IB (A)	1.2	1.6	2.4	3.1	3.2	3.3	3.4	0.3	0.4	0.6	0.9	1	1.2	1.3	
	C (µF)	-	-	-	-	-	-	-	17	17	25	36	36	36	36	
Max. no. of lamps according to P (W)	6	5	3	2	2	2	2	-	-	-	-	-	-	-	-	LC1
	10	7	5	3	3	3	3	40	30	-	-	-	-	-	-	K09
	12	9	6	4	4	4	4	50	37	25	-	-	-	-	-	D09, D12
	15	11	7	6	5	5	5	63	47	31	21	19	15	14	-	D18
	21	16	10	8	8	7	7	86	65	43	28	26	21	20	-	D25
	27	20	13	10	10	10	9	110	82	55	36	33	27	25	-	D32, D38
	35	26	17	13	13	12	12	140	105	70	46	42	35	32	-	D40A
	50	37	25	19	18	18	17	200	150	100	66	60	50	46	-	D50A, D65A, D80A
	100	75	50	40	40	35	35	400	300	200	135	120	100	90	-	D80, D95
	140	104	70	54	52	50	48	560	420	280	186	168	140	128	-	D115A, D150A
	152	114	76	58	56	54	54	606	454	302	202	182	152	140	-	G185
	174	130	88	68	66	64	62	700	524	350	232	210	174	162	-	G225
	198	148	98	76	74	72	70	792	594	396	264	238	198	182	-	G265
	250	188	124	96	94	90	88	1002	752	502	334	300	250	252	-	G330
	338	254	168	130	126	122	118	1352	1014	676	450	406	338	312	-	G400
496	372	248	192	186	180	174	1982	1488	992	660	594	496	458	-	G500	
																G630, G800

High pressure sodium vapour lamps													
	Non corrected					With parallel correction							
	P (W)	150	250	400	700	1000	150	250	400	700		1000	
	IB (A)	1.9	3.2	5	8.8	12.4	0.84	1.4	2.2	3.9	5.5		
	C (µF)	-	-	-	-	-	20	32	48	96	120		
Max. no. of lamps according to P (W)	4	2	1	-	-	-	-	-	-	-	-	LC1	
	6	3	2	1	-	-	-	-	-	-	-	K09	
	7	4	3	1	1	-	-	-	-	-	-	D09, D12	
	10	5	3	2	1	-	17	-	-	-	-	D18	
	13	8	5	2	2	-	22	13	8	-	-	D25	
	17	10	6	3	2	-	30	18	11	6	-	D32, D38	
	22	13	8	4	3	-	39	23	15	8	6	D40A	
	31	18	12	6	4	-	50	30	19	10	7	D50A, D65A, D80A	
	65	40	25	15	10	-	71	42	27	15	10	D80, D95	
	88	52	34	18	14	-	145	85	55	30	20	D115A, D150A	
	96	56	36	20	16	-	200	120	76	42	30	G185	
	110	66	42	24	18	-	216	130	82	46	32	G225	
	124	74	48	26	20	-	250	150	94	54	38	G265	
	158	94	60	34	24	-	282	170	108	60	42	G330	
	214	126	80	46	32	-	358	214	136	76	54	G400	
312	186	118	68	48	-	482	290	184	104	74	G500		
						708	424	270	152	108		G630, G800	



### Usual values

The tables show the following values:

- IB: value of current drawn by each lamp at its rated voltage
- C: unit capacitance for each lamp corresponding to the values normally quoted by lamp manufacturers.

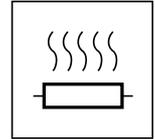
These values are given for an ambient temperature of 55 °C (for 40 °C, multiply the number by 1.2).

High pressure mercury vapour lamps																
Max. no. of lamps according to P (W)	Non corrected							With parallel correction								
	P (W)	50	80	125	250	400	700	1000	50	80	125	250	400	700	1000	
	IB (A)	0.54	0.81	1.20	2.30	4.10	6.80	9.90	0.3	0.45	0.67	1.3	2.3	3.8	5.5	
	C (µF)	–	–	–	–	–	–	–	10	10	10	18	25	40	60	
																LC1
																K09
																D09, D12
																D18
																D25
																D32, D38
																D40A
																D50A, D65A, D80A
																D80, D95
																D115A, D150A
																G185
																G225
																G265
																G330
																G400
																G500
																G630, G800

Metal iodine vapour lamps																
Max. no. of lamps according to P (W)	Non corrected				With parallel correction											
	P (W)	250	400	1000	2000	250	400	1000	2000							
	IB (A)	2.5	3.6	9.5	20	1.4	2	5.3	11.2							
	C (µF)	–	–	–	–	32	32	64	140							
																LC1
																K09
																D09, D12
																D18
																D25
																D32, D38
																D40A
																D50A, D65A, D80A
																D80, D95
																D115A, D150A
																G185
																G225
																G265
																G330
																G400
																G500
																G630, G800

Coordination and standards



## Selection

### General

A heating circuit is a power switching circuit supplying one or more resistive heating elements switched by a contactor. The same general rules apply as for motor circuits, except that heating circuits are not normally subjected to overload currents. It is therefore only necessary to provide short-circuit protection.

### Characteristics of heating elements

The examples below are based on resistive heating elements used for industrial furnaces or for the heating of buildings (infra-red or resistive radiant type, convactor heaters, closed loop heating circuits, etc.). The variation in resistance values between hot and cold states causes a current peak at switch-on which never exceeds 2 to 3 times the rated operational current ( $I_n$ ). This initial peak does not recur during normal operation where subsequent switching is thermostatically controlled. The rated power and current of a heater are given for the normal operating temperature.

### Protection

The steady state current drawn by a heating circuit is constant when the voltage is stable. In fact:

- it is unlikely that the number of loads in an existing circuit will be modified
- this type of circuit cannot create overloads. It is therefore only necessary to provide short-circuit protection.

This can be provided by:

- gG type fuses, or
- modular circuit breakers.

Nevertheless, it is always possible and sometimes more economical (smaller cable size) to protect the circuit by a thermal overload relay and associated aM type fuses.

### Switching, control, protection

A heating element or group of heating elements of a given power may be either single-phase or 3-phase and may be supplied from a 220/127 V or a 400/230 V distribution system. Excluding a single-phase 127 V system (which is no longer commonly used), the following 3 types of circuit arrangement are possible:

- single-phase, 2-pole switching
- single-phase, 4-pole switching
- 3-phase switching

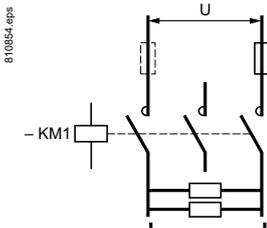
## Component selection according to the power switched

The combinations suggested below are based on an ambient temperature of 55 °C (60 °C for Giga contactors LC1G) and for powers at the nominal voltage, but they also ensure switching in the event of prolonged overloads up to 1.05  $U_e$ .

### Single-phase, 2-pole switching

Maximum power (kW)				Contactor rating
220/240 V	380/415 V	660/690 V	1000 V	
3.5	6.5	11	–	LC1K09, LP1K09
4.5	8	14	–	LC1D12
6	10.5	18.5	–	LC1D18
7	13	22.5	–	LC1D25
10	18	30.5	–	LC1D32, LC1D38
13	22.5	39.5	–	LC1D40A
16.5	28.5	43.5	–	LC1D65A, LC1D80A
24	42	73	82.5	LC1D80, LP1D80
44	76	118	157	LC1D115A, LC1D150A

Maximum power (kW)				Contactor rating
230 V	400 V	690 V	1000 V	
40	75	125	185	LC1G115
45	80	140	205	LC1G150
50	90	155	225	LC1G185
55	100	170	250	LC1G225
65	115	200	290	LC1G265
75	130	230	330	LC1G330
95	165	285	415	LC1G400
115	200	345	500	LC1G500
150	265	460	665	LC1G630
150	265	460	665	LC1G800

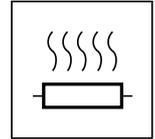


Circuit controlled by 2 poles of the contactor.

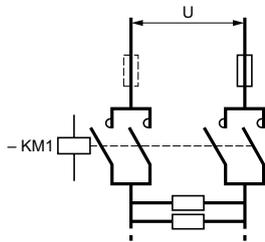
# TeSys Control

## Contactors for heating circuits

### Selection - Coordination and standards

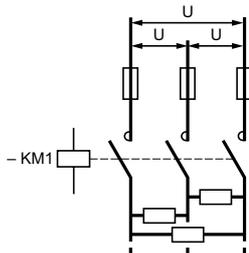


810856.eps



Circuit controlled by a 4-pole contactor with the poles parallel connected in pairs using appropriate connecting links. This solution enables the control of power values approximately equivalent to those controlled by the same contactor on 3-phase.

810857.eps



Circuit controlled by 3 poles of the contactor.

#### Component selection according to the power switched

##### Single-phase, 4-pole switching

Maximum power (kW)				Contactor rating
220/240 V	380/415 V	660/690 V	1000 V	
4.5	8	13.5	–	LC1K09004, LP1K09004
7	13	22.5	–	LC1DT25
12	21	36.5	–	LC1DT40
26	45.5	79.5	–	LC1DT80A
38	66	117.5	132	LC1D80004, LP1D80004
70	121	190	251	LC1DT200A

Maximum power (kW)				Contactor rating
230 V	400 V	690 V	1000 V	
65	120	205	300	LC1G1154
75	130	230	330	LC1G1504
80	145	250	365	LC1G1854
90	160	275	400	LC1G2254
105	185	320	465	LC1G2654
120	210	365	530	LC1G3304
150	265	460	665	LC1G4004
180	320	550	800	LC1G5004
245	425	735	1065	LC1G6304
245	425	735	1065	LC1G8004

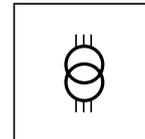
##### 3-phase switching

Maximum power (kW)				Contactor rating
220/240 V	380/415 V	660/690 V	1000 V	
4.5	8	13.5	–	LC1K09, LP1K09
7	13	22.5	–	LC1D12
10	18	30.5	–	LC1D18
13	22.5	39.5	–	LC1D25
18	31	52.5	–	LC1D32, LC1D38
22.5	38	68	–	LC1D40A
28.5	49	86	–	LC1D65A, LC1D80A
40.5	70.5	126	135.5	LC1D80, LP1D80
76	131	206	275	LC1D115A, LC1D150A

Maximum power (kW)				Contactor rating
230 V	400 V	690 V	1000 V	
70	125	220	320	LC1G115
80	140	245	360	LC1G150
90	155	270	395	LC1G185
95	170	295	430	LC1G225
115	200	345	505	LC1G265
130	230	395	575	LC1G330
165	285	495	720	LC1G400
195	345	595	865	LC1G500
265	460	795	1150	LC1G630
265	460	795	1150	LC1G800

#### Application example

For a 220 V, 50 Hz, single-phase circuit supplying a total heating load of 12.5 kW. Select a 3-pole contactor **LC1D65A**.



### Operating conditions

Maximum ambient temperature: 55 °C.

When a transformer is switched on, there is generally an initial current surge which reaches its peak value almost instantaneously and then decreases in a largely exponential manner to quickly reach its steady state value.

The value of this current depends on:

- the characteristics of the magnetic circuit and of the windings (cross sectional area of the core, rated inductance, number of turns, layout and size of the windings, ...)
- the performance of the magnetic laminations used
- the magnetic state of the circuit and the instantaneous value of the a.c. mains voltage at the moment of switch-on.

The inrush current at the moment of switch-on can reach 20 to 40 times the rated current for the various kVA power ratings in the tables below. This value is independent of the "no-load" or "on-load" state of the transformer.

### Contactor selection

The peak magnetising current of the transformer must be lower than the values given in the tables below.

Maximum operating rate: 120 operating cycles/hour.

Contactor rating		LC1/ LP1 K06	LC1/ LP1 K09	LC1 D09	LC1 D12	LC1 D18	LC1 D25	LC1 D32	LC1 D38	LC1 D40A	LC1 D50A	LC1 D65A D80A	LC1 D80	LC1 D95	LC1 D115A	LC1 D150A
Maximum permissible current peak at switch-on	<b>A</b>	160	225	350	350	420	630	770	770	1100	1250	1400	1550	1650	2948	3563
Maximum operational power <sup>(1)</sup>	220 V	<b>kVA</b> 2	2.5	4	4	5	7	8.5	8.5	14	16	18	19.5	19.5	25	25
	240 V															
	380 V	<b>kVA</b> 3.5	5	7	7	8	12.5	15	15	24	27	31	34	34	50	50
	400 V															
	415 V	<b>kVA</b> 4	5.5	8	8	9	14	17	17	28	32	36	39	39	55	55
	440 V															
500 V	<b>kVA</b> 5	7	9	9	11	16.5	20	20	32	36	40	45	45	65	65	
660 V	<b>kVA</b> 6	8.5	12	12	14	21.5	26.5	26.5	42	48	53	59	59	80	80	
690 V																
1000 V	<b>kVA</b> –	–	–	–	–	–	–	–	–	–	–	85	95	100	100	

<sup>(1)</sup> Maximum operational power corresponding to a current peak at switch-on of 30 In.

Contactor rating		LC1 G115	LC1 G150	LC1 G185	LC1 G225	LC1 G265	LC1 G330	LC1 G400	LC1 G500	LC1 G630	LC1 G630	LC1 G800
Maximum permissible current peak at switch-on	<b>A</b>	1800	2000	2900	3300	3800	5000	6300	7700	9000	11000	12000
Maximum operational power <sup>(2)</sup>	220 V	<b>kVA</b> 25	25	40	45	50	65	75	100	120	145	175
	240 V											
	380 V	<b>kVA</b> 50	50	75	80	90	120	130	170	200	245	280
	400 V											
	415 V	<b>kVA</b> 55	55	80	90	100	130	140	190	220	270	310
	440 V											
500 V	<b>kVA</b> 65	65	95	100	110	140	170	225	260	315	350	
660 V	<b>kVA</b> 80	80	120	130	140	170	200	270	350	425	400	
690 V												
1000 V	<b>kVA</b> 100	100	150	170	200	225	250	375	470	550	650	

<sup>(2)</sup> Maximum operational power corresponding to a current peak at switch-on of 30 In.



### Standard contactors

Capacitors, together with the circuits to which they are connected, form oscillatory circuits which can, at the moment of switch-on, give rise to high transient currents (> 180 In) at high frequencies (1 to 15 kHz).

As a general rule, the peak current on energisation is lower when:

- the mains inductances are high
- the line transformer ratings are low
- the transformer short-circuit voltage is high
- the ratio between the sum of the ratings of the capacitors already switched into the circuit and that of the capacitor to be switched in is small (for multiple step capacitor banks).

In accordance with standards IEC 60070, NF C 54-100, VDE 0560, the switching contactor must be able to withstand a continuous current of 1.43 times the rated current of the capacitor bank step being switched.

The rated operational powers given in the tables below take this overload into account. Short-circuit protection is normally provided by gl type HPC fuses rated at 1.7 to 2 In.

### Contactor applications

#### Operating conditions

Capacitors are directly switched. **The values of peak current at switch-on must not exceed the values indicated opposite.**

An inductor may be inserted in each of the three phases supplying the capacitors to reduce the peak current, if necessary. Inductance values are determined according to the selected operating temperature.

#### Power factor correction by a single-step capacitor bank

The use of a choke inductor is unnecessary: the inductance of the mains supply is adequate to limit the peak to a value compatible with the contactor characteristics.

#### Power factor correction by a multiple-step capacitor bank

Select a special contactor as defined on page B8/35 of TeSys Catalog, ref. MKTED210011EN.

**If a standard contactor is used, it is essential to insert a choke inductor in each of the three phases of each step.**

### Maximum operational power of contactors

#### Standard contactors

Maximum operating rate: 120 operating cycles/hour.

Electrical durability at maximum load: 100 000 operating cycles.

With choke inductors connected, where necessary.

Operational power at 50/60 Hz						Max. peak current	Contactor rating
$\theta \leq 40\text{ }^{\circ}\text{C}^{(1)}$			$\theta \leq 55\text{ }^{\circ}\text{C}^{(1)}$				
220/240 V	400/440 V	600/690 V	220/240 V	400/440 V	600/690 V	A	
kvAR	kvAR	kvAR	kvAR	kvAR	kvAR		
6	11	15	6	11	15	560	LC1D09, D12
9	15	20	9	15	20	850	LC1D18
11	20	25	11	20	25	1600	LC1D25
14	25	30	14	25	30	1900	LC1D32, D38
17	30	37	17	30	37	2160	LC1D40
22	40	50	22	40	50	2160	LC1D50
22	40	50	22	40	50	3040	LC1D65
35	60	75	35	60	75	3040	LC1D80, D95
50	90	125	38	75	80	2948	LC1D115A
60	110	135	40	85	90	3563	LC1D150A

<sup>(1)</sup> Upper limit of temperature category conforming to IEC 60070.

Operational power at 50/60 Hz						Max. peak current	Contactor rating
$\theta \leq 40\text{ }^{\circ}\text{C}^{(2)}$			$\theta \leq 60\text{ }^{\circ}\text{C}^{(2)}$				
220/240 V	400/440 V	600/690 V	220/240 V	400/440 V	600/690 V	A	
kvAR	kvAR	kvAR	kvAR	kvAR	kvAR		
50	90	150	45	80	135	1900	LC1G115
55	100	165	50	90	150	2480	LC1G150
60	110	185	55	100	165	3050	LC1G185
65	120	200	60	110	180	3710	LC1G225
75	140	235	70	125	210	4370	LC1G265
85	160	265	80	145	240	5450	LC1G330
110	200	335	100	185	305	6600	LC1G400
140	255	425	120	220	365	8250	LC1G500
210	385	640	160	295	485	10400	LC1G630
210	385	640	160	295	485	13200	LC1G800

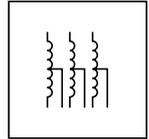
<sup>(2)</sup> Upper limit of temperature category conforming to IEC 60831-1.

# TeSys Control

## Contactors for auto-transformer starting

### Recommended wiring scheme, operation, curves

### Coordination and standards



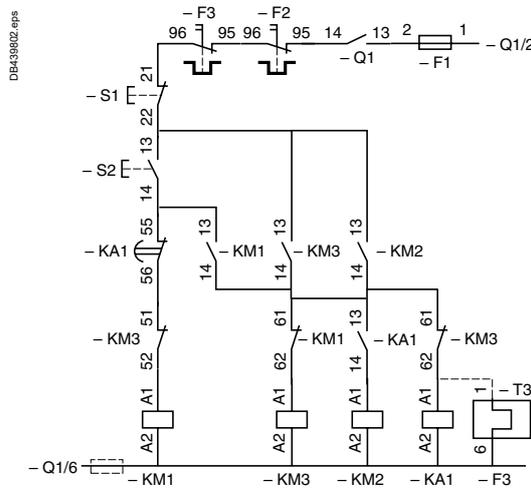
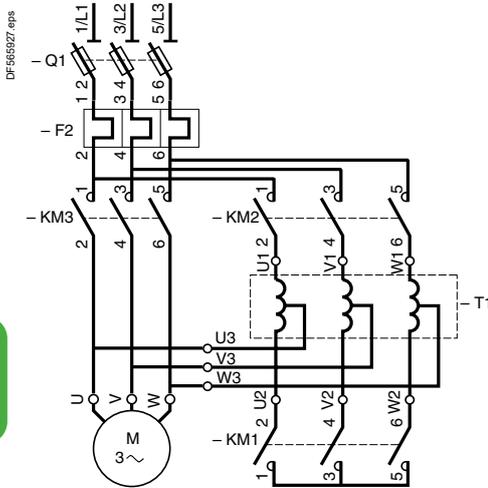
## Applications

Auto-transformer starting is suitable for starting all types of squirrel cage motors: with 3, 6 or even 9 terminals according to North American technology. Starting is performed at reduced voltage and produces maximum torque at minimum line current.

It allows the starting torque ( $C = f(U)^2$ ) to be adapted to the resistive torque of the driven machine by means of the 2 or 3 intermediate voltage take-off connections on the auto-transformer (0.65 and 0.8  $U_n$  or 0.5, 0.65 and 0.8  $U_n$ ). In general, only one take-off connection is used.

This type of starting is used for high power and/or high inertia machines. The motor is never disconnected from its power supply during starting (closed transition) and transient phenomena are eliminated.

## Recommended wiring scheme



Coordination and standards

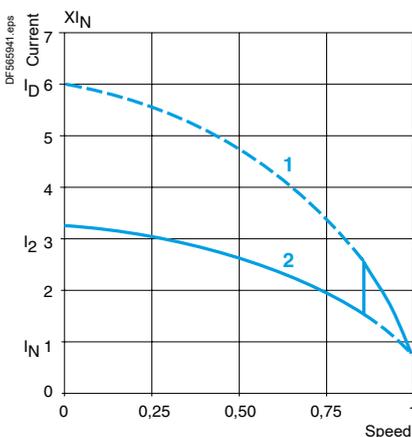
## Operation

Starting is performed in 3 stages:

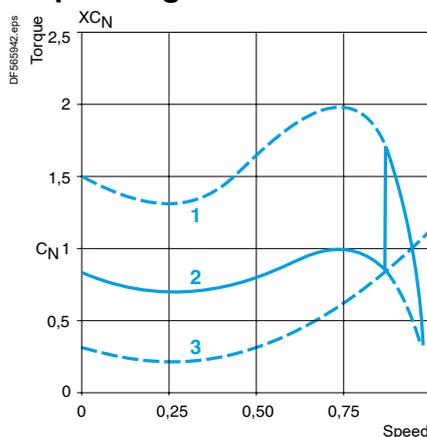
- star connection of the auto-transformer is made by KM1, then contactor KM2 closes and the motor starts under reduced voltage
- the neutral point is opened by KM1; part of the auto-transformer winding is switched into each phase for a short moment, constituting a stator starting inductance
- KM3 switches the motor to full mains voltage and causes the auto-transformer to be shunted out of circuit by KM2.

The auto-transformer used generally has an air gap (adjusted or not) in order to obtain, during the second phase of starting, a series inductance whose value is compatible with correct starting.

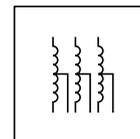
## Operating curves



- 1 Direct switching current
- 2 Current with auto-transformer



- 1 Direct motor torque
- 2 Torque with auto-transformer
- 3 Resistive torque of the machine



## Auto-transformer starters from 59 to 900 kW up to 440 V (type 1 coordination)

The components recommended in the table below have been determined according to the following characteristics:

- auto-transformer: on 0.65 Un connection with non adjusted air gap
- 3 starts per hour, of which 2 consecutive
- motor starting current:  $I_d/I_n = 6$
- $I_q = 70$  kA
- transient current on closing of KM3  $\leq 7 \sqrt{2} I_n$
- maximum starting time: 30 seconds
- ambient temperature  $\theta \leq 40$  °C.

Switch-disconnector-fuses: operators and accessories, please consult your Regional Sales Office.

Contactors: 3-pole.

LC1D: please refer to pages B8/23 and B8/24 of TeSys Catalog, ref. MKTED210011EN.

LC1G: please refer to pages A2/10 to A2/13.

Auxiliary contact blocks:

- for contactors LC1D: one LADN11 (1 N/O + 1 N/C) on KM1.

Thermal overload relays:

- LR9D: please refer to page B11/10 of TeSys Catalog, ref. MKTED210011EN.
- LR9G: please refer to pages B11/13 and B11/14 of TeSys Catalog, ref. MKTED210011EN.

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3					Switch- disconnector -fuse Reference	aM fuse		Contactors			Overload relays	
						Size	Rating	KM3 LC1	KM2 LC1	KM1 LC1	Reference	Setting range
220/230 V kW	380/400 V kW	415 V kW	440 V kW	In max A			A					A
30	55	59	59	105	GS•K	22 x 58	125	D115A	D115A	D40A	LR9G115	28...115
40	75	80	80	138	GS•L	T0	160	D115A	D115A	D50A	LR9G225	56...225
51	90	90	100	170	GS•N	T1	200	D115A	D115A	D65A	LR9G225	56...225
63	110	110	110	205	GS•N	T1	250	D150A	D150A	D115A	LR9G225	56...225
75	132	132	150	245	GS•N	T1	250	D150A	D150A	D115A	LR9G500	125...500
90	160	160	185	300	GS•QQ	T2	315	G185	G185	G115	LR9G500	125...500
110	200	200	220	370	GS•QQ	T2	400	G225	G225	G115	LR9G500	125...500
140	250	257	280	460	GS2S	T3	500	G265	G265	G150	LR9G500	125...500
180	315	355	375	584	GS2S	T3	630	G400	G400	G185	LR9G630	157...630
200	355	375	400	635	GS2S	T4	800	G400	G400	G225	LR9G630	157...630
220	400	425	450	710	GS2V	T4	800	G500	G500	G265	LR9G630	157...630
250	450	475	500	800	GS2V	T4	800	G500	G500	G265	LR9G630	157...630

# TeSys Control

## Contactors for rotor circuits of slip-ring motors

### Operation - Coordination and standards

#### Applications

These contactors are used to eliminate starting resistance in the rotor circuit of slip-ring motors.

The most common application is for starters without inching and without rotor speed adjustment: pumps, fans, conveyors, compressors, ...

In the case of control by means of a manually operated master controller, the use of contactors with magnetic blow-out is recommended. Please consult your Regional Sales Office.

For hoisting applications, contactor selection must take into account the type of motor duty, the operating rate, the rotor voltage and current, the type of connection, the ambient temperature, etc. Please consult your Regional Sales Office.

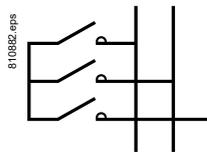
#### Operation

The rotor circuit contactors are interlocked with the stator contactor and therefore do not open until after the stator contactor has opened, when the rotor voltage has disappeared, or virtually disappeared.

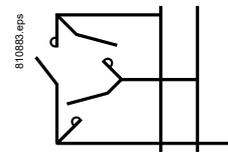
They make the current corresponding to the normal starting peak (1.5 to 2.5 times the rated rotor current) and open the circuit under no-load. Making and breaking are easy.

#### Different types of rotor connection

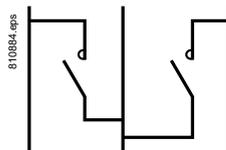
##### Star connection



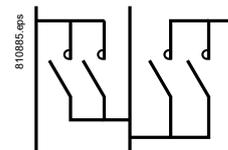
##### Delta connection



##### 'V' connection



##### 'W' connection



## Contactor selection according to the type of connection

### Rotor current and voltage coefficients

Coefficients to be applied to the operational current values shown in the table below.

Type of connection	Rotor I coefficient	3-phase rotor U <sub>e</sub> <sup>(1)</sup>	
		Maximum	With counter-current
		<b>LC1G</b>	<b>LC1G</b>
Star	1	2000 V	1000 V
Delta	1.4	1700 V	850 V
In V	1	1700 V	850 V
In W	1.6	1700 V	850 V

## Selection according to the operational current

The selection examples below take into account:

- a ratio of 2 between the maximum operational rotor voltage (U<sub>er</sub>) and the rated stator operational voltage (U<sub>es</sub>). This ratio is given in standard IEC 60947-4,
- a guarantee of occasional duty (making and breaking capacities) specified in the above standards.

Time current flowing	Contactor rating						
	LC1 G150	LC1 G185	LC1 G265	LC1 G400	LC1 G500	LC1 G630	LC1 G800
<b>Intermediate contactor: with number of operating cycles ≤ 30/h</b>							
10 s	450 A	550 A	800 A	1100 A	1500 A	2000 A	2500 A
30 s	280 A	400 A	550 A	730 A	1000 A	1500 A	2000 A
60 s	220 A	300 A	400 A	550 A	750 A	1200 A	1500 A
<b>Intermediate contactor: with number of operating cycles ≤ 60/h</b>							
5 s	450 A	550 A	800 A	1100 A	1500 A	2000 A	2500 A
10 s	330 A	450 A	620 A	860 A	1250 A	1800 A	2300 A
30 s	220 A	300 A	400 A	550 A	750 A	1200 A	1500 A
<b>Intermediate contactor: with number of operating cycles ≤ 150/h</b>							
5 s	300 A	420 A	580 A	820 A	1150 A	1650 A	2200 A
10 s	250 A	350 A	430 A	600 A	850 A	1300 A	1600 A
<b>Rotor short-circuit contactor and intermediate contactor: with number of operating cycles &gt; 150/h</b>							
–	200 A	270 A	350 A	500 A	700 A	1000 A	1600 A
<b>Electrical durability</b>							
For automatic starting, the electrical durability is in the region of 1 million operating cycles.							

(1) For use up to 3000 V, please consult your Local Schneider Electric Technical Support.



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