Life Is On | Schneider Electric

PriceList

# Switching and Controlling Products

With effect from January 25th, 2022

se.com/in

# Contents



For details on non standard references, technical parameters, accessories, compatibility, stockable and non stockable status please contact Customer Care

☑ NORMAL STOCK ITEMS

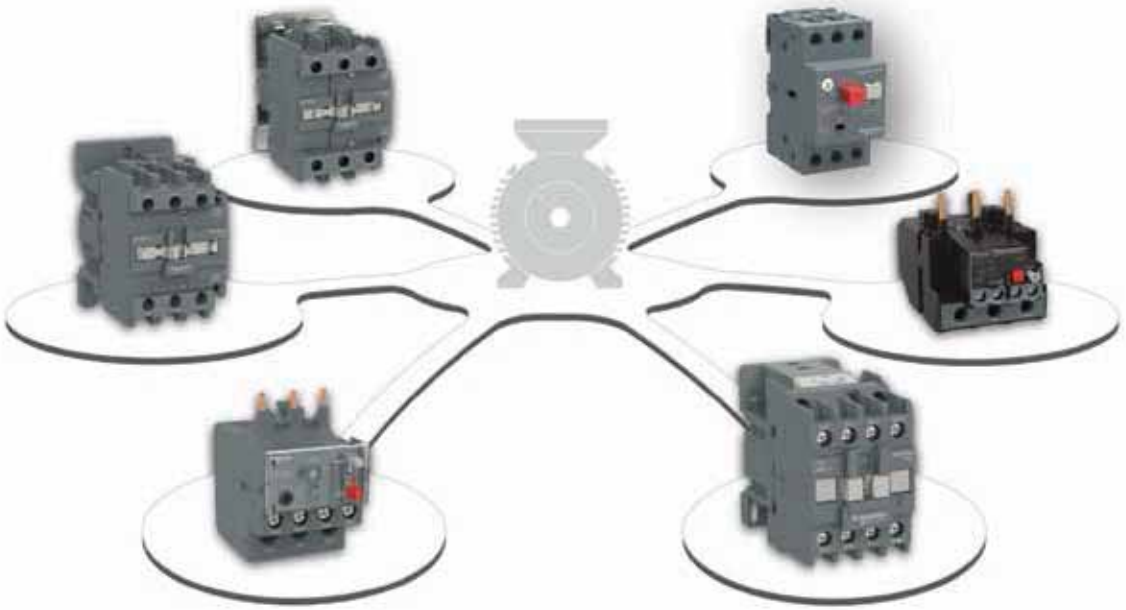
W.E.F. January 25th, 2022

# EasyPact TVS

## The Easy choice for simplicity and flexibility

- 3 Pole and 4 Pole Power Contactor
- Control Relays
- Thermal Overload Relay
- Circuit Breaker for Motor Protection
- Accessories

**New**
A2L certified upto 50A for HVAC applications




**Designed for the Essential**

EasyPact TVS Catalogue

Selection Charts for Motor Feeders for IE2/IE3 Motors with EasyPact TVS

## Power Contactors - ETVS (3 Pole AC Control)

- Conformance to IEC 60947-4-1, CE Marking
- Current Rating: 6A to 630A, AC-3 Rating
- Type 2 RSC available with Fuse, MPCB and MCCB

| Frame | [Ie] Rated Operational Current | | Motor Power at 415V, 3Ph, 50Hz | | Auxiliary Contacts | | Reference | Unit MRP [₹] |
|---|---|---|---|---|---|---|---|---|
| | AC-1 | AC-3 | HP | kW | NO | NC | | |
| FRAME-1 | 20 | 6 | 3 | 2.2 | - | 1 | LC1E0601* ☑ | 1190 |
| | | | | | 1 | - | LC1E0610* ☑ | |
| | 25 | 9 | 5.5 | 4 | - | 1 | LC1E0901* ☑ | 1220 |
| | | | | | 1 | - | LC1E0910* ☑ | |
| | 25 | 12 | 7.5 | 5.5 | - | 1 | LC1E1201* ☑ | 1390 |
| | | | | | 1 | - | LC1E1210* ☑ | |
| | 32 | 18 | 12 | 9 | - | 1 | LC1E1801* ☑ | 1605 |
| | | | | | 1 | - | LC1E1810* ☑ | |
| | 36 | 25 | 15 | 11 | - | 1 | LC1E2501* ☑ | 2190 |
| | | | | | 1 | - | LC1E2510* ☑ | |
| FRAME-2 | 50 | 32 | 20 | 15 | - | 1 | LC1E3201* ☑ | 4585 |
| | | | | | 1 | - | LC1E3210* ☑ | |
| | 50 | 38 | 25 | 18.5 | - | 1 | LC1E3801* ☑ | 5420 |
| | | | | | 1 | - | LC1E3810* ☑ | |
| | 50 | 40 | 29 | 22 | - | 1 | LC1E40B01** | 5780 |
| | | | | | 1 | - | LC1E40B10** | |
| FRAME-3 | 60 | 40 | 29 | 22 | 1 | 1 | LC1E40* ☑ | 7180 |
| | 70 | 50 | 34 | 25/30 | 1 | 1 | LC1E50* | 8730 |
| | 80 | 65 | 50 | 37 | 1 | 1 | LC1E65* ☑ | 11830 |

| Frame | [Ie] Rated Operational Current | | Motor Power at 415V, 3Ph, 50Hz | | Auxiliary Contacts | | Reference | Unit MRP [₹] |
|---|---|---|---|---|---|---|---|---|
| | AC-1 | AC-3 | HP | kW | NO | NC | | |
| FRAME-4 | 110 | 80 | 60 | 45 | 1 | 1 | LC1E80* ☑ | 15380 |
| | 120 | 95 | 60 | 45 | 1 | 1 | LC1E95* ☑ | 18440 |
| FRAME-5 | 150 | 120 | 75 | 55 | 1 | 1 | LC1E120* | 21965 |
| | 200 | 160 | 120 | 90 | 1 | 1 | LC1E160* | 29005 |
| FRAME-6 | 250 | 200 | 150 | 110 | - | - | LC1E200* | 39920 |
| | 300 | 250 | 175 | 132 | - | - | LC1E250* | 52610 |
| FRAME-7 | 320 | 300 | 215 | 160 | - | - | LC1E300* | 62980 |
| | 500 | 400 | 295 | 220 | - | - | LC1E400* | 78600 |
| FRAME-8 | 700 | 500 | 375 | 280 | - | - | LC1E500* | 110710 |
| FRAME-9 | 1000 | 630 | 500 | 375 | - | - | LC1E630* | 157180 |

* Reference to be completed by adding coil voltage code and recommended to check availability with Customer Care team

### Spare Coil for Contactors

| Contactor | Reference |
|---|---|
| **3 Pole Contactors** | |
| LC1E06…E25 | LAEX12** |
| LC1E32/E38 | LAEX2** |
| LC1E40/E65 | LAEX3** |
| LC1E80/E95 | LAEX4** |
| LC1E120/E160 | LAEX5** |
| LC1E200/E250 | LAEX6** |
| LC1E300 | LAEX7** |

* Reference to be completed by adding coil voltage code and recommended to check availability with Customer Care team

### Coil Voltage Code

| *VOLTAGE (V AC) | 24 | 110 | 220 | 415 |
|---|---|---|---|---|
| LC1E06..LC1E95 | B7 | F7 | M7 | N5 |
| LC1E120..LC1E300 | B5 | F5 | M5 | N5 |
| LC1E400..LC1E630 | B7 | F7 | M7 | N7 |
| LC1E06.. LC1E40B | - | - | M5WB | N5WB |

Please check with customer care for price and availability of non standard voltages (Except 110 and 220 V AC)

** For more information contact regional sales office

For details on non standard references, technical parameters, accessories, compatibility, stockable and non stockable status please contact Customer Care

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## Power Contactors - ETVS (4 Pole AC Control)

- Conformance to IEC 60947-4-1, CE Marking
- Current Rating: 20A to 125A, AC-1 rating
- Available in 4NO and 2NO+2NC Power Pole combination
- Wide Band Coil for all ratings in 220 & 415V AC

| Frame | AC-1 Rating | Power Poles | Reference | Unit MRP [₹] | Power Poles | Reference | Unit MRP [₹] |
|---|---|---|---|---|---|---|---|
| FRAME-1 | 20 | 4NO | LC1E06004*IN | 1530 | 2NO + 2NC | LC1E06008*IN | 1830 |
| | 25 | 4NO | LC1E09004*IN | 1625 | 2NO + 2NC | LC1E09008*IN | 1970 |
| | 32 | 4NO | LC1E12004*IN | 1690 | 2NO + 2NC | LC1E12008*IN | 2110 |
| | 40 | 4NO | LC1E18004*IN | 2110 | 2NO + 2NC | LC1E18008*IN | 2125 |
| FRAME-2 | 50 | 4NO | LC1E25004*IN | 2675 | 2NO + 2NC | LC1E25008*IN | 3795 |
| | 55 | 4NO | LC1E32004*IN | 4505 | 2NO + 2NC | LC1E32008*IN | 7150 |
| | 60 | 4NO | LC1E38004*IN | 5275 | 2NO + 2NC | LC1E38008*IN | 7460 |
| FRAME-3 | 75 | 4NO | LC1E40004*IN | 8225 | 2NO + 2NC | LC1E40008*IN | 11050 |
| | 85 | 4NO | LC1E65004*IN | 11125 | 2NO + 2NC | LC1E65008*IN | 13815 |

| Frame | AC-1 Rating | Power Poles | Reference | Unit MRP [₹] | Power Poles | Reference | Unit MRP [₹] |
|---|---|---|---|---|---|---|---|
| FRAME-4 | 110 | 4NO | LC1E80004*IN | 14090 | 2NO + 2NC | LC1E80008*IN | 19615 |
| | 125 | 4NO | LC1E95004* | 15885 | | | |

* Reference to be completed by adding coil voltage code and recommended to check availability with Customer Care team

## Control Relays - CAE, Conformance to IEC60947-5-1, CE Marking

| Auxiliary Contacts NO | Auxiliary Contacts NC | Reference | Unit MRP [₹] |
|---|---|---|---|
| 4 | 0 | CAE40* | 1275 |
| 3 | 1 | CAE31* | |
| 2 | 2 | CAE22* | |

* Reference to be completed by adding coil voltage code and recommended to check availability with Customer Care team

## Spare Coil for Contactors

| Contactor | Reference |
|---|---|
| **4 Pole Contactors** | |
| LC1E0600*…. LC1E1800* | LAEX1T** |
| LC1E2500*…. LC1E3800* | LAEX2T** |
| LC1E4000*…..LC1E9500* | LAEX4T** |
| **Control Contactors** | |
| CAE* | LAEX12** |

* Reference to be completed by adding coil voltage code and recommended to check availability with Customer Care team

## Coil Voltage Code

| * Voltage (V AC) | 24 | 110 | 220 | 415 |
|---|---|---|---|---|
| LC1E0600*…9500* 50/60 Hz | B7 | F7 | - | - |
| LC1E0600*…9500* 50 Hz/ Wide Band | - | - | M5WB | N5WB |
| Control relay CAE 50 Hz | B5 | F5 | M5 | N5 |

**Note:**
For non standard voltages (Except 110 and 220 V AC) please consult Customer Care for prices
* Reference to be completed by adding coil voltage code and recommended to check availability with Customer Care team

For details on non standard references, technical parameters, accessories, compatibility, stockable and non stockable status please contact Customer Care

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## Accessories - For ETVS Contactors

| Description | For Use with | Mounting | Contacts | Reference | Unit MRP [₹] |
|---|---|---|---|---|---|
| Auxiliary contact block | LC1E06..E630 & LC1E0600..E9500 | FRONT | 1NO+1NC | LAEN11 ☑ | 380 |
| | | | 2NO | LAEN20 ☑ | |
| | | | 2NC | LAEN02 ☑ | 450 |
| | | | 2NO+2NC | LAEN22 ☑ | 695 |
| | | | 4NO | LAEN40 ☑ | |
| Star delta timer | LC1E25..E630 | | | LAETSD ☑ | 3150 |

# For 415v control supply please contact customer care team

| Description | For Use with | Coil Voltage | Reference | Unit MRP [₹] |
|---|---|---|---|---|
| Surge suppressor* | LC1E06...E95 | 24..48V AC | LAERCE | 1460 |
| | LC1E06...E95 | 110..240V AC | LAERCU | 885 |

*For higher rating contactors, contact nearest sales office

| Description | For Use with | Reference | Unit MRP [₹] |
|---|---|---|---|
| Mechanical Interlock | LC1E06..E65 & LC1E0600*..E3800* | LAEM1 | 790 |
| | LC1E80/E95 & LC1E4000*…LC1E9500* | LAEM4 | 2570 |
| | LC1E120..E160 | LAEM5 | 4795 |
| | LC1E200/E250 | LAEM6 | 4885 |

*Reference to be completed by adding coil voltage

## 3 Pole Accessories Compatibility

| Contactor | Built in contacts | LAEN•• | LAERC• | LAEM |
|---|---|---|---|---|
| LC1E06 | 1NO or 1NC | 1 | 1 | 1 |
| LC1E09 | | | | |
| LC1E12 | | | | |
| LC1E18 | | | | |
| LC1E25 | | 1 | | |
| LC1E32 | | | | |
| LC1E38 | | | | |
| LC1E40B | | | | |
| LC1E40 | 1NO + 1NC | | | |
| LC1E50 | | | | |
| LC1E65 | | | | |
| LC1E80 | | | | |
| LC1E95 | | | | |
| LC1E120 | | | - | |
| LC1E160 | | | | |
| LC1E200 | - | 2 | | |
| LC1E250 | | | | |
| LC1E300 | | | | |
| LC1E400 | | | | |
| LC1E500 | | | | |
| LC1E630 | | | | |

## 4 Pole Accessories Compatibility

| Contactor | LAEN•• | LAEM | LAERC• |
|---|---|---|---|
| LC1E06 | 1 | 1 | 1 |
| LC1E09 | | | |
| LC1E12 | | | |
| LC1E18 | | | |
| LC1E25 | | | |
| LC1E32 | | | |
| LC1E38 | | | |
| LC1E40 | | | |
| LC1E50 | | | |
| LC1E65 | | | |
| LC1E80 | | | |
| LC1E95 | | | |

## Control Relay Accessories Compatibility

| Control Relay | LAEN* | LAERC |
|---|---|---|
| CAE | 1 of LAEN11 or LAEN20 or LAEN02 or LAEN22 | 1 |

For details on non standard references, technical parameters, accessories, compatibility, stockable and non stockable status please contact Customer Care

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## Thermal Overload Relay - ETVS

- Conformance to IEC 60947-4-1, CE Marking
- Range : 0.1A to 630A
- Tripping Class : 10A
- Direct & Independent mounting

| Thermal Protection Adjustment Range | For Use with Contactor | Reference | Unit MRP [₹] |
|---|---|---|---|
| **LRE** | | | |
| 0.25...0.4 | E06...E38 | LRE03 | 2025 |
| 0.4...0.63 | E06...E38 | LRE04 | |
| 0.63...1 | E06...E38 | LRE05 ☑ | |
| 1...1.6 | E06...E38 | LRE06 ☑ | |
| 1.6...2.5 | E06...E38 | LRE07 ☑ | |
| 2.5...4 | E06...E38 | LRE08 ☑ | |
| 4...6 | E06...E38 | LRE10 ☑ | |
| 5.5...8 | E09...E38 | LRE12 ☑ | |
| 7...10 | E09...E38 | LRE14 ☑ | |
| 9...13 | E12...E38 | LRE16 ☑ | |
| 12...18 | E18...E38 | LRE21 ☑ | 2240 |
| 16...24 | E25...E38 | LRE22 ☑ | 2590 |
| 23...32 | E25...E38 | LRE32 ☑ | 3465 |
| 30...38 | E38 | LRE35 ☑ | 3900 |
| 17...25 | E40...E95 | LRE322 | 4405 |
| 23...32 | E40...E95 | LRE353 | |
| 30...40 | E40...E95 | LRE355 | |
| 37...50 | E50...E95 | LRE357 ☑ | |
| 48...65 | E65...E95 | LRE359 | 5775 |

| Thermal Protection Adjustment Range | For Use with Contactor | Reference | Unit MRP [₹] |
|---|---|---|---|
| **LRE** | | | |
| 55...70 | E80...E95 | LRE361 | 6845 |
| 63...80 | E80...E95 | LRE363 | 7145 |
| 80...104 | E95 | LRE365 | |
| 51...81 | E120...E300 | LRE480 | 13380 |
| 62...99 | E120...E300 | LRE481 | |
| 84...135 | E120...E300 | LRE482 | |
| 124...198 | E160...E300 | LRE483 | |
| 146...234 | E200...E300 | LRE484 | |
| 174...279 | E250...E300 | LRE485 | |
| 208...333 | E300 | LRE486 | 14580 |
| 258…414 | E300…E400 | LRE487 | 17735 |

## Accessories for Relay

| Accessory | For Relay | Reference | Unit MRP [₹] |
|---|---|---|---|
| Separate Mounting Block | LRE01…LRE35 | LAEB1 | 715 |
| | LRE322…LRE365 | LAEB3 | 1645 |

For details on non standard references, technical parameters, accessories, compatibility, stockable and non stockable status please contact Customer Care

☑ NORMAL STOCK ITEMS

W.E.F. January 25th, 2022

## Circuit Breaker for Motor Protection - GZ1E - Pushbutton control

- Conformance to IEC60947-1,-2,-4, CE Marking
- Range : 0.1A to 32A
- Breaking Capacity upto 100KA

## Motor Protection Circuit Breaker - ETVS

| Breaking Capacity at 415 V 50 Hz | Motor Power AC3** kW | Motor Power AC3** hP | Thermal Protection Adjustment Range (A) | Reference | Unit MRP [₹] |
|---|---|---|---|---|---|
| **GZ1-E Thermal Magnetic - With Pushbutton Control** | | | | | |
| 100 kA | - | - | 0.1 - 0.16 | GZ1E01 | 3660 |
| | 0.06 | - | 0.16 - 0.25 | GZ1E02 | |
| | 0.09 | - | 0.25 - 0.40 | GZ1E03 | |
| | 0.18 | - | 0.40 - 0.63 | GZ1E04 | 4260 |
| | 0.37 | 0.5 | 0.63 – 1.0 | GZ1E05 | |
| | 0.55 | 0.75 | 1.0 – 1.6 | GZ1E06 | 4175 |
| | 0.75 | 1 | 1.6 – 2.5 | GZ1E07 | |
| | 1.1 | 2 | 2.5 – 4 | GZ1E08 | 4335 |
| | 2.2 | 3 | 4 – 6.3 | GZ1E10 | |
| | 3 | 5.5 | 6 – 10 | GZ1E14 | 4620 |
| 10 kA* | 5.5 | 7.5 | 9 – 14 | GZ1E16 | 5210 |
| | 7.5 | 10 | 13 – 18 | GZ1E20 | 5665 |
| | 9 | 12.5 | 17 – 23 | GZ1E21 | 5970 |
| | 11 | 15 | 20 – 25 | GZ1E22 | 6270 |
| | 15 | 20 | 24 – 32 | GZ1E32 | 11190 |

| Breaking Capacity at 415 V 50 Hz | Motor Power AC3** kW | Motor Power AC3** hP | Magnetic Protection (A) | Reference | Unit MRP [₹] |
|---|---|---|---|---|---|
| NEW **GZ1-LE Magnetic- With Pushbutton Control** | | | | | |
| 100 kA | 0.09 | - | 0.4 | GZ1LE03 | 2675 |
| | 0.18 | - | 0.63 | GZ1LE04 | |
| | 0.37 | 0.5 | 1 | GZ1LE05 | |
| | 0.55 | 0.75 | 1.6 | GZ1LE06 | |
| | 0.75 | 1 | 2.5 | GZ1LE07 | |
| | 1.1 | 2 | 4 | GZ1LE08 | |
| | 2.2 | 3 | 6.3 | GZ1LE10 | |
| | 3 | 5.5 | 10 | GZ1LE14 | |
| 10 kA* | 5.5 | 7.5 | 14 | GZ1LE16 | 2890 |
| | 7.5 | 10 | 18 | GZ1LE20 | |
| | 11 | 15 | 25 | GZ1LE22 | |
| | 15 | 20 | 32 | GZ1LE32 | 3425 |

* 50kA With current Limiter type GV1L3

## Accessories - ETVS Circuit Breaker for Motor Protection

| Description | Mounting | Contacts | Reference | Unit MRP [₹] |
|---|---|---|---|---|
| Auxillary Contact Block | LH side Mounted | 1NO+1NC | GZ1AN11 | 680 |
| | | 2NO | GZ1AN20 | 815 |

| Description | Mounting | Range | Reference | Unit MRP [₹] |
|---|---|---|---|---|
| **Electric Trips** | | | | |
| Undervoltage | RH Side Mounted | 110…115V 50Hz | GZ1AU115 | On Request |
| | | 220…240V 50Hz | GZ1AU225 | |
| | | 380…400V 50Hz | GZ1AU385 | |
| Shunt trip | | 110…115V 50Hz | GZ1AS115 | |
| | | 220…240V 50Hz | GZ1AS225 | |

For details on non standard references, technical parameters, accessories, compatibility, stockable and non stockable status please contact Customer Care

☑ NORMAL STOCK ITEMS

W.E.F. January 25th, 2022

# Green Premium™

## An industry leading portfolio of offers delivering sustainable value

Green Premium™

More than 75% of our product sales offer superior transparency on the material content, regulatory information and environmental impact of our products:

- RoHS compliance
- REACh substance information
- Industry leading # of PEP's*
- Circularity instructions

**Discover what we mean by green**
**Check your products!**

The Green Premium program stands for our commitment to deliver customer valued sustainable performance. It has been upgraded with recognized environmental claims and extended to cover all offers including Products, Services and Solutions.

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Green Premium brings improved resource efficiency throughout an asset's lifecycle. This includes efficient use of energy and natural resources, along with the minimization of $CO_2$ emissions.

### Cost of ownership optimization through… Circular Performance

We're helping our customers optimize the total cost of ownership of their assets. To do this, we provide IoT-enabled solutions, as well as upgrade, repair, retrofit, and remanufacture services.

### Peace of mind through… Well-being Performance

Green Premium products are RoHS and REACh compliant. We're going beyond regulatory compliance with step-by-step substitution of certain materials and substances from our products.

### Improved sales through… Differentiation

Green Premium delivers strong value propositions through third-party labels and services. By collaborating with third-party organizations we can support our customers in meeting their sustainability goals such as green building certifications.

# TeSys

> Control > Protect > Power > Active

## Innovative and connected solutions for motor starters

TeSys is an innovative motor control and management solution from the global market leader. TeSys offers connected, efficient products and solutions for switching and protection of motors and electrical loads in compliance with all major global electrical standards

NEW

## TeSys Function Names

TeSys components are grouped by function name, for easier identification.
These functions are related to motor, power, control and protection.

> **TeSys** Power:
Components for powering motors

> **TeSys** Control:
Components for controlling motors

> **TeSys** Protect:
Components for protecting motors

> **TeSys** Active:
Connected components for motor circuits


# 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 safety 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.

Wherever you are and anywhere your projects come together, you can trust Schneider Electric and TeSys contactors, circuit breakers, relays, and switches for unmatched reliability, complete compatibility with international standards, and the robust support of the Schneider Electric global supply network.

Start smart, run smart and stay smart with TeSys motor controls.

1st BAR Contactor — 1924

1st Enclosed Motor Starter — 1935

1st Modular Contactor — 1973

**TeSys** D Contactor — 2000

1st Modular 3 in 1 Motor Starter — 2004

GV3 MSP with EverLink — 2008

**TeSys** D Green — 2016

**TeSys** Island — 2019

**TeSys** Giga — 2021

**TeSys** Deca — 2021

**How do everlinks improve power connection reliability?**

**For more information on switching and motor management scan!**

# Superior safety for all industries

**TeSys** motor controls come with all of the isolation, protection and emergency handling you need to comply with international codes. High-contrast covers identify safety-critical devices to prevent inadvertent manual operation. Every **TeSys** contactor is both mechanically linked and equipped with mirror contacts for safety applications and wherever auxiliary contact state reliability is critical.

## HVAC

Ensure 24/7 availability of your HVAC system with reliable products that can reach high ambient temperatures without derating.

## Conveying

Decentralize the control cabinet of your conveyor line and benefit from up to 80% space reduction.

## Genset

Make certain your generator starts even in the harshest conditions with our robust solutions.

## Pumping

Optimize single or multi-drive boosters for industry or infrastructure with energy and cost-effective solutions.

## Packaging

Keep pace with the most demanding, high-end packing applications with our solutions

## Oil and Gas

Keep your employees and assets safe and improve uptime in onshore and offshore applications: pipeline operations: LNG and natural gas processing: and refining and petrochemical applications.

## Water and Wastewater

Optimize the treatment and delivery of safer water by reducing energy usage and lowering operating costs.

## Food and Beverage

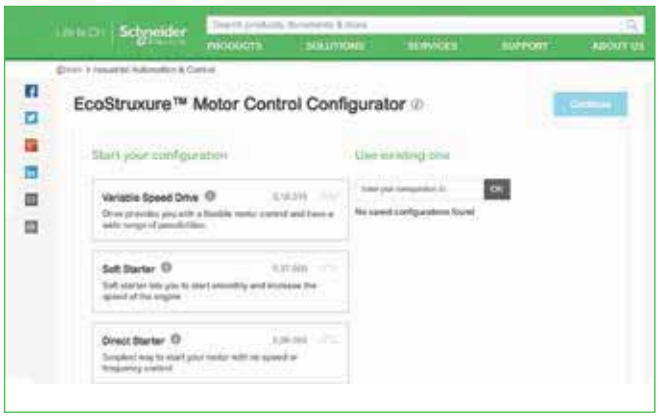
Serve your customers with environmentally friendly products to improve sustainability, efficiency, and flexibility, allowing you to adapt to changing customer habits.

## Online selection tool

### EcoStruxure™ Motor Control Configurator

For Direct-On-Line and Star-Delta starters, motor circuit breakers with advanced protection, motor management relays, configurations for total coordination, drives, and soft starters.

No matter what kind of starting method you need, our online **EcoStruxure™ Motor Control Starter Configurator** will help you to quickly and easily select the optimal combination of components to ensure maximized motor safety, protection, and uptime.




**Scan or click on the QR code**

NEW

## TeSys Component Series Names

Series names are now grouped as per the current ratings

- Series names group conventional components (circuit breakers, contactors, relays, overcurrent relays) by current rating ranges.
  - 0 to 16 A > **TeSys K** Series
  - 9 to 150 A > **TeSys 'Deca'** Series
  - 185 to 800 A > **TeSys 'Giga'** Series.

- TeSys advanced components have a specific classification.
  - 0 to 38 A All-in-one starters > **TeSys 'Ultra'** Series
  - 0 to 80 A Motor Control/Protection/Monitoring system > **TeSys 'island'** Series.

- Other TeSys component names remain unchanged (TeSys F, TeSys B, TeSys T).

### TeSys K Series

The essential line for motors up to 7.5kW/16A direct on TeSys K series of Motor Starters

### TeSys Deca Series

The industrial standard for motors up to 75kW/150A direct on TeSys Deca series of Motor Starters

### TeSys Giga Series

For large motors up to 450kW/800A direct on TeSys Giga Series

### TeSys Ultra Series

The most compact totally coordinated solution for Motor Starters. For Direct On Line or Reversing Motor Control and Drive Protection upto 18.5kW/38 A on TeSys Ultra series

### TeSys Island Series

Digitally powered monitoring, control and protection of electrical motors up to 37kW/80 A on TeSys Island Series

## Control Relays - K Model (AC & DC Control)

- Conformance IEC, UL, CSA, CE Marking
- Inbuilt 4 auxiliary contacts
- 10A thermal rating
- Available with AC (50/60Hz Dual frequency), DC & DC low consumption coil options

| No of Poles | AC Control Reference | Unit MRP [₹] | DC Control Reference (4) | Unit MRP [₹] | DC low consumption Reference (1) (2) (3) | Unit MRP [₹] |
|---|---|---|---|---|---|---|
| 2NO + 2NC | CA2KN22* | 1595 | CA3KN22** | 2200 | CA4KN22*** | 2730 |
| 3NO + 1NC | CA2KN31* | | CA3KN31** | | CA4KN31*** | |
| 4NO | CA2KN40* | | | | CA4KN40*** | |

(1) Compatible with PLC outputs
(2) Wide range coil (0.7...1.25Uc), suppressor fitted as standard
(3) 2 pole auxiliary contact block can be mounted additionally
(4) Optional in-built surge supressor available

## Power Contactors - K Model (3 Pole AC & DC Control)

- Conformance to IEC, UL, CSA
- Current Rating : 6A to 16A, AC-3 duty
- 1NO or 1NC inbuilt auxiliary contact
- Available in 3P & 4P version
- Available with AC (50/60Hz Dual frequency), DC & DC low consumption(5) coil options

| [Ie] Rated Operational Current (A) | Motor Power (kW) | Auxiliary Contacts | AC Control Reference | Unit MRP [₹] | DC Control Reference(5) | Unit MRP [₹] |
|---|---|---|---|---|---|---|
| 6 | 3 | 1NC | LC1K0601* | 1355 | LP1K0601** | 2095 |
| | | 1NO | LC1K0610* | | LP1K0610** | |
| 9 | 5.5 | 1NC | LC1K0901* | 1415 | LP1K0901** | 2280 |
| | | 1NO | LC1K0910* | | LP1K0910** | |
| 12 | 7.5 | 1NC | LC1K1201* | 1600 | LP1K1201** | 2645 |
| | | 1NO | LC1K1210* | | LP1K1210** | |
| 16 | 10 | 1NC | LC1K1601* | 1890 | - | - |
| | | 1NO | LC1K1610* | | - | - |

(5) For low consumption offer, please contact regional sales office

## Reversing Contactors - K Model

- Conformance to IEC, UL, CSA, CE
- Current Rating : 6A to 16A, AC-3 duty
- 1NO or 1NC inbuilt auxiliary contact
- Available in 3P & 4P version
- Available with AC(50/60Hz Dual frequency), DC & DC low consumption(6) coil options

| [Ie] Rated Operational Current (A) | Motor Power (kW) | Auxiliary Contacts | AC Control Reference | Unit MRP [₹] |
|---|---|---|---|---|
| 6 | 3 | 1NC | LC2K0601* | 4505 |
| | | 1NO | LC2K0610* | |
| 9 | 5.5 | 1NC | LC2K0901* | 4810 |
| | | 1NO | LC2K0910* | |
| 12 | 7.5 | 1NC | LC2K1201* | 4955 |
| | | 1NO | LC2K1210* | |
| 16 | 10 | 1NC | LC2K1601* | 6665 |
| | | 1NO | LC2K1610* | |

* Reference to be completed by adding coil voltage code
(6) For current rating and ref please contact Customer Care

## Coil Voltage Code

| Type | Voltage | 24 | 48 | 72 | 110 | 220 | 415 |
|---|---|---|---|---|---|---|---|
| AC* | CA2KN, LC1-K06 to K16, 50/60Hz | B7 | - | - | F7 | M7 | N7 |
| | LC2-K06 to K16 , 50/60Hz | - | - | - | F7 | M7 | N7 |
| DC** | CA3KN, LP1-K06 to K12 | BD | - | - | FD | MD | - |
| DC low consumption*** | CA4KN | BW3 | EW3 | SW3 | - | - | - |

**Note:** (1) For Non standard coil voltage (Except 110, 240 V AC and 24 V DC) prices please contact customer care.
(2) Reference to be completed by adding coil voltage code and recommended to check availability with Customer Care team rating.

For details on non standard references, technical parameters, accessories, compatibility, stockable and non stockable status please contact Customer Care

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W.E.F. January 25th, 2022

## Accessories - K Model

| Description | Mounting | Contacts | Reference | Unit MRP [₹] |
|---|---|---|---|---|
| Auxiliary contact block | Front | 2NC | LA1KN02 | 660 |
| | | 1NO + 1NC | LA1KN11 ☑ | 605 |
| | | 2NO | LA1KN20 | 660 |
| | | 4NC | LA1KN04 | 1025 |
| | | 1NO + 3NC | LA1KN13 | |
| | | 2NO + 2NC | LA1KN22 ☑ | |
| | | 3NO + 1NC | LA1KN31 | |
| | | 4NO | LA1KN40 | |

| Description | Control Voltage | Range | Reference | Unit MRP [₹] |
|---|---|---|---|---|
| On Delay Electronic Timer | 24..48V AC/DC | 1..30S | LA2KT2E(1) | 3350 |
| | 110..240V AC | 1..30S | LA2KT2UA(1) | |

| Description | Coil Voltage | Reference | Unit MRP [₹] |
|---|---|---|---|
| Surge Suppressor - RC Ciruit | 220..250V AC | LA4KA1U* | 1045 |
| Surge Suppressor - Varistor | 130..250V AC/DC | LA4KE1UG* | |
| Surge Suppressor - Varistor | 50..129V AC/DC | LA4KE1FC* | |

* Lot size 5
(1) Front mounted with common point changeover contact

For details on non standard references, technical parameters, accessories, compatibility, stockable and non stockable status please contact Customer Care

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# TeSys Control
## TeSys Deca NEW

The next-generation TeSys Deca series motor starters offer a reliable and robust solution for a faster machine time-to-market. It has a new modern look & feel and is designed to meet the requirements of Electro domestic applications. Ease of operation and reliability is guaranteed with the new multi-standard screws. Digital customer experience is enhanced with a QR embedded from product to packaging.

### TeSys Deca Control Contactors (AC & DC Control)

- Conformance to IEC, UL, CSA
- 5 inbuilt auxiliary contacts, in just 2 variants
- Available with AC (50/60Hz Dual frequency), DC & DC low consumption coil options
- High Operating ambient temperature upto 60 Deg C
- Inbuilt surge suppressor for DC & DC low consumption

| No of Poles | AC Control Reference | Unit MRP [₹] | DC Control Reference (2) | Unit MRP [₹] | DC low consumption Reference (1) (2) (3) | Unit MRP [₹] |
|---|---|---|---|---|---|---|
| 3NO + 2NC | CAD32* | 1700 | CAD32** | 2430 | CAD32*** | 3040 |
| 5NO | CAD50* | | CAD50** | | CAD50*** | |

(1) Compatible with PLC outputs
(2) Wide range coil (0.7...1.25Uc), suppressor fitted as standard
(3) 2 pole auxiliary block can be mounted

### TeSys Deca Power Contactors (3P AC & DC)

- Conformance to IEC, UL, CSA
- Current Rating : 9A to 150A
- Available with AC (50/60Hz Dual frequency), DC & DC low consumption coil options
- High Operating ambient temperature, no derating upto 60 Deg C
- Inbuilt 1NO + 1NC auxiliary contacts upto 150A
- High electrical and mechanical life
- Fuse-less Type 2 Co-ordination Charts available
- EverLink® terminal for 40, 50, 65 & 80A contactors
- Inbuilt surge suppressor in DC coil for 9-80A

| [Ie] Rated Operational Current AC-1 | AC-3 Duty kW | HP | A | Auxiliary Contacts | AC Control Reference | Unit MRP [₹] | DC Control Reference(1) | Unit MRP [₹] |
|---|---|---|---|---|---|---|---|---|
| 25 | 4 | 5.5 | 9 | 1NO + 1NC | LC1D09* ☑ | 1730 | LC1D09** ☑ | 2715 |
| | 5.5 | 7.5 | 12 | 1NO + 1NC | LC1D12* ☑ | 1945 | LC1D12** ☑ | 3055 |
| 32 | 9 | 12.5 | 18 | 1NO + 1NC | LC1D18* ☑ | 2255 | LC1D18** ☑ | 3765 |
| 40 | 11 | 15 | 25 | 1NO + 1NC | LC1D25* ☑ | 2790 | LC1D25** ☑ | 4760 |
| 50 | 15 | 20 | 32 | 1NO + 1NC | LC1D32* ☑ | 5430 | LC1D32** ☑ | 9700 |
| | 18.5 | 25 | 38 | 1NO + 1NC | LC1D38* ☑ | 7830 | LC1D38** ☑ | 11465 |
| 60 | 22 | 30 | 40 | 1NO + 1NC | LC1D40A* ☑ | 8215 | LC1D40A# | 13735 |
| 80 | 25 | 35 | 50 | 1NO + 1NC | LC1D50A* ☑ | 10605 | LC1D50A# | 17230 |
| 80 | 37 | 50 | 65 | 1NO + 1NC | LC1D65A* ☑ | 14710 | LC1D65A# | 19540 |
| 80 | 37 | 50 | 80 | 1NO + 1NC | LC1D80A* ☑ | 18385 | LC1D80A# | 23720 |
| 125 | 45 | 60 | 80 | 1NO + 1NC | LC1D80* ☑ | 22680 | LC1D80** | 26540 |
| | 45 | 60 | 95 | 1NO + 1NC | LC1D95* | 23905 | LC1D95** | 29085 |
| 250 | 59 | 80 | 115 | 1NO + 1NC | LC1D115* | 29420 | LC1D115** | 34375 |
| | 80 | 110 | 150 | 1NO + 1NC | LC1D150* ☑ | 36775 | LC1D150** | 41250 |

* Reference to be completed by adding coil voltage code and recommended to check availability with Customer Care team

For details on non standard references, technical parameters, accessories, compatibility, stockable and non stockable status please contact Customer Care

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# TeSys Control
## TeSys Deca NEW

### TeSys Deca Power Contactors (3 Pole DC Low Consumption)

Now available upto 80A with the TeSys Deca Green Low Consumption offer

| [Ie] Rated Operational Current AC-1 | Motor Power AC-3 kW | HP | A | Auxiliary Contacts | Reference | Unit MRP [₹] |
|---|---|---|---|---|---|---|
| 25 | 4 | 5.5 | 9 | 1NO + 1NC | LC1D09**** ☑ | 2980 |
| | 5.5 | 7.5 | 12 | 1NO + 1NC | LC1D12**** ☑ | 3335 |
| 32 | 9 | 12.5 | 18 | 1NO + 1NC | LC1D18**** ☑ | 5100 |
| 40 | 11 | 15 | 25 | 1NO + 1NC | LC1D25**** ☑ | 6215 |
| 50 | 15 | 20 | 32 | 1NO + 1NC | LC1D32**** ☑ | 10625 |
| [Ie] Rated Operational Current AC-1 | Motor Power AC-3 kW | HP | A | Auxiliary Contacts | Reference | Unit MRP [₹] |
| 60 | 22 | 30 | 40 | 1NO + 1NC | LC1D40A# | 13735 |
| 80 | 25 | 35 | 50 | 1NO + 1NC | LC1D50A# | 17230 |
| 80 | 37 | 50 | 65 | 1NO + 1NC | LC1D65A# | 19540 |
| 80 | 37 | 50 | 80 | 1NO + 1NC | LC1D80A# | 23720 |

* Reference to be completed by adding coil voltage code and recommended to check availability with Customer Care team

### TeSys Deca Power Contactors (4 Pole AC & DC Control)

- Conformance to IEC, UL, CSA
- Current Rating : 20A to 250A, AC-1 Rating
- Available with AC (50/60Hz Dual frequency), DC & DC low consumption (1) coil options
- High Operating ambient temperature, no derating upto 60 deg C

| [Ie] Rated Operational Current AC-1 | Poles Composotion | AC Control Reference | Unit MRP [₹] | DC Control Reference | Unit MRP [₹] |
|---|---|---|---|---|---|
| 20 | 4NO | - | - | LC1DT20** | 3240 |
| | 2NO + 2NC | - | - | LC1D098** | 3525 |
| 25 | 4NO | - | - | LC1DT25** | 3885 |
| | 2NO + 2NC | - | - | LC1D128** | 5075 |
| 32 | 4NO | - | - | LC1DT32** | 4270 |
| | 2NO + 2NC | - | - | LC1D188** | 5780 |
| 40 | 4NO | - | - | LC1DT40** | 6700 |
| | 2NO + 2NC | - | - | LC1D258** | 8830 |
| 60 | 4NO | - | - | LC1DT60A# | 13410 |
| | 2NO + 2NC | - | - | LP1D40008** | 17620 |
| [Ie] Rated Operational Current AC-1 | Poles Composotion | AC Control Reference | Unit MRP [₹] | DC Control Reference | Unit MRP [₹] |
| 80 | 4NO | - | - | LC1DT80A# | 20000 |
| | 2NO + 2NC | - | - | LP1D65008** | 23685 |
| 125 | 4NO | - | - | LP1D80004** | 25655 |
| | 2NO + 2NC | - | - | LP1D80008** | 29605 |
| 250 | 4NO | LC1D1150046* | 32340 | LC1D1150046** | 35925 |

* Reference to be completed by adding coil voltage code and recommended to check availability with Customer Care team

### Coil Voltage Code

| Type | Voltage | 24 | 48 | 72 | 110 | 220 | 415 |
|---|---|---|---|---|---|---|---|
| AC* | CAD, LC1D09-D150 50/60 Hz | B7 | - | - | F7 | M7 | N7 |
| | LC1D1150046 50/60 Hz | - | - | - | F7 | M7 | N7 |
| DC** | CAD, LC1D09-D38, LC1D80-D150 | BD | - | - | FD | MD | - |
| | LC1DT20-DT40, LC1D098-D258, LP1D40-D80, LC1D115 | BD | - | - | FD | MD | - |
| DC Low Consumption*** | CAD | BL | - | - | FL | ML | - |
| | LC1D09-D32 | BL | EL | SL | - | - | - |

| Type | Voltage | 24V DC Low consumption | 24-60V AC/DC | 48-130V AC/DC | 100-250V AC/DC |
|---|---|---|---|---|---|
| TeSys Deca Green# | LC1D40A-80A, LC1DT60A-DT80A | BBE | BNE | EHE | KUE |

**Note:** Please contact Customer Care for 4 Pole AC coil contactor details
For Non standard coil voltage prices please contact customer care
(1) For current rating and ref please contact Customer Care
(2) Reference to be completed by adding coil voltage code and recommended to check availability with Customer Care team

For details on non standard references, technical parameters, accessories, compatibility, stockable and non stockable status please contact Customer Care

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# TeSys Deca Green
## The Revolutionary Electronic Coil Contactor

80A AC3 offer in 55mm frame

| Complete range in 3 frame sizes: |
|---|
| 09-12-18A |
| 25-32-38A |
| 40-50-65-80A |

**-80%**
Up to 80% less energy consumption than a traditional electromechanical motor starter

**10X Reduction in references**
Only 3 references to cover the complete voltage range for AC and DC

**→← -35%**
Highest currents in smallest size, e.g. 80A in 55mm instead of 84mm

**PLC Compatible**
Direct connection to a PLC without the need for an interposing relay

**SEMIF47**
High uptime thanks to wide band coil with high resistance to voltage surges/SEMIF47 conform

**Scan to see TeSys Deca Green under voltage performance.**

# TeSys Control
## TeSys Deca NEW

### TeSys Deca Green Contactor (3 Pole AC/DC Universal Coil)

- Current Rating: 9-65A
- Universal AC/DC coil from 24 - 250V
- Special low consumption offer from 40-80A
- Fuseless Type 2 Co-ordination charts available

### The Revolutionary Electronic Coil Contactor

| [Ie] Rated Operational Current AC-1 | AC-3 Duty (Long Life) | | | Auxiliary Contacts | Reference | Unit MRP [₹] |
|---|---|---|---|---|---|---|
| | kW | HP | A | | | |
| 25 | 4 | 5.5 | 9 | 1NO + 1NC | LC1D09* | 3540 |
| | 5.5 | 7.5 | 12 | 1NO + 1NC | LC1D12* | 3670 |
| 32 | 9 | 12.5 | 18 | 1NO + 1NC | LC1D18* | 4845 |
| 40 | 11 | 15 | 25 | 1NO + 1NC | LC1D25* | 5780 |
| 50 | 15 | 20 | 32 | 1NO + 1NC | LC1D32* | 11750 |
| | 18.5 | 25 | 38 | 1NO + 1NC | LC1D38* | 12680 |
| 60 | 22 | 30 | 40 | 1NO + 1NC | LC1D40A* | 13735 |
| 80 | 25 | 35 | 50 | 1NO + 1NC | LC1D50A* | 17230 |
| 80 | 37 | 50 | 65 | 1NO + 1NC | LC1D65A* | 19540 |
| 80 | 37 | 50 | 80 | 1NO + 1NC | LC1D80A* | 23720 |

### TeSys Deca Green Power Contactors (4 Pole AC & DC Control)

| [Ie] Rated Operational Current AC-1 | Poles Composotion | Auxiliary Contacts | DC Control Reference | Unit MRP [₹] |
|---|---|---|---|---|
| 60 | 4NO | 1NO + 1NC | LC1DT60A* | 13410 |
| 80 | 4NO | 1NO + 1NC | LC1DT80A* | 20000 |

### Coil Voltage Code

| Type | Voltage | 24-60V AC/DC | 48-130V AC/DC | 100-250V AC/DC |
|---|---|---|---|---|
| AC/DC* | LC1D09 - D38, LC1D40A - 80A, LC1DT60A - 80A | BNE | EHE | KUE |
| 24V DC Low Consumption* | LC1D40A - 80A, LC1DT60A - 80A | BBE (24V DC only) | - | - |

* Reference to be completed by adding coil voltage code and recommended to check availability with Customer Care team

**Check the features of the TeSys Deca Green**

For details on non standard references, technical parameters, accessories, compatibility, stockable and non stockable status please contact Customer Care

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| Description | For use with | Reference | Unit MRP [₹] |
|---|---|---|---|
| **Power connection accessories** | | | |
| Terminal block | For supply to one or more GV2 G busbar sets | GV1G09 | 2130 |
| Set of 63A busbars for parallelling of contactors | 2 contactors LC1D09…D18 or D25…D38 | GV2G245 | 1865 |
| | 4 contactors LC1D09…D18 or D25…D38 | GV2G445 | 2935 |
| Set of 115A busbars for parallelling of contactors | 2 contactors LC1D40A…D80A | GV3G264 | 3350 |
| | 3 contactors LC1D40A…D80A | GV3G364(1) | 1790 |
| Set of S-shape busbars | For circuit breakers GV3P** & GV3L** and contactors LC1 D40A…D65A | GV3S | 1340 |

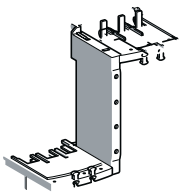
**Not applicable for GV3P/GV3L 73A and 80A


GV2G245

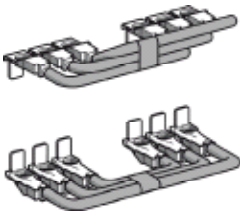

GV1G09

| Description | For use with | Reference | Unit MRP [₹] |
|---|---|---|---|
| Mechanical interlock | LC1D09 to D38(1) | LAD9V2 | 745 |
| | LC1D40A to D65A(1) | LAD4CM | 1515 |
| | LC1D80 and D95 ( for AC control voltage) | LA9D4002 | 3315 |
| | LC1D80 and D95 (for DC control voltage)(2) | LA9D8002 | 4935 |
| | LC1D115 and D150(2) | LA9D11502 | 5005 |

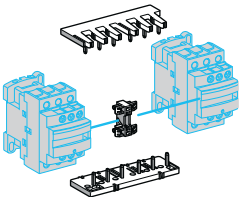
(1) With this set of busbars, any one contactor can be supplied directly by its EverLink® double cage power terminal block. The other two contactors are supplied by the busbar set. The 115A limitation is therefore applied to these two contactors.
(2) With electrical interlock


GV3S

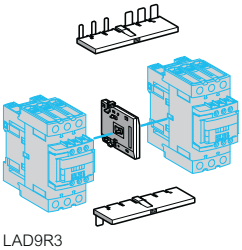
| Description | For use with | Reference | Unit MRP [₹] |
|---|---|---|---|
| **Power Connection for Reversing** | | | |
| Kit Comprising :<br>1. A set of parallel bars<br>2. A set of reverser bars. | LC1D09 to D38 | LAD9V5 + LAD9V6 | 1385 |
| | LC1D40A to D80A | LA9D65A69 | 3220 |
| | LC1D80 and D95 ( for AC control voltage) | LA9D8069 | 6890 |
| | LC1D80 and D95 (for DC control voltage) | LA9D8069 | 6890 |
| | LC1D115 and D150 | LA9D11569 | 11460 |


LA9 D8069

| Description | For use with | Reference | Unit MRP [₹] |
|---|---|---|---|
| **Reversing Kit** | | | |
| Kit Comprising :<br>1. A mechanical interlock LAD 9V2 with electrical interlocking LAD 9V1<br>2. A set of power connections LAD 9V5 (parallel) and LAD 9V6 (reversing). | LC1D09 to D38 | LAD9R1V | 1545 |
| Kit Comprising :<br>1. A mechanical interlock LAD 9V2 without electrical interlocking<br>2. A set of power connections LAD 9V5 (parallel) and LAD 9V6 (reversing). | LC1D09 to D38 | LAD9R1 | 1410 |
| Kit Comprising :<br>1. A mechanical interlock LAD 4CM<br>2. A set of power connections LA9 D65A69. | LC1D40A to D80A | LAD9R3 | 3675 |


LAD9R1

| Description | For use with | Reference | Unit MRP [₹] |
|---|---|---|---|
| **Star Delta Kit** | | | |
| Time delay contact block LAD S2 (LC1D09…D80),<br>Power circuit connections (LC1D09…D80),<br>Hardware required for fixing the contactors onto the mounting plate (LC1D80) | LC1D09 and D12 | LAD91217 | 5810 |
| | LC1D18 to D32 | LAD93217 | 7470 |
| | LC1D40A and D50A | LAD9SD3 | 15100 |
| | LC1D80 | LA9D8017 | 16765 |


LAD9R3


LAD91217


LAD9SD3


LA9D8017

For details on non standard references, technical parameters, accessories, compatibility, stockable and non stockable status please contact Customer Care

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| Description | Time Delay Range | Timer Type | Reference | Unit MRP [₹] |
|---|---|---|---|---|
| On delay timer(1) (2) | 15...30 s | on delay | LA4DT2U | 5140 |
| On delay timer(1) (2) | 0.1...2 s | on delay | LA4DT0U | |
| On delay timer(1) (2) | 25...500 s | on delay | LA4DT4U | 5760 |
| Relay interface module - 24V DC(1) (2) | - | - | LA4DFB | 4735 |

(1) For LC1 D09...38A (3P, AC coils only) add mounting adaptor LAD4BB and for LC1 D40A...65A (3P, AC coils only), add mounting adaptor LAD4BB3.
(2) For LC1D80...150 (3P), direct mounting, for 100-250V AC Coils only.

| Description | For use with | Reference | Unit MRP [₹] |
|---|---|---|---|
| **TeSys Deca Model Mechanical Latch Blocks** | | | |
| Front, Clip-on | LC1D09...D38 (a or c)<br>LC1DT20...DT40 (a or c)<br>LC1D40A...D65A (3P a or c)<br>LC1DT60A and DT80A (4P a or c) | LAD6K10* | 6180 |
| | LC1D80...D150 (3P a)<br>LC1D80 and D115 (3 P c)<br>LC1D80 (4 P a)<br>LC1D80 and D115 (4 P a)<br>LP1D80 and LC1D115 (4 P c) | LA6DK20* | 6450 |

* Reference to be completed by adding coil voltage code and recommended to check availability with Customer Care team

## Coil Voltage Code

| VOLTAGE (AC/DC) | 24 | 42/48 | 110/127 | 220/240 | 380/415 |
|---|---|---|---|---|---|
| Code | B | E | F | M | Q |

## Spare Coils TeSys Deca Model

| Product Compatibility | Reference |
|---|---|
| **AC Coils** | |
| CAD, LC1-D09...D38, DT20..40 | LXD1* |
| LC1D40A, D50A, D65A & LC1DT60A, DT80A | LXD3* |
| D80 & D95 (3P & 4P) | LX1D6* |
| LC1-D115,D150 | LX1D8* |
| **DC Coils** | |
| LC1-D80-D95 | LX4D7** |
| LC1-D115, D150 | LX4D8** |

* Reference to be completed by adding coil voltage code and recommended to check availability with Customer Care team

## Coil Voltage Code

| Type | Voltage (V) | 24 | 110 | 220 | 415 |
|---|---|---|---|---|---|
| AC* | CAD, LC1-D09...D38, DT20..40, LC1 - D150, LC1D40A, D50A, D65A & LC1DT60A, DT80A, LC1D150 LC1D80, D95, D115 | B7 | F7 | M7 | N7 |

For details on non standard references, technical parameters, accessories, compatibility, stockable and non stockable status please contact Customer Care

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## Accessories

| Description | For use With | Contacts | | Reference | Unit MRP [₹] |
|---|---|---|---|---|---|
| **Add On Blocks** | | | | | |
| Additional instantaneous auxiliarycontact blocks | LC1D09 ...LC1D150 & LC1F* | Front Mounted | 1NO + 1NC | LADN11 | 500 |
| | | | 2NO | LADN20 ☑ | |
| | | | 2NC | LADN02 | 725 |
| | | | 2NO + 2NC | LADN22 ☑ | 900 |
| | | | 4NC | LADN04 | 1205 |
| | | | 4NO | LADN40 ☑ | 900 |
| | | | 1NO + 3NC | LADN13 | |
| | | | 3NO + 1NC | LADN31 ☑ | |
| | LC1D80..LC1D95 & LC1F | Front Mounted | 1NO | LADN10 | 405 |
| | | | 1NC | LADN01 | |

| Description | | Contacts | | Reference | Unit MRP [₹] |
|---|---|---|---|---|---|
| **Add On Blocks** | | | | | |
| Additional instantaneous auxiliary contact blocks | Side Mounted (1) | 1NO + 1NC | | LAD8N11 | 1740 |
| | | 2NO | | LAD8N20 | |
| Pneumatic timer blocks front mounted | ON delay | 1NO + 1NC | 0.1..3s | LADT0 | 3595 |
| | | 1NO + 1NC | 0.1..30s | LADT2 | |
| | | 1NO + 1NC | 10..180s | LADT4 | |
| | | 1NO + 1NC | 1..30s (2) | LADS2 ☑ | 3835 |
| | OFF delay | 1NO + 1NC | 0.1 ..3s | LADR0 | 3595 |
| | | 1NO + 1NC | 0.1 ..30s | LADR2 ☑ | |
| | | 1NO + 1NC | 10..180s | LADR4 | |

(1) Suitable for mounting on TeSys Deca range AC Coil Contactors and Control Relays only
(2) With Switching time of 40 ms between opening of the NC contact and closing of the NO contact recommended for Star - Delta Starters

## Accessories compatibility

| Contactors | | | Instantaneous Auxiliary Contacts | | | | | Time delay Front Mounted |
|---|---|---|---|---|---|---|---|---|
| | | | | | Front mounted | | | |
| Type | Number of Poles and Size | | Side mounted | | 1 contact | 2 contact | 4 contacts | |
| AC & AC/DC | 3P | LC1D09…D38 | 1 on LH side | and | - | 1 | or 1 | or 1 |
| | | LC1D40A…D80A | 1 on LH or 1 on RH side | and | - | 1 | or 1 | or 1 |
| | | LC1D80 and D95A (50/60 Hz) | 1 on each side | or | 2 | and 1 | or 1 | or 1 |
| | | LC1D80 and D95A (50 or 60 Hz) | 1 on each side | and | 2 | and 2 | or 1 | or 1 |
| | | LC1D115 and D150 | 1 on LH side | and | - | 1 | or 1 | or 1 |
| | 4P | LC1DT20…DT40 | 1 on LH side | and | - | 1 | or 1 | or 1 |
| | | LC1DT60A and DT80A | 1 on LH or 1 on RH side | and | - | 1 | or 1 | or 1 |
| | | LC1D40008, D65008 and D80 | 1 on each side | or | 1 | or 1 | or 1 | or 1 |
| | | LC1D115 | 1 on each side | and | 1 | or 1 | or 1 | or 1 |
| DC | 3P | LC1D09…D38 | – | | - | 1 | or 1 | or 1 |
| | | LC1D40A…D80A | – | | - | 1 | or 1 | or 1 |
| | | LC1D80 and D95 | – | | 1 | or 1 | or 1 | or 1 |
| | | LC1D115 and D150 | 1 on LH side | and | - | 1 | or 1 | or 1 |
| | 4P | LC1DT20…DT40 | – | | - | 1 | or 1 | or 1 |
| | | LC1DT60A and DT80A | – | | - | 1 | or 1 | or 1 |
| | | LC1D40008, D65008 and D80 | – | | 2 | and 1 | or 1 | or 1 |
| | | LC1D115 | 1 on each side | | - | and 1 | or 1 | or 1 |
| LC (3) | 3P | LC1D09…D38 | – | | - | 1 | - | – |
| | 3P | LC1DT20…DT40 | – | | - | 1 | - | – |

(3) LC : Low consumption

For details on non standard references, technical parameters, accessories, compatibility, stockable and non stockable status please contact Customer Care

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W.E.F. January 25th, 2022

## Accessories

| Description | For use with | Reference | Unit MRP [₹] |
|---|---|---|---|
| **For Contactor D115/150** | | | |
| Contacts set - 3P | LC1D115 | LA5D1158031 | 20240 |
| Contacts set - 3P | LC1D150 | LA5D150803 | 20980 |
| Contacts set - 4P | LC1D1150046 | LA5D115804 | 27900 |

| Product Compatibility | Fixing | Control Circuit Voltage | Suppressor Type | Reference | Unit MRP [₹] |
|---|---|---|---|---|---|
| **Coil Suppressor Modules** | | | | | |
| LC1D12...D25 (4P) | Screw | 110...240V AC | RC Circuit AC | LA4DA1U | 1585 |
| LC1D12...D25 (4P) | | 12...250V DC | Diode DC | LA4DC1U | 1775 |
| LC1D09...D38, LC2D09...D38, LC1DT20...DT40, LC2DT20...DT40 (3P) | | 24...48V AC | Varistor AC/DC | LAD4VE | 1535 |
| | | 24...48V AC 400Hz | RC Circuit AC | LAD4RCE | |
| | | 50...127V AC 200Hz | RC Circuit AC | LAD4RCG | 1390 |
| CAD | | 110...240V AC 100Hz | RC Circuit AC | LAD4RCU ☑ | 1535 |
| | | 110….250V AC | Varistor AC/DC | LAD4VU | |
| LC1D80, LC1D95, LC2D80, LC2D95 (3P) LC2D80 (4P), LC1D40008, LC1D65008 | | 24...250V DC | Diode DC | LA4DC3U | 1585 |
| | | 110...250V AC | Varistor AC/DC | LA4DE2U | 1515 |
| | | 24...48V AC 400Hz | RC Circuit AC | LA4DA2E | |
| | | 50...127V AC 200Hz | RC Circuit AC | LA4DA2G | 2390 |
| | | 110...240V AC 100Hz | RC Circuit AC | LA4DA2U | 1585 |
| | | 380...415V AC 150Hz | RC Circuit AC | LA4DA2N | 2390 |
| | | 24...48V DC | Varistor AC/DC | LA4DE3E | 1585 |

For details on non standard references, technical parameters, accessories, compatibility, stockable and non stockable status please contact Customer Care

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W.E.F. January 25th, 2022

# TeSys Control
## TeSys Deca NEW

## Modular marking system simplifies identification of standard contactors in the control panel to enhance visibility of the safety chain

**Simple, customisable modular marking sytem**

### Standard TeSys Deca contactors

Easy-to-attach covers:

Auxiliary blocks with safety chain identification also available for more contact points:

### Standard TeSys Ultra motor starters

Translucent labels to identify safety-chain devices:

Flexibility to customise contactors included in the safety chain during panel building

Simpler and faster maintenance with 100% visibility

Safety covers and auxiliary blocks prevent screwdriver contact with poles

### Complete safety-chain identification system

**TeSys Deca range**

Retrofit contactor safety covers

LAD9ET1S
9A upto 65A

LAD9ET3S
80A to 95A

LAD9ET4S
110A to 150A

Also available for CAD32/CAD50

**TeSys Ultra range**

Auxiliary contact block

LADN22S
2NO + 2NC

Retrofit identification label

LU9ET1S

### Built in Safety

TeSys Ultra motor starters are certified according to IEC 60947-4-1 for safety applicarions thanks to integrated mirror contact

| Description | For use with | Reference | Unit MRP [₹] |
|---|---|---|---|
| Red Cover (For safety chain indication) | LC1D09…D65A and DT20 .. DT80A | LAD9ET1S | 715 |
| Auxiliary Contact block with red front face- for safety chain indication | 2NO + 2NC | LADN22S | 1020 |

For details on non standard references, technical parameters, accessories, compatibility, stockable and non stockable status please contact Customer Care

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W.E.F. January 25th, 2022

# New TeSys Giga Contactors and Relays Futuristic ready…

- **New generation** of high power contactors..115-800 A (AC-3)
- Advanced contact wear diagnostic for **predictive maintenance**
- **Modular design** for easy maintenance and short down times
- **Compact** design for less installation space consumption
- Less product references for **easier selection** and **reduced inventory**
- Right choice for a wide range of **demanding applications**!!

se.com/in/TeSys

# TeSys Control
## TeSys Giga NEW

A comprehensive range of TeSys Giga 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 Contactors - Standard version

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

**Remote control**
- 48-130V, 100-250V 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)

**Mounting**
- *'Cabling memory' adapter enables maintenance without removing power cables and busbar connections. (Provided as an accessory in standard version)*

## > TeSys Giga Contactors - Advanced version

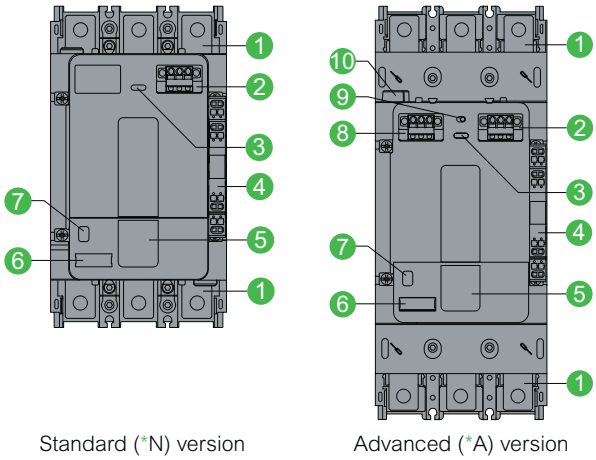
**Power & control**
- 3 or 4 power poles
- 115 to 800A(1) (AC-3)
- 200 to 1050A(1) (AC-1)
- Embedded 1 NO + 1 NC auxiliary contacts
- Push-in type terminals for coils & control

**Remote control**
- *24-48V, 48-130V, 200-500V 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**
- *'Cabling memory' adapter enables maintenance without removing power cables and busbar connections. (Provided as default in advanced version)*

**(1)** 630A and 800A (AC-3) and 1050A (AC-1) contactors shall be launched in Q2 2022.




Standard (*N) version  Advanced (*A) version

1. Power connection (cable memory kit provided with Advanced version contactor)
2. A1-A2 coil terminal
3. Contact wear diagnosis LED
4. 1 NO + 1 NC auxiliary contact
5. QR code
6. Label holder
7. Status indicator
8. PLC control terminal
9. PLC control ON/OFF switch
10. Connector for Remote Wear Diagnostic (RWD) module

*Product references finishing by A or N.

# TeSys Control
## TeSys Giga NEW

### TeSys Giga Power Contactors (3 Pole AC and DC)

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

- Current Rating: 115-800(1) A AC3 rating; and AC1 upto 1050(1) A
- Universal AC/DC electronic wideband coil
- Fuseless Type 2 Co-ordination charts as per IEC60947-4-1 available
- Conformity to International Standards – IEC, UL, CSA, CE

| [Ie] Rated Operational Current AC-1 | Motor Power (Long Life) AC-3 | | | Standard version Reference | Unit MRP [₹] | Advanced version Reference | Unit MRP [₹] |
|---|---|---|---|---|---|---|---|
| | kW | HP | A | | | | |
| 250 | 59 | 80 | 115 | LC1G115***N | 28000 | LC1G115***A | On Request |
| 275 | 80 | 110 | 150 | LC1G150***N | 35700 | LC1G150***A | |
| 305 | 100 | 135 | 185 | LC1G185***N | 44245 | LC1G185***A | |
| 330 | 110 | 150 | 225 | LC1G225***N | 47610 | LC1G225***A | |
| 385 | 140 | 190 | 265 | LC1G265***N | 57970 | LC1G265***A | |
| 440 | 180 | 245 | 330 | LC1G330***N | 70105 | LC1G330***A | |
| 550 | 220 | 300 | 400 | LC1G400***N | 84730 | LC1G400***A | |
| 700 | 280 | 380 | 500 | LC1G500***N | 117540 | LC1G500***A | |

**(1)** 630A and 800A (AC-3) and 1050A (AC-1) contactors shall be launched in Q2 2022.

### TeSys Giga Power Contactors (4 Pole AC and DC)

| [Ie] Rated Operational Current AC-1 | Power Pole Composition | Standard version Reference | Unit MRP [₹] | Advanced version Reference | Unit MRP [₹] |
|---|---|---|---|---|---|
| 250 | 4 NO | LC1G1154***N | 44215 | LC1G1154***A | On Request |
| 275 | 4 NO | LC1G1504***N | 52610 | LC1G1504***A | |
| 305 | 4 NO | LC1G1854***N | 65735 | LC1G1854***A | |
| 330 | 4 NO | LC1G2254***N | 77215 | LC1G2254***A | |
| 385 | 4 NO | LC1G2654***N | 86335 | LC1G2654***A | |
| 440 | 4 NO | LC1G3304***N | 100470 | LC1G3304***A | |
| 550 | 4 NO | LC1G4004***N | 124870 | LC1G4004***A | |
| 700 | 4 NO | LC1G5004***N | 184010 | LC1G5004***A | |

| Standard Coil Reference(***N) | Voltages (AC/DC) |
|---|---|
| EHEN | 48-130 |
| KUEN | 100-250 |
| **Standard Coil Reference(***A)** | **Voltages (AC/DC)** |
| LSEA(1) | 200-500 |
| BEEA(1) (2) | 24-48 |

1: Advanced version (Price on request)
2: Available upto 500 A

Contactor prices are for the standard version (100-250 V AC/DC) and inclusive of coil.
Reference to be completed by adding coil voltage code and recommended to check availability with Customer Care team.

### Accessories - TeSys Giga

| Add On Blocks | Push In Type Terminal | Position | Contacts | Reference | Unit MRP [₹] |
|---|---|---|---|---|---|
| Auxillary contact module | 1st left or 1st right | Side Mounted(1) | 1 NO+1NC | LAG8N113P | 1245 |
| | | Side Mounted | 2 NO | LAG8N203P | 1616 |
| | 2nd left or right | Side Mounted | 1 NO+1NC | LAG8N113 | 1245 |
| | | Side Mounted | 2 NO | LAG8N203 | 1616 |

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

| Mechanical interlock between contactors(1) | Reference | Unit MRP [₹] |
|---|---|---|
| **For Use With Contactor** | | |
| Between Identical contactor frames | LA9G970 | 2273 |
| Between LC1G(265-500) and LC1G(185-225) | LA9G971 | 2273 |
| LC1G630 to LC1G800 and LC1G265 to LC1G500 | LA9G972 | on request* |

(1) Maximum 3 auxiliary contacts can be installed between 2 contactors with mechanical interlock kit.
* to be launched in Q2 2022

**EcoStruxure™ Motor Control Configuration**

**Product Selector for TeSys Giga**

**EcoStruxureTM Motor Management Design**

For details on non standard references, technical parameters, accessories, compatibility, stockable and non stockable status please contact Customer Care

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**W.E.F. January 25th, 2022**

## TeSys F Power Contactors (3 Pole AC/DC Control)

- Conformity to International Standards – IEC, UL, CSA, CE
- High electrical life
- Type 2 Co-ordination Charts available (upon request)
- Common accessories as TeSys Deca
- Rating : 115 - 2600A, AC/DC Coils, special Hoisting application coils
- Shock Proof version and Magnetic latching contactor available

| [Ie] Rated Operational Current AC-1 | Motor Power (Long Life) AC-3 | | | Reference | Unit MRP [₹] |
|---|---|---|---|---|---|
| | kW | HP | A | | |
| 200 | 59 | 80 | 115 | LC1F115 | On Request |
| 250 | 80 | 110 | 150 | LC1F150 | |
| 275 | 100 | 135 | 185 | LC1F185 | |
| 315 | 110 | 150 | 225 | LC1F225 | |
| 350 | 140 | 190 | 265 | LC1F265 | |
| 400 | 180 | 245 | 330 | LC1F330 | |
| 500 | 220 | 300 | 400 | LC1F400 | |
| 700 | 280 | 380 | 500 | LC1F500 | |
| 1000 | 375 | 500 | 630 | LC1F630 | |
| 1000 | 450 | 610 | 800 | LC1F800 | |
| 1250 | 630 | 840 | 1000 | LC1F1000 | |

**Note:**
- Contactor reference does not include coil. Contactor coil & aux. contacts to be ordered separately.(Coil includes 1NO contact)
- Please select coils from table on next page (Page-30).

## TeSys F Power Contactors (2 Pole & 4 Pole AC/DC Control)

- Conformity to International Standards – IEC, UL, CSA
- 2 and 4 pole versions available
- 240-1600A in AC-1 duty, AC/DC coils
- Common accessories same as TeSys Deca
- High electrical life

| [Ie] Rated Operational Current AC-1 | Power Pole Composition | Reference | Unit MRP [₹] |
|---|---|---|---|
| 200 | 4NO | LC1F1154 | On Request |
| 250 | 4NO | LC1F1504 | |
| 275 | 4NO | LC1F1854 | |
| 315 | 4NO | LC1F2254 | |
| 350 | 4NO | LC1F2654 | |
| 400 | 4NO | LC1F3304 | |
| 500 | 2NO | LC1F4002 | |
| 500 | 4NO | LC1F4004 | |
| 700 | 2NO | LC1F5002 | |
| 700 | 4NO | LC1F5004 | |
| 1000 | 2NO | LC1F6302 | |
| 1000 | 4NO | LC1F6304 | |
| 1600 | 4NO | LC1F7804 | |

**Note:**
- Contactor reference does not include coil. Contactor coil & aux. contacts to be ordered separately.(Coil includes 1NO contact)
- Power terminals may be protected by the addition of shrouds, to be ordered separately.

## 3P AC/DC control for AC-1 applications

| [Ie] Rated Operational Current AC-1 | Reference | Unit MRP [₹] |
|---|---|---|
| 1250 | LC1F1250 | On Request |
| 1700 | LC1F1700 | |
| 2100 | LC1F2100(1) | |
| 2600 | LC1F2600(2) | |

(1) With set of right-angled connectors LA9 F2100
(2) With set of right-angled connectors LA9 F2600

It is recommended to check with Customer care team for selection, recommendation ,and availability of stockable and non stockable references

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## TeSys F Coils

| Product Compatibility | AC Coil Reference | Unit MRP [₹] | DC Coil Reference(2) | Unit MRP [₹] |
|---|---|---|---|---|
| LC1F115, LC1F150 | LX9FF* | On Request | LX4FF** | On Request |
| LC1F185, LC1F225 | LX9FG* | | LX4FG** | |
| LC1F265, LC1F330 | LX1FH* | | LX4FH** | |
| LC1F400 | LX1FJ* | | LX4FJ** | |
| LC1F500 | LX1FK* | | LX4FK** | |
| LC1F630 | LX1FL* | | LX4FL** | |
| LC1F800 | (1) | | LX4F8** | |
| LC1F1000, LC1F1700, LC1F2100 | LX1FK*(3) | | | |
| LC1F2600 | LX1FL*(3) | | | |

**Please replace ( * ) with the Corresponding Control Voltage.**
(1) Use rectifier with required DC coil (Ref: DR5TE4U)
(2) Coil with suppressor fitted as standard.
(3) Set of two coils to be connected in series.
(4) It is recommended to check availability with Customer Care team.

## Coil Voltage Code

| Type | Voltage (V) | 24 | 110 | 220 | 415 |
|---|---|---|---|---|---|
| AC* | LC1F115-F225, LC1F400-630 | - | 110 | 220 | 415 |
| | LC1F265, LC1F330 | - | 1102 | 2202 | 3802 |
| | LC1F1000 | | 55 | 110 | 220 |
| | LC1F1700, 2100, 2600 | - | 65 | 110 | 220 |
| DC** | LC1F115-LC1F330 | 24 | 110 | 220 | - |
| | LC1F400-LC1F780 | - | 110 | 220 | |
| | LC1F800 | - | FW | MW | |

**Note:** (1) It is recommended to check availability with Customer Care team

## Accessories - TeSys Deca and TeSys F

| Description | For use With | Position | Contacts | Reference | Unit MRP [₹] |
|---|---|---|---|---|---|
| **Add On Blocks** | | | | | |
| Additional instantaneous auxiliary contact blocks | LC1D09....LC1D150 & LC1F* | Front Mounted | 1NO + 1NC | LADN11 | 500 |
| | | | 2NO | LADN20 | |
| | | | 2NC | LADN02 | 725 |
| | | | 2NO + 2NC | LADN22 | 900 |
| | | | 4NC | LADN04 | 1205 |
| | | | 4NO | LADN40 | 900 |
| | | | 1NO + 3NC | LADN13 | |
| | | | 3NO + 1NC | LADN31 | |
| | LC1D80...LC1D95* & LC1F | | 1NO | LADN10* | 405 |
| | | | 1NC | LADN01* | |

It is recommended to check with Customer care team for selection, recommendation ,and availability of stockable and non stockable references

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## Accessories - TeSys Deca and TeSys F

| Description | | Contacts | Reference | Unit MRP [₹] |
|---|---|---|---|---|
| **Add On Blocks** | | | | |
| Additional instantaneous auxiliary contact blocks | Side Mounted (1) | 1NO + 1NC | LAD8N11 | 1740 |
| | | 2NO | LAD8N20 | |
| Pneumatic timer blocks front mounted | ON delay | 1NO + 1NC 0.1..3s | LADT0 | 3595 |
| | | 1NO + 1NC 0.1..30s | LADT2 | |
| | | 1NO + 1NC 10..180s | LADT4 | |
| | | 1NO + 1NC 1..30s (2) | LADS2 ☑ | 3835 |
| | OFF delay | 1NO + 1NC 0.1 ..3s | LADR0 | 3595 |
| | | 1NO + 1NC 0.1 ..30s | LADR2 ☑ | |
| | | 1NO + 1NC 10 ..180s | LADR4 | |

(1) Suitable for mounting on D Model range AC Coil Contactors and Control Relays only
(2) With Switching time of 40 ms between opening of the NC contact and closing of the NO contact recommended for Star - Delta Starters
* Suitable for 80A, 95A & Model F contactors only

| For Use With TeSys F Contactors | Reference | Unit MRP [₹] |
|---|---|---|
| **Mechanical Interlocks (1) - Horizontally Mounted** | | |
| LC1F115, LC1F150, LC1F1154, LC1F1504 | LA9FF970 | On Request |
| LC1F185, LC1F1854, LC1F225, LC1F2254 | LA9FG970 | |
| LC1F265, LC1F330, LC1F400, LC1F500, LC1F2654, LC1F3304, LC1F4004, LC1F5004 | LA9FJ970 | |
| LC1F630, LC1F6304, LC1F800 | LA9FL970 | |
| (1) For assembly of 3/4 pole 2 contactors of identical rating. To obtain electrical interlocking, please order 2 contact blocks LADN11 All power connections are to be made by the user. | | |
| **Main Contact Sets*** | | |
| LC1F115, LC1F150 | LA5FF431 ☑ | On Request |
| LC1F185, LC1F225 | LA5FG431 | |
| LC1F265 | LA5FH431 | |
| LC1F330, LC1F400 | LA5F400803 | |
| LC1F500 | LA5F500803 | |
| LC1F630 | LA5F630803 | |
| LC1F800 | LA5F800803 | |

* For 3 Pole contactor (per pole: 2 fixed contacts and 1 moving contact, 2 deflectors, 1 backplate, fixing screws & washers.)

| Description | For use with | 110V Reference | 220V Reference | Unit MRP [₹] |
|---|---|---|---|---|
| **Suppressor Blocks** | | | | |
| Suppressor module clip on | All AC ratings | LA4FRCF | LA4FRCP | On Request |
| Suppressor bracket | For all LA4F | LA9D09981 | | |

| Product Compatibility | 110V Reference | 220/230V Reference | 415/440V Reference | Unit MRP [₹] |
|---|---|---|---|---|
| **Hoisting Applications - AC Coils** | | | | |
| LC1F265 | LX9FH1102 | LX9FH2202 | - | On Request |
| LC1F330 | | | | |
| LC1F400 | LX9FJ925 | LX9FJ931 | LX9FJ937 | |
| LC1F500 | LX9FK925 | LX9FK931 | LX9FK937 | |
| LC1F630 | LX9FL924 | LX9FL931 | LX9FL936 | |

**Note:** Rectifier is a must with the coil. Ref no. DR5TE4U for 110..230V & DR5TE4S* for 415..440V, needs to be added extra with coil.

| Product Compatibility | 48V Reference | 110V Reference | 220/230V Reference | 415/440V Reference | Unit MRP [₹] |
|---|---|---|---|---|---|
| **Hoisting Applications - DC Coils** | | | | | |
| LC1F400 | LX9FJ918 | LX9FJ926 | LX9FJ932 | LX9FJ938 | On Request |
| LC1F500 | LX9FK918 | LX9FK926 | LX9FK932 | LX9FK938 | |
| LC1F630 | LX9FL918 | LX9FL926 | LX9FL931 | LX9FL937 | |

**Note:**
- Resistor is a must with every coil as per the quantity mentioned.
- Economy Resistor to be selected from below table as per coil voltage code

| Contactor | 110V Reference | 220V Reference | 440/460V Reference | Unit MRP [₹] |
|---|---|---|---|---|
| **Economy Resistor** | | | | |
| • To be used with hoisting application DC coil | | | | |
| LC1F400 | 1 X DR2SC0047 | 1 X DR2SC1200 | 1 X DR2SC4700 | On Request |
| LC1F500 | 1 X DR2SC0039 | 1 X DR2SC1000 | 1 X DR2SC3300 | |
| LC1F630 | 2 X DR2SC0047 | 2 X DR2SC0047 | 2 X DR2SC3900 | |

It is recommended to check with Customer care team for selection, recommendation ,and availability of stockable and non stockable references

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# TeSys Special Purpose Contactor

## Capacitor Duty Contactor

| Nominal Reactive Power 440V | Auxiliary Contacts | Reference | Unit MRP [₹] |
|---|---|---|---|
| **LC1-D•K - with Damping Resistors & Block of Early Make poles** | | | |
| 12.5 kVar | 1NO + 2NC | LC1DFK* | 4850 |
| 16.7 kVar | 1NO + 2NC | LC1DGK* | 6815 |
| 20 kVar | 1NO + 2NC | LC1DLK* | 7655 |
| 25 kVar | 1NO + 2NC | LC1DMK* | 8395 |
| 32 kVar | 1NO + 2NC | LC1DPK* | 18290 |
| 40 kVar | 1NO + 2NC | LC1DTK* | 25195 |
| 60 kVar | 1NO + 2NC | LC1DWK12* | 28365 |

# Contactor recommended upto 6 steps. For over 6 steps it is recommended to use chokes
* Reference to be completed by adding coil voltage code

## Coil Voltage Code

| VOLTAGE | 110 | 220 |
|---|---|---|
| LC1DFK....DWK, 50/60Hz | F7 | M7 |

**Note:**
(1) For non standard coil voltage (including F7) prices please consult customer care.
(2) It is recommended to check availability with Customer Care team.

**Instruction Manual Video for Capacitor Duty Contactors**

**Guide for the Design and Production of LV Power Factor Correction Cubicles**

For complete information on selection of capacitor switching please refer to the TeSys catalogue

It is recommended to check with Customer care team for selection, recommendation ,and availability of stockable and non stockable references

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W.E.F. January 25th, 2022

# The most compact 3 KW / 400 V starter in the world


## Up to 75 % of space reduction

- Ultra-compact 22.5 mm starter
- Reversing starter in the same width
- Maximum space savings for group starter architecture

## Long electrical durability

- Suitable for high demanding application
- 30 000 000 of AC53a electrical cycles

> With printed QR code, refering directly to the product data sheet.

## Easy Design

- Wide range setting motor protection
- Automatic, manual or remote reset after thermal trip
- Wide range of control voltage

## Easy to integrate

- Direct mounting installation on DIN rail
- Control terminals on the upper side
- Power terminal on the lower side

It is recommended to check with Customer care team for selection, recommendation ,and availability of stockable and non stockable references

☑ NORMAL STOCK ITEMS

W.E.F. January 25th, 2022

# TeSys Protection Range

**TeSys has the most rugged and reliable solution to manage motors**
Please find a quick range overview below

| | TeSys Power | | TeSys Protect | | | TeSys Active | | |
|---|---|---|---|---|---|---|---|---|
| Feature | Motor Protection Circuit Breakers | | Overload Relays | Multi function Relays | | TeSys Ultra | TeSys T | TeSys Island |
| TeSys Range of Products | GV2P, GV4P GV3P,GV2ME | GV4PEM | LR2K, LRD, LR9D, LR9F | LR9G | EOCR | | | |
| |  GV2P GV3P  GV2ME |  GV4PEM |  LR2K  LR9D  LRD  LR9F |  LR9G |  EOCR |  TeSys Ultra |  TeSys T |  TeSys Island |
| Short circuit | | | | | | | | |
| Causes of overheating | | | | | | | | |
| Slight overload | | | | | | | | |
| Locked rotor | | | | | | | | |
| Ventilation fault With probes | | | | | | | With Probes | With Probes |
| Abnormal temperature rise | | | | | | | | With Probes |
| Shaft bearing seizure | | | | | | | | |
| Insulation fault | | | | | With CBCT | | | |
| Long starting time Adjustable Adjustable | | Adjustable | | | Adjustable | Adjustable | Adjustable | Adjustable |
| Heavy duty | | | LR9D only | | | | | |
| Voltage variation (Derived) | | | | | | | | |
| Causes of phase variation | | | | | | | | |
| Phase reversal | | | | | | | | |
| Phase losses | | | | | | | | |
| Phase imbalance | | | | | | | | |
| Earth fault | GV4P only | | | | | | | |
| Historic fault, Pre-Alarming | | | | Possible Pre alarm | | | | |

# Protection Relays for Motor Safety

Providing Motor Safety tailored to your needs

se.com/in/TeSys

# TeSys Protect
## TeSys K, TeSys Deca, TeSys F, TeSys Giga

### Thermal Overload Relays - Tesys K Series (Direct Mounting)

- Conformance to IEC, UL, CSA, CE
- Range : 0.1A to 16A
- Direct & Independent mounting
- Trip class 10A

| Thermal Protection Adjustment | For Use With | For Use With | Unit MRP [₹] |
|---|---|---|---|
| 0.11...0.16 | LC1K, LP1K, LP4K, LP2K, LC2K | LR2K0301 | 2340 |
| 0.16...0.23 | | LR2K0302 | |
| 0.23...0.36 | | LR2K0303 | |
| 0.36...0.54 | | LR2K0304 | |
| 0.54...0.8 | | LR2K0305 | |
| 0.8...1.2 | | LR2K0306 | |
| 1.2...1.8 | | LR2K0307 | |
| 1.8...2.6 | | LR2K0308 | |
| 2.6...3.7 | | LR2K0310 | |
| 3.7...5.5 | | LR2K0312 | |
| 5.5...8 | | LR2K0314 | |
| 8...11.5 | | LR2K0316 | |
| 10...14 | | LR2K0321 | 2380 |
| 12...16 | | LR2K0322 | |

***Note:** Terminal Block for Clip-on Mounting LA7K0064

### Thermal Overload Relays - TeSys Deca Series

- Conformance to IEC, UL, CSA
- Range : 0.1A to 104A
- Higher operating temperature
- Tripping class 10A & 20 available
- Direct mounting on contactor is possible upto 95A

| Thermal Protection Adjustment Range | For Use With | Reference* | Unit MRP [₹] |
|---|---|---|---|
| **LRD Model (Direct Mounting)** | | | |
| 0.1...0.16 | GV2L03, LE03, LC1D09...LC1D38 | LRD01 | 2350 |
| 0.16...0.25 | | LRD02 | |
| 0.25...0.4 | | LRD03 | |
| 0.4...0.63 | | LRD04 | |
| 0.63...1 | | LRD05 ☑ | |
| 1...1.6 | | LRD06 ☑ | |
| 1.6...2.5 | | LRD07 ☑ | |
| 2.5...4 | | LRD08 ☑ | |
| 4...6 | | LRD10 ☑ | |
| 5.5...8 | | LRD12 ☑ | |
| 7...10 | | LRD14 ☑ | 2640 |
| 9...13 | | LRD16 ☑ | |
| 12...18 | | LRD21 ☑ | 2720 |
| 16...24 | GV2L22, LC1D25...D38 | LRD22 ☑ | |
| 23...32 | LC1D25...LC1D38, LC1D32 | LRD32 ☑ | 4370 |
| 30...38 | LC1D32, LC1D38 | LRD35 | |
| 23...32 | LC1D40A...D65a | LRD332 | 4840 |
| | LC1D80...LC1D95 | LRD3353 | |
| 30...40 | LC1D40A...D65a | LRD340 | |
| 30...40 | LC1D80...LC1D95 | LRD3355 | |
| 37...50 | LC1D40A...D65a | LRD350 ☑ | 6635 |
| | LC1D80...LC1D95 | LRD3357 | 7935 |
| 48...65 | LC1D40A...D65a | LRD365 | 8515 |
| 62...80 | LC1D80A | LRD380 | 8880 |
| 48...65 | LC1D80...LC1D95 | LRD3359 | 8515 |
| 63...80 | LC1D80...LC1D95 | LRD3363 | 9240 |
| 80...104 | LC1D80, LC1D95 | LRD3365 | 11405 |

### Electronic Overload Relay - TeSys Deca Series

- Conformance to IEC, UL, CSA
- Range : 0.1A to 32A
- 5:1 Adjustment range
- High Operating Temperature
- Field selectable tripping class : 5,10, 20 & 30
- Type 1 & Type 2 Co-ordination chart available

| Current Range | For Use With | Reference* | Unit MRP [₹] |
|---|---|---|---|
| 0.1....0.5 | LC1D09 - 38A Direct Mounting | LR9D01 | 10680 |
| 0.4....2.0 | | LR9D02 | 10965 |
| 1.6....8.0 | | LR9D08 | |
| 6.4....32 | | LR9D32 | 12265 |

***Note:** For LR9D01 to LR9D32 - Terminal Block for Clip on Mounting LAD7B205.

### Electronic Overload Relay - TeSys F Series

- Conformity to International Standards - IEC, UL, CSA
- Direct mounting on contactors is possible upto 630A
- Higher operating temperature
- Tripping class 10

| Thermal Protection Adjustment Range | Reference* | Unit MRP [₹] |
|---|---|---|
| **LRD Model (Direct Mounting)** | | |
| 90...150 | LR9F5369 ☑ | On Request |
| 132...220 | LR9F5371 | |
| 200...330 | LR9F7375 | |
| 300...500 | LR9F7379 | |
| 380...630 | LR9F7381 | |

### Electronic Overload Relay - TeSys Giga Series NEW

- Wide range of protection with only 4 references (28A to 630A)
- Switchable protection against ground fault and phase imbalance
- ON status and overload alarm signaling by LED
- Direct mouting of relay with contactors saving in panel space and installation time
- Selectable Trip class from 5E to class 30E to suit different application needs

| Thermal Protection Adjustment Range | Reference | Unit MRP [₹] |
|---|---|---|
| 28...115 A | LR9G115 | 18000 |
| 57...225 A | LR9G225 | 21000 |
| 125...500 A | LR9G500 | 24700 |
| 160...630 A | LR9G630* | on request |

*To be launched in Q2 2022

***Note:**
- For LRD01...LRD35 - Terminal Block for clip-on Mounting LAD7B106
- For LRD33** - Terminal Block for clip-on Mounting LA7D3064 ☑
- For LRD332, LRD340, LRD350 & LRD365 - Connection block for separate mounting LAD96560
- The LRD relays can be used for AC or DC current up to 104A
- For long starting, Class 20 relays are available on request.
- Device for remote tripping and electrical reset is available on request.

For details on non standard references, technical parameters, accessories, compatibility, stockable and non stockable status please contact Customer Care

☑ NORMAL STOCK ITEMS

**W.E.F. January 25th, 2022**

# Advanced Motor Protection

## High performance protection for your application

## EOLR
### Electronic Overload Relay

- Precise Overload Protection
- Wide operating Range 5:1
- Higher Operating Temperature
- Selectable Trip Class

## EOCR
### Electronic Over Current Relay

- Compact and Robust
- Advanced current protections
- Suitable for 1-phase and 3-phase applications
- Suitable for motors upto 400A
- Pass-through CT for electrical isolation

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# TeSys Protect
## EOLR, EOCR

# EOLR
### Electronic Overload Relay

- Conformance to IEC, UL, CSA
- Range : 0.1A to 630A
- High Operating Temperature
- Field selectable tripping class : 5,10, 20 & 30
- Type 1 & Type 2 Co-ordination chart available

| Current Range | For Use With | Reference* | Unit MRP [₹] |
|---|---|---|---|
| **LR9-D Electronic Protection Relays** | | | |
| 0.1....0.5 | LC1D09 - 38A Direct Mounting | LR9D01 | 10680 |
| 0.4....2.0 | | LR9D02 | 10965 |
| 1.6....8.0 | | LR9D08 | |
| 6.4....32 | | LR9D32 | 12265 |
| **LR9-G Electronic Protection Relays** | | | |
| 28…115 | LC1G115 - 630A Direct Mounting | LR9G115 | 18000 |
| 57…225 | | LR9G225 | 21000 |
| 125…500 | | LR9G500 | 24700 |
| 160…630 | | LR9G630 | On Request |

**Note:** For LR9D01 to LR9D32 - Terminal Block for Clip on Mounting LAD7B205.

### Protection Relay Selection Table

| | EOLR | EOCR | | |
|---|---|---|---|---|
| **Features\product** | **LR9D/ LR9G** | **SS/ SSD** | **3DM2/ FDM2** | **3MZ2/ FMZ2/ 3BZ2/ FBZ2** |
| Precise Overload Protection (Inverse Time) | ■ | | ■ | ■ |
| Over Current Protection (Defnite Time) | | ■ | ■ | ■ |
| Selectable Trip Clas 5-30 | ■ | | ■ | ■ |
| Current Unbalance Protection | LR9G Only | | ■ | ■ |
| Locked Rotor, Phase Loss | ■ | * | ■ | ■ |
| Under current Protection | | | ■ | ■ |
| Ground Current Protection | LR9G Only | | | ■ |
| Current Measurement | 3CT | 2CT | 3CT | 3CT |
| Current Display | | # | ■ | ■ |
| Direct Mounting on Contactor | $ | | | |
| Fault History | | | ■ | ■ |
| Configurable protection functions | | | ■ | ■ |

* - over current based protection
# - with SSD
$ - upto 38 Amps

■ Possible solution
■ Ideal solution

# Analog EOCR

- Compact
- Protection against over current/phase loss/locked rotor (phase loss/locked rotor operates by over current)
- Manual (instant)/electrical reset
- NVR (No Volt Release) function / Fail Safe
- Suitable for single-phase / 3-phase motors
- LED (operation display and active current display)

## EOCR SS
- Without Display

| EOCR SS | | | |
|---|---|---|---|
| **Current Range** | **Control Voltage** | **Reference** | **Unit MRP [₹]** |
| 0.5-6 | 24-240V AC/DC | EOCRSS-05S | 6105 |
| 3-30 | 24-240V AC/DC | EOCRSS-30S | |
| 5-60 | 24-240V AC/DC | EOCRSS-60S | |

**Note:** 2 SPST output contacts

**To order an EOCR-SS:**

E 0 C R S S - 0 5 S
(0 5 → ①, S → ②)

| | | | | |
|---|---|---|---|---|
| ① | **Current Setting Range** | **5** | 0.5-6A | For 60A or higher, combine 05 Type and an external CT (secondary 5A) for use |
| | | **30** | 3.0-30A | |
| | | **60** | 5.0-60A | |
| ② | **Operating Power Supply** | **S** | 24-240V AC/DC | |
| | | **W** | 380-440V AC | |

**Note:** For a CT combination type, please write an accessory code from the CT Order Codes separately.

## EOCR SSD
- With Display (Operating Current & Trip Cause)

| EOCR SSD | | | |
|---|---|---|---|
| **Current Range** | **Control Voltage** | **Reference** | **Unit MRP [₹]** |
| 0.5-6 | 24-240V AC/DC | EOCRSSD-05S | 9130 |
| 3-30 | 24-240V AC/DC | EOCRSSD-30S | |
| 5-60 | 24-240V AC/DC | EOCRSSD-60S | |

**Note:** 2 SPST output contacts

**To order an EOCR-SS:**

E 0 C R S S D - 0 5 S
(0 5 → ①, S → ②)

| | | | | |
|---|---|---|---|---|
| ① | **Current Setting Range** | **5** | 0.5-6A | For 60A or higher, combine 05Type and an external CT (secondary 5A) for use |
| | | **30** | 3.0-30A | |
| | | **60** | 5.0-60A | |
| ② | **Operating Power Supply** | **S** | 24-240V AC/DC | |
| | | **W** | 380-440V AC | |

**Note:** For a CT combination type, please write an accessory code from the CT Order Codes separately.

For details on non standard references, technical parameters, accessories, compatibility, stockable and non stockable status please contact Customer Care

☑ NORMAL STOCK ITEMS

W.E.F. January 25th, 2022

# TeSys Protect
## EOCR

NEW

# Digital EOCR

- Micro-controller unit based
- Real time processing / High precision
- Protections : Over current, Under current, Phase loss, Phase reversal, Stall, Jam, Current Imbalance, Earth fault (3MZ2/ FMZ2/3BZ2/FBZ2)
- Current Rating - 0.5 to 400A
- Bar graph indication of a load current to the current setting.
- Ancillary functions : Fail safe, Accumulated running hour, 3 faults records & limitation of auto-restart.
- Individual phase I-THD monitoring
- Suitable low Frequency Operation
- Communication capable RS485 (Optional)

### Selection Table for Digital EOCR

| 3 | D | M | 2 | - | W | R | D | U | W | Z |
|---|---|---|---|---|---|---|---|---|---|---|
| ❶ | | | | | ❷ | | ❸ | ❹ | ❺ | ❻ |

| | | | | |
|---|---|---|---|---|
| ❶ | Digital Electronic Over-current Relay | 3DM2/ FDM2 | Without Ground Fault Protection | |
| | | 3MZ2/ FMZ2 | With Ground Fault Protection with External ZCT | |
| | | 3BZ2/ FBZ2 | With Ground Fault Protection inbuilt ZCT | |
| Built-in display | | 3●●2 | Flush mounting display F●●2 | |
| No | Item | Type | Current Range | |
| ❷ | Standard | WR | 0.5...80A | |
| ❸ | Relay Output | D | b (95-96), a(97-98), a(07-08) 3DM2, FDM2 | |
| | | A | a(97-98): OL, a(57-58): GF | 3MZ2, FMZ2 |
| | | C | b(95-96), a(97-98): OL/GF | |
| | | D | b(95-96) : OL, a(57-58): GF* | |
| ❹ | Control Power | B | AC/DC 24V | |
| | | U | AC/DC 100~240V | |
| ❺ | Wiring Method | W | Window-hole type* | |
| | | H | Bottom-hole type | |
| ❻ | Version | Z | New version | |

* Not Possible with 3BZ2/FBZ2

| Digital EOCR | | | | |
|---|---|---|---|---|
| Current Range | Control Voltage | Reference | Description | Unit MRP [₹] |
| 0.5-80A | 100-240V AC/DC | 3DM2-WRDUWZ | Without ground - fault protection | 19265 |
| | | 3DM2-WRDUHZ | | |
| | | FDM2-WRDUWZ | | 20835 |
| | | FDM2-WRDUHZ | | |
| | | 3MZ2-WRAUWZ | With ground - fault protection | 19525 |
| | | 3MZ2-WRAUHZ | | |
| | | 3MZ2-WRCUWZ | | |
| | | 3MZ2-WRCUHZ | | |
| | | 3MZ2-WRDUWZ | | |
| | | 3MZ2-WRDUHz | | |
| | | FMZ2-WRAUWZ | | 23440 |
| | | FMZ2-WRAUHZ | | |
| | | FMZ2-WRCUWZ | | |
| | | FMZ2-WRCUHZ | | |
| | | FMZ2-WRDUWZ | | |
| | | FMZ2-WRDUHZ | | |
| | | 3BZ2-WRAUHZ | With ground - fault protection (inbuilt ZCT) | 28340 |
| | | 3BZ2-WRCUHZ | | |
| | | FBZ2-WRAUHZ | | 28795 |
| | | FBZ2-WRCUHZ | | |

# EOCR Accessories

| ZCT - Ground Fault Protection | | | |
|---|---|---|---|
| | Reference | Description | Unit MRP [₹] |
|  | ZCT-035-Z | ZCT EP 35 mm | 6130 |
| | ZCT-080-Z | ZCT EP 80 mm | 8295 |
| | ZCT-120-Z | ZCT EP 120 mm | 13650 |

| Display Cable for FDM2/FMZ2/FBZ2 | | | |
|---|---|---|---|
| | Reference | Description | Unit MRP [₹] |
| | CABLE-RJ45-001Q | CABLE 1M | 2230 |

**ZCT - Ground Fault Protection**

| 3CT | - | H1 | - | 100 | - | Z |
|---|---|---|---|---|---|---|
| | | ❶ | | | | |

| | | Reference | Description | Unit MRP [₹] |
|---|---|---|---|---|
|  | ❶ CT ratio | H1-100-Z | Square 3CT 100:5 | 4905 |
| | | HH-150-Z | Square 3CT 150:5 | 6075 |
| | | H2-200-Z | Square 3CT 200:5 | 6730 |
| | | H3-300-Z | Square 3CT 300:5 | 7050 |
| | | H4-400-Z | Square 3CT 400:5 | 8295 |

For details on non standard references, technical parameters, accessories, compatibility, stockable and non stockable status please contact Customer Care

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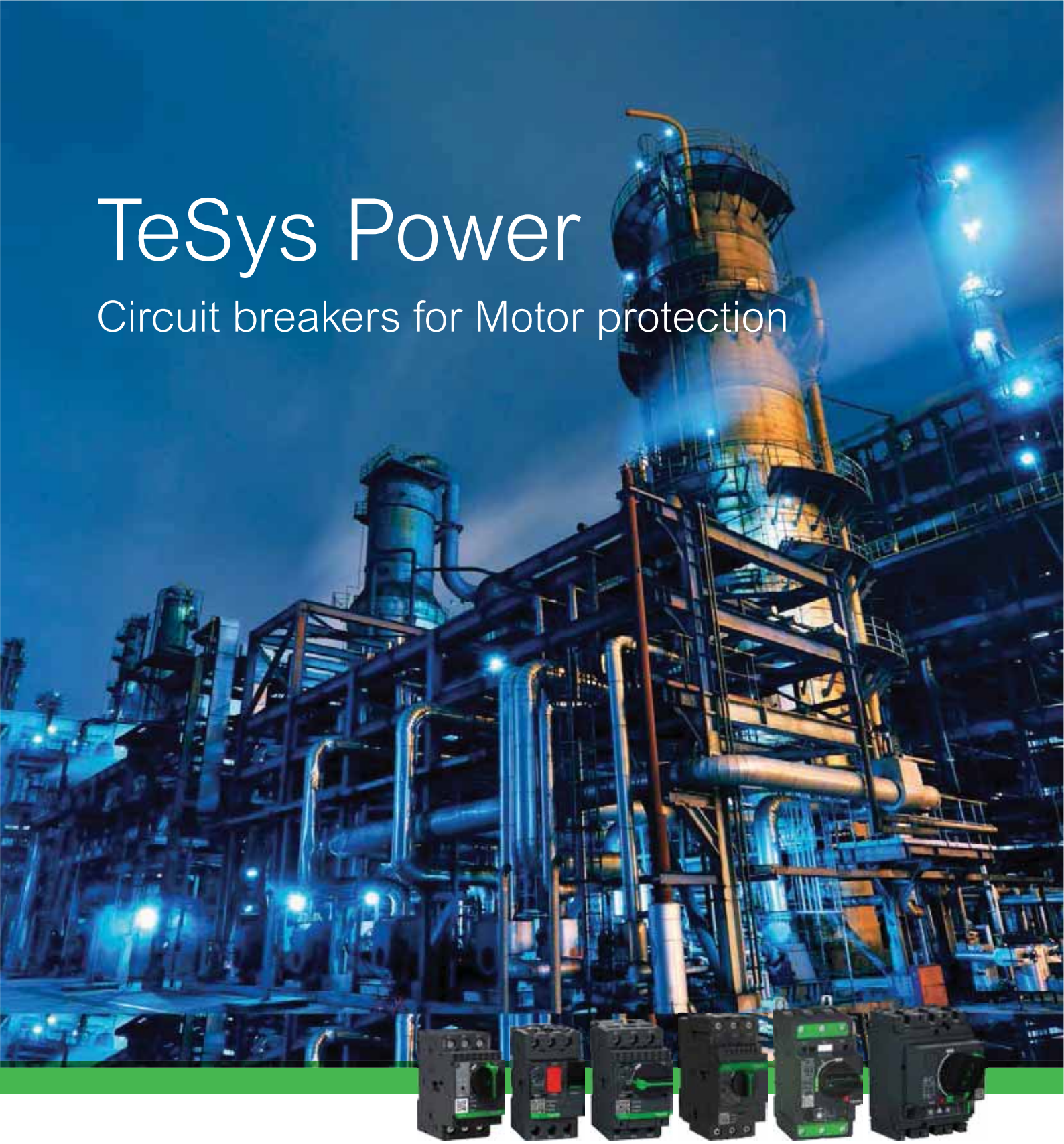
W.E.F. January 25th, 2022

# TeSys Power

## Circuit breakers for Motor protection



## Circuit breakers for motor protection and control

TeSys Deca and TeSys Giga Circuit Breakers provide compact, reliable and efficient solutions:

- Isolation
- Protection against short circuits and overloads
- Control of motors from 0.06 to 250 kW.
- Conforming to global standards.(IEC/EN/UL/CSA)

**For more information on motor protection circuit breakers**

se.com/in/TeSys

# TeSys Power
## Circuit Breakers for Motor Protection

### Magnetic Circuit Breaker

- Conformance to IEC 60947 -1,-2,-4
- Magnetic circuit breakers range from 0.1-80 Amps
- High Breaking capacity up to 100kA
- Wide range of accessories

| Breaking Capacity at 415V 50Hz | Motor Power AC-3** kW | HP | Magnetic Protection Rating (A) | Reference | Unit MRP [₹] |
|---|---|---|---|---|---|
| **With Rocker Lever Control (Economy)*** | | | | | |
| 100kA | 0.09 | - | 0.4 | GV2LE03 | 4875 |
| | 0.18 | - | 0.63 | GV2LE04 | |
| | 0.37 | 0.5 | 1 | GV2LE05 | |
| | 0.55 | - | 1.6 | GV2LE06 | |
| | 1.1 | 1.5 | 2.5 | GV2LE07 | |
| | 1.5 | 2 | 4 | GV2LE08 | |
| | 2.2 | 3 | 6.3 | GV2LE10 | |
| | 3 | 5.5 | 10 | GV2LE14 | |
| 15kA | 5.5 | 7.5 | 14 | GV2LE16 | |
| | 7.5 | 10 | 18 | GV2LE20 | 5660 |
| | 11 | 15 | 25 | GV2LE22 | |
| 10kA | 15 | 20 | 32 | GV2LE32 | 9615 |
| **With Rotary Handle Control*** | | | | | |
| 100kA | 0.09 | - | 0.4 | GV2L03 | 5595 |
| | 0.18 | - | 0.63 | GV2L04 | |
| | 0.37 | 0.5 | 1 | GV2L05 | |
| | 0.55 | - | 1.6 | GV2L06 | |
| | 1.1 | 1.5 | 2.5 | GV2L07 | |
| | 1.1 | 2 | 4 | GV2L08 | |
| | 2.2 | 3 | 6.3 | GV2L10 | |
| | 4 | 5.5 | 10 | GV2L14 | |
| 50kA | 5.5 | 7.5 | 14 | GV2L16 | |
| | 7.5 | 10 | 18 | GV2L20 | |
| | 11 | 15 | 25 | GV2L22 | |
| | 15 | 20 | 32 | GV2L32 | |
| | 18.5 | 25 | 40 | GV3L40 | 15775 |
| | 22 | 29 | 50 | GV3L50 | 16145 |
| | 30 | 40 | 65 | GV3L65 | 16495 |
| | 37 | 50 | 73 | GV3L73 | 18650 |
| **With Toggle Control** | | | | | |
| 50kA | 37 | 50 | 80 | GV4LE80N6 | 15525 |
| | 55 | 74 | 115 | GV4LE115N6 | |
| | 75 | 101 | 150 | LV430832 | On Request |
| | 110 | 147 | 220 | LV431752 | |
| | 160 | 214 | 320 | LV432749 | |
| | 200 | 268 | 500 | LV432949 | |

* Conforming to IEC 60947-2-3-4
** 50/60Hz - 415V
- GV2-L with the TeSys Deca contactor and LRD overload relay provides Type 2 Co-ordination

### Thermal Magnetic Circuit Breaker

- Conformance to IEC 60947 -1,-2,-4, conformity to International Standards - UL, CSA, CE
- Thermal magnetic circuit breakers range from 0.1-220 Amps
- High Breaking capacity up to 100kA
- Wide range of accessories
- S-shaped busbar for side-by-side connection with 40 - 65A Contactor

| Breaking Capacity at 415V 50Hz | Motor Power AC-3** kW | HP | Thermal Protection Adjustment Range | Reference | Unit MRP [₹] |
|---|---|---|---|---|---|
| **With Push Button Control (Economy)** | | | | | |
| 100kA | - | - | 0.1 - 0.16 | GV2ME01 | 5235 |
| | 0.06 | - | 0.16 - 0.25 | GV2ME02 | |
| | 0.09 | - | 0.25 - 0.40 | GV2ME03 | |
| | 0.18 | - | 0.40 - 0.63 | GV2ME04 ☑ | 5565 |
| | 0.37 | 0.5 | 0.63 - 1.0 | GV2ME05 ☑ | |
| | 0.55 | 0.75 | 1.0 - 1.6 | GV2ME06 ☑ | 5690 |
| | 0.75 | 1 | 1.6 - 2.5 | GV2ME07 ☑ | |
| | 1.1 | 2 | 2.5 - 4 | GV2ME08 ☑ | 5885 |
| | 2.2 | 3 | 4 - 6.3 | GV2ME10 ☑ | |
| | 3 | 5.5 | 6 - 10 | GV2ME14 ☑ | |
| 15kA(1) | 5.5 | 7.5 | 9 - 14 | GV2ME16 ☑ | 6600 |
| | 7.5 | 10 | 13 - 18 | GV2ME20 ☑ | 7100 |
| | 9 | 12.5 | 17 - 23 | GV2ME21 ☑ | 7580 |
| | 11 | 15 | 20 - 25 | GV2ME22 ☑ | 7580 |
| 10kA(1) | 15 | 20 | 24 - 32 | GV2ME32 ☑ | 12280 |
| **With Rotary Handle Control** | | | | | |
| 100kA | - | - | 0.1 - 0.16 | GV2P01 | 5095 |
| | 0.06 | - | 0.16 - 0.25 | GV2P02 | |
| | 0.09 | - | 0.25 - 0.40 | GV2P03 | |
| | 0.18 | - | 0.40 - 0.63 | GV2P04 | 5840 |
| | 0.37 | 0.5 | 0.63 - 1.0 | GV2P05 ☑ | |
| | 0.55 | 0.75 | 1.0 - 1.6 | GV2P06 | |
| | 0.75 | 1 | 1.6 - 2.5 | GV2P07 | |
| | 1.1 | 2 | 2.5 - 4 | GV2P08 ☑ | 6020 |
| | 2.2 | 3 | 4 - 6.3 | GV2P10 ☑ | |
| | 3 | 5.5 | 6 - 10 | GV2P14 ☑ | 6420 |
| | 5.5 | 7.5 | 9 - 14 | GV2P16 ☑ | 7885 |
| 50kA(2) | 7.5 | 10 | 13 - 18 | GV2P20 ☑ | 9105 |
| | 9 | 12.5 | 17 - 23 | GV2P21 ☑ | |
| | 11 | 15 | 20 - 25 | GV2P22 ☑ | |
| 35kA(2) | 15 | 20 | 24 - 32 | GV2P32 ☑ | 15340 |
| 50kA | 18.5 | | 30...40 | GV3P40 ☑ | 17925 |
| | 22 | | 37...50 | GV3P50 ☑ | 22225 |
| | 30 | | 48...65 | GV3P65 ☑ | 22795 |
| | 37 | | 62...73 | GV3P73 | 23300 |
| **With Toggle Control** | | | | | |
| 50kA | 37 | 49.58 | 40...80 | GV4PE80N6 | 20125 |
| | 55 | 73.7 | 65...115 | GV4PE115N6 | |
| **With Direct Rotary Handle** | | | | | |
| 70kA | 75 | 101 | 70...150 | GV5P150H | 42085 |
| | 110 | 147 | 100...220 | GV5P220H | 49095 |
| | 160 | 214 | 160...320 | GV6P320H | 63125 |
| | 200 | 268 | 250...500 | GV6P500H | 86970 |

** 50/60Hz - 415V
(1) With GV1-L3 current limiter, breaking capacity can be increased to 100kA. Combination of the GV2-M with the TeSys Deca provides Type 2 Co-ordination.
(2) With GV1-L3 current limiter, breaking capacity can be increased to 100kA. Combination of the GV2-P with the TeSys Deca providesType 2 Co-ordination.

It is recommended to check with Customer care team for selection, recommendation, and availability of stockable and non stockable references

☑ NORMAL STOCK ITEMS

W.E.F. January 25th, 2022

# TeSys Power
## Circuit Breakers for Motor Protection

## GV4LE

- IEC/EN 60947-1, IEC/EN 60947-2, CCC, EAC
- Can be used with class 5, 10 or 20 relay
- Short Circuit Protection with an adjustable pick-up Ii = 6 to 14 In.
- From 0.25 - 55kW

### Magnetic Toggle Control

| Motor Power AC-3 (400/415V AC) | | In | Magnetic Setting Range | 25kA Breaking Capacity | | 50kA Breaking Capacity | | 100kA Breaking Capacity | |
|---|---|---|---|---|---|---|---|---|---|
| kW | HP | (A) | A | Reference | Unit MRP [₹] | Reference | Unit MRP [₹] | Reference | Unit MRP [₹] |
| 0.25..0.75 | 0.3..1 | 2 | 12..28 | - | - | GV4LE02N6 | 12420 | GV4LE02S6 | 15870 |
| 0.55..1.5 | 0.7..2 | 3.5 | 21..49 | - | - | GV4LE03N6 | | GV4LE03S6 | |
| 1.5..3 | 2..4 | 7 | 42..96 | - | - | GV4LE07N6 | | GV4LE07S6 | |
| 3..5.5 | 4..7.5 | 12.5 | 75..175 | - | - | GV4LE12N6 | | GV4LE12S6 | |
| 5.5..11 | 7.5..14 | 25 | 150..350 | GV4LE25B6 | On Request | GV4LE25N6 | 15525 | GV4LE25S6 | 18975 |
| 11..22 | 15..30 | 50 | 300..700 | GV4LE50B6 | | GV4LE50N6 | | GV4LE50S6 | |
| 18.5..37 | 25..50 | 80 | 480..1120 | GV4LE80B6 | | GV4LE80N6 | | GV4LE80S6 | |
| 30..55 | 40..75 | 115 | 690..1610 | GV4LE115B6 | | GV4LE115N6 | | GV4LE115S6 | |

**Note:** For Everlink termination please order after removing the 6 at the end Eg. GV4LE115N

## GV4PE

- IEC/EN 60947-1, IEC/EN 60947-2, IEC/EN 60947-4-1, UL 60497-4-1, CCC, EAC, CSA
- Overload or thermal protection
- Short time delay protection
- Short circuit protection
- Fixed Ground fault protection
- Phase unbalance or phase loss
- Front indications through LED
- Variable Trip class : Trip Class 10/ Trip Class 20

### Thermal Magnetic Protection Toggle Control

| Motor Power AC-3 (400/415V AC) | | In | Magnetic Setting Range | 25kA Breaking Capacity | | 50kA Breaking Capacity | | 100kA Breaking Capacity | |
|---|---|---|---|---|---|---|---|---|---|
| kW | HP | (A) | A | Reference | Unit MRP [₹] | Reference | Unit MRP [₹] | Reference | Unit MRP [₹] |
| 0.25..0.75 | 0.3..1 | 2 | 0.8..2 | - | - | GV4PE02N6 | 17020 | GV4PE02S6 | 18400 |
| 0.55..1.5 | 0.7..2 | 3.5 | 1.4..3.5 | - | - | GV4PE03N6 | | GV4PE03S6 | |
| 1.5..3 | 2..4 | 7 | 2.9..7 | - | - | GV4PE07N6 | | GV4PE07S6 | |
| 3..5.5 | 4..7.5 | 12.5 | 5..12.5 | - | - | GV4PE12N6 | | GV4PE12S6 | |
| 5.5..11 | 7.5..14 | 25 | 10..25 | GV4PE25B6 | On Request | GV4PE25N6 | 20125 | GV4PE25S6 | 22425 |
| 11..22 | 15..30 | 50 | 20..50 | GV4PE50B6 | | GV4PE50N6 | | GV4PE50S6 | 21275 |
| 18.5..37 | 25..50 | 80 | 40..80 | GV4PE80B6 | | GV4PE80N6 | | GV4PE80S6 | |
| 30..55 | 40..75 | 115 | 65..115 | GV4PE115B6 | | GV4PE115N6 | | GV4PE115S6 | |

**Note:** For Everlink version please order after removing the 6 at the end. Eg. GV4PE115N

| Crimp Lug/busbar connection | | | |
|---|---|---|---|
| Description | | Sold in lots of | Reference |
| Crimped lug connector + screws | | 1 | GV4LUG |
| Transparent terminal shield for crimped lug connector | | 1 | LAD96590 |
| Interphase barriers | | 6 | LV426920 |
| Spreader 3-pole | To increase the pitchto 35 min | 1 | LV426940 |

It is recommended to check with Customer care team for selection, recommendation, and availability of stockable and non stockable references

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W.E.F. January 25th, 2022

# Accessories for GV4

**MX Shunt Trip**

- Trips the circuit breaker when the control voltage rises above 70% of rated voltage
- Shunt trip 110..130V AC is suitable.. etc for ground fault protection when combined with a Class I ground fault sensing element

**MN Under Voltage Release**

Trips the circuit breaker when the control voltage drops below 35% of its rated voltage

| Description | Mounting | Voltage | References | Unit MRP [₹] |
|---|---|---|---|---|
| Mx Shunt Trip | Internal, Plug-In | 220-240 VAC 50 Hz, 208-240 VAC 60 Hz, 277 VAC 60 Hz | GV4AS287 | 3465 |
| Mn Under Voltage Release | Internal, Plug-In | 440-480 VAC 60 Hz | GV4AU486 | 5125 |

# Auxiliary Contact Blocks

An auxiliary contact block provides one changeover contact with one common point for OF and SD function, depending on where it is inserted

Open/Close OF Function: indicates position of the circuit breaker contacts

Trip Alarm SD Function: indicates circuit breaker tripping due to:

- Electrical fault (overload, short circuit)
- Shunt trip/Undervoltage release
- "Push to Trip" Function

Resets when the circuit breaker is reset

| Description | Maximum Number | Mounting | Type of Contacts | Reference | Unit MRP [₹] |
|---|---|---|---|---|---|
| Auxiliary Contact Block | 2 (1 Each For OF or SD) | Internal Plug-In | NO + NC | GV4AE11 | 1220 |

## Rotary Handles

| Description | Type | Degree of Protection | Reference | Unit MRP [₹] |
|---|---|---|---|---|
| Direct Mounting Rotary Handle | BLACK | IP40 | GV4ADN01 | 1815 |
| Front Extended Rotary Handle (Min Shaft Length 214Mm/Max Shaft Length 627Mm) | BLACK | IP54 | GV4APN01 | 2695 |
| | RED HANDLE ON YELLOW BEZEL | IP54 | GV4APN02 | |
| | RED HANDLE ON YELLOW BEZEL | IP65 | GV4APN04 | 2835 |

## Connection Accessories

| Description | Reference |
|---|---|
| Spreader 3-pole (To increase pitch to 35mm) (1 pce) | LV426940 |

It is recommended to check with Customer care team for selection, recommendation, and availability of stockable and non stockable references

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## Accessories for Motor Circuit Breakers

| Description | | | Reference | Unit MRP [₹] |
|---|---|---|---|---|
| **For GV2** | | | | |
| Front contact NO or NC(1) | | | GVAE1 | 1070 |
| Front contact NO + NC | | | GVAE11 ☑ | 1315 |
| | | | GVAE20 | 1450 |
| Side contact NO + NC | | | GVAN11 ☑ | 1585 |
| | | | GVAN20 | |
| Fault signalling contact + 1NO contact (2) | | | GVAD1010 ☑ | 2065 |
| Fault signalling contact + 1NC contact (2) | | | GVAD1001 | |
| Short circuit signalling contact block 1 C/O | | | GVAM11 | 1970 |
| Under voltage trip | 110 ... 115V | 50Hz | GVAU115 | 4175 |
| | 220 ... 240V | 50Hz | GVAU225 | 3770 |
| | 380 ... 400V | 50Hz | GVAU385 | |
| Shunt trip | 110 ... 115V | 50Hz | GVAS115 | |
| | 220 ... 240V | 50Hz | GVAS225 | |
| | 380 ... 400V | 50Hz | GVAS385 | |
| Additive limiter for increasing breaking capacity to100kA for GV2ME and GV2P. | | | GV1L3 | 6085 |
| Connection block - GV2 with contactor LC1-D09..D38 | | | GV2AF3 | 740 |
| Connection block - LS1 D32 or GV2 with Contactor LC1-K or LP1-K | | | GV2AF01 | 800 |
| Empty enclosure for GV2ME - plastic | | | GV2MP02 | 3165 |
| | | | GV2MC02 | 3475 |

(1) Choice of NC or NO contact operation depending on which way round the reversible block is mounted.
(2) The GV-AD is always mounted next to the circuit breaker.

## Busbars

| Connection Pitch | No. of Tapoff Points | Reference | Unit MRP [₹] |
|---|---|---|---|
| **For GV2** | | | |
| 45 mm | 2 | GV2G245 | 1865 |
| | 4 | GV2G445 | 2935 |
| 54 mm | 2 | GV2G254 | 1885 |
| | 3 | GV2G354 | 2120 |
| | 4 | GV2G454 | 2655 |
| | 5 | GV2G554 | 2875 |
| 72 mm | 4 | GV2G472 | 3250 |

| Description | Reference | Unit MRP [₹] |
|---|---|---|
| **Accessories for Busbars** | | |
| Terminal block - to supply one or more 3-pole busbar GV2 | GV2G05 | 4075 |
| Protective end covers for unused busbar outlets | GV1G10 | 720 |
| Terminal block for connection from top | GV1G09 | 2130 |

## Accessories for Motor Circuit Breakers

| Description | Reference | Unit MRP [₹] |
|---|---|---|
| **For GV2-P/GV2-L** | | |
| External operator - IP54, Black | GV2APN01 ☑ | 3780 |
| External operator - IP54, Yellow/Red | GV2APN02 | 6965 |
| Visible isolation block - for motor circuit breaker GV2 | GV2AK00 | 3165 |
| **For GV3P/GV3L** | | |
| **Auxiliary Contacts** | | |
| Front contact: 1 NO (fault) + 1NC (Auxiliary) | GVAED011 | 1365 |
| Front contact: 1 NO (fault) + 1NO (Auxiliary) | GVAED101 | 1500 |
| **Busbar** | | |
| 3-pole, 3 tap, 64 mm pitch | GV3G364 | 1790 |
| S-shape bus bar | GV3S | 1340 |
| **External Operator** | | |
| **IP54, Black** | **GV3APN01** | **4515** |
| **IP54, Yellow/Red** | **GV3APN02** | **4330** |

**Note:** All other accessories are same as of GV2.
Busbars GV3G364 and GV3S are not compatible with GV3*73 and GV3*80.

| Description | Operating Voltage | Reference | Unit MRP [₹] |
|---|---|---|---|
| **For GV5 and GV6** | | | |
| Auxiliary contact - 1 OC | - | GV7AE11 ☑ | 2840 |
| Clip-on connector - upto 150 A - 1.5..95 mm2 | - | GV7AC021 | 1170 |
| Clip-on connector- upto 220 A - 1.5..185 mm2 | - | GV7AC022 | 1245 |
| Front rotary handle GV7AP GV7R - black handle (2) | - | GV7AP03 | 4880 |
| | | GV7AP01 | 8490 |
| Padlocking device - 1..3 padlocks Ø 5..8mm shank(3) | - | GV7V01 | 1155 |
| Terminal shields IP405(1) | - | GV7AC01 | 3020 |
| **For GV5 and GV6** | | | |
| Shunt release | 200...240 V AC 50/60 Hz | GV7AS207 | 6450 |
| Under Voltage release | 200...240 V AC 50/60 Hz | GV7AU207 | 6660 |

(1) Terminal shields cannot be used together with spreaders.
(2) For mounting direct rotary handle on enclosure door.
This accessory makes it possible to open the door If the device is closed and prevents the device from being closed if the door is open.
(3) For Circuit breaker not fitted with a rotary handle

It is recommended to check with Customer care team for selection, recommendation, and availability of stockable and non stockable references

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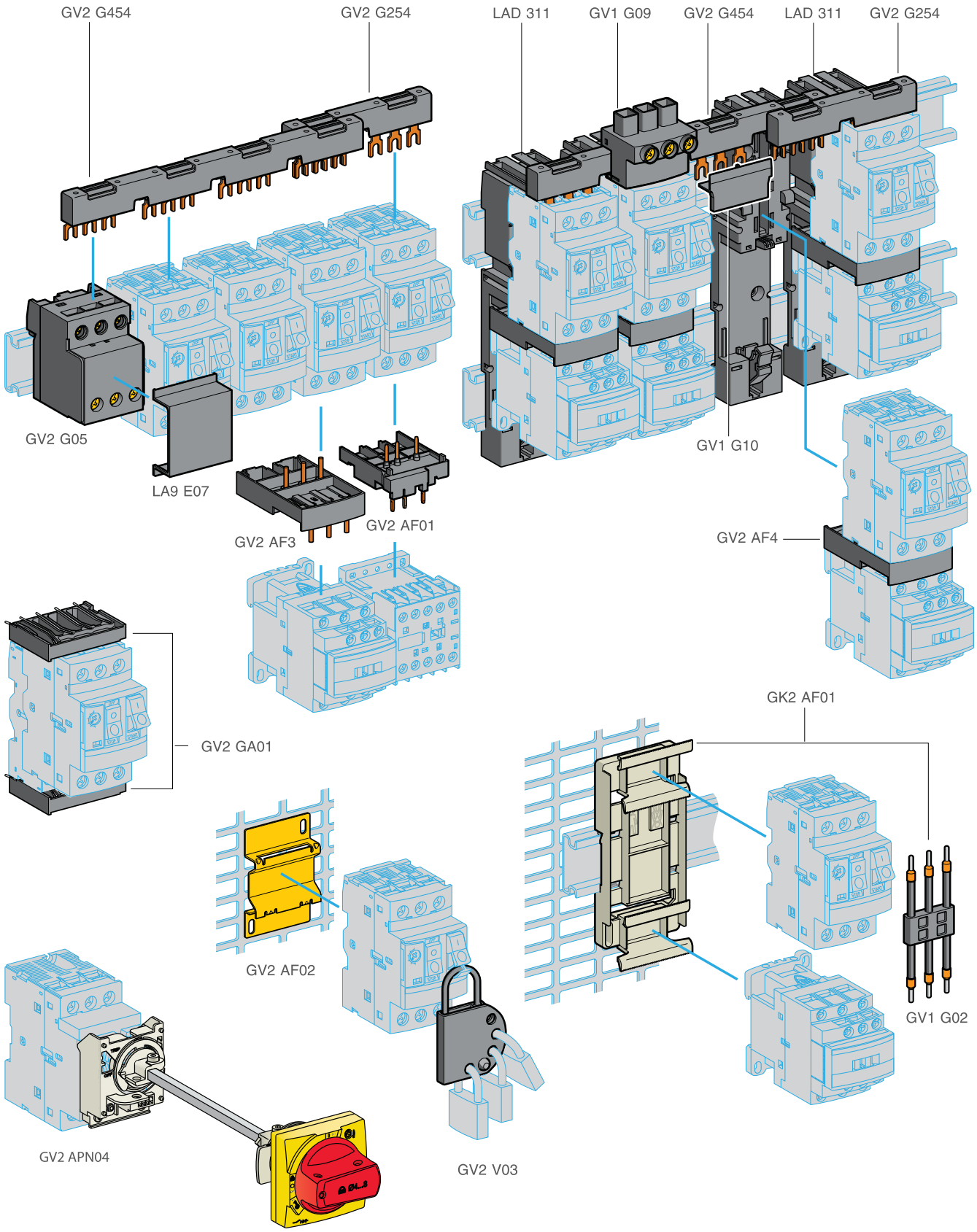
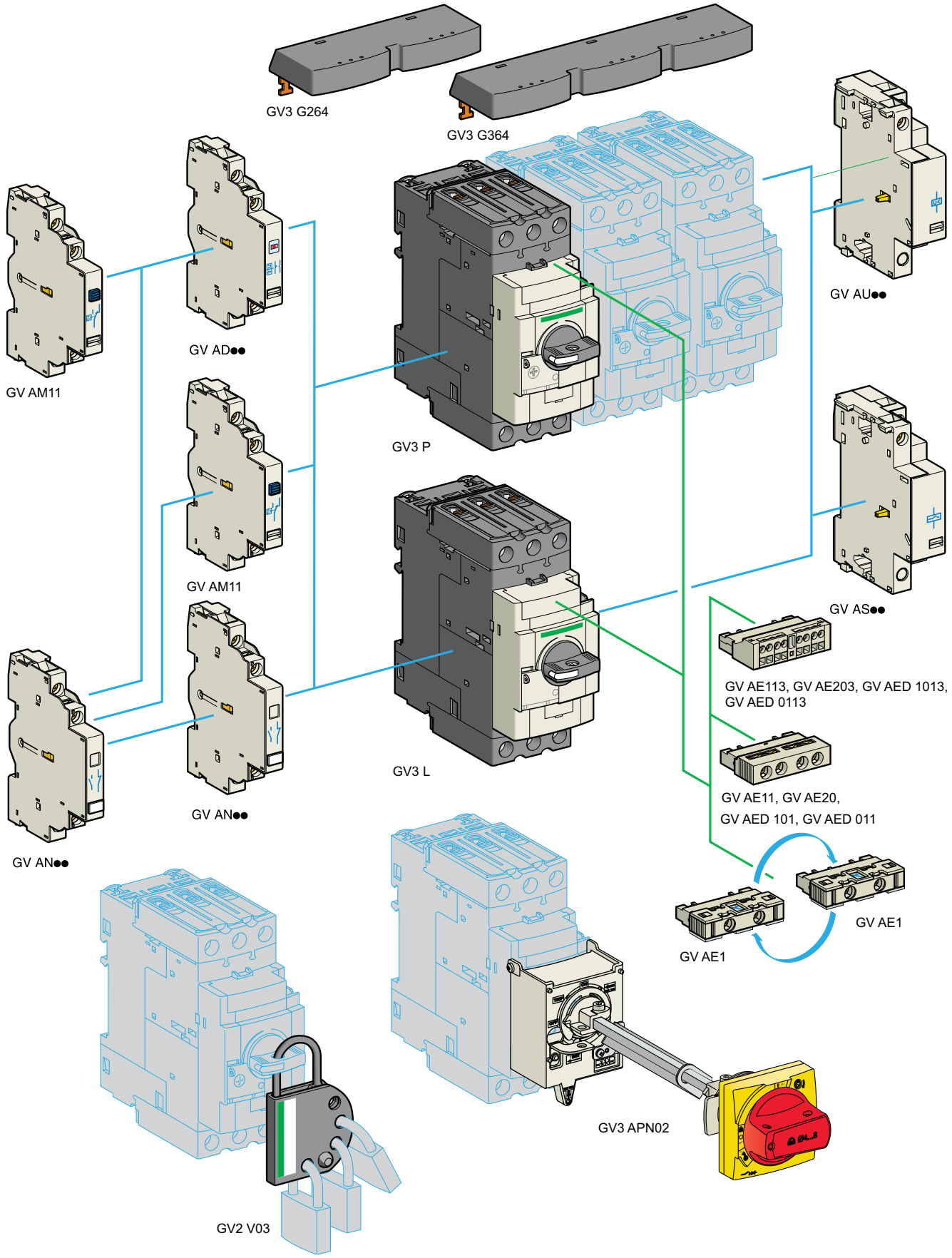
W.E.F. January 25th, 2022

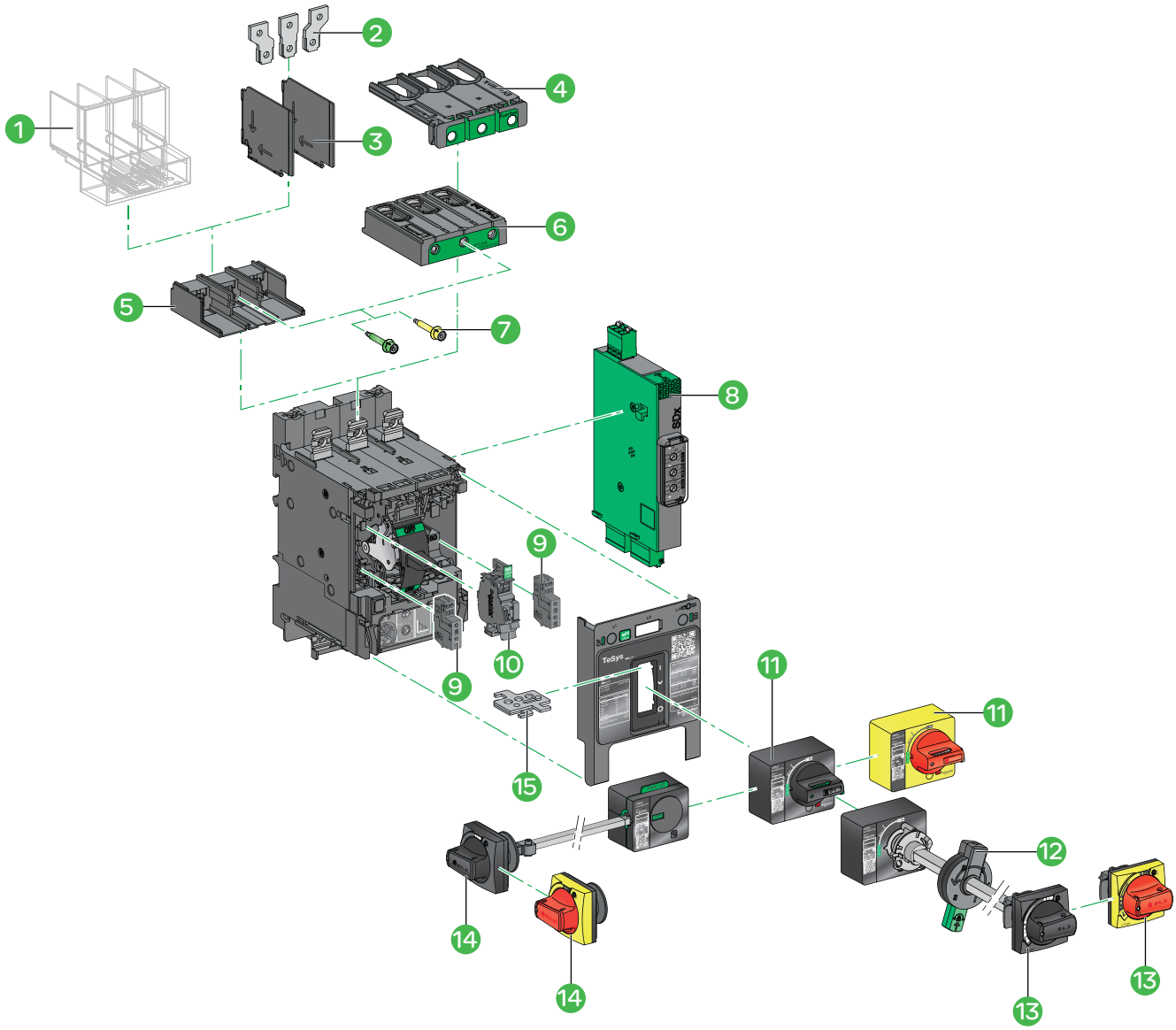
# TeSys
## Accessories compatibility



# TeSys
## Accessories compatibility



# TeSys GV4 Overview




1. Long terminal shield LAD96590
2. Terminal spreaders LV426940
3. Interphases barriers LV426920
4. Large spacing cover for EverLink connector GV4G66
5. Crimp lug connector GV4LUG
6. EverLink® connector LAD96595
7. Torque limiting breakaway bits LV42699p
8. SDx alarming/fault differentiation module GV4ADM1111 (only with GV4PEM)
9. Auxiliary contact block for OF or SD function GV4AE11
10. - MN undervoltage release GV4AUpp
    - MX shunt trip GV4ASpp
11. Direct mounting black or red on yellow bezel rotary handle GV4ADN01/ GV4ADN02
12. Open door shaft operator (for front extended rotary handle) LV426937
13. Front extended rotary handle kit with red handle on yellow bezel or black handle GV4APN01/ GV4APN02 /GV4APN04
14. Side rotary handle kit with red handle on yellow bezel or black handle LV426935/LV426936.
15. Toggle locking device 29370

## Vario Switch Disconnectors

| [Ithe] Conventional Thermal Current** | Poles Description | Rated Operational Power (AC-23)* | Reference | Unit MRP [₹] |
|---|---|---|---|---|
| **Complete Enclosed Switches** | | | | |
| • Range 12 to 175A, IP 65 Sealable and Lockable | | | | |
| 10 | 3P | 4 kW | VCF02GE | 3620 |
| 16 | 3P | 5.5 kW | VCF01GE | 3940 |
| 20 | 3P | 7.5 kW | VCF0GE | 4790 |
| 25 | 3P | 11 kW | VCF1GE | 5140 |
| 32 | 3P | 15 kW | VCF2GE | 6025 |
| 50 | 3P | 22 kW | VCF3GE | 9315 |
| 63 | 3P | 30 kW | VCF4GE | 10895 |

* Rated Power at 415V
** Ith in enclosure

| For Switch Type (Amps) | Mounting Arrangement | Ingress | Reference | Unit MRP [₹] |
|---|---|---|---|---|
| **Operators (Padlockable)** | | | | |
| 12 - 40 | 4 Screw Fixing | IP65 | KCF1PZ | 950 |
| 63 - 80 | 4 Screw Fixing | IP65 | KCF2PZ | 1005 |
| 125 - 175 | 4 Screw Fixing | IP40 | KCF3PZ | 4075 |

## Vario Switch Disconnectors

| [Ithe] onventional Thermal Current** | Poles Description | Reference | Unit MRP [₹] |
|---|---|---|---|
| **Complete Switch with Padlockable Operator** | | | |
| • Suitable for Front Mounting or Base Mounting | | | |
| 12 | 3P | VCF02 | 2275 |
| 20 | 3P | VCF01 | 2475 |
| 25 | 3P | VCF0 | 2890 |
| 32 | 3P | VCF1 | 3030 |
| 40 | 3P | VCF2 | 3750 |
| 63 | 3P | VCF3 | 6990 |
| 80 | 3P | VCF4 | 6360 |
| 125 | 3P | VCF5 | 14575 |
| 175 | 3P | VCF6 | 17670 |
| **Switch Bodies** | | | |
| 12 | | V02 | 1480 |
| 20 | | V01 | 1710 |
| 25 | | V0 | 2035 |
| 32 | | V1 | 2475 |
| 40 | | V2 | 3030 |
| 63 | | V3 | 4215 |
| 80 | | V4 | 5540 |
| 125 | | V5 | 11245 |
| 175 | | V6 | 14350 |

## Accessories

| Description | For Use with Switch Bodies | Rating in A | Pole Composition | Earth Contact | Auxiliary Contacts | Reference | Unit MRP [₹] |
|---|---|---|---|---|---|---|---|
| **Vario Add-on Modules** (1) | | | | | | | |
| Main Pole Module | V02/VCF02 | 12 | 1P | - | - | VZ02 | 1060 |
| | V0/1/VCF01 | 20 | 1P | - | - | VZ01 | 1080 |
| | V0/VCF0 | 25 | 1P | - | - | VZ0 | 1150 |
| | V1/VCF1 | 32 | 1P | - | - | VZ1 | 1125 |
| | V2/VCF2 | 40 | 1P | - | - | VZ2 | 1205 |
| | V3/VCF3 | 63 | 1P | - | - | VZ3 | 1565 |
| | V4/VCF4 | 80 | 1P | | - | VZ4 | |
| Neutral Pole Module(2) | V02 / VCF02 to V2 / VCF2 | - | 1N | - | - | VZ11 | 1290 |
| | V3 / VCF3 to V4 / VCF4 | - | 1N | - | - | VZ12 | 1730 |
| | V5 / VCZ5 to V6 / VCZ6 | - | 1N | - | - | VZ13 | 3570 |
| Earthing Module | V02 / VCF02 to V2 / VCF20 | - | - | - | - | VZ14 | 1275 |
| | V3 / VCF3 to V4 / VCF4 | - | - | 1 | - | VZ15 | 1505 |
| | V5 / VCZ5 to V6 / VCZ6 | - | - | 1 | - | VZ16 | 2335 |
| Auxiliary Contact Block Module | V02/ VCF02 to V6 / VCZ6 | - | - | - | 1NO + 1NC | VZ7 | 1330 |
| | V2/ VCF02 to V6 / VCZ6 | - | - | - | 2NO | VZ20 | 1330 |

(1) For mounting option of modules, please refer to the technical catalogue.
(2) With early make and late break contacts

| Description | For Use With | Reference | Unit MRP [₹] |
|---|---|---|---|
| **Components for Door Interlocking** | | | |
| Shaft extension - for Mini-VARIO and VARIO - V02..V2 | V02...V2 | VZ17 | 1275 |
| | | VZ30 | 1505 |
| Shaft extension - for Mini-VARIO and VARIO - V3 V4 V5 V6 | V3, V4, V5, V6 | VZ18 | |
| | | VZ31 | 1710 |
| Door interlock plate | VZ17 / VZ30 | KZ32 | 405 |
| | VZ18/31 | KZ74 | 695 |
| **Input Terminal Protection Shrouds** | | | |
| Terminal Shrouds | V02 - V2 | VZ8 | 430 |
| | V3 - V4 | VZ26 | 375 |
| | | VZ9 | 455 |
| | V5 - V6 | VZ27 | 375 |
| | | VZ10 | 570 |
| | V02 - V6 | VZ28 | 635 |
| | | VZ29 | 520 |

For details on non standard references, technical parameters, accessories, compatibility, stockable and non stockable status please contact Customer Care

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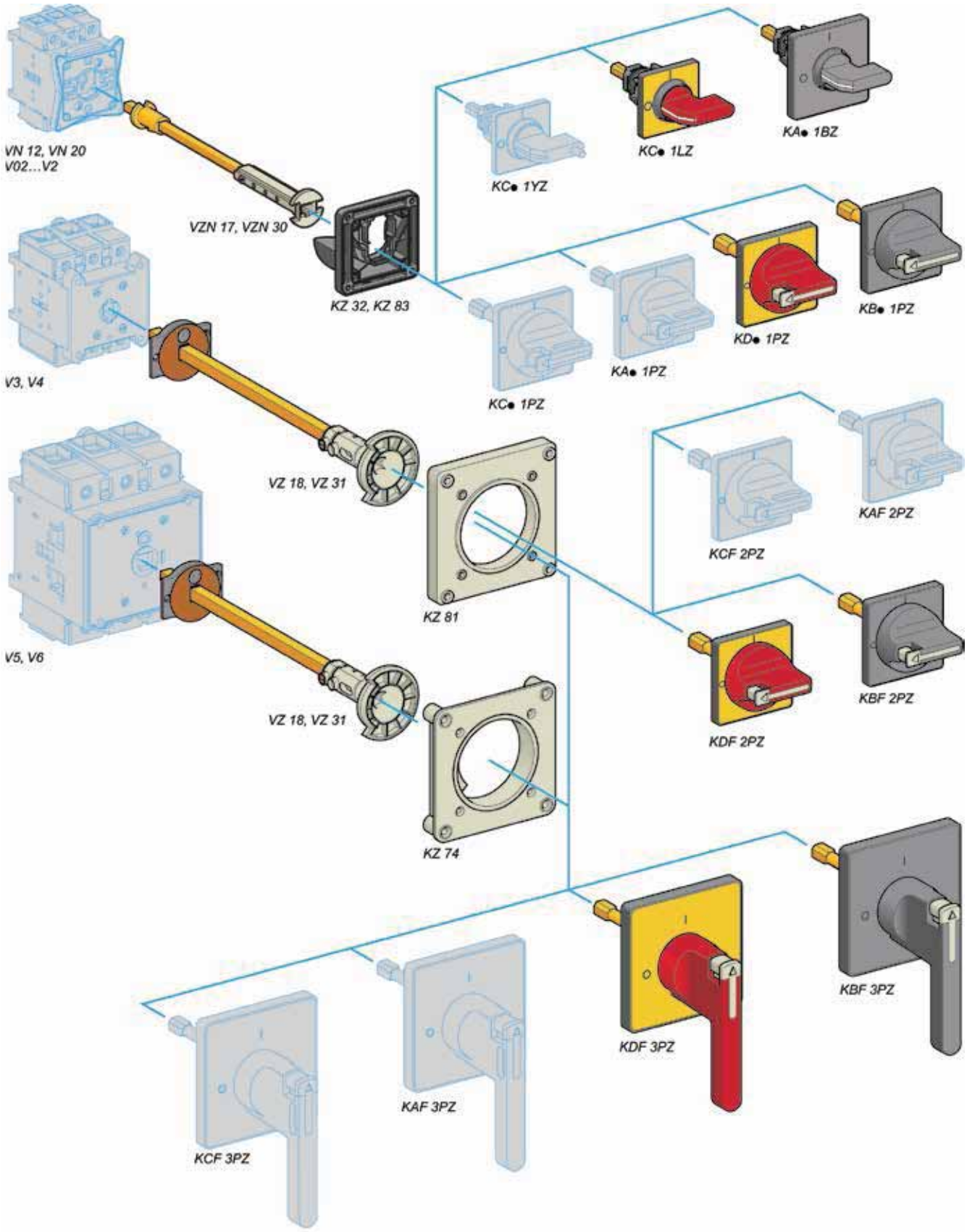
W.E.F. January 25th, 2022

# TeSys Control
## Accessories for Switches



EcoStruxure™
Innovation At Every Level

# Machine builders, it is time to cut engineering time and costs — DIGITIZE load management

## TeSys island

### Unique features

TeSys island is a smart, digital multifunctional load management system; it can switch, protect, manage motors and other electrical loads up to 80 Amps (AC3) in an electrical control panel.

### Benefits

Why should you choose TeSys island?

- Quicker engineering and reduce time to market
- Embedded algorithms detect abnormal load behaviors and generate alarms before machine stoppage.
- Pre-trip warnings can also be set on the system for scheduled maintenance.
- Fast device replacement on any portion of the island is possible because of the full integration of the system and the integrated Bus coupler resulting in reduced downtime.
- TeSys island provides energy monitoring at the load level
- Health status can be easily accessed, remotely or locally. This energy management data can be used for advanced analytics to increase machine efficiency further
- TeSys island can be easily integrated into Schneider Electric's EcoStruxure Machine architecture and 3rd party automation systems, supporting all major field buses.

se.com/in/TeSys

**For more information on TeSys island Digital Load Management System**

# TeSys Active
## TeSys island

# Enable smarter design and engineering

## Efficient

Make your machines intelligent, save time and costs with intuitive programming and commissioning using TeSys avatars. Simplify software integration within all major automation environments. One-click mounting on DIN rail and no need for control wiring.

## Enable new business models

Use load data and status information to create new service enabled business models. Access your machine from remote during operation & maintenance.

## A data provider

Get relevant data for digital load management & advanced analytics. Monitor energy at load level, remote users can easily check health status, troubleshoot and diagnose issues and take action, reduce machine stoppages and machine downtime.

## Improved security

Benefit from the highest cybersecurity and safety levels. Safety IO / Scalable with embedded diagnostic.

## Technical specifications

- System consists of DOL Starters & Input / Output modules
- System manages motors and other electrical loads up to 80A/37kW/50hp
- Up to 20 modules / 1 meter at one bus coupler
- No mechanical adjustments/settings required
- International standards-compliant
- Energy monitoring at the load level
- Only 21 commercial references for the complete system, including 5 standard motor starters and 5 functional safety motor starters
- Cybersecurity embedded into the system (Achilles Level 2 & Safety up to Cat 2)
- Safety stop TUV certified (Stop 0 and 1 with wiring categories 1 to 2, suitable for PL c,d (Performance Level) and SIL level 2)
- Open connectivity thanks to Ethernet IP and Modbus TCP fieldbuses

# TeSys Active
## TeSys island

TeSys island is an innovative digital load management solution-providing data for higher machine efficiency and ease of servicing, and allowing faster time to market.

**TeSys island is a modular, multifunctional system providing integrated functions inside an automation architecture, primarily for the direct control and management of low-voltage loads.**

**After commissioning, TeSys island can switch, help protect, and manage motors and other electrical loads up to 37 kW installed in an electrical control panel.**

This system is designed around the concept of TeSys avatars. These avatars:
- Are the functional object representing a logical function of the physical module with pre-defined logic
- Determine the configuration of the island.

The logical aspects of the island are managed with software tools, covering all phases of product and application lifecycle: design, engineering, commissioning, operation, and maintenance.


1. Bus Coupler
2. Analog I/O module
3. Digital I/O module
4. Voltage interface module
5. Power interface module
6. Standard Starter
7. SIL Starter
8. SIL interface module

| Designation | Product Commercial Reference | |
|---|---|---|
| **TeSys island components** | | |
| Standard Starter | 9A (AC-3) | TPRST009 |
| | 25A (AC-3) | TPRST025 |
| | 38A (AC-3) | TPRST038 |
| | 65A (AC-3) | TPRST065 |
| | 66A (AC-3) - 80A (AC-1) | TPRST080 |
| SIL Starter | 9A (AC-3) | TPRSS009 |
| | 25A (AC-3) | TPRSS025 |
| | 38A (AC-3) | TPRSS038 |
| | 65A (AC-3) | TPRSS065 |
| | 66A (AC-3) - 80A (AC-1) | TPRSS080 |
| Power interface module | 9A (AC-3) | TPRPM009 |
| | 38A (AC-3) | TPRPM038 |
| | 80A (AC-3) | TPRPM080 |
| Voltage interface module | | TPRVM001 |
| SIL interface module | | TPRSM001 |
| Digital I/O module | (4 input - 2 output) | TPRDG4X2 |
| Analog I/O module | (2 input -1 output) | TPRAN2X1 |
| Bus Coupler | EtherNet/IP - Modbus TCP | TPRBCEIP |
| | PROFINET | TPRBCPFN |
| | PROFIBUS | TPRBCPFB |
| **Assembly and Wiring Kits** | | |
| Kit for reversing starter application | for 9, 25, 38A (size 1 and 2) starters | LAD9R1 |
| | for 65, 80A (size 3) starters | LAD9R3 |
| Jumper bar 3-pole for Star Delta application | for 9, 25, 38A (size 1 and 2) starters | LAD9P3 |
| | for 65, 80 A (size 3) starters, a hazard sticker is provided | LAD9SD3S |

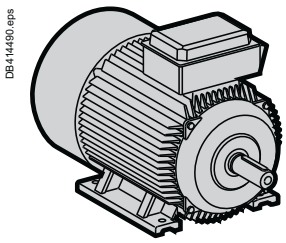
## Introduction

# From traditional solution to …

Motor circuit breaker: GV2L


Contactor: LC1D


Protection relay: LRD


### Magnetic protection
> short-circuit protection

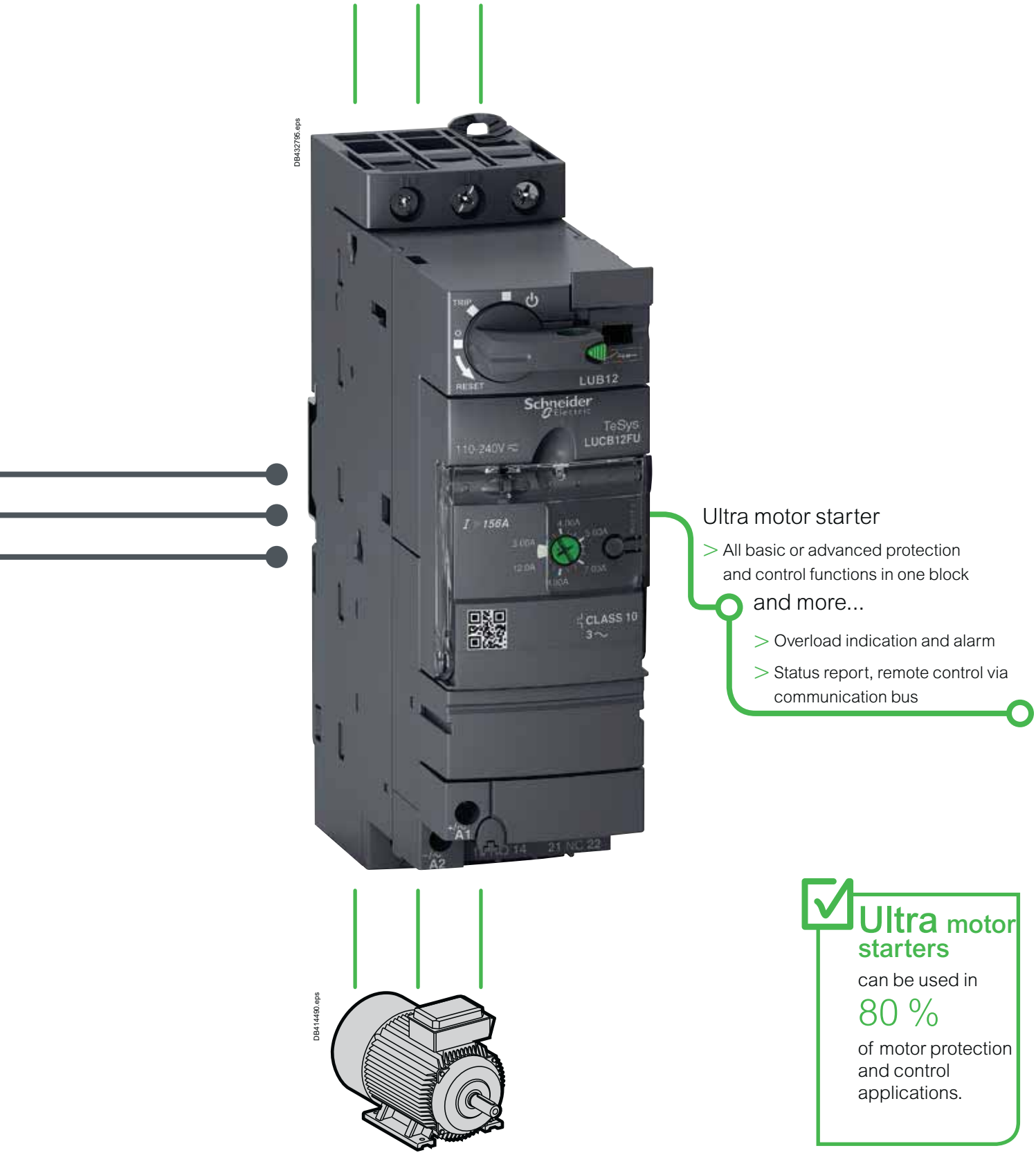
### Control
> Start /Stop

### Status monitoring
> signaling
> alarm monitoring

### Thermal protection
> overload

## Introduction

# …Ultra motor starter




### Ultra motor starter

> All basic or advanced protection and control functions in one block

and more...

> Overload indication and alarm

> Status report, remote control via communication bus

**Ultra motor starters**

can be used in

80 %

of motor protection and control applications.

# TeSys Control
## Ultra motor starters

- Total Coordinated Starter – 3 functions in a single device
- Compact Starter, DOL / RDOL upto 18.5kW (38A, AC-3) in 45mm width
- Direct connectivity to Modbus / Profibus / CANopen / DeviceNet
- Higher switching life - 15Million operations, 2Million AC-43 electrical life
- Breaking capacity upto 130kA

### Control Unit
Performs all the electrical protection functions to cover main applications from 0 to 38A.

Some of these also provide advanced measurement, alarm and display functions.

### 4 simple function modules
Thermal overload alarm Indication of motor load

Thermal overload signalling and manual reset

Thermal overloaded signalling and automatic or remote reset.

### Power Base
For assembling components, ON/OFF operation and resetting.
> 3 power bases: upto 12A and upto 38A
> Direct starter and reversing starter models.

### 4 communication modules
Profibus DP
CANopen
DeviceNet
Modbus.

**40%**
"TeSys solutions allow us to reduce the size of our enclosure"
says a panel builder from the water treatment sector

**60%**
"Late customization means that we can build 60% of the panels, even though the project design has not yet been completed"
says an engineer in a food processing industry

## Quick Selection

Select 1 + Select 1 | Optional | or | Optional | or | Optional

### Base Power Unit

Non-Reversing

| LUB | 120 |
|---|---|
| 0.. 12A with terminal | 12 |
| 0.. 12A no terminal | 120* |
| 0.. 32A with terminal | 32 |
| 0.. 32A no terminal | 320* |
| 0.. 38A with terminal | 38 |
| 0.. 38A no terminal | 380* |

Reversing

| LU2B | 120 | BL |
|---|---|---|
| 0.. 12A with terminal | 12 | |
| 0.. 12A no terminal | 120* | |
| 0.. 32A with terminal | 32 | |
| 0.. 32A no terminal | 320* | |
| 0.. 38A with terminal | 38 | |
| 0.. 38A no terminal | 380* | |
| 24 V DC | | BL |
| 24 V AC | | B |
| 48...72 VAC or 48 VDC | | ES |
| 110..240 VAC/DC | | FU |

*prewired cables to be ordered separately

### Control Unit

| LUC | B | X6 | BL |
|---|---|---|---|
| Class 10, 3Ph | B | | |
| Class 10, 1Ph | C | | |
| Class 20, 3Ph | D | | |
| Multifunction | M | | |
| 0.15 to 0.6 A | | X6 | |
| 0.35 to 1.4 A | | 1X | |
| 1.25 to 5 A | | 05 | |
| 3 to 12 A | | 12 | |
| 4.5 to 18 A | | 18 | |
| 8 to 38 A | | 38 | |
| 24V DC | | | BL |
| 24VAC | | | B |
| 48...72 VAC/48 VDC | | | ES |
| 110..24VAC/DC | | | FU |

### Communication Module*

| LULC | 033 |
|---|---|
| Modbus Serial | 033 |
| Profibus DP | 07 |
| CANopen | 08 |
| DeviceNet | 09 |

### Prewired Cables

| Description | Reference |
|---|---|
| Prewired cable for non-reversing power base | LU9BN11C or LU9BN11L |
| Prewired cable for reversing power base | LU9MRC or LU9MRL |

### Function Module

| LUF | DH11 |
|---|---|
| Fault diff. with manual reset | DH11 |
| Fault diff. with auto reset | DA10 |
| Thermal overload pre-alarm | W10 |
| Motor load indication (4-20mA) | V2 |

### Auxiliary Contacts

Contactor auxiliary contacts

| LUFN | 11 |
|---|---|
| 1NO + 1NC | 11 |
| 2NC | 02 |
| 2NO | 20 |
| Side contacts 2NO | LUA8E20 |

Power auxiliary contacts (trip status)

| LUA1C | 20 |
|---|---|
| 1NO + 1NC | 11 |
| 2NO | 20 |

### Accessories

| Description | Reference |
|---|---|
| Line spacer for UL508 Type E | LU9SPO |
| Current limiter 130kA@460V | LUALB1 |

*Suitable with 24V DC starter variant only

**Note:** For prices please contact regional sales office or customer care centre

# Wherever productivity is a concern, intelligence to Motor Control is the solution

TeSys T Intelligence system optimises the operational performance of LV motors through advanced protections and embedded intelligent functions inside intelligent Motor Control Centre (iMCC)

Discover TeSys T

# Tesys T Motor Management Systems

TeSys T covers all load monitoring and protection needs from feeders to critical process automation. The equipment is protected, while advanced diagnostics, statistics, and alarms help in anticipating unexpected production halts and minimize downtime. TeSys T is compact and a natural fit for control panels with IEC or NEMA standards. In addition, the system's connectivity and access to real-time data provides key information to enhance the operation and safety of the process while improving efficiency.

## Tesys T Controller:

Intelligent motor controller for 1P/3P Motors with built in CT up to 100Amps with accurate monitoring and protection functions, 6DI, 4DO, 1CBCT input, 1 Temperature probe

### Protection Functions:

- Thermal overload
- Phase imbalance and phase overloads
- Temperature monitoring via probes
- Phase reversal
- Ground fault detection
- Long start and Jam protection
- Load shedding
- Load fluctuations
- power factor monitoring

### Monitoring Functions:

- Phase and average current
- Line to Line and average voltage
- Motor temperature, ground current
- Active and Reactive Energy
- Frequency & Power Factor
- Detailed Fault history
- Fault counts
- motor statistics

### Control Functions:

- Local / Remote / HMI control
- Predefined programs for DOL, RDOL, Star-delta, two-speed starters

### Communication:

DeviceNet, CANopen, PROFIBUS, EtherNet/IP, Modbus / TCP

## Quick Selection

### TeSys T Controller

Reference

| LTM R | 100 | E | BD |
|---|---|---|---|

| Current Range | | |
|---|---|---|
| | 0.4 - 8 A | 08 |
| | 1.35 - 27 A | 27 |
| | 5 - 100 A | 100 |

| Network Protocol | | |
|---|---|---|
| | CAN Open | C |
| | DeviceNet | D |
| | Ethernet IP / Modbus TCP/IP | E |
| | Modbus | M |
| | Profibus DP | P |

| Control Voltage | | |
|---|---|---|
| | 24 V DC | BD |
| | 110-240V AC | FM |

**TeSys T Full and Flexible Intelligent Motor Management System**

### TeSys T Accessories

#### TeSys T Expansion Module[1, 2]

| Control Voltage | Reference |
|---|---|
| 24 V DC | LTM EV40BD |
| 110V AC | LTM EV40FM |

[1] Required for Voltage & Power measurement
[2] 4 digital inputs

#### Operator Control Display

| Description | Reference |
|---|---|
| Operator Control Display with config-uration backup | LTM CUF |

#### Connector for Expansion

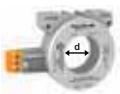
| Length (m) | Reference |
|---|---|
| 0.04 | LTMCC004[3] |

[3] Sold in lots of 6

#### Controller to Display Cable

| Length (m) | Reference |
|---|---|
| 1.0 | LTM9CU10 |
| 3.0 | LTM9CU30 |

#### Ground Fault CT's



| Primary [A] | Internal Ø "d" [mm] | Reference |
|---|---|---|
| 65 | 30 | 50437 |
| 85 | 50 | 50438 |
| 160 | 80 | 50439 |
| 250 | 120 | 50440 |
| 400 | 200 | 50441 |
| 630 | 300 | 50442 |

#### Current Transformers[4]

| Primary [A] | Secondary [A] | Reference |
|---|---|---|
| 100 | 1 | LT6 CT1001 |
| 200 | 1 | LT6 CT2001 |
| 400 | 1 | LT6 CT4001 |
| 800 | 1 | LT6 CT8001 |

| Description | Composition | Reference |
|---|---|---|
| Programming software SoMove | 1 Program for each PC | On request |
| PC connecting cable | USB to RS485 Converter | TCSMCNAM3M002P |

**Note:** For prices please contact regional sales office or customer care centre

# TeSys Control
## Enclosed switch-disconnectors and Motor Starters

- Exhaustive Range of industrial starters consisting of DOL, Reversing, Automatic star delta starters upto 400HP
- Better aesthetic & Assured performance
- Test to trip facility
- Built in single phasing protection

**>>TDL**

**>>TSD/A**

**>>TSD/A**

*Please contact local sales office for availability, recommendation and selection

# Type 2 Co-ordination chart with TeSys range

Type 2 co-ordination chart for Direct-On-Line starter with circuit breaker and overload protection built into the circuit breaker

## Reliable switching for IE2/IE3/IE4 motors

IE2

IE3

IE4

Rated operational voltage, Ue = 400/415V, 50/60Hz
Short Circuit Current (Iq) = 50kA

| Sr. No. | 3Φ Motor power in kW | Current in A | Circuit Breaker | Setting range of thermal trips (A) | Contactor |
|---|---|---|---|---|---|
| 1 | 0.06 | 0.2 | GV2P02 or GV2ME02 | 0.16…0.25 | LC1D09 |
| 2 | 0.09 | 0.3 | GV2P03 or GV2ME03 | 0.25…0.4 | LC1D09 |
| 3 | 0.12 | 0.44 | GV2P04 or GV2ME04 | 0.4…0.63 | LC1D09 |
| 4 | 0.18 | 0.6 | GV2P04 or GV2ME04 | 0.4…0.63 | LC1D09 |
| 5 | 0.25 | 0.85 | GV2P05 or GV2ME05 | 0.63…1 | LC1D09 |
| 6 | 0.37 | 1.0 | GV2P05 or GV2ME05 | 0.63…1 | LC1D09 |
| 7 | 0.55 | 1.5 | GV2P06 or GV2ME06 | 1…1.6 | LC1D09 |
| 8 | 0.75 | 1.9 | GV2P07 or GV2ME07 | 1.6…2.5 | LC1D09 |
| 9 | 1.1 | 2.7 | GV2P08 or GV2ME08 | 2.5…4 | LC1D09 |
| 10 | 1.5 | 3.6 | GV2P08 or GV2ME08 | 2.5…4 | LC1D09 |
| 11 | 2.2 | 4.9 | GV2P10 or GV2ME10 | 4…6.3 | LC1D09 |
| 12 | 3 | 6.5 | GV2P14 or GV2ME14 | 6…10 | LC1D09 |
| 13 | 4 | 8.5 | GV2P14 or GV2ME14 | 6…10 | LC1D09 |
| 14 | 5.5 | 11.5 | GV2P16 | 9…14 | LC1D25 |
| 15 | 7.5 | 15.5 | GV2P20 | 13…18 | LC1D25 |
| 16 | 9 | 18.1 | GV2P21 | 17…23 | LC1D25 |
| 17 | 11 | 22 | GV2P22 | 20…25 | LC1D25 |
| 18 | 15 | 29 | GV2P32 | 25…40 | LC1D32 |
| 19 | 18.5 | 35 | GV3P40 | 30…40 | LC1D50A |
| 20 | 22 | 41 | GV3P50 | 37…50 | LC1D50A |
| 21 | 30 | 55 | GV3P65 | 48…65 | LC1D65A |
| 22 | 37 | 66 | GV4PE/PEM80*(2) | 62…73 | LC1D80 |
| 23 | 45 | 80 | GV4PE/PEM115*(2) | 65…115 | LC1D115 |
| 24 | 55 | 97 | GV4PE/PEM115*(2) | 65…115 | LC1D115 |
| 25 | 75 | 132 | GV5P150*(2) | 70...150 | LC1D150 |
| 26 | 90 | 160 | GV5P220*(2) | 100...220 | LC1G185 |
| 27 | 110 | 195 | GV5P220*(2) | 100...220 | LC1G225 |
| 28 | 132 | 230 | GV6P320*(2) | 160...320 | LC1G265 |
| 29 | 160 | 280 | GV6P320*(2) | 160...320 | LC1G330 |
| 30 | 220 | 385 | GV6P500*(2) | 250...500 | LC1G500 |
| 31 | 250 | 450 | GV6P500*(2) | 250...500 | LC1G500 |

(1) The breaking performance of circuit-breakers GV2 P can be increased by adding a current limiter GV1 L3
(2) Reference to be completed by replacing the * with the breaking performance code as per table given below:

| Circuit breaker type | GV5P150* | GV5P220* | GV5P320* | GV6P500* | GV4PE/ PEM80* | GV4PE/ PEM115* |
|---|---|---|---|---|---|---|
| Breaking performance Iq (kA) at 400/415V | 70 | 70 | 70 | 70 | 50 | 50 |
| Breaking performance code | H | H | H | H | N | N |

For advanced protection, protection with Electronic Overcurrent Relays, heavy starting, please contact our sales teams.

# Type 2 Co-ordination chart

Type 2 co-ordination chart for Direct-On-Line starter with circuit breaker and separate thermal overload relay

## Reliable switching for IE2/IE3/IE4 motors

IE2

IE3

IE4

Rated operational voltage, Ue = 400/415V, 50/60Hz
Short Circuit Current (Iq) = 50kA

| Sr. No. | 3Φ Motor power in kW | Current in Amps | Circuit Breaker | Contactor | Overload relay | |
|---|---|---|---|---|---|---|
| | | | | | Type | Range (A) |
| 1 | 0.06 | 0.2 | GV2L03 or GV2LE03 | LC1D09 | LRD02 | 0.16…0.25 |
| 2 | 0.09 | 0.3 | GV2L03 or GV2LE03 | LC1D09 | LRD03 | 0.25…0.40 |
| 3 | 0.12 | 0.44 | GV2L04 or GV2LE04 | LC1D09 | LRD04 | 0.4…0.63 |
| 4 | 0.18 | 0.6 | GV2L04 or GV2LE04 | LC1D09 | LRD04 | 0.4…0.63 |
| 5 | 0.25 | 0.85 | GV2L05 or GV2LE05 | LC1D09 | LRD05 | 0.63…1 |
| 6 | 0.37 | 1.0 | GV2L05 or GV2P06 | LC1D09 | LRD05 | 0.63…1 |
| 7 | 0.55 | 1.5 | GV2L06 or GV2LE06 | LC1D09 | LRD06 | 1…1.7 |
| 8 | 0.75 | 1.9 | GV2L07 or GV2LE07 | LC1D09 | LRD07 | 1.6…2.5 |
| 9 | 1.1 | 2.7 | GV2L08 or GV2LE08 | LC1D09 | LRD08 | 2.5…4 |
| 10 | 1.5 | 3.6 | GV2L08 or GV2LE08 | LC1D09 | LRD08 | 2.5…4 |
| 11 | 2.2 | 4.9 | GV2L10 or GV2LE10 | LC1D09 | LRD10 | 4…6 |
| 12 | 3 | 6.5 | GV2L14 or GV2LE14 | LC1D09 | LRD12 | 5.5…8 |
| 13 | 4 | 8.5 | GV2L14 or GV2LE14 | LC1D09 | LRD14 | 7…10 |
| 14 | 5.5 | 11.5 | GV2L16 | LC1D25 | LRD16 | 9…13 |
| 15 | 7.5 | 15.5 | GV2L20 | LC1D25 | LRD21 | 12…18 |
| 16 | 9 | 18.1 | GV2L22 | LC1D25 | LRD22 | 16…24 |
| 17 | 11 | 22 | GV2L22 | LC1D25 | LRD22 | 16…24 |
| 18 | 15 | 29 | GV3L32 | LC1D40A | LRD332 | 23…32 |
| 19 | 18.5 | 35 | GV3L40 | LC1D50A | LRD340 | 30…40 |
| 20 | 22 | 41 | GV3L50 | LC1D50A | LRD350 | 37…50 |
| 21 | 30 | 55 | GV3L65 | LC1D65A | LRD365 | 48…65 |
| 22 | 37 | 66 | GV4L/LE80*(1) | LC1D80 | LRD3363 | 63…80 |
| 23 | 45 | 80 | GV4L/LE115*(1) | LC1D115 | LR9D5367 | 60…100 |
| 24 | 55 | 97 | GV4L/LE115(1) | LC1D115 | LR9D5369 | 90…150 |
| 25 | 75 | 132 | NSX160*MA(1) | LC1D150 | LR9D5369 | 90…150 |
| 26 | 90 | 160 | NSX250*MA(1) | LC1G185 | LR9G225 | 57…225 |
| 27 | 110 | 195 | NSX250*MA(1) | LC1G225 | LR9G225 | 57…225 |
| 28 | 132 | 230 | NSX400* + Mic 1.3M(1) | LC1G265 | LR9G500 | 125…500 |
| 29 | 160 | 280 | NSX400* + Mic 1.3M(1) | LC1G330 | LR9G500 | 125…500 |
| 30 | 200 | 350 | NSX630* + Mic 1.3M(1) | LC1G400 | LR9G500 | 125…500 |
| 31 | 220 | 388 | NSX630* + Mic 1.3M(1) | LC1G500 | LR9G500 | 125…500 |
| 32 | 250 | 430 | NSX630* + Mic 1.3M(1) | LC1G500 | LR9G500 | 125…500 |

(1) Reference to be completed by replacing the * with the breaking performance code as per table given below:

| Circuit breaker type | NSX100*MA | NSX160*MA, NSX250*MA | NSX400* NSX630* | GV4L/LE80* | GV4L/LE115* |
|---|---|---|---|---|---|
| Breaking performance Iq (kA) at 400/415V | 50 | 50 | 50 | 50 | 50 |
| Breaking performance code | N | N | N | N | N |

For advanced protection, protection with Electronic Overcurrent Relays, heavy starting, please contact our sales teams.

# Type 2 Co-ordination chart

Type 2 co-ordination chart for Star Delta starters with circuit-breaker and separate thermal overload relay

## Reliable switching for IE2/IE3/IE4 motors

IE2

IE3

IE4

Rated operational voltage, Ue = 400/415V, 50/60Hz
Short Circuit Current (Iq) = 50kA

| Sr. No. | 3Φ Motor power in kW | Line current in Amps | Phase current in Amps | Circuit Breaker | Main/Delta Contactor | Star Contactor | Overload Relay | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Type | Range (A) |
| 1 | 5.5 | 11.5 | 6.6 | GV2L16 | LC1D25 | LC1D09 | LRD12 | 5.5..8 |
| 2 | 75 | 15.5 | 8.9 | GV2L20 | LC1D25 | LC1D09 | LRD14 | 7..10 |
| 3 | 9 | 18.1 | 10.5 | GV2L22 | LC1D25 | LC1D09 | LRD16 | 9..13 |
| 4 | 11 | 22 | 12.7 | GV2L22 | LC1D25 | LC1D09 | LRD21 | 12..18 |
| 5 | 15 | 29 | 16,7 | GV3L32 | LC1D40A | LC1D09 | LRD318 | 12..18 |
| 6 | 18.5 | 35 | 20.2 | GV3L40 | LC1D50A | LC1D09 | LRD325 | 17..25 |
| 7 | 22 | 41 | 23.7 | GV3L50 | LC1D50A | LC1D18 | LRD332 | 23..32 |
| 8 | 30 | 55 | 31.8 | GV3L65 | LC1D65A | LC1D18 | LRD340 | 30..40 |
| 9 | 37 | 66 | 38.1 | GV3L73 | LC1D80A | LC1D32 | LRD350 | 37..50 |
| 10 | 37 | 66 | 38.1 | GV4L/LE80*(1) | LC1D80A | LC1D32 | LRD3357 | 37..50 |
| 11 | 45 | 80 | 46.2 | GV4L/LE115*(1) | LC1D115 | LC1D65A | LRD3357 | 37..50 |
| 12 | 55 | 97 | 56 | GV4L/LE115*(1) | LC1D115 | LC1D65A | LRD3359 | 48...65 |
| 13 | 75 | 132 | 76.2 | NSX160*MA150(1) | LC1D150 | LC1D65A | LR9D5367 | 60 ... 100 |
| 14 | 90 | 160 | 92.4 | NSX250*MA220(1) | LC1G115 | LC1D65 | LR9G115 | 28 ... 115 |
| 15 | 110 | 195 | 112.6 | NSX250*MA220(1) | LC1G150 | LC1D80 | LR9G225 | 57 ... 225 |
| 16 | 132 | 230 | 132.8 | NSX400*Mic 1.3M(1) | LC1G150 | LC1D80 | LR9G225 | 57 ... 225 |
| 17 | 160 | 280 | 161.7 | NSX400*Mic 1.3M(1) | LC1G185 | LC1D115 | LR9G225 | 57 ... 225 |
| 18 | 200 | 350 | 202.1 | NSX630*Mic 1.3M(1) | LC1G225 | LC1G150 | LR9G225 | 57 ... 225 |
| 19 | 220 | 388 | 224 | NSX630*Mic 1.3M(1) | LC1G265 | LC1G150 | LR9G500 | 125 ... 500 |
| 20 | 250 | 430 | 248.3 | NSX630*Mic 1.3M(1) | LC1G265 | LC1G150 | LR9G500 | 125 ... 500 |

(1) Reference to be completed by replacing the * with the breaking performance code as per table given below:

| Circuit breaker type | NSX100*MA | NSX160*MA, NSX250*MA | NSX400* NSX630* | GV4L/LE80* | GV4L/LE115* |
|---|---|---|---|---|---|
| Breaking performance Iq (kA) at 400/415V | 50 | 50 | 50 | 50 | 50 |
| Breaking performance code | N | N | N | N | N |

For advanced protection, protection with Electronic Overcurrent Relays, heavy starting, please contact our sales teams.

# Type 2 Co-ordination chart

Type 2 co-ordination chart for Star Delta starter with circuit breaker and overload protection built into circuit breaker

## Reliable switching for IE2/IE3/IE4 motors

IE2

IE3

IE4

Rated operational voltage, Ue = 400/415V, 50/60Hz
Short Circuit Current (Iq) = 50kA / 70kA as per table

| Sr. No. | 3Φ Motor power in kW | Line current in Amps | Phase current in Amps | Iq (kA) | Circuit Breaker | Main/Delta Contactor | Star Contactor |
|---|---|---|---|---|---|---|---|
| 1 | 5,5 | 11.5 | 6.6 | 50 | GV2P16 | LC1D25 | LC1D09 |
| 2 | 7,5 | 15.5 | 8.9 | 50 | GV2P20 | LC1D25 | LC1D09 |
| 3 | 9 | 18.1 | 10.5 | 50 | GV2P21 | LC1D25 | LC1D09 |
| 4 | 11 | 22 | 12.7 | 50 | GV2P22 | LC1D25 | LC1D09 |
| 5 | 15 | 29 | 16,7 | 50 | GV3P32 | LC1D40A | LC1D09 |
| 6 | 18,5 | 35 | 20.2 | 50 | GV3P40 | LC1D50A | LC1D09 |
| 7 | 22 | 41 | 23.7 | 50 | GV3P50 | LC1D50A | LC1D18 |
| 8 | 30 | 55 | 31.8 | 50 | GV3P65 | LC1D65A | LC1D32 |
| 9 | 37 | 66 | 38.1 | 50 | GV3P73 | LC1D80A | LC1D32 |
| 10 | 37 | 66 | 38.1 | 70 | GV4PE/PEM80*(1) | LC1D80A | LC1D32 |
| 11 | 45 | 80 | 46.2 | 70 | GV4PE/PEM115*(1) | LC1D115 | LC1D65A |
| 12 | 55 | 97 | 56.0 | 70 | GV4PE/PEM115*(1) | LC1D115 | LC1D65A |
| 13 | 75 | 132 | 76.2 | 70 | GV5P150*(1) | LC1 D150 | LC1D150 |
| 14 | 90 | 160 | 92.4 | 70 | GV5P220*(1) | LC1 G115 | LC1D65 |
| 15 | 110 | 195 | 112.6 | 70 | GV5P220*(1) | LC1 G150 | LC1D80 |
| 16 | 132 | 230 | 132.8 | 70 | GV6P320*(1) | LC1G150 | LC1D95 |
| 17 | 160 | 280 | 161.7 | 70 | GV6P320*(1) | LC1G185 | LC1G115 |
| 18 | 220 | 388 | 224.0 | 70 | GV6P500*(1) | LC1G265 | LC1G150 |
| 19 | 250 | 430 | 248.3 | 70 | GV6P500*(1) | LC1G265 | LC1G150 |

(1) Reference to be completed by replacing the * with the breaking performance code as per table given below:

| Circuit breaker type | GV5P150* | GV5P220* | GV5P320* | GV6P500* | GV4PE/ PEM80* | GV4PE/ PEM115* |
|---|---|---|---|---|---|---|
| Breaking performance Iq (kA) at 400/415V | 70 | 70 | 70 | 70 | 50 | 50 |
| Breaking performance code | H | H | H | H | N | N |

# Type 2 Co-ordination chart

Type 2 Co-ordination chart for Direct-On-Line starter with circuit breaker and separate thermal overload relay

## Reliable switching for IE2/IE3/IE4 motors

IE2

IE3

IE4

| Sr. No. | 3Φ Motor power in kW | Circuit Breaker | Contactor | Thermal Overload Relay |
|---|---|---|---|---|
| 1 | 0.18 | GV4L/LE02* | LC1D09 | LRD05 |
| 2 | 0.25 | GV4L/LE02* | LC1D09 | LRD05 |
| 3 | 0.37 | GV4L/LE02* | LC1D09 | LRD06 |
| 4 | 0.55 | GV4L/LE02* | LC1D09 | LRD06 |
| 5 | 0.75 | GV4L/LE02* | LC1D09 | LRD07 |
| 6 | 1.1 | GV4L/LE03* | LC1D25 | LRD08 |
| 7 | 1.5 | GV4L/LE07* | LC1D32+GV1L3 | LRD08 |
| 8 | 2.2 | GV4L/LE07* | LC1D32+GV1L3 | LRD10 |
| 9 | 3 | GV4L/LE07* | LC1D40A | LRD12 |
| 10 | 4 | GV4L/LE12* | LC1D65A | LRD14 |
| 11 | 5.5 | GV4L/LE12* | LC1D65A | LRD313 |
| 12 | 7.5 | GV4L/LE25* | LC1D65A | LRD318 |
| 13 | 10 | GV4L/LE25* | LC1D65A | LRD325 |
| 14 | 11 | GV4L/LE25* | LC1D65A | LRD325 |
| 15 | 15 | GV4L/LE50* | LC1D65A | LRD332 |
| 16 | 18.5 | GV4L/LE50* | LC1D65A | LRD340 |
| 17 | 22 | GV4L/LE50* | LC1D65A | LRD350 |
| 18 | 30 | GV4L/LE80* | LC1D65A | LRD365 |

* - Reference to be completed by replacing the * with the breaking performance code as per table given below:

Performance Iq (kA) at 415V

| Circuit breaker | Breaking performance code | | |
|---|---|---|---|
| | B | N | S |
| GV4L/LE02-12 | - | 50 | 100 |
| GV4L/LE25-115 | 25 | 50 | 100 |

# Type 2 Co-ordination chart

Type 2 Co-ordination chart for Star Delta starter with circuit breaker and separate thermal overload relay

## Reliable switching for IE2/IE3/IE4 motors

IE2

IE3

IE4

| Sr. No. | P (kW) | Ie (A) | Ie/1,73 (A) | Circuit Breaker | Main/Delta Contactor | Star Contactor | Thermal Overload Relay | |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.25 | 0.85 | 0.5 | GV4L/LE02* | LC1D09 | LC1D09 | LRD05 | 0.63…1 |
| 2 | 0.37 | 1 | 0.6 | GV4L/LE02* | LC1D09 | LC1D09 | LRD06 | 1…1.7 |
| 3 | 0.55 | 1.5 | 0.9 | GV4L/LE02* | LC1D09 | LC1D09 | LRD06 | 1…1.7 |
| 4 | 0.75 | 1.9 | 1.1 | GV4L/LE02* | LC1D09 | LC1D09 | LRD07 | 1.6…2.5 |
| 5 | 1.1 | 2.7 | 1.6 | GV4L/LE03* | LC1D25 | LC1D09 | LRD08 | 2.5…4 |
| 6 | 1.5 | 3.6 | 2.1 | GV4L/LE07* | LC1D32+GV1L3 | LC1D09 | LRD08 | 2.5…4 |
| 7 | 2.2 | 4.9 | 2.8 | GV4L/LE07* | LC1D32+GV1L3 | LC1D09 | LRD10 | 4…6 |
| 8 | 3 | 6.5 | 3.8 | GV4L/LE07* | LC1D40A | LC1D09 | LRD12 | 5.5…8 |
| 9 | 4 | 8.5 | 4.9 | GV4L/LE12* | LC1D65A | LC1D09 | LRD14 | 7…10 |
| 10 | 5.5 | 11.5 | 6.6 | GV4L/LE12* | LC1D65A | LC1D09 | LRD313 | 9…13 |
| 11 | 7.5 | 15.5 | 8.9 | GV4L/LE25* | LC1D65A | LC1D09 | LRD318 | 12…18 |
| 12 | 9 | 18.1 | 10.5 | GV4L/LE25* | LC1D65A | LC1D09 | LRD325 | 16…24 |
| 13 | 11 | 22 | 12.7 | GV4L/LE25* | LC1D65A | LC1D09 | LRD325 | 16…24 |
| 14 | 15 | 29 | 16,7 | GV4L/LE50* | LC1D65A | LC1D18 | LRD332 | 23…32 |
| 15 | 18.5 | 35 | 20.2 | GV4L/LE50* | LC1D65A | LC1D18 | LRD340 | 30…40 |
| 16 | 22 | 41 | 23.7 | GV4L/LE50* | LC1D65A | LC1D18 | LRD350 | 37…50 |
| 17 | 30 | 55 | 31.8 | GV4L/LE80* | LC1D65A | LC1D25 | LRD365 | 48…65 |
| 18 | 37 | 66 | 38.1 | GV4L/LE80*(1) | LC1D80A | LC1D32 | LRD3357 | 37..50 |

* - Reference to be completed by replacing the * with the breaking performance code as per table given below:

### Performance Iq (kA) at 415V

| Circuit breaker | Breaking performance code | | |
|---|---|---|---|
| | B | N | S |
| GV4L/LE02-12 | - | 50 | 100 |
| GV4L/LE25-115 | 25 | 50 | 100 |

# Type 2 Co-ordination chart with TeSys range (With TeSys G Contactors and Relays) NEW

Type 2 co-ordination chart for Direct-On-Line starter with circuit breaker and overload protection built into the circuit breaker

## Reliable switching for IE2/IE3/IE4 motors

IE2

IE3

IE4

Rated operational voltage, Ue = 400/415V, 50/60Hz
Short Circuit Current (Iq) = 50kA

| 45 to 250 kW at 400/415V: type 2 coordination (with ref. GV4, GV5, GV6 circuit breakers) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sr. No. | Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e | | | Circuit breaker | | | Contactor |
| | 400/415V | | | Reference(1) | Ir Setting | Irm | Reference |
| | P | Ie | Iq (max) | | | | |
| | kW | A | kA | | A | A | |
| 1 | 45 | 80 | 100 | GV4P/GV4PE/GV4PEM115● | 86 | 1118 | LC1G115 |
| 2 | 55 | 97 | 100 | GV4P115● | 100 | 1300 | LC1G115 |
| 3 | 55 | 97 | 70 | GV5P150● | 100 | 1300 | LC1G115 |
| 4 | 75 | 132 | 70 | GV5P150● | 140 | 1820 | LC1G150 |
| 5 | 90 | 160 | 70 | GV5P220● | 170 | 2210 | LC1G185 |
| 6 | 110 | 195 | 70 | GV5P220● | 200 | 2600 | LC1G225 |
| 7 | 110 | 195 | 70 | GV6P320● | 200 | 2600 | LC1G265 |
| 8 | 132 | 230 | 70 | GV6P320● | 240 | 3120 | LC1G265 |
| 9 | 160 | 280 | 70 | GV6P320● | 300 | 3900 | LC1G330 |
| 10 | 200 | 350 | 70 | GV6P500● | 380 | 4940 | LC1G400 |
| 11 | 220 | 380 | 70 | GV6P500● | 400 | 5200 | LC1G500 |
| 12 | 250 | 430 | 70 | GV6P500● | 440 | 5720 | LC1G500 |

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

### Breaking performance Iq (kA)

| Code | GV4P/GV4PE/GV4PEM115● | | | GV5P150●/ 220● GV6P320●/ 500● | |
|---|---|---|---|---|---|
| | B | N | S | F | H |
| 400/415V | 25 | 50 | 100 | 36 | 70 |

W.E.F. January 25th, 2022

# Type 2 Co-ordination chart with TeSys range (With TeSys G Contactors and Relays) NEW

Type 2 co-ordination chart for Direct-On-Line starter with circuit breaker and separate relay

## Reliable switching for IE2/IE3/IE4 motors

IE2

IE3

IE4

Rated operational voltage, Ue = 400/415V, 50/60Hz
Short Circuit Current (Iq) = 50kA

| 45 to 335 kW at 400/415V: type 2 coordination (with ref GV4, or NSX circuit breakers) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Sr. No. | Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e | | | Circuit breaker | | Contactor | Contactor | |
| | 400/415V | | | Reference(1) | Irm | Reference | Reference | Ir Setting |
| | P | Ie | Iq (max) | | | | | |
| | kW | A | kA | | A | | | A |
| 1 | 45 | 80 | 100 | GV4L/GV4LE115● | 1265 | LC1G115 | LR9G115 | 80 |
| 2 | 55 | 97 | 100 | GV4L/GV4LE115● | 1100 | LC1G115 | LR9G225 | 80 |
| 3 | 45 | 80 | 130 | NSX100● + MA | 1265 | LC1G115 | LR9G115 | 97 |
| 4 | 55 | 97 | 130 | NSX160● + MA | 1500 | LC1G115 | LR9G225 | 97 |
| 5 | 75 | 132 | 130 | NSX160● + MA | 1800 | LC1G150 | LR9G225 | 132 |
| 6 | 90 | 160 | 130 | NSX250● + MA | 2640 | LC1G185 | LR9G225 | 160 |
| 7 | 110 | 195 | 130 | NSX250● + MA | 2640 | LC1G225 | LR9G225 | 195 |
| 8 | 110 | 195 | 130 | NSX400● + Micrologic 1.3M | 3520 | LC1G265 | LR9G500 | 195 |
| 9 | 132 | 230 | 130 | NSX400● + Micrologic 1.3M | 3520 | LC1G265 | LR9G500 | 230 |
| 10 | 160 | 280 | 130 | NSX400● + Micrologic 1.3M | 3840 | LC1G330 | LR9G500 | 280 |
| 11 | 200 | 350 | 130 | NSX630● + Micrologic 1.3M | 5500 | LC1G400 | LR9G500 | 350 |
| 12 | 220 | 380 | 130 | NSX630● + Micrologic 1.3M | 5500 | LC1G500 | LR9G500 | 380 |
| 13 | 250 | 430 | 130 | NSX630● + Micrologic 1.3M | 6000 | LC1G500 | LR9G500 | 430 |
| 14 | 300 | 460 | 130 | NS800● + Micrologic 5 | 8800 | LC1G630 | LR9G630 | 460 |
| 15 | 335 | 575 | 130 | NS800● + Micrologic 5 | 9600 | LC1G630 | LR9G630 | 575 |

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

### Breaking performance Iq (kA)

| Code | GV4L115●/ GV4LE115● | | | NSX100●/ NSX160●/ NSX250●/ NSX400●/ NSX630● | | | | NS800● | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | B | N | S | F | N | H | R | N | H | L |
| 400/415V | 25 | 50 | 100 | 36 | 50 | 70 | 200 | 50 | 70 | 150 |

### Magnetic circuit breakers + Contactor + TeSys T + current transformers

| 90 to 250 kW at 400/415V: type 2 coordination | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sr. No. | Standard power ratings of 3-phase motors 50/60 Hz in category AC-3e | | | Circuit breaker | | Contactor | TeSys T Motor management controller | | Current transformers |
| | 400/415V | | | Reference(1) | Rating Irm | Reference | Reference (2) | Ir Setting | Reference |
| | P | Ie | Iq (max) | | | | | | |
| | kW | A | kA | | A | | | A | |
| 1 | 90 | 160 | 130 | NSX250● + MA | 2200 | LC1G185 | LTMR08●● | 160 | LT6CT2001 |
| 2 | 110 | 195 | 130 | NSX250● + MA | 2640 | LC1G225 | LTMR08●● | 195 | LT6CT2001 |
| 3 | 132 | 230 | 130 | NSX400● + Micrologic 1.3M | 3200 | LC1G265 | LTMR08●● | 230 | LT6CT4001 |
| 4 | 150 | 280 | 130 | NSX400● + Micrologic 1.3M | 3840 | LC1G330 | LTMR08●● | 280 | LT6CT4001 |
| 5 | 200 | 350 | 130 | NSX630● + Micrologic 1.3M | 5000 | LC1G400 | LTMR08●● | 350 | LT6CT4001 |
| 6 | 220 | 388 | 130 | NSX630● + Micrologic 1.3M | 5500 | LC1G500 | LTMR08●● | 388 | LT6CT4001 |
| 7 | 250 | 430 | 130 | NSX630● + Micrologic 1.3M | 6000 | LC1G500 | LTMR08●● | 430 | LT6CT8001 |

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

### Breaking performance Iq (kA)

| Code | NSX250●/ NSX400●/ NSX630● | | | |
|---|---|---|---|---|
| | F | N | H | R |
| 400/415V | 36 | 50 | 70 | 200 |

(2) Please refer to TeSys Catalogue to select the complete reference for TeSys T motor management controller.

W.E.F. January 25th, 2022

# Type 2 Co-ordination chart with TeSys range (With TeSys G Contactors and Relays) NEW

Type 2 co-ordination chart for Star Delta starter with circuit breaker and overload protection built into circuit breaker

## Reliable switching for IE2/IE3/IE4 motors

IE2

IE3

IE4

Rated operational voltage, Ue = 400/415V, 50/60Hz
Short Circuit Current (Iq) = 50kA / 70kA as per table

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

**90 to 250 kW at 400/415V: type 2 coordination**

| Sr. No. | Standard power ratings of 3-phase motors 50/60 Hz in category AC-3 | | | Circuit breaker | | | Contactor Line/ Delta | Contactor Star |
|---|---|---|---|---|---|---|---|---|
| | 400/415V | | | Reference(1) | Ir Setting | Irm | Reference | |
| | P | Ie | Iq (max) | | | | | |
| | kW | A | kA | | A | A | | |
| 1 | 90 | 160 | 70 | GV5P220● | 170 | 1360 | LC1G115 | LC1D65 |
| 2 | 110 | 195 | 70 | GV5P220● | 200 | 1600 | LC1G150 | LC1D80 |
| 3 | 110 | 195 | 70 | GV6P320● | 200 | 1600 | LC1G150 | LC1D80 |
| 4 | 132 | 230 | 70 | GV6P320● | 240 | 1920 | LC1G150 | LC1D95 |
| 5 | 160 | 280 | 70 | GV6P320● | 300 | 2400 | LC1G185 | LC1G115 |
| 6 | 200 | 350 | 70 | GV6P500● | 380 | 3040 | LC1G225 | LC1G115 |
| 7 | 220 | 380 | 70 | GV6P500● | 400 | 3200 | LC1G265 | LC1G150 |
| 8 | 250 | 430 | 70 | GV6P500● | 440 | 3520 | LC1G265 | LC1G150 |

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

### Breaking performance Iq (kA)

| Code | GV5P220● GV6P320●/GV6P500● | |
|---|---|---|
| | F | H |
| 400/415V | 36 | 70 |

**90 to 450 kW at 400/415V: type 2 coordination**

| Sr. No. | Standard power ratings of 3-phase motors 50/60 Hz in category AC-3 | | | Circuit breaker | | | Contactor Line/ Delta | Contactor Star |
|---|---|---|---|---|---|---|---|---|
| | 400/415V | | | Reference(1) | Ir Setting | Irm | Reference | |
| | P | Ie | Iq (max) | | | | | |
| | kW | A | kA | | A | A | | |
| 1 | 90 | 160 | 130 | NSX250● + Micrologic 2.2M | 170 | 1360 | LC1G115 | LC1D65 |
| 2 | 110 | 195 | 130 | NSX250● + Micrologic 2.2M | 200 | 1600 | LC1G150 | LC1D80 |
| 3 | 110 | 195 | 130 | NSX400● + Micrologic 2.3M | 200 | 1600 | LC1G150 | LC1D80 |
| 4 | 132 | 230 | 130 | NSX400● + Micrologic 2.3M | 240 | 1920 | LC1G150 | LC1D95 |
| 5 | 160 | 280 | 130 | NSX400● + Micrologic 2.3M | 300 | 2400 | LC1G185 | LC1G115 |
| 6 | 200 | 350 | 130 | NSX630● + Micrologic 2.3M | 380 | 3040 | LC1G225 | LC1G115 |
| 7 | 220 | 380 | 130 | NSX630● + Micrologic 2.3M | 400 | 3200 | LC1G265 | LC1G150 |
| 8 | 250 | 430 | 130 | NSX630● + Micrologic 2.3M | 440 | 3520 | LC1G265 | LC1G150 |
| 9 | 300 | 460 | 130 | NS800● + Micrologic 5 | 480 | 3840 | LC1G330 | LC1G185 |
| 10 | 335 | 575 | 130 | NS800● + Micrologic 5 | 640 | 5120 | LC1G400 | LC1G225 |
| 11 | 355 | 610 | 130 | NS800● + Micrologic 5 | 640 | 5120 | LC1G400 | LC1G225 |
| 12 | 400 | 690 | 130 | NS800● + Micrologic 5 | 720 | 5760 | LC1G500 | LC1G265 |
| 13 | 450 | 770 | 130 | NS1000● + Micrologic 5 | 784 | 6272 | LC1G500 | LC1G330 |

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

### Breaking performance Iq (kA)

| Code | NSX250●/ NSX400●/ NSX630● | | | | NS800●/ NS1000● | | |
|---|---|---|---|---|---|---|---|
| | F | N | H | R | N | H | L |
| 400/415V | 36 | 50 | 70 | 200 | 50 | 70 | 150 |

W.E.F. January 25th, 2022

# Type 2 Co-ordination chart with TeSys range (With TeSys G Contactors and Relays) NEW

Type 2 Co-ordination chart for Direct-On-Line starter with circuit breaker and separate thermal overload relay

## Reliable switching for IE2/IE3/IE4 motors

IE2

IE3

IE4

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

**90 to 450 kW at 400/415V: type 2 coordination**

| Sr. No. | Standard power ratings of 3-phase motors 50/60 Hz in category AC-3 | | | Circuit breaker | | Contactor Line/ Delta | Contactor Star | Thermal overload relay | |
|---|---|---|---|---|---|---|---|---|---|
| | 400/415V | | | Reference(1) | Irm | Reference | | Reference | Setting range |
| | P | Ie | Iq (max) | | | | | | |
| | kW | A | kA | | A | | | | A |
| 1 | 90 | 160 | 130 | NSX250● + MA | 1980 | LC1G115 | LC1D65 | LR9G115 | 92 |
| 2 | 110 | 195 | 130 | NSX250● + MA | 1980 | LC1G150 | LC1D80 | LR9G225 | 113 |
| 3 | 110 | 195 | 130 | NSX400● + Micrologic 1.3M | 1920 | LC1G150 | LC1D80 | LR9G225 | 113 |
| 4 | 132 | 230 | 130 | NSX400● + Micrologic 1.3M | 1920 | LC1G150 | LC1D80 | LR9G225 | 133 |
| 5 | 160 | 280 | 130 | NSX400● + Micrologic 1.3M | 2560 | LC1G185 | LC1G115 | LR9G225 | 162 |
| 6 | 200 | 350 | 130 | NSX630● + Micrologic 1.3M | 3000 | LC1G225 | LC1G150 | LR9G225 | 202 |
| 7 | 220 | 380 | 130 | NSX630● + Micrologic 1.3M | 3500 | LC1G265 | LC1G150 | LR9G500 | 219 |
| 8 | 250 | 430 | 130 | NSX630● + Micrologic 1.3M | 3500 | LC1G265 | LC1G150 | LR9G500 | 248 |
| 9 | 300 | 460 | 130 | NS800● + Micrologic 5 | 4000 | LC1G330 | LC1G185 | LR9G500 | 266 |
| 10 | 335 | 575 | 130 | NS800● + Micrologic 5 | 4800 | LC1G400 | LC1G225 | LR9G500 | 332 |
| 11 | 355 | 610 | 130 | NS800● + Micrologic 5 | 5600 | LC1G400 | LC1G225 | LR9G500 | 352 |
| 12 | 400 | 627 | 130 | NS800● + Micrologic 5 | 5600 | LC1G400 | LC1G225 | LR9G500 | 362 |
| 13 | 450 | 695 | 130 | NS800● + Micrologic 5 | 6400 | LC1G500 | LC1G265 | LR9G500 | 401 |

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

### Breaking performance Iq (kA)

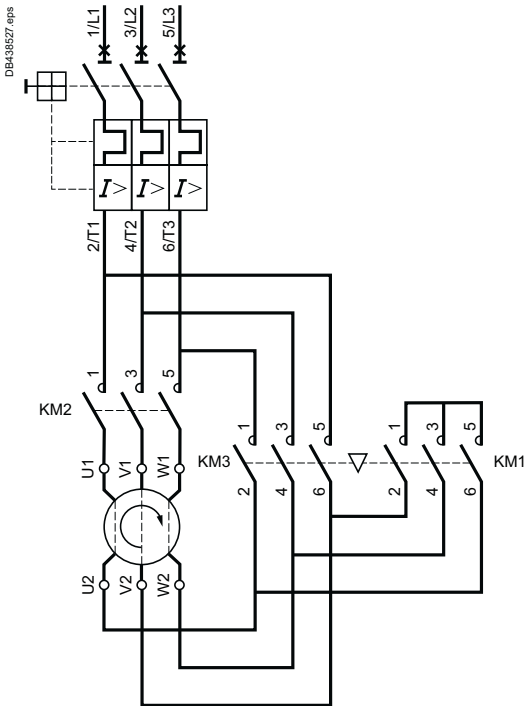
| Code | NSX250●/ NSX400●/ NSX630● | | | | NS800● | | |
|---|---|---|---|---|---|---|---|
| | F | N | H | R | N | H | L |
| 400/415V | 36 | 50 | 70 | 200 | 50 | 70 | 150 |

W.E.F. January 25th, 2022

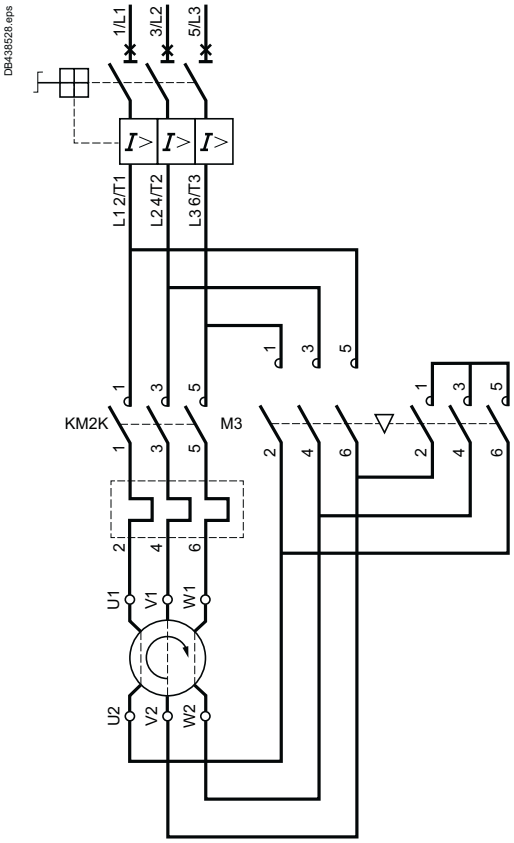
## Coordination tables
## Star-Delta motor starter - Common circuit diagrams

### Star-Delta motor 'Power' circuit diagram

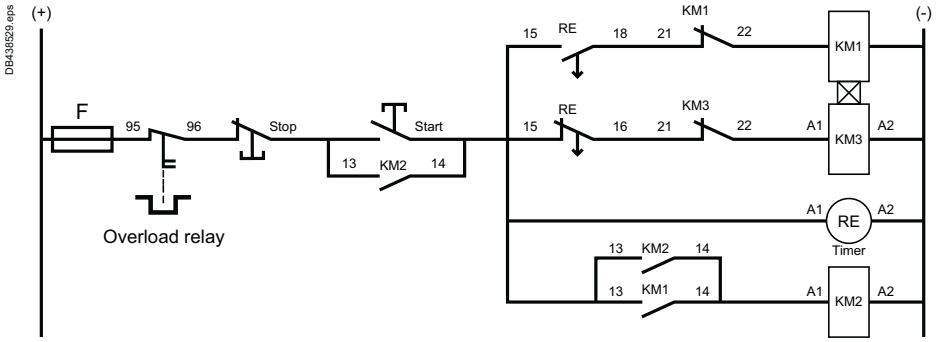
#### Thermal magnetic circuit breaker + contactors




#### Magnetic circuit breaker + contactors + overload relay




### Star-Delta Motor 'Control' circuit diagram




Recommended timing relay (RE): Zelio Time ref. RE17RMMW (12...240 V AC/DC 50/60 Hz – 8 A AC/DC contacts)

# Type 2 Recommended Selection Charts for Motor Feeder with EasyPact

**Notes:**

- Selection is for Normal Starting time (Relay Trip classes 10A/10) applications.
- Overload relay type LRE and EOCR both can be used. However, while using EOCR, setting of Trip class in EOCR should be up to 10/10A only.
- For high Inertia loads like Blowers, Pumps & ID/FD fans etc., if taking longer starting time, kindly consult us to derive the selection. However, this selection can still be used if these applications accept relay trip class 10A/10.
- Service factor of the motors considered is 1
- Selection is directly valid for Switching & Protection of Motors which comply to IS: 12615 efficiency class and can also be used for other non-standard motors whose starting current is less than or equal to starting currents as described in IS: 12615
- The rated motor current used for derivation is Full Load Current (FLC) for 3-phase, 4 Pole Squirrel Cage Induction Motors as indicated in IS: 12615. Selection can also be used for 2 Pole, 6 Pole and 8 Pole Motors based on rated motor current.
- Higher ratings of Contactors can be used in place of recommended combinations.
- These charts are derived basis Type-2 Methodology described in IEC 60947-4, Clause B.4.5.
- For Star-Delta Motor feeders, In-side delta wiring is considered.
- For Star Delta Motor feeders, proper Change-over time and Pause time must be ensured. Selected combination of Motor feeders components in this chart are valid only and only when used along with timer MSMI06 and equivalent timer from Schneider.
- This selection is valid only for suggested Product combinations. Change in any of the recommended combination including timer will invalidate the recommendations and Human safety, Installation safety and product safety requirements may not be fulfilled.
- In case of motor feeders with Circuit breaker, ensure proper Instantaneous setting as suggested in respective charts, if any.
- Max. Operating rate per Hour for contactors & Circuit breaker for Motor protection shall not be exceeded.
- Product evolution and improvement is a Continuous process at Schneider Electric. Hence, recommendations and guidelines are subject to change. Contact Schneider Electric for latest guidelines.

Contact our nearest sales office for application specific Custom / optimised selection for your motor feeders having motors with service factor more than 1, longer starting time applications, Closed transition star delta starters, other than 400/415V perational voltages, starting currents / inrush currents lower than specified in IS 12615

# Selection Chart

Direct-on-Line starters with circuit-breaker and overload protection built into the circuit-breaker Type GZ1E

## Reliable switching for IE2/IE3 motors

IE2

IE3

Rated Operational Voltage, Ue = 400/415V, 50/60Hz
Short Circuit Current Iq = 50kA

Type-2 Recommended Selection

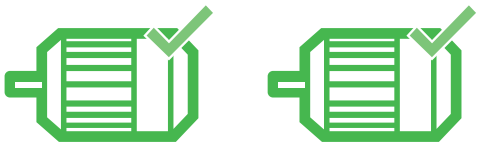
| Sr. No. | 3Φ Motors | | | Iq Current (kA) | Contactor | Overload Relay | | Circuit Breaker | |
|---|---|---|---|---|---|---|---|---|---|
| | kW | HP | FLC - $I_n$ (Amps) | | | Type | Range (A) | Type | Rating (A) |
| 1 | 0.06 | x | 0.19 | 50 | LC1E09 | In-built in Circuit Breaker | | GZ1E02 | 0.16 - 0.25 |
| 2 | 0.09 | x | 0.28 | 50 | LC1E09 | | | GZ1E03 | 0.25 - 0.4 |
| 3 | 0.12 | 0.16 | 0.51 | 50 | LC1E09 | | | GZ1E04 | 0.4 - 0.63 |
| 4 | 0.18 | 0.25 | 0.6 | 50 | LC1E09 | | | GZ1E04 | 0.4 - 0.63 |
| 5 | 0.25 | 0.33 | 0.8 | 50 | LC1E09 | | | GZ1E05 | 0.63 - 1 |
| 6 | 0.37 | 0.5 | 1.4 | 50 | LC1E09 | | | GZ1E06 | 1 - 1.6 |
| 7 | 0.55 | 0.75 | 1.7 | 50 | LC1E09 | | | GZ1E07 | 1.6 - 2.5 |
| 8 | 0.75 | 1 | 2.2 | 50 | LC1E09 | | | GZ1E07 | 1.6 - 2.5 |
| 9 | 1.1 | 1.5 | 2.9 | 50 | LC1E09 | | | GZ1E08 | 2.5 - 4 |
| 10 | 1.3 | 1.75 | 3 | 50 | LC1E09 | | | GZ1E08 | 2.5 - 4 |
| 11 | 1.5 | 2 | 3.8 | 50 | LC1E09 | | | GZ1E08 | 2.5 - 4 |
| 12 | 2.2 | 3 | 5.1 | 50 | LC1E18 | | | GZ1E10 | 4 - 6.3 |
| 13 | 3 | 4 | 6 | 50 | LC1E18 | | | GZ1E14 | 6 - 10 |
| 14 | 3.7 | 5 | 8.1 | 50 | LC1E25 | | | GZ1E14 | 6 - 10 |
| 15 | 4 | 5.5 | 8.5 | 50 | LC1E25 | | | GZ1E14 | 6 - 10 |
| 16 | 5.5 | 7.5 | 11.4 | 50* | LC1E32 | | | GZ1E16 | 9 -14 |
| 17 | 7.5 | 10 | 15.4 | 50* | LC1E32 | | | GZ1E20 | 13 - 18 |
| 18 | 9.3 | 12.5 | 17.3 | 50* | LC1E40B | | | GZ1E21 | 17 - 23 |
| 19 | 11 | 15 | 22 | 50* | LC1E40B | | | GZ1E22 | 20 - 25 |
| 20 | 13 | 17.5 | 24 | 50* | LC1E50 | | | GZ1E32 | 24 - 32 |
| 21 | 15 | 20 | 30 | 50* | LC1E50 | | | GZ1E32 | 24 - 32 |

* 50kA With current Limiter type GV1L3, 10kA without current limiter

# Selection Chart

## Direct-On-Line starters with circuit-breaker GZL1LE and separate thermal overload relay

## Reliable switching for IE2/IE3 motors



IE2 IE3

Rated Operational Voltage, Ue = 400/415V, 50/60Hz
Short Circuit Current Iq = 50kA upto 4kw and above 4kw with 50kA
With current Limiter type GV1L3, 10kA without current limiter

Type-2 Recommended Selection

| Sr. No. | P (kW) | Ie (A) | Circuit Breaker | Contactor | Thermal Overload relay | Range (A) |
|---|---|---|---|---|---|---|
| 1 | 0.09 | 0.4 | GZ1LE03 | LC1E09 | LRE03 | 0.25…0.40 |
| 2 | 0.18 | 0.63 | GZ1LE04 | LC1E09 | LRE04 | 0.4…0.63 |
| 3 | 0.25 | 1 | GZ1LE05 | LC1E09 | LRE05 | 0.63…1 |
| 4 | 0.37 | 1.4 | GZ1LE06 | LC1E09 | LRE06 | 1…1.6 |
| 5 | 0.75 | 2.2 | GZ1LE07 | LC1E09 | LRE07 | 1.6…2.5 |
| 6 | 1.5 | 3.8 | GZ1LE08 | LC1E09 | LRE08 | 2.5…4 |
| 7 | 2.2 | 5.1 | GZ1LE10 | LC1E18 | LRE10 | 4…6 |
| 8 | 4 | 8.5 | GZ1LE14 | LC1E25 | LRE14 | 7…10 |
| 9 | 5.5 | 11.4 | GZ1LE16 | LC1E32 | LRE16 | 9…13 |
| 10 | 7.5 | 15.4 | GZ1LE20 | LC1E32 | LRE21 | 12…18 |
| 11 | 9.3 | 17.3 | GZ1LE22 | LC1E40 | LRE22 | 16…24 |
| 12 | 11 | 22 | GZ1LE22 | LC1E40 | LRE22 | 16…24 |
| 13 | 15 | 30 | GZ1LE32 | LC1E50 | LRE32 | 23…32 |

### Star Delta starters with circuit-breaker GZL1LE and separate thermal overload relay

Type-2 Recommended Selection

| Sr. No. | P (kW) | Ie (A) | Ie/1,73 (A) | Circuit Breaker | Main/Delta Contactor | Star Contactor | Thermal Overload Relay | |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.09 | 0.4 | 0.2 | GZ1LE03 | LC1E09 | LC1E09 | LRE02 | 0.16…0.25 |
| 2 | 0.18 | 0.63 | 0.4 | GZ1LE04 | LC1E09 | LC1E09 | LRE03 | 0.25…0.40 |
| 3 | 0.25 | 1 | 0.6 | GZ1LE05 | LC1E09 | LC1E09 | LRE04 | 0.4…0.63 |
| 4 | 0.37 | 1.4 | 0.8 | GZ1LE06 | LC1E09 | LC1E09 | LRE05 | 0.63…1 |
| 5 | 0.75 | 2.2 | 1.3 | GZ1LE07 | LC1E09 | LC1E09 | LRE06 | 1…1.6 |
| 6 | 1.5 | 3.8 | 2.2 | GZ1LE08 | LC1E09 | LC1E09 | LRE07 | 1.6…2.5 |
| 7 | 2.2 | 5.1 | 2.9 | GZ1LE10 | LC1E18 | LC1E09 | LRE08 | 2.5…4 |
| 8 | 4 | 8.5 | 4.9 | GZ1LE14 | LC1E25 | LC1E09 | LRE10 | 4…6 |
| 9 | 5.5 | 11.4 | 6.6 | GZ1LE16 | LC1E32 | LC1E09 | LRE12 | 5.5…8 |
| 10 | 7.5 | 15.4 | 8.9 | GZ1LE20 | LC1E32 | LC1E09 | LRE14 | 7…10 |
| 11 | 9.3 | 17.3 | 10.0 | GZ1LE22 | LC1E40B | LC1E18 | LRE16 | 9…13 |
| 12 | 11 | 22 | 12.7 | GZ1LE22 | LC1E40B | LC1E18 | LRE16 | 9…13 |
| 13 | 15 | 30 | 17.3 | GZ1LE32 | LC1E50 | LC1E18 | LRE21 | 12…18 |

# Selection Chart

Direct-on-Line starters with Fuses and overload protection by separate overload relay type LRE (thermal) or EOCR** (up to Trip class 10/10A)

## Reliable switching for IE2 motors

**IE2**

Rated Operational Voltage, Ue = 400/415V, 50/60Hz
Short Circuit Current Iq = 50kA

Type-2 Recommended Selection

| Sr. No. | 3Φ Motors | | | Contactor | Overload Relay | | Nominal Back-up Fuse | | | SDF |
|---|---|---|---|---|---|---|---|---|---|---|
| | kW | HP | FLC - $I_n$ (Amps) | | Type | Range (A) | Fuse | Fuse Rating | Fuse Size | |
| 1 | 0.12 | 0.16 | 0.51 | LC1E09 | LRE04 | 0.4-0.63 | 4NHG000B | 4 | 000 | NX032 |
| 2 | 0.18 | 0.25 | 0.6 | LC1E09 | LRE04 | 0.4-0.63 | 4NHG000B | 4 | 000 | NX032 |
| 3 | 0.25 | 0.33 | 0.8 | LC1E09 | LRE05 | 0.63-1 | 4NHG000B | 4 | 000 | NX032 |
| 4 | 0.37 | 0.5 | 1.4 | LC1E09 | LRE06 | 1-1.6 | 4NHG000B | 4 | 000 | NX032 |
| 5 | 0.55 | 0.75 | 1.7 | LC1E09 | LRE06 | 1-1.6 | 4NHG000B | 4 | 000 | NX032 |
| 6 | 0.75 | 1 | 2.2 | LC1E09 | LRE07 | 1.6-2.5 | 6NHG000B | 6 | 000 | NX032 |
| 7 | 1.1 | 1.5 | 2.9 | LC1E09 | LRE08 | 2.5-4 | 10NHG000B | 10 | 000 | NX032 |
| 8 | 1.3 | 1.75 | 3 | LC1E09 | LRE08 | 2.5-4 | 10NHG000B | 10 | 000 | NX032 |
| 9 | 1.5 | 2 | 3.8 | LC1E09 | LRE08 | 2.5-4 | 10NHG000B | 10 | 000 | NX032 |
| 10 | 2.2 | 3 | 5.1 | LC1E09 | LRE10 | 4-6 | 16NHG000B | 16 | 000 | NX032 |
| 11 | 3 | 4 | 6 | LC1E09 | LRE12 | 5.5-8 | 20NHG000B | 20 | 000 | NX032 |
| 12 | 3.7 | 5 | 8.1 | LC1E09 | LRE14 | 7-10 | 20NHG000B | 20 | 000 | NX032 |
| 13 | 4 | 5.5 | 8.5 | LC1E09 | LRE14 | 7-10 | 20NHG000B | 20 | 000 | NX032 |
| 14 | 5.5 | 7.5 | 11.4 | LC1E12 | LRE16 | 9-13 | 25NHG000B | 25 | 000 | NX032 |
| 15 | 7.5 | 10 | 15.4 | LC1E18 | LRE21 | 12-18 | 32NHG000B | 32 | 000 | NX063 |
| 16 | 9.3 | 12.5 | 17.3 | LC1E25 | LRE22 | 16-24 | 50NHG000B | 50 | 000 | NX063 |
| 17 | 11 | 15 | 22 | LC1E25 | LRE22 | 16-24 | 50NHG000B | 50 | 000 | NX063 |
| 18 | 13 | 17.5 | 24 | LC1E32 | LRE32 | 23-32 | 50NHG000B | 50 | 000 | NX063 |
| 19 | 15 | 20 | 30 | LC1E32 | LRE32 | 23-32 | 63NHG000B | 63 | 000 | NX063 |
| 20 | 18.5 | 25 | 36 | LC1E40 | LRE355 | 30-40 | 80NHG000B | 80 | 000 | NX080 |
| 21 | 22 | 30 | 43 | LC1E50 | LRE357 | 37-50 | 80NHG000B | 80 | 000 | NX080 |
| 22 | 30 | 40 | 56 | LC1E65 | LRE359 | 48-65 | 100NHG000B | 100 | 000 | NX100 |
| 23 | 37 | 50 | 69 | LC1E80 | LRE363 | 63-80 | 125NHG00B | 125 | 00 | NX125 |
| 24 | 45 | 60 | 84 | LC1E95 | LRE365 | 80-104 | 160NHG00B | 160 | 00 | NX160 |
| 25 | 55 | 75 | 99 | LC1E120 | LRE482 | 84-135 | 160NHG00B | 160 | 00 | NX160 |
| 26 | 75 | 100 | 134 | LC1E160 | LRE483* | 124-198 | 250NHG1B | 250 | 1 | NX250 |
| 27 | 80 | 110 | 139 | LC1E160 | LRE483* | 124-198 | 250NHG1B | 250 | 1 | NX250 |
| 28 | 90 | 120 | 164 | LC1E200 | LRE483 | 124-198 | 250NHG1B | 250 | 1 | NX250 |
| 29 | 110 | 150 | 204 | LC1E250 | LRE484 | 146-234 | 250NHG1B | 250 | 1 | NX250 |
| 30 | 125 | 170 | 234 | LC1E250 | LRE485 | 174-279 | 315NHG2B | 315 | 2 | NX315 |
| 31 | 132 | 180 | 247 | LC1E250 | LRE485 | 174-279 | 315NHG2B | 315 | 2 | NX315 |
| 32 | 160 | 215 | 288 | LC1E300 | LRE486 | 208-333 | 400NHG2B | 400 | 2 | NX400 |
| 33 | 180 | 240 | 298 | LC1E300 | LRE486 | 208-333 | 400NHG2B | 400 | 2 | NX400 |
| 34 | 200 | 270 | 348 | LC1E400 | LRE487 | 258-414 | 400NHG2B | 400 | 2 | NX400 |
| 35 | 225 | 300 | 360 | LC1E400 | LRE487 | 258-414 | 500NHG3B | 500 | 3 | NX630 |
| 36 | 250 | 335 | 435 | LC1E500 | LRE488 | 321-513 | 630NHG3B | 630 | 3 | NX630 |
| 37 | 275 | 370 | 440 | LC1E500 | LRE488 | 321-513 | 630NHG3B | 630 | 3 | NX630 |
| 38 | 315 | 425 | 548 | LC1E630 | LRE489 | 394-630 | 800NHG3B | 800 | 3 | NA |
| 39 | 335 | 452 | 580 | LC1E630 | LRE489 | 394-630 | 800NHG3B | 800 | 3 | NA |

* Relay can match with contactor electrically (i.e Cannot be directly mounted), rest all relays are suitable for direct mounting as per catalogue.
** Selection valid upto Trip class 10/10A, Contact nearest sales office for details of EOCR to be used with this selection charts.

# Selection Chart

Star Delta starters with Fuses and overload protection by separate overload relay type LRE (thermal) or EOCR** (up to Trip class 10/10A)

## Reliable switching for IE2 motors

**IE2**

Rated Operational Voltage, Ue = 400/415V, 50/60Hz
Short Circuit Current Iq = 50kA

Type-2 Recommended Selection

| Sr. No. | 3Φ Motors | | | | Contactor | | | Overload Relay | | Nominal Back-up Fuse | | | SDF | Minimum Pause time (mSec) | Star-Delta Timer# |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | kW | HP | FLC - $I_n$ (Amps) | | | | | Type | Range (A) | Fuse type | Fuse Rating | Fuse Size | | | |
| | | | Line | Phase | Main | Delta | Star | | | | | | | | |
| 1 | 0.75 | 1 | 2.2 | 1.3 | LC1E09 | LC1E09 | LC1E09 | LRE06 | 1-1.6 | 4NHG000B | 4 | 000 | NX032 | 50 | MSMI06 |
| 2 | 1.1 | 1.5 | 2.9 | 1.7 | LC1E09 | LC1E09 | LC1E09 | LRE07 | 1.6-2.5 | 4NHG000B | 4 | 000 | NX032 | 50 | MSMI06 |
| 3 | 1.3 | 1.75 | 3 | 1.7 | LC1E09 | LC1E09 | LC1E09 | LRE07 | 1.6-2.5 | 4NHG000B | 4 | 000 | NX032 | 50 | MSMI06 |
| 4 | 1.5 | 2 | 3.8 | 2.2 | LC1E09 | LC1E09 | LC1E09 | LRE07 | 1.6-2.5 | 6NHG000B | 6 | 000 | NX032 | 50 | MSMI06 |
| 5 | 2.2 | 3 | 5.1 | 2.9 | LC1E09 | LC1E09 | LC1E09 | LRE08 | 2.5-4 | 10NHG000B | 10 | 000 | NX032 | 50 | MSMI06 |
| 6 | 3 | 4 | 6 | 3.5 | LC1E09 | LC1E09 | LC1E09 | LRE08 | 2.5-4 | 10NHG000B | 10 | 000 | NX032 | 50 | MSMI06 |
| 7 | 3.7 | 5 | 8.1 | 4.7 | LC1E09 | LC1E09 | LC1E09 | LRE10 | 4-6 | 10NHG000B | 10 | 000 | NX032 | 50 | MSMI06 |
| 8 | 4 | 5.5 | 8.5 | 4.9 | LC1E09 | LC1E09 | LC1E09 | LRE10 | 4-6 | 16NHG000B | 16 | 000 | NX032 | 50 | MSMI06 |
| 9 | 5.5 | 7.5 | 11.4 | 6.6 | LC1E09 | LC1E09 | LC1E09 | LRE12 | 5.5-8 | 16NHG000B | 16 | 000 | NX032 | 50 | MSMI06 |
| 10 | 7.5 | 10 | 15.4 | 8.9 | LC1E09 | LC1E09 | LC1E09 | LRE14 | 7-10 | 20NHG000B | 20 | 000 | NX032 | 50 | MSMI06 |
| 11 | 9.3 | 12.5 | 17.3 | 10.0 | LC1E12 | LC1E12 | LC1E09 | LRE14 | 7-10 | 20NHG000B | 20 | 000 | NX032 | 50 | MSMI06 |
| 12 | 11 | 15 | 22 | 12.7 | LC1E18 | LC1E18 | LC1E09 | LRE16 | 9-13 | 32NHG000B | 32 | 000 | NX032 | 50 | MSMI06 |
| 13 | 15 | 20 | 30 | 17.3 | LC1E18 | LC1E18 | LC1E09 | LRE21 | 12-18 | 40NHG000B | 40 | 000 | NX063 | 50 | MSMI06 |
| 14 | 18.5 | 25 | 36 | 20.8 | LC1E25 | LC1E25 | LC1E09 | LRE22 | 16-24 | 40NHG000B | 40 | 000 | NX063 | 50 | MSMI06 |
| 15 | 22 | 30 | 43 | 24.8 | LC1E25 | LC1E25 | LC1E25 | LRE32 | 23-32 | 50NHG000B | 50 | 000 | NX063 | 50 | MSMI06 |
| 16 | 30 | 40 | 56 | 32.3 | LC1E40 | LC1E40 | LC1E25 | LRE355 | 30-40 | 63NHG000B | 63 | 000 | NX063 | 50 | MSMI06 |
| 17 | 37 | 50 | 69 | 39.8 | LC1E50 | LC1E50 | LC1E32 | LRE355 | 30-40 | 80NHG000B | 80 | 000 | NX080 | 50 | MSMI06 |
| 18 | 45 | 60 | 84 | 48.5 | LC1E50 | LC1E50 | LC1E32 | LRE357 | 37-50 | 100NHG00B | 100 | 00 | NX125 | 50 | MSMI06 |
| 19 | 55 | 75 | 99 | 57.2 | LC1E65 | LC1E65 | LC1E40 | LRE359 | 48-65 | 125NHG00B | 125 | 00 | NX125 | 50 | MSMI06 |
| 20 | 75 | 100 | 134 | 77.4 | LC1E80 | LC1E80 | LC1E65 | LRE363 | 63-80 | 160NHG00B | 160 | 00 | NX160 | 50 | MSMI06 |
| 21 | 80 | 110 | 139 | 80.3 | LC1E80 | LC1E80 | LC1E80 | LRE363 | 63-80 | 160NHG00B | 160 | 00 | NX160 | 50 | MSMI06 |
| 22 | 90 | 120 | 164 | 94.7 | LC1E95 | LC1E95 | LC1E80 | LRE365 | 80-104 | 200NHG1B | 200 | 1 | NX200 | 50 | MSMI06 |
| 23 | 110 | 150 | 204 | 117.8 | LC1E120 | LC1E120 | LC1E95 | LRE482 | 84-135 | 250NHG1B | 250 | 1 | NX250 | 50 | MSMI06 |
| 24 | 125 | 170 | 234 | 135.1 | LC1E160 | LC1E160 | LC1E120 | LRE483* | 124-198 | 250NHG1B | 250 | 1 | NX250 | 50 | MSMI06 |
| 25 | 132 | 180 | 247 | 142.6 | LC1E160 | LC1E160 | LC1E120 | LRE483* | 124-198 | 250NHG1B | 250 | 1 | NX250 | 50 | MSMI06 |
| 26 | 150 | 200 | 248 | 143.2 | LC1E160 | LC1E160 | LC1E120 | LRE483* | 124-198 | 250NHG1B | 250 | 1 | NX250 | 50 | MSMI06 |
| 27 | 160 | 215 | 288 | 166.3 | LC1E200 | LC1E200 | LC1E160 | LRE483 | 124-198 | 315NHG2B | 300 | 2 | NX315 | 50 | MSMI06 |
| 28 | 180 | 240 | 298 | 172.1 | LC1E200 | LC1E200 | LC1E160 | LRE483 | 124-198 | 315NHG2B | 300 | 2 | NX315 | 50 | MSMI06 |
| 29 | 200 | 270 | 348 | 200.9 | LC1E250 | LC1E250 | LC1E160 | LRE484 | 146-234 | 400NHG2B | 400 | 2 | NX400 | 50 | MSMI06 |
| 30 | 225 | 300 | 360 | 207.9 | LC1E250 | LC1E250 | LC1E160 | LRE484 | 146-234 | 400NHG2B | 400 | 2 | NX400 | 50 | MSMI06 |
| 31 | 250 | 335 | 435 | 251.2 | LC1E300 | LC1E300 | LC1E200 | LRE485 | 174-279 | 450NHG3B | 450 | 3 | NX630 | 50 | MSMI06 |
| 32 | 275 | 370 | 440 | 254.0 | LC1E300 | LC1E300 | LC1E200 | LRE485 | 174-279 | 450NHG3B | 450 | 3 | NX630 | 50 | MSMI06 |
| 33 | 315 | 425 | 548 | 316.4 | LC1E400 | LC1E400 | LC1E250 | LRE486 | 208-333 | 630NHG3B | 630 | 3 | NX630 | 50 | MSMI06 |
| 34 | 335 | 452 | 580 | 334.9 | LC1E400 | LC1E400 | LC1E250 | LRE487 | 258-414 | 630NHG3B | 630 | 3 | NX630 | 50 | MSMI06 |
| 35 | 355 | 475 | 618 | 356.8 | LC1E400 | LC1E400 | LC1E250 | LRE487 | 258-414 | 630NHG3B | 630 | 3 | NX630 | 50 | MSMI06 |
| 36 | 375 | 502 | 653 | 377.0 | LC1E400 | LC1E400 | LC1E250 | LRE487 | 258-414 | 800NHG3B | 800 | 3 | NA | 50 | MSMI06 |
| 37 | 400 | 535 | 674 | 389.1 | LC1E500 | LC1E500 | LC1E300 | LRE487 | 258-414 | 800NHG3B | 800 | 3 | NA | 200 | MSMI06 |

* Relay can match with contactor electrically (i.e Cannot be directly mounted), rest all relays are suitable for direct mounting as per catalogue. Use alternate suggested for direct mounting.
**Selection valid upto Trip class 10/10A, Contact nearest sales office for details of EOCR to be used with this selection charts.
# For guaranteed performance, Motor feeders built using this chart must make use of MSMI06 or equivalent Schneider Electric make timer only.

# Selection Chart

Direct-on-Line starters with circuit-breaker type CVS and overload protection by separate overload relay type LRE (thermal) or EOCR** (up to Trip class 10/10A)

## Reliable switching for IE2/IE3 motors

IE2

IE3

Rated Operational Voltage, Ue = 400/415V, 50/60Hz
Short Circuit Current Iq = 50kA

Type-2 Recommended Selection

| Sr. No. | 3Φ Motors | | | Contactor | Overload Relay | | Circuit Breaker | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | kW | HP | FLC - $I_n$ (Amps) | | Type | Range (A) | Type | Trip Unit Rating | Magnetic Setting Range | Setting on Trip Unit in Amps |
| 1 | 0.37 | 0.5 | 1.4 | LC1E09 | LRE06 | 1-1.6 | CVS100-MA | 2.5 | 6-14 | 15 |
| 2 | 0.55 | 0.75 | 1.7 | LC1E09 | LRE07 | 1.6-2.5 | CVS100-MA | 2.5 | 6-14 | 17.5 |
| 3 | 0.75 | 1 | 2.2 | LC1E09 | LRE07 | 1.6-2.5 | CVS100-MA | 2.5 | 6-14 | 22.5 |
| 4 | 1.1 | 1.5 | 2.9 | LC1E09 | LRE08 | 2.5-4 | CVS100-MA | 6.3 | 6-14 | 31.5 |
| 5 | 1.3 | 1.75 | 3 | LC1E09 | LRE08 | 2.5-4 | CVS100-MA | 6.3 | 6-14 | 31.5 |
| 6 | 1.5 | 2 | 3.8 | LC1E09 | LRE08 | 2.5-4 | CVS100-MA | 6.3 | 6-14 | 37.8 |
| 7 | 2.2 | 3 | 5.1 | LC1E18 | LRE10 | 4-6 | CVS100-MA | 6.3 | 6-14 | 63 |
| 8 | 3 | 4 | 6 | LC1E18 | LRE10 | 4-6 | CVS100-MA | 6.3 | 6-14 | 69.3 |
| 9 | 3.7 | 5 | 8.1 | LC1E25 | LRE14 | 7-10 | CVS100-MA | 12.5 | 6-14 | 100 |
| 10 | 4 | 5.5 | 8.5 | LC1E25 | LRE14 | 7-10 | CVS100-MA | 12.5 | 6-14 | 100 |
| 11 | 5.5 | 7.5 | 11.4 | LC1E32 | LRE16 | 9-13 | CVS100-MA | 12.5 | 6-14 | 137.5 |
| 12 | 7.5 | 10 | 15.4 | LC1E32 | LRE21 | 12-18 | CVS100-MA | 25 | 6-14 | 175 |
| 13 | 9.3 | 12.5 | 17.3 | LC1E32 | LRE21 | 12-18 | CVS100-MA | 25 | 6-14 | 200 |
| 14 | 11 | 15 | 22 | LC1E40B | LRE22 | 16-24 | CVS100-MA | 25 | 6-14 | 275 |
| 15 | 13 | 17.5 | 24 | LC1E40B | LRE22 | 16-24 | CVS100-MA | 25 | 6-14 | 300 |
| 16 | 15 | 20 | 30 | LC1E50 | LRE32* or LRE353 | 23-32 | CVS100-MA | 50 | 6-14 | 350 |
| 17 | 18.5 | 25 | 36 | LC1E65 | LRE35* or LRE355 | 30-38* 30-40 | CVS100-MA | 50 | 6-14 | 450 |
| 18 | 22 | 30 | 43 | LC1E65 | LRE357 | 37-50 | CVS100-MA | 50 | 6-14 | 500 |
| 19 | 30 | 40 | 56 | LC1E80 | LRE359 | 48-65 | CVS100-MA | 100 | 6-14 | 700 |
| 20 | 37 | 50 | 69 | LC1E95 | LRE361 | 55-70 | CVS100-MA | 100 | 6-14 | 800 |
| 21 | 45 | 60 | 84 | LC1E120 | LRE482 | 84-135 | CVS100-MA | 100 | 6-14 | 1000 |
| 22 | 55 | 75 | 99 | LC1E160 | LRE482 | 84-135 | CVS100-MA | 100 | 6-14 | 1200 |
| 23 | 75 | 100 | 134 | LC1E160 | LRE482 | 84-135 | CVS250-MA | 150 | 9-14 | 1650 |
| 24 | 80 | 110 | 139 | LC1E160 | LRE483 | 124-198 | CVS250-MA | 150 | 9-14 | 1650 |
| 25 | 90 | 120 | 164 | LC1E200 | LRE483 | 124-198 | CVS250-MA | 220 | 9-14 | 1980 |
| 26 | 110 | 150 | 204 | LC1E250 | LRE484 | 146-234 | CVS250-MA | 220 | 9-14 | 2420 |
| 27 | 125 | 170 | 234 | LC1E300 | LRE484 | 146-234 | CVS400-MA | 320 | 6-13 | 2880 |
| 28 | 132 | 180 | 247 | LC1E300 | LRE485 | 174-279 | CVS400-MA | 320 | 6-13 | 3200 |
| 29 | 160 | 215 | 288 | LC1E400 | LRE486 | 208-333 | CVS400-MA | 320 | 6-13 | 3520 |
| 30 | 180 | 240 | 298 | LC1E400 | LRE486 | 208-333 | CVS400-MA | 320 | 6-13 | 3520 |
| 31 | 200 | 270 | 348 | LC1E400 | LRE487 | 258-414 | CVS630-MA | 500 | 6-13 | 4500 |
| 32 | 225 | 300 | 360 | LC1E500 | LRE487* or LRE488 | 258-414* 321-513 | CVS630-MA | 500 | 6-13 | 4500 |
| 33 | 250 | 335 | 435 | LC1E500 | LRE488 | 321-513 | CVS630-MA | 500 | 6-13 | 5500 |
| 34 | 275 | 370 | 440 | LC1E630 | LRE489 | 394-630 | CVS630-MA | 500 | 6-13 | 5500 |
| 35 | 315 | 425 | 548 | LC1E630 | LRE489 | 394-630 | CVS630-ETS | 630 | 2-10 | 6300 |
| 36 | 335 | 452 | 580 | LC1E630 | LRE489 | 394-630 | CVS630-ETS | 630 | 2-10 | 6300 |
| 37 | 355 | 475 | 618 | LC1E630 | LRE489 | 394-630 | CVS800-TMD | 800 | 3.5-10 | 8000 |

* Relay can match with contactor electrically (i.e Cannot be directly mounted), rest all relays are suitable for direct mounting as per catalogue. Use alternate suggested for direct mounting.

** Selection valid upto Trip class 10/10A, Contact nearest sales office for details of EOCR to be used with this selection charts.

W.E.F. January 25th, 2022

# Selection Chart

Star Delta starters with circuit-breaker type CVS and overload protection by separate overload relay type LRE (thermal) or EOCR** (up to Trip class 10/10A)

## Reliable switching for IE2/IE3 motors

IE2

IE3

Rated Operational Voltage, Ue = 400/415V, 50/60Hz
Short Circuit Current Iq = 50kA

Type-2 Recommended Selection

| Sr. No. | 3Φ Motors | | | | Contactor | | | Overload Relay | | Circuit Breaker | | | | Minimum Pause time (mSec) | Star-Delta Timer# |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | kW | HP | FLC - $I_n$ (Amps) | | | | | Type | Range (A) | Type | Trip Unit Rating | Mag-netic Setting Range | Setting on Trip Unit in Amps | | |
| | | | Line | Phase | Main | Delta | Star | | | | | | | | |
| 1 | 0.75 | 1 | 2.2 | 1.3 | LC1E09 | LC1E09 | LC1E09 | LRE06 | 1-1.6 | CVS100-MA | 6.3 | 6-14 | 37.8 | 50 | MSMI06 |
| 2 | 1.1 | 1.5 | 2.9 | 1.7 | LC1E09 | LC1E09 | LC1E09 | LRE07 | 1.6-2.5 | CVS100-MA | 6.3 | 6-14 | 50.4 | 50 | MSMI06 |
| 3 | 1.3 | 1.8 | 3 | 1.7 | LC1E09 | LC1E09 | LC1E09 | LRE07 | 1.6-2.5 | CVS100-MA | 6.3 | 6-14 | 50.4 | 50 | MSMI06 |
| 4 | 1.5 | 2 | 3.8 | 2.2 | LC1E09 | LC1E09 | LC1E09 | LRE07 | 1.6-2.5 | CVS100-MA | 6.3 | 6-14 | 63 | 50 | MSMI06 |
| 5 | 2.2 | 3 | 5.1 | 2.9 | LC1E09 | LC1E09 | LC1E09 | LRE08 | 2.5-4 | CVS100-MA | 12.5 | 6-14 | 100 | 50 | MSMI06 |
| 6 | 3 | 4 | 6 | 3.5 | LC1E09 | LC1E09 | LC1E09 | LRE08 | 2.5-4 | CVS100-MA | 12.5 | 6-14 | 112.5 | 50 | MSMI06 |
| 7 | 3.7 | 5 | 8.1 | 4.7 | LC1E09 | LC1E09 | LC1E09 | LRE10 | 4-6 | CVS100-MA | 12.5 | 6-14 | 150 | 50 | MSMI06 |
| 8 | 4 | 5.5 | 8.5 | 4.9 | LC1E09 | LC1E09 | LC1E09 | LRE10 | 4-6 | CVS100-MA | 12.5 | 6-14 | 162.5 | 50 | MSMI06 |
| 9 | 5.5 | 7.5 | 11.4 | 6.6 | LC1E12 | LC1E12 | LC1E09 | LRE12 | 5.5-8 | CVS100-MA | 25 | 6-14 | 225 | 50 | MSMI06 |
| 10 | 7.5 | 10 | 15.4 | 8.9 | LC1E18 | LC1E18 | LC1E09 | LRE14 | 7-10 | CVS100-MA | 25 | 6-14 | 300 | 50 | MSMI06 |
| 11 | 9.3 | 13 | 17.3 | 10 | LC1E25 | LC1E25 | LC1E12 | LRE14 | 7-10 | CVS100-MA | 25 | 6-14 | 325 | 50 | MSMI06 |
| 12 | 11 | 15 | 22 | 12.7 | LC1E25 | LC1E25 | LC1E12 | LRE16 | 9-13 | CVS100-MA | 50 | 6-14 | 400 | 50 | MSMI06 |
| 13 | 13 | 18 | 24 | 13.9 | LC1E32 | LC1E32 | LC1E12 | LRE21 | 12-18 | CVS100-MA | 50 | 6-14 | 450 | 50 | MSMI06 |
| 14 | 15 | 20 | 30 | 17.3 | LC1E32 | LC1E32 | LC1E18 | LRE21 | 12-18 | CVS100-MA | 50 | 6-14 | 550 | 50 | MSMI06 |
| 15 | 18.5 | 25 | 36 | 20.8 | LC1E40B | LC1E40B | LC1E25 | LRE22 | 16-24 | CVS100-MA | 50 | 6-14 | 700 | 50 | MSMI06 |
| 16 | 22 | 30 | 43 | 24.8 | LC1E40 | LC1E40 | LC1E32 | LRE32* or LRE353 | 23-32 | CVS100-MA | 100 | 6-14 | 800 | 50 | MSMI06 |
| 17 | 30 | 40 | 56 | 32.3 | LC1E50 | LC1E50 | LC1E38 | LRE355 | 30-40 | CVS100-MA | 100 | 6-14 | 1100 | 50 | MSMI06 |
| 18 | 37 | 50 | 69 | 39.8 | LC1E65 | LC1E65 | LC1E40 | LRE355 | 30-40 | CVS100-MA | 100 | 6-14 | 1300 | 50 | MSMI06 |
| 19 | 45 | 60 | 84 | 48.5 | LC1E80 | LC1E80 | LC1E50 | LRE357 | 37-50 | CVS250-MA | 150 | 9-14 | 1650 | 50 | MSMI06 |
| 20 | 55 | 75 | 99 | 57.2 | LC1E95 | LC1E95 | LC1E65 | LRE359 | 48-65 | CVS250-MA | 150 | 9-14 | 1950 | 50 | MSMI06 |
| 21 | 75 | 100 | 134 | 77.4 | LC1E120 | LC1E120 | LC1E80 | LRE481 | 62-99 | CVS250-MA | 220 | 9-14 | 2640 | 50 | MSMI06 |
| 22 | 80 | 110 | 139 | 80.3 | LC1E120 | LC1E120 | LC1E80 | LRE481 | 62-99 | CVS250-MA | 220 | 9-14 | 2640 | 50 | MSMI06 |
| 23 | 90 | 120 | 164 | 94.7 | LC1E160 | LC1E160 | LC1E95 | LRE482 | 84-135 | CVS250-MA | 220 | 9-14 | 3080 | 50 | MSMI06 |
| 24 | 110 | 150 | 204 | 117.8 | LC1E200 | LC1E200 | LC1E120 | LRE482* | 84-135 | CVS400-MA | 320 | 6-13 | 3840 | 50 | MSMI06 |
| 25 | 125 | 170 | 234 | 135.1 | LC1E250 | LC1E250 | LC1E120 | LRE483* | 124-198 | CVS630-MA | 500 | 6-13 | 4500 | 50 | MSMI06 |
| 26 | 132 | 180 | 247 | 142.6 | LC1E250 | LC1E250 | LC1E120 | LRE483* | 124-198 | CVS630-MA | 500 | 6-13 | 5000 | 50 | MSMI06 |
| 27 | 150 | 200 | 248 | 143.2 | LC1E250 | LC1E250 | LC1E120 | LRE483* | 124-198 | CVS630-MA | 500 | 6-13 | 5000 | 50 | MSMI06 |
| 28 | 160 | 215 | 288 | 166.3 | LC1E300 | LC1E300 | LC1E160 | LRE483* | 124-198 | CVS630-MA | 500 | 6-13 | 5500 | 50 | MSMI06 |
| 29 | 180 | 240 | 298 | 172.1 | LC1E300 | LC1E300 | LC1E160 | LRE483* | 124-198 | CVS630-MA | 500 | 6-13 | 6000 | 50 | MSMI06 |
| 30 | 200 | 270 | 348 | 200.9 | LC1E400 | LC1E400 | LC1E200 | LRE484 | 146-234 | CVS630-MA | 500 | 6-13 | 6500 | 50 | MSMI06 |
| 31 | 225 | 300 | 360 | 207.9 | LC1E400 | LC1E400 | LC1E200 | LRE484 | 146-234 | CVS630-MA | 500 | 6-13 | 6500 | 50 | MSMI06 |
| 32 | 250 | 335 | 435 | 251.2 | LC1E400 | LC1E400 | LC1E250 | LRE485 | 174-279 | CVS630-MA | 500 | 6-13 | 6500 | 50 | MSMI06 |
| 33 | 275 | 370 | 440 | 254 | LC1E400 | LC1E400 | LC1E250 | LRE485 | 174-279 | CVS630-MA | 500 | 6-13 | 6500 | 50 | MSMI06 |
| 34 | 315 | 425 | 548 | 316.4 | LC1E500 | LC1E500 | LC1E300 | LRE486* | 208-333 | CV630-ETS | 630 | 2-10 | 6300 | 200 | MSMI06 |

* Relay can match with contactor electrically (i.e Cannot be directly mounted), rest all relays are suitable for direct mounting as per catalogue. Use alternate suggested for direct mounting.
**Selection valid upto Trip class 10/10A, Contact nearest sales office for details of EOCR to be used with this selection charts.
# For guaranteed performance, Motor feeders built using this chart must make use of MSMI06 or equivalent Schneider Electric make timer only.

Note

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