

# LC1E80F5

Contactor, Easy TeSys

Control, LC1E, 3P(3NO), AC-3, ≤440V, 80A, 110V

AC coil, 50Hz



## Main

|                                |                                                                                                                 |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Range                          | Easy TeSys                                                                                                      |
| Range of product               | Easy TeSys Control                                                                                              |
| Product or component type      | Contactor                                                                                                       |
| Device short name              | LC1E                                                                                                            |
| Contactor application          | Resistive load<br>Motor control                                                                                 |
| Utilisation category           | AC-3<br>AC-1                                                                                                    |
| Poles description              | 3P                                                                                                              |
| [Ue] rated operational voltage | Power circuit: ≤ 690 V AC 50/60 Hz                                                                              |
| [Ie] rated operational current | 80 A (at ≤55 °C) at ≤ 440 V AC AC-3 for power circuit<br>110 A (at ≤55 °C) at ≤ 440 V AC AC-1 for power circuit |
| [Uc] control circuit voltage   | 110 V AC 50 Hz                                                                                                  |

## Complementary

|                                             |                                                                                                                                                                                                                                              |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motor power kW                              | 22 kW at 220...230 V AC 50/60 Hz (AC-3)<br>37 kW at 380...400 V AC 50/60 Hz (AC-3)<br>45 kW at 415 V AC 50/60 Hz (AC-3)<br>45 kW at 440 V AC 50/60 Hz (AC-3)<br>45 kW at 500 V AC 50/60 Hz (AC-3)<br>45 kW at 660...690 V AC 50/60 Hz (AC-3) |
| Pole contact composition                    | 3 NO                                                                                                                                                                                                                                         |
| [Ith] conventional free air thermal current | 100 A (at 60 °C) for power circuit                                                                                                                                                                                                           |
| Irms rated making capacity                  | 800 A at 440 V AC for power circuit conforming to IEC 60947-4-1                                                                                                                                                                              |
| Rated breaking capacity                     | 640 A at 440 V for power circuit conforming to IEC 60947                                                                                                                                                                                     |
| [Icw] rated short-time withstand current    | 640 A 40 °C - 10 s for power circuit<br>320 A 40 °C - 60 s for power circuit<br>135 A 40 °C - 600 s for power circuit                                                                                                                        |
| Associated fuse rating                      | 10 A gG at ≤ 690 V coordination type 1 for control circuit conforming to IEC 60947-5-1<br>160 A gG at ≤ 690 V coordination type 1 for power circuit                                                                                          |
| Average impedance                           | 0.8 mOhm - Ith 110 A 50 Hz for power circuit                                                                                                                                                                                                 |
| Power dissipation per pole                  | 5.1 W AC-3<br>9.7 W AC-1                                                                                                                                                                                                                     |
| [Ui] rated insulation voltage               | 690 V conforming to IEC 60947-4-1                                                                                                                                                                                                            |
| Overvoltage category                        | III                                                                                                                                                                                                                                          |
| Pollution degree                            | 3                                                                                                                                                                                                                                            |
| [Uimp] rated impulse withstand voltage      | 6 kV coil not connected to the power circuit conforming to IEC 60947                                                                                                                                                                         |
| Mechanical durability                       | 3000000 cycles                                                                                                                                                                                                                               |
| Electrical durability                       | 350000 Cycles AC-1<br>900000 cycles AC-3                                                                                                                                                                                                     |
| Control circuit type                        | AC at 50 Hz                                                                                                                                                                                                                                  |
| Control circuit voltage limits              | 0.85...1.1 Uc (-5...55 °C):operational 50 Hz<br>0.3...0.6 Uc (-5...55 °C):drop-out 50 Hz                                                                                                                                                     |
| Inrush power in VA                          | 200 VA 50 Hz cos phi 0.75 (at 20 °C)<br>220 VA 60 Hz cos phi 0.75 (at 20 °C)                                                                                                                                                                 |

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| Hold-in power consumption in VA | 22 VA 60 Hz cos phi 0.3 (at 20 °C)<br>20 VA 50 Hz cos phi 0.3 (at 20 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Heat dissipation                | 6...10 W for control circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Operating time                  | 20...35 ms on closing<br>6...30 ms on opening                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Maximum operating rate          | 1200 cyc/h 60 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Connections - terminals         | Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: flexible without cable end<br>Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: flexible with cable end<br>Control circuit: screw clamp terminals 2 1...2.5 mm <sup>2</sup> - cable stiffness: flexible with cable end<br>Control circuit: screw clamp terminals 1 1...4 mm <sup>2</sup> - cable stiffness: solid without cable end<br>Control circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: solid without cable end<br>Power circuit: screw clamp terminals 1 4...50 mm <sup>2</sup> - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 2 4...16 mm <sup>2</sup> - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 1 4...50 mm <sup>2</sup> - cable stiffness: solid without cable end<br>Power circuit: screw clamp terminals 2 4...50 mm <sup>2</sup> - cable stiffness: solid without cable end |
| Tightening torque               | Control circuit: 1.2 N.m<br>Power circuit: 12 N.m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Auxiliary contact composition   | 1 NO + 1 NC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Minimum switching voltage       | 17 V for control circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Minimum switching current       | 5 mA for control circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Insulation resistance           | > 10 MOhm for control circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Non-overlap time                | 1.5 Ms on energisation guaranteed between NC and NO contact<br>1.5 ms on de-energisation guaranteed between NC and NO contact                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Mounting support                | Plate<br>DIN rail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## Environment

|                                                       |                                                                                                                                                                                        |
|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standards                                             | IEC 60947-1<br>IEC 60947-4-1<br>IEC 60947-5-1                                                                                                                                          |
| Product certifications                                | CE[RETURN]EAC                                                                                                                                                                          |
| IP degree of protection                               | IP2X conforming to IEC 60529                                                                                                                                                           |
| Protective treatment                                  | TH (pollution degree 3) conforming to IEC 60068-2-30                                                                                                                                   |
| Permissible ambient air temperature around the device | -20...70 °C at U <sub>c</sub><br>-60...80 °C storage<br>-5...55 °C operation                                                                                                           |
| Operating altitude                                    | 3000 m without derating                                                                                                                                                                |
| Fire resistance                                       | 850 °C conforming to IEC 60695-2-1                                                                                                                                                     |
| Mechanical robustness                                 | Vibrations contactor open (1.5 Gn, 5...300 Hz)<br>Vibrations contactor closed (3 Gn, 5...300 Hz)<br>Shocks contactor open (6 Gn for 11 ms)<br>Shocks contactor closed (7 Gn for 11 ms) |
| Height                                                | 127 mm                                                                                                                                                                                 |
| Width                                                 | 85 mm                                                                                                                                                                                  |
| Depth                                                 | 121 mm                                                                                                                                                                                 |
| Net weight                                            | 1.52 kg                                                                                                                                                                                |

## Packing Units

|                              |          |
|------------------------------|----------|
| Unit Type of Package 1       | PCE      |
| Number of Units in Package 1 | 1        |
| Package 1 Height             | 15 cm    |
| Package 1 Width              | 11.2 cm  |
| Package 1 Length             | 15.5 cm  |
| Package 1 Weight             | 1.536 kg |

|                              |          |
|------------------------------|----------|
| Unit Type of Package 2       | S03      |
| Number of Units in Package 2 | 5        |
| Package 2 Height             | 30 cm    |
| Package 2 Width              | 30 cm    |
| Package 2 Length             | 40 cm    |
| Package 2 Weight             | 8.393 kg |

### Offer Sustainability

|                            |                                                                                                                             |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                       |
| REACH Regulation           | <a href="#">REACH Declaration</a>                                                                                           |
| EU RoHS Directive          | Compliant with Exemptions                                                                                                   |
| Mercury free               | Yes                                                                                                                         |
| China RoHS Regulation      | <a href="#">China RoHS Declaration</a>                                                                                      |
| RoHS exemption information | <a href="#">Yes</a>                                                                                                         |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>                                                                               |
| Circularity Profile        | <a href="#">End Of Life Information</a>                                                                                     |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |

### Contractual warranty

|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|