

# Product data sheet

Specifications



## Contactor, EasyPact TVS, 3P(3NO), AC-3, <=440V, 50A, 415V AC coil, 50Hz

LC1E50N5

### Main

|                                |  |
|--------------------------------|--|
| Range                          | EasyPact   |
| Product or component type      | Contactor  |
| Device short name              | LC1E   |
| Contactor application          | Motor control<br>Resistive load  |
| Utilisation category           | AC-1<br>AC-3   |
| Poles description              | 3P   |
| [Ue] rated operational voltage | Power circuit: <= 690 V AC 50/60 Hz  |
| [Ie] rated operational current | 50 A (at <55 °C) at <= 440 V AC AC-3 for power circuit<br>70 A (at <55 °C) at <= 440 V AC AC-1 for power circuit |
| [Uc] control circuit voltage   | 415 V AC 50 Hz   |

### Complementary

|  |  |
|--|--|
| Motor power kW   | 15 kW at 220...230 V AC 50/60 Hz (AC-3)<br>22 kW at 380...400 V AC 50/60 Hz (AC-3)<br>25 kW at 415 V AC 50/60 Hz (AC-3)<br>30 kW at 440 V AC 50/60 Hz (AC-3)<br>30 kW at 500 V AC 50/60 Hz (AC-3)<br>33 kW at 660...690 V AC 50/60 Hz (AC-3) |
| Pole contact composition                                 | 3 NO   |
| [I <sub>th</sub> ] conventional free air thermal current | 70 A (at 55 °C)  |
| I <sub>rms</sub> rated making capacity                   | 500 A at 440 V AC for power circuit conforming to IEC 60947-4-1  |
| Rated breaking capacity                                  | 400 A at 440 V for power circuit conforming to IEC 60947   |
| [I <sub>cw</sub> ] rated short-time withstand current    | 400 A 40 °C - 10 s for power circuit<br>208 A 40 °C - 60 s for power circuit<br>84 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>100 A gG at <= 690 V coordination type 1 for power circuit  |
| Average impedance  | 1.5 mOhm - I <sub>th</sub> 70 A 50 Hz for power circuit  |
| Power dissipation per pole                               | 3.8 W AC-3<br>7.4 W AC-1   |
| [U <sub>i</sub> ] rated insulation voltage               | 690 V conforming to IEC 60947-4-1  |
| Overtoltage category                                     | III  |
| Pollution degree   | 3  |

|  |  |
|--|--|
| <b>[Uimp] rated impulse withstand voltage</b>                | 6 kV coil not connected to the power circuit conforming to IEC 60947   |
| <b>Mechanical durability</b>                                 | 5000000 cycles   |
| <b>Electrical durability</b>                                 | 350000 cycles AC-1<br>900000 cycles AC-3   |
| <b>Control circuit type</b>                                  | AC at 50 Hz  |
| <b>Control circuit voltage limits</b>                        | 0.85...1.1 U <sub>c</sub> (55 °C):operational 50 Hz<br>0.3...0.6 U <sub>c</sub> (55 °C):drop-out 50 Hz   |
| <b>Inrush power in VA</b>                                    | 160 VA 50 Hz cos phi 0.75 (at 20 °C)<br>140 VA 60 Hz cos phi 0.75 (at 20 °C)   |
| <b>Hold-in power consumption in VA</b>                       | 15 VA 50 Hz cos phi 0.3 (at 20 °C)<br>13 VA 60 Hz cos phi 0.3 (at 20 °C)   |
| <b>Heat dissipation</b>                                      | 6...10 W for control circuit   |
| <b>Operating time</b>  | 20...26 ms on closing<br>8...12 ms on opening  |
| <b>Maximum operating rate</b>                                | 1200 cyc/h 60 °C   |
| <b>Connections - terminals</b>                               | 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 2.5...25 mm <sup>2</sup> - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 2 2.5...10 mm <sup>2</sup> - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 1 2.5...25 mm <sup>2</sup> - cable stiffness: solid without cable end<br>Power circuit: screw clamp terminals 2 2.5...16 mm <sup>2</sup> - cable stiffness: solid without cable end |
| <b>Tightening torque</b>                                     | Control circuit: 1.2 N.m<br>Power circuit: 5 N.m   |
| <b>Auxiliary contact composition</b>                         | 1 NO + 1 NC  |
| <b>Minimum switching voltage</b>                             | 17 V for control circuit   |
| <b>Minimum switching current</b>                             | 5 mA for control circuit   |
| <b>Insulation resistance</b>                                 | > 10 MOhm for control circuit  |
| <b>Non-overlap time</b>                                      | 1.5 ms on energisation guaranteed between NC and NO contact<br>1.5 ms on de-energisation guaranteed between NC and NO contact  |
| <b>Mounting support</b>                                      | Plate<br>DIN rail  |
| <b>Environment</b>   |  |
| <b>Standards</b>   | IEC 60947-4-1<br>IEC 60947-1<br>IEC 60947-5-1  |
| <b>Product certifications</b>                                | EAC<br>CE  |
| <b>IP degree of protection</b>                               | IP2X conforming to IEC 60529   |
| <b>Protective treatment</b>                                  | TH (pollution degree 3) conforming to IEC 60068-2-30 test Db   |
| <b>Permissible ambient air temperature around the device</b> | -20...70 °C at U <sub>c</sub><br>-60...80 °C storage<br>-5...55 °C operation   |
| <b>Operating altitude</b>                                    | 3000 m without derating  |
| <b>Fire resistance</b>                                       | 850 °C conforming to IEC 60695-2-1   |
| <b>Mechanical robustness</b>                                 | 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)   |
| <b>Height</b>  | 127 mm   |
| <b>Width</b>   | 75 mm  |
| <b>Depth</b>   | 114 mm   |

|            |         |
|------------|---------|
| Net weight | 0.98 kg |
|------------|---------|

## Packing Units

|                              |          |
|------------------------------|----------|
| Unit Type of Package 1       | PCE      |
| Number of Units in Package 1 | 1        |
| Package 1 Height             | 12.3 cm  |
| Package 1 Width              | 8.6 cm   |
| Package 1 Length             | 13.2 cm  |
| Package 1 Weight             | 980 g    |
| Unit Type of Package 2       | S02      |
| Number of Units in Package 2 | 9        |
| Package 2 Height             | 15 cm    |
| Package 2 Width              | 30 cm    |
| Package 2 Length             | 40 cm    |
| Package 2 Weight             | 9.275 kg |
| Unit Type of Package 3       | S02      |
| Number of Units in Package 3 | 9        |
| Package 3 Height             | 15 cm    |
| Package 3 Width              | 30 cm    |
| Package 3 Length             | 40 cm    |
| Package 3 Weight             | 9.275 kg |

## Offer Sustainability

|                            |   |
|----------------------------|---|
| Sustainable offer status   | Green Premium product   |
| REACH Regulation           | <a href="#">REACH Declaration</a>   |
| REACH free of SVHC         | Yes   |
| EU RoHS Directive          | Compliant<br><a href="#">EU RoHS Declaration</a>  |
| Toxic heavy metal free     | Yes   |
| 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 |
|----------|-----------|

## Recommended replacement(s)