

# LC1N3801B7N

Contactor, Easy TeSys

Control, LC1N, 3P(3NO), AC-3, ≤440V, 38A, 24V

AC coil, 50/60Hz, 1NC auxiliary contact, China



## Main

|                                |                                                                                                                                                                           |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                          | Easy TeSys                                                                                                                                                                |
| Range of product               | Easy TeSys Control                                                                                                                                                        |
| Product or component type      | Contactor                                                                                                                                                                 |
| Device short name              | LC1N                                                                                                                                                                      |
| Contactor application          | Motor control<br>Resistive load                                                                                                                                           |
| Utilisation category           | AC-3<br>AC-1<br>AC-4                                                                                                                                                      |
| Poles description              | 3P                                                                                                                                                                        |
| [Ue] rated operational voltage | Power circuit: ≤ 690 V AC 50/60 Hz                                                                                                                                        |
| [Ie] rated operational current | 40 A (at <60 °C) at ≤ 440 V AC AC-3 for power circuit<br>50 A (at <60 °C) at ≤ 440 V AC AC-1 for power circuit<br>15.6 A (at <60 °C) at ≤ 440 V AC AC-4 for power circuit |
| [Uc] control circuit voltage   | 24 V AC 50/60 Hz                                                                                                                                                          |

## Complementary

|                                             |                                                                                                                                                                                   |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motor power kW                              | 9 kW at 220...230 V AC 50/60 Hz<br>18.5 kW at 380...400 V AC 50/60 Hz<br>18.5 kW at 415...440 V AC 50/60 Hz<br>18.5 kW at 500 V AC 50/60 Hz<br>18.5 kW at 660...690 V AC 50/60 Hz |
| Pole contact composition                    | 3 NO                                                                                                                                                                              |
| [Ith] conventional free air thermal current | 40 A (at 60 °C) for power circuit                                                                                                                                                 |
| Irms rated making capacity                  | 380 A at 380 V AC for power circuit conforming to IEC 60947-4-1<br>140 A AC for auxiliary contact conforming to IEC 60947-5-1                                                     |
| Rated breaking capacity                     | 304 A at 440 V for power circuit conforming to IEC 60947                                                                                                                          |
| [Icw] rated short-time withstand current    | 60 A 40 °C - 600 s for power circuit<br>310 A 40 °C - 10 s for power circuit<br>150 A 40 °C - 60 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>63 A gG at ≤ 690 V coordination type 1 for power circuit                                |
| Average impedance                           | 2.5 mOhm - Ith 50 A 50 Hz for power circuit                                                                                                                                       |
| Power dissipation per pole                  | 2.9 W AC-3<br>5 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                       | 8000000 cycles                                                                                                                                                                    |
| Electrical durability                       | 350000 Cycles AC-1<br>900000 Cycles AC-3<br>200000 cycles AC-4                                                                                                                    |
| Control circuit type                        | AC at 50/60 Hz                                                                                                                                                                    |

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| Control circuit voltage limits  | 0.85...1.1 U <sub>c</sub> (-5...55 °C):operational 50/60 Hz<br>0.3...0.6 U <sub>c</sub> (-5...55 °C):drop-out 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Inrush power in VA              | 95 VA 50 Hz cos phi 0.75 (at 20 °C)<br>95 VA 60 Hz cos phi 0.75 (at 20 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Hold-in power consumption in VA | 8.3 VA 50 Hz cos phi 0.3 (at 20 °C)<br>8.3 VA 60 Hz cos phi 0.3 (at 20 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Heat dissipation                | 2...3 W for control circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Operating time                  | 12...22 ms on closing<br>4...19 ms on opening                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Maximum operating rate          | 1800 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 1.5...6 mm <sup>2</sup> - cable stiffness: solid without cable end<br>Power circuit: screw clamp terminals 2 1.5...6 mm <sup>2</sup> - cable stiffness: solid without cable end<br>Power circuit: screw clamp terminals 1 1...6 mm <sup>2</sup> - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: flexible with cable end |
| Tightening torque               | Control circuit: 1.2 N.m<br>Power circuit: 1.85 N.m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Auxiliary contact composition   | 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                | DIN rail<br>Plate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## Environment

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|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standards                                             | IEC 60947-4-1<br>GB 14048.4<br>IEC 60947-1<br>EN 60947-1<br>EN 60947-4-1                                                                                                                |
| Product certifications                                | CCC                                                                                                                                                                                     |
| IP degree of protection                               | IP20 conforming to IEC 60529                                                                                                                                                            |
| Protective treatment                                  | TH (pollution degree 3) conforming to IEC 60068                                                                                                                                         |
| Permissible ambient air temperature around the device | -5...55 °C operation<br>-60...80 °C storage<br>-20...70 °C at U <sub>c</sub>                                                                                                            |
| 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 closed (10 Gn for 11 ms)<br>Shocks contactor open (6 Gn for 11 ms) |
| Height                                                | 84 mm                                                                                                                                                                                   |
| Width                                                 | 56 mm                                                                                                                                                                                   |
| Depth                                                 | 86 mm                                                                                                                                                                                   |
| Net weight                                            | 0.45 kg                                                                                                                                                                                 |

## Packing Units

|                              |        |
|------------------------------|--------|
| Unit Type of Package 1       | PCE    |
| Number of Units in Package 1 | 1      |
| Package 1 Height             | 8.6 cm |
| Package 1 Width              | 5.6 cm |
| Package 1 Length             | 8.4 cm |
| Package 1 Weight             | 451 g  |

## Offer Sustainability

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