

# LC1R40B5N

Contactor, EasyPact TVR, 3P, 1NO  
+1NC, 18.5kW, 40A, 24V AC coil



## Main

|                                |                                                                                                                  |
|--------------------------------|------------------------------------------------------------------------------------------------------------------|
| Range                          | EasyPact                                                                                                         |
| Product name                   | EasyPact TVR                                                                                                     |
| Product or component type      | Contactor                                                                                                        |
| Device short name              | LC1R                                                                                                             |
| Contactor application          | Reversing<br>Resistive load<br>Motor control                                                                     |
| Utilisation category           | AC-1<br>AC-3                                                                                                     |
| Poles description              | 3P                                                                                                               |
| Power pole contact composition | 3 NO                                                                                                             |
| [Ie] rated operational current | 40 A (at <40 °C) at <= 400 V AC AC-3 for power circuit<br>60 A (at <40 °C) at <= 400 V AC AC-1 for power circuit |
| [Uc] control circuit voltage   | 24 V AC 50 Hz                                                                                                    |
| Auxiliary contact composition  | 1 NO + 1 NC                                                                                                      |
| [Ue] rated operational voltage | Power circuit: 690 V AC 50 Hz<br>Signalling circuit: 690 V AC 50 Hz                                              |

## Complementary

|                                             |                                                                                                                                                                                                                                                |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motor power kW                              | 11 kW at 220/230 V AC 50 Hz<br>18.5 kW at 380/400 V AC 50 Hz<br>30 kW at 660/690 V AC 50 Hz                                                                                                                                                    |
| Electrical durability                       | 0.8 Mcycles 40 A AC-3 at Ue <= 440 V                                                                                                                                                                                                           |
| Mechanical durability                       | 8 Mcycles                                                                                                                                                                                                                                      |
| Maximum operating rate                      | 1000 cyc/h 40 °C                                                                                                                                                                                                                               |
| Operating time                              | 20...26 ms closing<br>8...12 ms opening                                                                                                                                                                                                        |
| Control circuit voltage limits              | Drop-out: 0.3...0.6 Uc<br>Operational: 0.8...1.1 Uc                                                                                                                                                                                            |
| Hold-in power consumption in VA             | 36.6 VA cos phi 0.3                                                                                                                                                                                                                            |
| [Ith] conventional free air thermal current | 60 A (at 40 °C) for power circuit<br>10 A (at 40 °C) for signalling circuit                                                                                                                                                                    |
| Average impedance                           | 1.5 mOhm - Ith 50 A 50 Hz for power circuit                                                                                                                                                                                                    |
| Power dissipation per pole                  | AC-3: 2.4 W<br>AC-1: 5.4 W                                                                                                                                                                                                                     |
| Heat dissipation                            | 6...10 W at 50 Hz                                                                                                                                                                                                                              |
| Irms rated making capacity                  | 320 A 380 V AC power circuit AC-3 IEC 60947<br>320 A 380 V AC power circuit AC-3 GB 14048                                                                                                                                                      |
| Rated breaking capacity                     | 320 A at 380 V for power circuit AC-3 conforming to IEC 60947<br>320 A at 380 V for power circuit AC-3 conforming to GB 14048                                                                                                                  |
| [Icw] rated short-time withstand current    | 100 A - 1 s for signalling circuit<br>120 A - 500 ms for signalling circuit<br>140 A - 100 ms for signalling circuit<br>320 A 40 °C - 10 s for power circuit<br>165 A 40 °C - 1 min for power circuit<br>72 A 40 °C - 10 min for power circuit |

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| Associated fuse rating        | 10 A gG for signalling circuit conforming to IEC 60947-5-1<br>80 A gG at ≤ 690 V coordination type 1 for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Overvoltage category          | III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| [Ui] rated insulation voltage | Power circuit: 690 V conforming to IEC 60947-4-1<br>Signalling circuit: 690 V conforming to IEC 60947-1<br>Power circuit: 690 V conforming to GB 14048.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Coil technology               | Without built-in suppressor module                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Auxiliary contacts type       | Type mechanically linked 1 NO + 1 NC conforming to IEC 60947-5-1<br>Type mirror contact 1 NC conforming to IEC 60947-4-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Signalling circuit frequency  | 50 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Minimum switching current     | 5 mA for signalling circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Switching voltage             | 17 V for signalling circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Non-overlap time              | 1.5 Ms on de-energisation between NC and NO contact<br>1.5 ms on energisation between NC and NO contact                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Insulation resistance         | > 10 MOhm for signalling circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Mounting support              | Plate<br>Rail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 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 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>Control circuit: screw clamp terminals 1 1...2.5 mm <sup>2</sup> - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 1 2.5...25 mm <sup>2</sup> - external diameter: 16 mm - cable stiffness: flexible without cable end<br>Power circuit: screw clamp terminals 2 2.5...16 mm <sup>2</sup> - external diameter: 16 mm - cable stiffness: flexible without cable end<br>Power circuit: screw clamp terminals 1 2.5...25 mm <sup>2</sup> - external diameter: 16 mm - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 2 2.5...10 mm <sup>2</sup> - external diameter: 16 mm - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 1 2.5...25 mm <sup>2</sup> - external diameter: 16 mm - cable stiffness: solid without cable end<br>Power circuit: screw clamp terminals 2 2.5...16 mm <sup>2</sup> - external diameter: 16 mm - cable stiffness: solid without cable end |
| Tightening torque             | Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>Control circuit: 1.2 N.m - on screw clamp terminals - with screwdriver Philips No 2<br>Power circuit: 5 N.m - on screw clamp terminals - with screwdriver flat Ø 6 to Ø 8 mm M6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Height                        | 127 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Width                         | 75 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Depth                         | 114 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Standards                     | IEC 60947-4-1<br>GB 14048.1<br>GB 14048.4<br>IEC 60947-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Product certifications        | CCC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## Environment

|                                                       |                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pollution degree                                      | 3                                                                                                                                                                                                                                                                                                  |
| Protective treatment                                  | TH conforming to IEC 60068-2-30                                                                                                                                                                                                                                                                    |
| Ambient air temperature for operation                 | -5...40 °C                                                                                                                                                                                                                                                                                         |
| Ambient air temperature for storage                   | -40...60 °C                                                                                                                                                                                                                                                                                        |
| Permissible ambient air temperature around the device | -20...55 °C at U <sub>c</sub>                                                                                                                                                                                                                                                                      |
| Operating altitude                                    | 2000 m without derating                                                                                                                                                                                                                                                                            |
| Fire resistance                                       | 850 °C conforming to IEC 60695-2-11                                                                                                                                                                                                                                                                |
| Mechanical robustness                                 | Vibrations contactor open (1.2 gn, 5...300 Hz) conforming to IEC 60068-2-6<br>Vibrations contactor closed (2.5 Gn, 5...300 Hz) conforming to IEC 60068-2-6<br>Shocks 11 ms contactor open (4 gn) conforming to IEC 60068-2-27<br>Shocks 11 ms contactor closed (6 Gn) conforming to IEC 60068-2-27 |

## Packing Units

|                              |         |
|------------------------------|---------|
| Unit Type of Package 1       | PCE     |
| Number of Units in Package 1 | 1       |
| Package 1 Height             | 7.5 cm  |
| Package 1 Width              | 11.4 cm |
| Package 1 Length             | 12.7 cm |
| Package 1 Weight             | 910 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 |