

# LC1D128FE7

TeSys D contactor - 4P(2 NO + 2 NC) - AC-1 -  
≤ 440 V 25 A - 115 V AC coil



## Main

|                                             |                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range of product                            | TeSys D                                                                                                                                                                                                                                                                                                       |
| Product or component type                   | Contacteur                                                                                                                                                                                                                                                                                                    |
| Device short name                           | LC1D                                                                                                                                                                                                                                                                                                          |
| Contacteur application                      | Resistive load                                                                                                                                                                                                                                                                                                |
| Utilisation category                        | AC-1                                                                                                                                                                                                                                                                                                          |
| Poles description                           | 4P                                                                                                                                                                                                                                                                                                            |
| Power pole contact composition              | 2 NO + 2 NC                                                                                                                                                                                                                                                                                                   |
| [Ue] rated operational voltage              | ≤ 690 V AC 25...400 Hz for power circuit<br>≤ 690 V DC for power circuit                                                                                                                                                                                                                                      |
| [Ie] rated operational current              | 25 A (≤ 60 °C) at ≤ 440 V AC AC-1 for power circuit                                                                                                                                                                                                                                                           |
| Control circuit type                        | AC 50/60 Hz                                                                                                                                                                                                                                                                                                   |
| Control circuit voltage                     | 115 V AC 50/60 Hz                                                                                                                                                                                                                                                                                             |
| Auxiliary contact composition               | 1 NO + 1 NC                                                                                                                                                                                                                                                                                                   |
| [Uimp] rated impulse withstand voltage      | 6 kV conforming to IEC 60947                                                                                                                                                                                                                                                                                  |
| Overvoltage category                        | III                                                                                                                                                                                                                                                                                                           |
| [Ith] conventional free air thermal current | 25 A at ≤ 60 °C for power circuit<br>10 A at ≤ 60 °C for signalling circuit                                                                                                                                                                                                                                   |
| Irms rated making capacity                  | 250 A at 440 V for power circuit conforming to IEC 60947<br>140 A AC for signalling circuit conforming to IEC 60947-5-1<br>250 A DC for signalling circuit conforming to IEC 60947-5-1                                                                                                                        |
| Rated breaking capacity                     | 250 A at 440 V for power circuit conforming to IEC 60947                                                                                                                                                                                                                                                      |
| [Icw] rated short-time withstand current    | 105 A ≤ 40 °C 10 s power circuit<br>210 A ≤ 40 °C 1 s power circuit<br>100 A 1 s signalling circuit<br>120 A 500 ms signalling circuit<br>140 A 100 ms signalling circuit<br>30 A ≤ 40 °C 10 min power circuit<br>61 A ≤ 40 °C 1 min power circuit                                                            |
| Associated fuse rating                      | 40 A gG at ≤ 690 V coordination type 1 for power circuit<br>25 A gG at ≤ 690 V coordination type 2 for power circuit<br>10 A gG for signalling circuit conforming to IEC 60947-5-1                                                                                                                            |
| Average impedance                           | 2.5 mOhm at 50 Hz - Ith 25 A for power circuit                                                                                                                                                                                                                                                                |
| [Ui] rated insulation voltage               | 690 V for power circuit conforming to IEC 60947-4-1<br>600 V for power circuit certifications CSA<br>600 V for power circuit certifications UL<br>690 V for signalling circuit conforming to IEC 60947-1<br>600 V for signalling circuit certifications CSA<br>600 V for signalling circuit certifications UL |
| Power dissipation per pole                  | 1.56 W AC-1                                                                                                                                                                                                                                                                                                   |
| Safety cover                                | With                                                                                                                                                                                                                                                                                                          |
| Mounting support                            | Plate<br>Rail                                                                                                                                                                                                                                                                                                 |

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| Standards                        | EN 60947-4-1<br>EN 60947-5-1<br>IEC 60947-4-1<br>IEC 60947-5-1<br>UL 508<br>CSA C22.2 n°14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Product certifications           | BV<br>CCC<br>CSA<br>DNV<br>GL<br>GOST<br>RINA<br>UL<br>LROS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Connections - terminals          | Power circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Power circuit: screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Power circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Power circuit: screw clamp terminals 2 cable(s) 1...2.5 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Power circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: solid - without cable end<br>Power circuit: screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: solid - without cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...2.5 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Control circuit: screw clamp terminals 1 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: solid - without cable end<br>Control circuit: screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> - cable stiffness: solid - without cable end |
| Tightening torque                | Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>Power circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2<br>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>Control circuit: 1.7 N.m - on screw clamp terminals - with screwdriver Philips No 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Operating time                   | 12...22 ms closing<br>4...19 ms opening                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Safety reliability level         | B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1<br>B10d = 2000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Mechanical durability (millions) | 15 Mcycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Operating rate                   | 3600 cyc/h at ≤ 60 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

## Complementary

|                                 |                                                                                                                                |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Coil technology                 | Without built-in suppressor module                                                                                             |
| Control circuit voltage limits  | 0.3...0.6 Uc at 60 °C drop-out 50/60 Hz<br>0.8...1.1 Uc at 60 °C operational 50 Hz<br>0.85...1.1 Uc at 60 °C operational 60 Hz |
| Inrush power in VA              | 70 VA at 20 °C (cos φ 0.75) 60 Hz<br>70 VA at 20 °C (cos φ 0.75) 50 Hz                                                         |
| Hold-in power consumption in VA | 7.5 VA at 20 °C (cos φ 0.3) 60 Hz<br>7 VA at 20 °C (cos φ 0.3) 50 Hz                                                           |
| Heat dissipation                | 2...3 W at 50/60 Hz                                                                                                            |
| 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    | 25...400 Hz                                                                                                                    |

|                           |                                                                                                             |
|---------------------------|-------------------------------------------------------------------------------------------------------------|
| Minimum switching current | 5 mA for signalling circuit                                                                                 |
| Minimum 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                                                                            |

## Environment

|                                                       |                                                                                                                                                                                |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IP degree of protection                               | IP2x front face conforming to IEC 60529                                                                                                                                        |
| Protective treatment                                  | TH conforming to IEC 60068-2-30                                                                                                                                                |
| Pollution degree                                      | 3                                                                                                                                                                              |
| Ambient air temperature for operation                 | -5...60 °C                                                                                                                                                                     |
| Ambient air temperature for storage                   | -60...80 °C                                                                                                                                                                    |
| Permissible ambient air temperature around the device | -40...70 °C at U <sub>c</sub>                                                                                                                                                  |
| Operating altitude                                    | 3000 m without derating in temperature                                                                                                                                         |
| Fire resistance                                       | 850 °C conforming to IEC 60695-2-1                                                                                                                                             |
| Flame retardance                                      | V1 conforming to UL 94                                                                                                                                                         |
| Mechanical robustness                                 | Vibrations contactor open 2 Gn, 5...300 Hz<br>Vibrations contactor closed 4 Gn, 5...300 Hz<br>Shocks contactor open 10 Gn for 11 ms<br>Shocks contactor closed 15 Gn for 11 ms |
| Height                                                | 85 mm                                                                                                                                                                          |
| Width                                                 | 45 mm                                                                                                                                                                          |
| Depth                                                 | 92 mm                                                                                                                                                                          |
| Product weight                                        | 0.365 kg                                                                                                                                                                       |