



## Main

|                                |                                                                      |
|--------------------------------|----------------------------------------------------------------------|
| Range                          | TeSys                                                                |
| Range of product               | TeSys Deca                                                           |
| Product or component type      | Contactor                                                            |
| Device short name              | LP1D                                                                 |
| Contactor application          | Resistive load                                                       |
| Utilisation category           | AC-1                                                                 |
| Poles description              | 4P                                                                   |
| [Ue] rated operational voltage | Power circuit: <= 690 V AC 25...400 Hz<br>Power circuit: <= 300 V DC |
| [Ie] rated operational current | 80 A (at <60 °C) at <= 440 V AC AC-1 for power circuit               |
| [Uc] control circuit voltage   | 24 V DC                                                              |

## Complementary

|                                             |                                                                                                                                                                      |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Compatibility code                          | LP1D                                                                                                                                                                 |
| Pole contact composition                    | 2 NO + 2 NC                                                                                                                                                          |
| Contact compatibility                       | M3                                                                                                                                                                   |
| Protective cover                            | Without                                                                                                                                                              |
| [Ith] conventional free air thermal current | 80 A (at 60 °C) for power circuit                                                                                                                                    |
| Irms rated making capacity                  | 1000 A at 440 V for power circuit conforming to IEC 60947                                                                                                            |
| Rated breaking capacity                     | 1000 A at 440 V for power circuit conforming to IEC 60947                                                                                                            |
| [Icw] rated short-time withstand current    | 110 A 40 °C - 10 min for power circuit<br>260 A 40 °C - 1 min for power circuit<br>520 A 40 °C - 10 s for power circuit<br>900 A 40 °C - 1 s for power circuit       |
| Associated fuse rating                      | 125 A gG at <= 690 V coordination type 1 for power circuit<br>125 A gG at <= 690 V coordination type 2 for power circuit                                             |
| Average impedance                           | 1.5 mOhm - Ith 80 A 50 Hz for power circuit                                                                                                                          |
| Power dissipation per pole                  | 9.6 W AC-1                                                                                                                                                           |
| [Ui] rated insulation voltage               | Power circuit: 690 V conforming to IEC 60947-4-1<br>Power circuit: 600 V CSA certified<br>Power circuit: 600 V UL certified                                          |
| Overvoltage category                        | III                                                                                                                                                                  |
| Pollution degree                            | 3                                                                                                                                                                    |
| [Uimp] rated impulse withstand voltage      | 6 kV conforming to IEC 60947                                                                                                                                         |
| Safety reliability level                    | B10d = 1369863 cycles contactor with nominal load conforming to EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical load conforming to EN/ISO 13849-1 |
| Mechanical durability                       | 6 Mcycles                                                                                                                                                            |
| Electrical durability                       | 1.4 Mcycles 80 A AC-1 at Ue <= 440 V                                                                                                                                 |
| Control circuit type                        | DC wide range                                                                                                                                                        |
| Coil technology                             | Built-in bidirectional peak limiting diode suppressor                                                                                                                |
| Control circuit voltage limits              | 0.1...0.3 Uc (-40...70 °C):drop-out DC<br>0.75...1.2 Uc (-40...55 °C):operational DC<br>1...1.2 Uc (55...70 °C):operational DC                                       |
| Inrush power in W                           | 22 W (at 20 °C)                                                                                                                                                      |
| Hold-in power consumption in W              | 22 W at 20 °C                                                                                                                                                        |

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating time          | 4...19 ms opening<br>12...26 ms closing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Time constant           | 75 ms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Maximum operating rate  | 3600 cyc/h 60 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Connections - terminals | Power circuit: screw clamp terminals 1 1...35 mm <sup>2</sup> - cable stiffness: flexible without cable end<br>Power circuit: screw clamp terminals 2 1...25 mm <sup>2</sup> - cable stiffness: flexible without cable end<br>Power circuit: screw clamp terminals 1 1...35 mm <sup>2</sup> - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 2 1...25 mm <sup>2</sup> - cable stiffness: flexible with cable end<br>Power circuit: screw clamp terminals 1 1...35 mm <sup>2</sup> - cable stiffness: solid<br>Power circuit: screw clamp terminals 2 1...25 mm <sup>2</sup> - cable stiffness: solid<br>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<br>Control circuit: screw clamp terminals 2 1...4 mm <sup>2</sup> - cable stiffness: solid |
| Tightening torque       | Power circuit: 8 N.m - on screw clamp terminals - cable 25...35 mm <sup>2</sup> hexagonal screw head 4 mm<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<br>Power circuit: 5 N.m - on screw clamp terminals - cable 1...25 mm <sup>2</sup> hexagonal screw head 4 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Mounting support        | Rail<br>Plate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

## Environment

|                                                       |                                                                                                                                                                                         |
|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standards                                             | CSA C22.2 No 14<br>EN 60947-4-1<br>EN 60947-5-1<br>IEC 60947-4-1<br>IEC 60947-5-1<br>UL 508                                                                                             |
| Product certifications                                | BV[RETURN]CCC[RETURN]CSA[RETURN]DNV[RETURN]EAC[RETURN]GL[RETURN]LROS (Lloyds register of shipping)[RETURN]UL                                                                            |
| IP degree of protection                               | IP20 front face conforming to IEC 60529                                                                                                                                                 |
| Permissible ambient air temperature around the device | -40...60 °C<br>60...70 °C with derating                                                                                                                                                 |
| Operating altitude                                    | 0...3000 m                                                                                                                                                                              |
| Fire resistance                                       | 850 °C conforming to IEC 60695-2-1                                                                                                                                                      |
| Flame retardance                                      | V1 conforming to UL 94                                                                                                                                                                  |
| Mechanical robustness                                 | Shocks contactor open (8 Gn for 11 ms)<br>Shocks contactor closed (10 Gn for 11 ms)<br>Vibrations contactor opened (2 Gn, 5...300 Hz)<br>Vibrations contactor closed (3 Gn, 5...300 Hz) |
| Height                                                | 127 mm                                                                                                                                                                                  |
| Width                                                 | 85 mm                                                                                                                                                                                   |
| Depth                                                 | 182 mm                                                                                                                                                                                  |
| Net weight                                            | 2.22 kg                                                                                                                                                                                 |

## Packing Units

|                              |     |
|------------------------------|-----|
| Unit Type of Package 1       | PCE |
| Number of Units in Package 1 | 1   |

## Offer Sustainability

|                            |                                                                                                                             |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                       |
| 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 |
| PVC free                   | Yes                                                                                                                         |

## Contractual warranty

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