

## LC1D80BW

IEC contactor, TeSys Deca, nonreversing, 80A,  
60HP at 480VAC, up to 100kA SCCR, 3 phase,  
3 NO, wide range 24VDC coil, open





## Main

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|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                                       | TeSys                                                                                                                                                                                                                                                                                          |
| Product name                                | TeSys D<br>TeSys Deca                                                                                                                                                                                                                                                                          |
| Product or Component Type                   | Contacteur                                                                                                                                                                                                                                                                                     |
| Device short name                           | LC1D                                                                                                                                                                                                                                                                                           |
| Contacteur application                      | Motor control<br>Resistive load                                                                                                                                                                                                                                                                |
| Utilisation category                        | AC-1<br>AC-4<br>AC-3<br>AC-3e                                                                                                                                                                                                                                                                  |
| Poles description                           | 3P                                                                                                                                                                                                                                                                                             |
| Power pole contact composition              | 3 NO                                                                                                                                                                                                                                                                                           |
| [Ue] rated operational voltage              | Power circuit <= 300 V DC 25...400 Hz<br>Power circuit <= 690 V AC                                                                                                                                                                                                                             |
| [Ie] rated operational current              | 125 A 140 °F (60 °C)) <= 440 V AC AC-1 power circuit<br>80 A 140 °F (60 °C)) <= 440 V AC AC-3 power circuit<br>80 A 140 °F (60 °C)) <= 440 V AC-3e power circuit                                                                                                                               |
| Motor power kW                              | 22 KW 220...230 V AC 50/60 Hz AC-3)<br>37 KW 380...400 V AC 50/60 Hz AC-3)<br>45 KW 415...440 V AC 50/60 Hz AC-3)<br>55 KW 500 V AC 50/60 Hz AC-3)<br>45 KW 660...690 V AC 50/60 Hz AC-3)<br>45 KW 1000 V AC 50/60 Hz AC-3)<br>15 kW 400 V AC 50/60 Hz AC-4)                                   |
| Motor power HP (UL / CSA)                   | 7.5 Hp 120 V at AC 50/60 Hz for 1 phase<br>15 Hp 230/240 V at AC 50/60 Hz for 1 phase<br>30 Hp 200/208 V at AC 50/60 Hz for 3 phase<br>30 Hp 230/240 V at AC 50/60 Hz for 3 phase<br>60 Hp 460/480 V at AC 50/60 Hz for 3 phase<br>60 hp 575/600 V at AC 50/60 Hz for 3 phase                  |
| Control circuit type                        | DC wide range                                                                                                                                                                                                                                                                                  |
| [Uc] control circuit voltage                | 24 V DC                                                                                                                                                                                                                                                                                        |
| Auxiliary contact composition               | 1 NO + 1 NC                                                                                                                                                                                                                                                                                    |
| [Uimp] rated impulse withstand voltage      | 8 kV IEC 60947                                                                                                                                                                                                                                                                                 |
| Overvoltage category                        | III                                                                                                                                                                                                                                                                                            |
| [Ith] conventional free air thermal current | 10 A 140 °F (60 °C) signalling circuit<br>125 A 140 °F (60 °C) power circuit                                                                                                                                                                                                                   |
| Irms rated making capacity                  | 140 A AC signalling circuit IEC 60947-5-1<br>250 A DC signalling circuit IEC 60947-5-1<br>1100 A 440 V power circuit IEC 60947                                                                                                                                                                 |
| Rated breaking capacity                     | 1100 A 440 V power circuit IEC 60947                                                                                                                                                                                                                                                           |
| [Icw] rated short-time withstand current    | 640 A 104 °F (40 °C) - 10 s power circuit<br>990 A 104 °F (40 °C) - 1 s power circuit<br>135 A 104 °F (40 °C) - 10 min power circuit<br>320 A 104 °F (40 °C) - 1 min power circuit<br>100 A - 1 s signalling circuit<br>120 A - 500 ms signalling circuit<br>140 A - 100 ms signalling circuit |
| Associated fuse rating                      | 10 A gG signalling circuit IEC 60947-5-1<br>200 A gG <= 690 V type 1 power circuit<br>160 A gG <= 690 V type 2 power circuit                                                                                                                                                                   |
| Average impedance                           | 0.8 mOhm - Ith 125 A 50 Hz power circuit                                                                                                                                                                                                                                                       |
| [Ui] rated insulation voltage               | Power circuit 600 V CSA<br>Power circuit 600 V UL<br>Power circuit 1000 V IEC 60947-4-1<br>Signalling circuit 690 V IEC 60947-1<br>Signalling circuit 600 V CSA<br>Signalling circuit 600 V UL                                                                                                 |

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|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electrical durability      | 0.8 Mcycles 125 A AC-1 ≤ 440 V<br>1.5 Mcycles 80 A AC-3 ≤ 440 V<br>1.5 Mcycles 80 A AC-3e ≤ 440 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Power dissipation per pole | 5.1 W AC-3<br>12.5 W AC-1<br>5.1 W AC-3e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Front cover                | With                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Mounting Support           | Rail<br>Plate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 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     | LROS (Lloyds register of shipping)<br>CSA<br>RINA<br>CCC<br>GL<br>GOST<br>BV<br>UL<br>DNV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Connections - terminals    | Control circuit screw clamp terminals 2 0.00...0.00 in <sup>2</sup> (1...2.5 mm <sup>2</sup> )flexible with cable end<br>Control circuit screw clamp terminals 1 0.00...0.00 in <sup>2</sup> (1...2.5 mm <sup>2</sup> )flexible with cable end<br>Control circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> )flexible without cable end<br>Control circuit screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> )flexible without cable end<br>Control circuit screw clamp terminals 1 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> )solid without cable end<br>Control circuit screw clamp terminals 2 0.00...0.01 in <sup>2</sup> (1...4 mm <sup>2</sup> )solid without cable end<br>Power circuit connector 1 0.01...0.08 in <sup>2</sup> (4...50 mm <sup>2</sup> )flexible without cable end<br>Power circuit connector 2 0.01...0.04 in <sup>2</sup> (4...25 mm <sup>2</sup> )flexible without cable end<br>Power circuit connector 1 0.01...0.08 in <sup>2</sup> (4...50 mm <sup>2</sup> )flexible with cable end<br>Power circuit connector 2 0.01...0.02 in <sup>2</sup> (4...16 mm <sup>2</sup> )flexible with cable end<br>Power circuit connector 1 0.01...0.08 in <sup>2</sup> (4...50 mm <sup>2</sup> )solid without cable end<br>Power circuit connector 2 0.01...0.04 in <sup>2</sup> (4...25 mm <sup>2</sup> )solid without cable end |
| Tightening torque          | Control circuit 10.62 lbf.in (1.2 N.m) screw clamp terminals flat Ø 6 mm<br>Control circuit 10.62 lbf.in (1.2 N.m) screw clamp terminals Philips No 2<br>Power circuit 106.21 lbf.in (12 N.m) connector flat Ø 6 to Ø 8 mm<br>Power circuit 106.21 lbf.in (12 N.m) connector hexagonal 0.16 in (4 mm)<br>Control circuit 10.62 lbf.in (1.2 N.m) screw clamp terminals pozidriv No 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Operating time             | 95...130 ms closing<br>20...35 ms opening                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Safety reliability level   | B10d = 1369863 cycles contactor with nominal load EN/ISO 13849-1<br>B10d = 20000000 cycles contactor with mechanical load EN/ISO 13849-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Mechanical durability      | 10 Mcycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Maximum operating rate     | 3600 cyc/h 140 °F (60 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

## Complementary

|                                |                                                                                                                                                                       |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Coil technology                | Without built-in suppressor module                                                                                                                                    |
| Control circuit voltage limits | 0.75...1.2 Uc -40...131 °F (-40...55 °C) operational DC<br>0.1...0.3 Uc -40...158 °F (-40...70 °C) drop-out DC<br>1...1.2 Uc 131...158 °F (55...70 °C) operational DC |
| Time constant                  | 75 ms                                                                                                                                                                 |
| Inrush power in W              | 22 W 68 °F (20 °C))                                                                                                                                                   |
| Hold-in power consumption in W | 22 W 68 °F (20 °C)                                                                                                                                                    |
| Auxiliary contacts type        | Mechanically linked 1 NO + 1 NC IEC 60947-5-1<br>Mirror contact 1 NC IEC 60947-4-1                                                                                    |
| Signalling circuit frequency   | 25...400 Hz                                                                                                                                                           |
| Minimum switching current      | 5 mA signalling circuit                                                                                                                                               |
| Minimum switching voltage      | 17 V 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 signalling circuit                                                                                                                                          |

## Environment

|                                       |                                                                                                                                                                           |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IP degree of protection               | IP20 front face IEC 60529                                                                                                                                                 |
| Climatic withstand                    | IACS E10                                                                                                                                                                  |
| Protective treatment                  | TH IEC 60068-2-30                                                                                                                                                         |
| Pollution degree                      | 3                                                                                                                                                                         |
| Ambient air temperature for operation | -40...140 °F (-40...60 °C)<br>140...158 °F (60...70 °C) with derating                                                                                                     |
| Ambient Air Temperature for Storage   | -76...176 °F (-60...80 °C)                                                                                                                                                |
| Operating altitude                    | 0...9842.52 ft (0...3000 m)                                                                                                                                               |
| Fire resistance                       | 1562 °F (850 °C) IEC 60695-2-1                                                                                                                                            |
| Mechanical robustness                 | Vibrations contactor open2 Gn, 5...300 Hz<br>Shocks contactor open8 Gn for 11 ms<br>Vibrations contactor closed3 Gn, 5...300 Hz<br>Shocks contactor closed10 Gn for 11 ms |
| Height                                | 5.00 in (127 mm)                                                                                                                                                          |
| Width                                 | 3.35 in (85 mm)                                                                                                                                                           |
| Depth                                 | 7.32 in (186 mm)                                                                                                                                                          |
| Net Weight                            | 5.71 lb(US) (2.59 kg)                                                                                                                                                     |

## Ordering and shipping details

|                       |                                         |
|-----------------------|-----------------------------------------|
| Category              | 22359-CTR, TESYS D, OPEN, 80-150A AC&DC |
| Discount Schedule     | I12                                     |
| GTIN                  | 3389110439984                           |
| Nbr. of units in pkg. | 1                                       |
| Package weight(Lbs)   | 5.77 lb(US) (2.618 kg)                  |
| Returnability         | No                                      |
| Country of origin     | CZ                                      |

## Packing Units

|                              |                         |
|------------------------------|-------------------------|
| Unit Type of Package 1       | PCE                     |
| Package 1 Height             | 4.41 in (11.2 cm)       |
| Package 1 width              | 8.90 in (22.6 cm)       |
| Package 1 Length             | 6.30 in (16 cm)         |
| Unit Type of Package 2       | S02                     |
| Number of Units in Package 2 | 2                       |
| Package 2 Weight             | 12.23 lb(US) (5.546 kg) |
| Package 2 Height             | 5.91 in (15 cm)         |
| Package 2 width              | 11.81 in (30 cm)        |
| Package 2 Length             | 15.75 in (40 cm)        |

## Offer Sustainability

|                            |                                                                                                                                                                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                                                                                                                                                     |
| California proposition 65  | WARNING: This product can expose you to chemicals including: Antimony oxide & Antimony trioxide, which is known to the State of California to cause cancer. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |
| 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                                                                                                                                                                                                                                                       |
| RoHS exemption information | <a href="#">Yes</a>                                                                                                                                                                                                                                       |
| China RoHS Regulation      | <a href="#">China RoHS Declaration</a>                                                                                                                                                                                                                    |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</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 |
|----------|-----------|