

# LC1D80P7

TeSys D contactor - 3P(3 NO) - AC-3 -  $\leq 440$  V  
80 A - 230 V AC 50/60 Hz coil



## Main

|                                        |                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                                  | TeSys                                                                                                                                                                                                                                                                                                                       |
| Product name                           | TeSys D                                                                                                                                                                                                                                                                                                                     |
| Product or component type              | Contactor                                                                                                                                                                                                                                                                                                                   |
| Device short name                      | LC1D                                                                                                                                                                                                                                                                                                                        |
| Contactor application                  | Resistive load<br>Motor control                                                                                                                                                                                                                                                                                             |
| Utilisation category                   | AC-3<br>AC-1<br>AC-4                                                                                                                                                                                                                                                                                                        |
| Poles description                      | 3P                                                                                                                                                                                                                                                                                                                          |
| Pole contact composition               | 3 NO                                                                                                                                                                                                                                                                                                                        |
| [Ue] rated operational voltage         | $\leq 690$ V AC for power circuit<br>$\leq 300$ V DC 25...400 Hz for power circuit                                                                                                                                                                                                                                          |
| [Ie] rated operational current         | 125 A ( $\leq 60$ °C) at $\leq 440$ V AC AC-1 for power circuit<br>80 A ( $\leq 60$ °C) at $\leq 440$ V AC AC-3 for power circuit                                                                                                                                                                                           |
| Motor power kW                         | 22 kW at 220...230 V AC 50/60 Hz AC-3<br>37 kW at 380...400 V AC 50/60 Hz AC-3<br>45 kW at 660...690 V AC 50/60 Hz AC-3<br>45 kW at 415...440 V AC 50/60 Hz AC-3<br>55 kW at 500 V AC 50/60 Hz AC-3<br>45 kW at 1000 V AC 50/60 Hz AC-3<br>15 kW at 400 V AC 50/60 Hz AC-4                                                  |
| Motor power hp                         | 20 hp at 200/208 V AC 50/60 Hz for 3 phases motors<br>7.5 hp at 115 V AC 50/60 Hz for 1 phase motors<br>15 hp at 230/240 V AC 50/60 Hz for 1 phase motors<br>25 hp at 230/240 V AC 50/60 Hz for 3 phases motors<br>60 hp at 460/480 V AC 50/60 Hz for 3 phases motors<br>60 hp at 575/600 V AC 50/60 Hz for 3 phases motors |
| Control circuit type                   | AC 50/60 Hz                                                                                                                                                                                                                                                                                                                 |
| [Uc] control circuit voltage           | 230 V AC 50/60 Hz                                                                                                                                                                                                                                                                                                           |
| Auxiliary contact composition          | 1 NO + 1 NC                                                                                                                                                                                                                                                                                                                 |
| [Uimp] rated impulse withstand voltage | Conforming to IEC 60947                                                                                                                                                                                                                                                                                                     |

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Overvoltage category                        | III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| [Ith] conventional free air thermal current | 125 A at $\leq 60^\circ\text{C}$ for power circuit<br>10 A at $\leq 60^\circ\text{C}$ for signalling circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Irms rated making capacity                  | 1100 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                     | 1100 A at 440 V for power circuit conforming to IEC 60947                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| [Icw] rated short-time withstand current    | 135 A $\leq 40^\circ\text{C}$ 10 min power circuit<br>100 A 1 s signalling circuit<br>120 A 500 ms signalling circuit<br>140 A 100 ms signalling circuit<br>640 A $\leq 40^\circ\text{C}$ 10 s power circuit<br>990 A $\leq 40^\circ\text{C}$ 1 s power circuit<br>320 A $\leq 40^\circ\text{C}$ 1 min power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Associated fuse rating                      | 160 A gG at $\leq 690$ V coordination type 2 for power circuit<br>200 A gG at $\leq 690$ V coordination type 1 for power circuit<br>10 A gG for signalling circuit conforming to IEC 60947-5-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Average impedance                           | 0.8 mOhm at 50 Hz - Ith 125 A for power circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| [Ui] rated insulation voltage               | 1000 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Electrical durability                       | 0.8 Mcycles 125 A AC-1 at $U_e \leq 440$ V<br>1.5 Mcycles 80 A AC-3 at $U_e \leq 440$ V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Power dissipation per pole                  | 5.1 W AC-3<br>12.5 W AC-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Protective 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>CCC<br>UL<br>GOST<br>DNV<br>CSA<br>GL<br>BV<br>RINA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Connections - terminals                     | 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: 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: 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<br>Control circuit : screw clamp terminals 1 cable(s) 1...2.5 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Power circuit : connector 1 cable(s) 4...50 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Power circuit : connector 2 cable(s) 4...25 mm <sup>2</sup> - cable stiffness: flexible - without cable end<br>Power circuit : connector 1 cable(s) 4...50 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Power circuit : connector 2 cable(s) 4...16 mm <sup>2</sup> - cable stiffness: flexible - with cable end<br>Power circuit : connector 1 cable(s) 4...50 mm <sup>2</sup> - cable stiffness: solid - without cable end<br>Power circuit : connector 2 cable(s) 4...25 mm <sup>2</sup> - cable stiffness: solid - without cable end |
| Tightening torque                           | Power circuit : 9 N.m - on connector - with screwdriver flat Ø 6 to Ø 8 mm<br>Power circuit : 9 N.m - on connector hexagonal 4 mm<br>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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Operating time                              | 20...35 ms closing<br>6...20 ms opening                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

|                          |                                                                                                                                                                      |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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    | 4 Mcycles                                                                                                                                                            |
| Operating rate           | 3600 cyc/h at ≤ 60 °C                                                                                                                                                |

## Complementary

|                                 |                                                                                                                                            |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Coil technology                 | Without built-in suppressor module                                                                                                         |
| Control circuit voltage limits  | 0.85...1.1 Uc operational at 55 °C, AC 60 Hz<br>0.3...0.6 Uc drop-out at 55 °C, AC 50/60 Hz<br>0.8...1.1 Uc operational at 55 °C, AC 50 Hz |
| Inrush power in VA              | 245 VA at 20 °C (cos φ 0.75) 60 Hz<br>245 VA at 20 °C (cos φ 0.75) 50 Hz                                                                   |
| Hold-in power consumption in VA | 26 VA at 20 °C (cos φ 0.3) 60 Hz<br>26 VA at 20 °C (cos φ 0.3) 50 Hz                                                                       |
| Heat dissipation                | 6...10 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                               | IP20 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 Uc                                                                                                                                                             |
| 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>Shocks contactor open 8 Gn for 11 ms<br>Vibrations contactor closed 3 Gn, 5...300 Hz<br>Shocks contactor closed 10 Gn for 11 ms |
| Height                                                | 127 mm                                                                                                                                                                        |
| Width                                                 | 85 mm                                                                                                                                                                         |
| Depth                                                 | 130 mm                                                                                                                                                                        |
| Product weight                                        | 1.59 kg                                                                                                                                                                       |

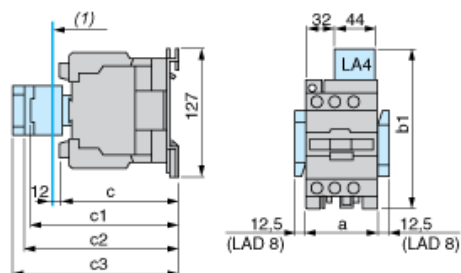
## Offer Sustainability

|                                  |                                                                                                                                                                                                                           |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status         | Green Premium product                                                                                                                                                                                                     |
| RoHS (date code: YYWW)           | Compliant - since 0701 - Schneider Electric declaration of conformity<br> <a href="#">Schneider Electric declaration of conformity</a> |
| REACH                            | Reference not containing SVHC above the threshold<br><a href="#">Reference not containing SVHC above the threshold</a>                                                                                                    |
| Product environmental profile    | Available<br> <a href="#">Product environmental</a>                                                                                    |
| Product end of life instructions | Need no specific recycling operations                                                                                                                                                                                     |

Contractual warranty

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

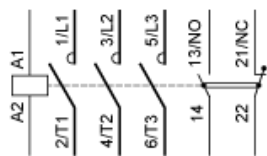
## Dimensions



(1) Minimum electrical clearance

| LC1                                |                                | D80 | D95 |
|------------------------------------|--------------------------------|-----|-----|
| a                                  |                                | 85  | 85  |
| b1                                 | with LA4 D•2                   | 135 | 135 |
| with LA4 DB3 or LAD 4BB3           | 135                            | —   |     |
| with LA4 DF, DT                    | 142                            | 142 |     |
| with LA4 DM, DW, DL                | 150                            | 150 |     |
| c                                  | without cover or add-on blocks | 125 | 125 |
| with cover, without add-on blocks  | 130                            | 130 |     |
| c1                                 | with LAD N (1 contact)         | 150 | 150 |
| with LAD N or C (2 or 4 contacts)  | 158                            | 158 |     |
| c2                                 | with LA6 DK10, LAD 6DK         | 170 | 170 |
| c3                                 | with LAD T, R, S               | 178 | 178 |
| with LAD T, R, S and sealing cover | 182                            | 182 |     |

Wiring



Our Proposal - Type 1 : Circuit Breaker + Contactor for Motor Power 37 kW and 415 VAC

| Motor power<br>(kW) | ICU<br>(kA) | Breaker                                                                                      | Contactor (*)                                                                                   |
|---------------------|-------------|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 37                  | 36          | <br>GV7RE80 | <br>LC1D80P7 |
| 37                  | 15          | <br>GV3ME80 | <br>LC1D80P7 |

Non contractual pictures.

Type 1 coordination requires that in a short-circuit condition, the contactor or starter must not present any danger to personnel or installations and must not be able to resume operation without repair or the replacement of parts.