# Product data sheet

Specifications



# TeSys F - star delta starter - 3 x 3P (3 NO) - 185 A - 415 V AC coil

LC3F185N7A64

#### Main

| Wall                                      |  |
|---|--|
| Range                                     | TeSys  |
| Product Name                              | TeSys F  |
| Product Or Component Type                 | Star delta starter   |
| Device Short Name                         | LC3F   |
| Contactor Application                     | Motor control  |
| Utilisation Category                      | AC-3   |
| Device Presentation                       | Pre-wired  |
| Poles Description                         | 3 x 3P   |
| Power Pole Contact Composition            | 3 x 3 NO   |
| [Ue] Rated Operational Voltage            | Power circuit: <= 1000 V AC 16 Hz 2/3200 Hz  |
| [le] Rated Operational Current            | 185 A (at <55 $^\circ\text{C})$ at <= 440 V AC AC-3 for power circuit  |
| Motor Power Kw                            | 160 kW at 380/400 V AC 50/60 Hz<br>160 kW at 415 V AC 50/60 Hz<br>185 kW at 440 V AC 50/60 Hz<br>90 kW at 220/230 V AC 50/60 Hz  |
| Control Circuit Type                      | AC at 50/60 Hz   |
| [Uc] Control Circuit Voltage              | 415 V AC 50/60 Hz  |
| Auxiliary Contact Composition             | 1 NC for KM1 star contactor<br>1 NO for KM1 star contactor<br>2 NC for KM2 line contactor<br>1 NO for KM2 line contactor<br>1 NC for KM3 delta contactor<br>2 NO for KM3 delta contactor |
| [Uimp] Rated Impulse Withstand<br>Voltage | 8 kV   |
| [Ui] Rated Insulation Voltage             | 1000 V conforming to IEC 60947-4-1<br>1500 V conforming to VDE 0110 group C  |
| Interlocking Type                         | Mechanical   |
| Mounting Support                          | Plate  |
| Standards                                 | EN 60947-1<br>IEC 60947-1<br>EN 60947-4-1<br>IEC 60947-4-1<br>JIS C8201-4-1  |

Product Certifications

LROS (Lloyds register of shipping) CSA DNV CB CCC UL ABS RMRoS RINA

# Complementary

| e emprementar y  |   |
|--|---|
| [Ith] Conventional Free Air<br>Thermal Current   | 275 A 40 °C   |
| Irms Rated Making Capacity   | 1850 A conforming to IEC 60947-4-1  |
| Rated Breaking Capacity  | 1480 A conforming to IEC 60947-4-1  |
| [Icw] Rated Short-Time Withstand<br>Current  | 1500 A 40 °C - 10 s<br>920 A 40 °C - 30 s<br>740 A 40 °C - 1 min<br>500 A 40 °C - 3 min<br>400 A 40 °C - 10 min   |
| Associated Fuse Rating   | 315 A gG at <= 440 V<br>200 A aM at <= 440 V  |
| Connections - Terminals  | Power circuit: lugs-ring terminals 1 150 mm <sup>2</sup><br>Power circuit: connector 1 150 mm <sup>2</sup><br>Control circuit: screw clamp terminals 1 14 mm <sup>2</sup> - cable stiffness: flexible with cable<br>end<br>Control circuit: screw clamp terminals 2 12.5 mm <sup>2</sup> - cable stiffness: flexible with<br>cable end<br>Control circuit: screw clamp terminals 1 14 mm <sup>2</sup> - cable stiffness: flexible without<br>cable end<br>Control circuit: screw clamp terminals 2 14 mm <sup>2</sup> - cable stiffness: flexible without<br>cable end<br>Control circuit: screw clamp terminals 2 14 mm <sup>2</sup> - cable stiffness: flexible without<br>cable end<br>Control circuit: screw clamp terminals 1 14 mm <sup>2</sup> - cable stiffness: solid without<br>cable end<br>Control circuit: screw clamp terminals 2 14 mm <sup>2</sup> - cable stiffness: solid without<br>cable end<br>Control circuit: screw clamp terminals 2 14 mm <sup>2</sup> - cable stiffness: solid without<br>cable end<br>Power circuit: bar 2 - busbar cross section: 25 x 3 mm<br>Power circuit: bolted connection |
| Connections Bolt Diameter  | M8  |
|  |   |
| Tightening Torque  | Control circuit: 1.2 N.m<br>Power circuit: 18 N.m   |
| Tightening Torque  |   |
|  | Power circuit: 18 N.m<br>2035 ms closing  |
| Operating Time   | Power circuit: 18 N.m<br>2035 ms closing<br>715 ms opening  |
| Operating Time<br>Mechanical Durability  | Power circuit: 18 N.m   2035 ms closing   715 ms opening   10 Mcycles   |
| Operating Time<br>Mechanical Durability<br>Maximum Operating Rate  | Power circuit: 18 N.m   2035 ms closing   715 ms opening   10 Mcycles   2400 cyc/h 55 °C  |
| Operating Time<br>Mechanical Durability<br>Maximum Operating Rate<br>Starting Time   | Power circuit: 18 N.m   2035 ms closing   715 ms opening   10 Mcycles   2400 cyc/h 55 °C   30 s   Operational: 0.851.1 Uc at 50/60 Hz (at <55 °C)   |
| Operating Time<br>Mechanical Durability<br>Maximum Operating Rate<br>Starting Time<br>Control Circuit Voltage Limits   | Power circuit: 18 N.m   2035 ms closing   715 ms opening   10 Mcycles   2400 cyc/h 55 °C   30 s   Operational: 0.851.1 Uc at 50/60 Hz (at <55 °C)   |
| Operating Time<br>Mechanical Durability<br>Maximum Operating Rate<br>Starting Time<br>Control Circuit Voltage Limits<br>Inrush Power In Va   | Power circuit: 18 N.m   2035 ms closing   715 ms opening   10 Mcycles   2400 cyc/h 55 °C   30 s   Operational: 0.851.1 Uc at 50/60 Hz (at <55 °C)   |
| Operating Time<br>Mechanical Durability<br>Maximum Operating Rate<br>Starting Time<br>Control Circuit Voltage Limits<br>Inrush Power In Va<br>Hold-In Power Consumption In Va  | Power circuit: 18 N.m   2035 ms closing   715 ms opening   10 Mcycles   2400 cyc/h 55 °C   30 s   Operational: 0.851.1 Uc at 50/60 Hz (at <55 °C)   |
| Operating Time<br>Mechanical Durability<br>Maximum Operating Rate<br>Starting Time<br>Control Circuit Voltage Limits<br>Inrush Power In Va<br>Hold-In Power Consumption In Va<br>Heat Dissipation                    | Power circuit: 18 N.m   2035 ms closing   715 ms opening   10 Mcycles   2400 cyc/h 55 °C   30 s   Operational: 0.851.1 Uc at 50/60 Hz (at <55 °C)   |
| Operating Time<br>Mechanical Durability<br>Maximum Operating Rate<br>Starting Time<br>Control Circuit Voltage Limits<br>Inrush Power In Va<br>Hold-In Power Consumption In Va<br>Heat Dissipation<br>Width           | Power circuit: 18 N.m   2035 ms closing   715 ms opening   10 Mcycles   2400 cyc/h 55 °C   30 s   Operational: 0.851.1 Uc at 50/60 Hz (at <55 °C)   |
| Operating Time<br>Mechanical Durability<br>Maximum Operating Rate<br>Starting Time<br>Control Circuit Voltage Limits<br>Inrush Power In Va<br>Hold-In Power Consumption In Va<br>Heat Dissipation<br>Width<br>Height | Power circuit: 18 N.m   2035 ms closing   715 ms opening   10 Mcycles   2400 cyc/h 55 °C   30 s   Operational: 0.851.1 Uc at 50/60 Hz (at <55 °C)   |

## Environment

| Ip Degree Of Protection                  | IP2X front face with shrouds conforming to IEC 60529<br>IP2X front face with shrouds conforming to VDE 0106   |
|--|---|
| Protective Treatment                     | тн  |
| Ambient Air Temperature For<br>Storage   | -6080 °C  |
| Ambient Air Temperature For<br>Operation | -555 °C<br>-4070 °C at Uc   |
| Operating Altitude                       | 3000 m without derating   |
| Mechanical Robustness                    | Vibrations contactor open: 2 Gn, 5300 Hz<br>Shocks contactor closed: 15 Gn for 11 ms<br>Vibrations contactor closed: 5 Gn, 5300 Hz<br>Shocks contactor open: 7 Gn for 11 ms |

# **Contractual warranty**

Warranty

18 months

## Sustainability

**Green Premium<sup>TM</sup> label** is Schneider Electric's commitment to delivering products with best-inclass environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO<sub>2</sub> products.

**Guide to assessing product sustainability** is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

Learn more about Green Premium >

Guide to assess a product's sustainability >



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Transparency RoHS/REACh

#### Well-being performance



### **Certifications & Standards**

| Eu Rohs Directive        | Compliant<br>EU RoHS Declaration  |
|--------------------------|---|
| China Rohs Regulation    | China RoHS declaration<br>Product out of China RoHS scope. Substance declaration for your information |
| Environmental Disclosure | Product Environmental Profile   |
| Circularity Profile      | End of Life Information   |