# Product data sheet
## Characteristics

# LTMR100EFM
## motor controller LTM R TeSys T - 100..240 V AC 100 A for Ethernet TCP/IP

### Main

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| Commercial Status | Commercialised |
| Range of product | TeSys T |
| Device short name | LTMR |
| Product or component type | Motor controller |
| Communication port protocol | Ethernet TCP/IP |
| Control circuit voltage | 100...240 V AC |
| Current range | 5...100 A |
| [Ue] rated operational voltage | 93.5...264 V AC |
| Input type | Logic input |
| Bus type | Ethernet IEEE 802.3 interface, addressing 0...159, transmission rate 10...100 Mbit/s, RJ45 with 2 shielded twisted pairs |

### Complementary

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| Logic input number | 6 |
| Discrete output function | 1 NO + 1 NC fault signalling<br>3 NO |
| Protection type | GG fuse 0.5 A for control circuit<br>GG fuse 4 A for output |
| Typical current consumption | 56...127 mA, 50/60 Hz |
| Connection pitch | 5.08 mm |
| Connections - terminals | Connector, 2 solid cable without cable end 0.2...1 mm² /AWG 24...14 for control circuit<br>Connector, 2 flexible cable without cable end 0.5...1.5 mm² /AWG 24...14 for control circuit<br>Connector, 2 flexible cable without cable end 0.2...1.5 mm² /AWG 24...14 for control circuit<br>Connector, 2 flexible cable with cable end 0.2...1 mm² /AWG 24...14 for control circuit<br>Connector, 1 solid cable without cable end 0.2...2.5 mm² /AWG 24...14 for control circuit<br>Connector, 1 flexible cable without cable end 0.25...2.5 mm² /AWG 24...14 for control circuit<br>Connector, 1 flexible cable without cable end 0.2...2.5 mm² /AWG 24...14 for control circuit<br>Connector, 1 flexible cable with cable end 0.25...2.5 mm² /AWG 24...14 for control circuit |
| Tightening torque | 0.5...0.6 N.m, 3 mm flat screwdriver for control circuit |
| [Ui] rated insulation voltage | 690 V, category III (degree of pollution: 3) CSA C22.2 No 14 certified conforming to EN/IEC 60947-1 |
| [Uimp] rated impulse withstand voltage | 0.8 kV for communication circuit conforming to EN/IEC 60947-4-1<br>6 kV for current or voltage measurement circuit conforming to EN/IEC 60947-4-1<br>4 kV for supply, inputs and outputs conforming to EN/IEC 60947-4-1 |
| Short-circuit withstand | 100 kA conforming to EN/IEC 60947-4-1 |
| Input current | 7.5 mA at 240 V<br>3.1 mA at 100 V |
| Input voltage | 79...264 V at state 1<br>0...40 V at state 0 |
| Input current limits | >= 2 mA at state 1<br><= 15 mA at state 0 |
| Load current | 5 A at 30 V DC for logic output<br>5 A at 250 V AC for logic output |

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| Permissible power | 30 W (DC-13), Ie = 1.25 A, 500000 cycles (output)<br>480 VA (AC-15), Ie = 2 A, 500000 cycles (output) |
| Maximum operating frequency | 2 Hz |
| Operating rate | 1800 cyc/h |
| Response time | 25 ms at state 1 for logic input<br>25 ms at state 0 for logic input |
| Measurement accuracy | 5 % earth fault current external measurement (< 5 % or 0.01 A)<br>5 % active and reactive power<br>3 % power factor (cos φ > 0.6)<br>1 % voltage (100...830 V)<br>0,02 temperature<br>0,02 current<br>5...15 % earth fault current internal measurement (for current > 0.3 A)<br>+/- 30 min/year internal clock |
| Width | 91 mm |
| Height | 61 mm |
| Depth | 122.5 mm |
| Product weight | 0.53 kg |

## Environment

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| Immunity to voltage dips | 70 % of U for 500 ms conforming to EN/IEC 61000-4-11 |
| Standards | EN 60947-4-1<br>IACS E10<br>IEC 60947-4-1<br>UL 508<br>CSA C22.2 No 14 |
| Product certifications | ABS<br>ATEX<br>BV<br>CCC<br>CSA<br>C-Tick<br>DNV<br>GL<br>GOST<br>KERI<br>LROS (Lloyds register of shipping)<br>NOM<br>RINA<br>RMRoS<br>UL |
| Protective treatment | TH conforming to EN/IEC 60068<br>48 h conforming to EN/IEC 60070-2-11<br>12 x 24 hour cycles conforming to EN/IEC 60068-2-30 |
| Ambient air temperature for operation | -40...80 °C (storage)<br>-20...60 °C (operation) |
| Fire resistance | 960 °C conforming to UL 94<br>650 °C conforming to EN/IEC 60695-2-12 |
| Shock resistance | 15 gn (half sine wave, 11 ms) conforming to EN/IEC 60068-2-27 |
| Vibration resistance | 4 gn (f = 5...300 Hz) plate mounted conforming to EN/IEC 60068-2-6<br>1 gn (f = 5...300 Hz) mounted on symmetrical rail conforming to EN/IEC 60068-2-6 |
| Resistance to electrostatic discharge | 8 kV, level 3 (in open air) conforming to EN/IEC 61000-4-2<br>6 kV, level 3 (on contact) conforming to EN/IEC 61000-4-2 |
| Resistance to radiated fields | 10 V/m, level 3 conforming to EN/IEC 61000-4-3 |
| Resistance to fast transients | 4 kV, level 4 (on supply and relay outputs) conforming to EN/IEC 61000-4-4<br>2 kV, level 3 (other circuits) conforming to EN/IEC 61000-4-4 |
| Immunity to radioelectric fields | 10 V, level 3 conforming to EN/IEC 61000-4-6 |
| Non-dissipating shock wave | 4 kV (common mode) for relay outputs and supply conforming to EN/IEC 61000-4-5<br>2 kV (serial mode) for relay outputs and supply conforming to EN/IEC 61000-4-5<br>2 kV (common mode) for control circuit conforming to EN/IEC 61000-4-5<br>2 kV (common mode) for communication conforming to EN/IEC 61000-4-5<br>1 kV (serial mode) for control circuit conforming to EN/IEC 61000-4-5<br>1 kV (common mode) for temperature sensor conforming to EN/IEC 61000-4-5<br>0.5 kV (serial mode) for temperature sensor conforming to EN/IEC 61000-4-5 |

## Contractual warranty

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| Period | 18 months |