

# LTMR08EFM

motor controller LTMR TeSys T - 100..240 V  
AC 8 A for Ethernet TCP/IP



## Main

|                             |                                                                                                                          |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Range                       | TeSys                                                                                                                    |
| Product name                | TeSys T                                                                                                                  |
| Device short name           | LTMR                                                                                                                     |
| Product or component type   | Motor controller                                                                                                         |
| Device application          | Equipment monitoring and control                                                                                         |
| Measurement current         | 0.4...8 A                                                                                                                |
| [Us] rated supply voltage   | 100...240 V AC 50/60 Hz                                                                                                  |
| Supply current              | 8 A...62.8 mA                                                                                                            |
| Supply voltage limits       | 93.5...264 V AC                                                                                                          |
| Communication port protocol | Modbus TCP/EtherNet/IP                                                                                                   |
| 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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| [Ui] rated insulation voltage          | 690 V conforming to UL 508<br>690 V conforming to CSA C22.2 No 14<br>690 V 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                                                                                                                                                                                                                                                                                                        |
| Associated fuse rating                 | 0.5 A gG for control circuit<br>4 A gG for output                                                                                                                                                                                                                                                                                            |
| Protection type                        | Earth-leakage protection<br>Phase failure<br>Reverse polarity protection<br>Thermal overload protection<br>Thermal protection<br>Overload<br>Phase unbalance<br>Locked rotor<br>Overload (long time)<br>Load fluctuation<br>Power factor variation                                                                                           |
| Network and machine diagnosis type     | Phase fault and earth fault trip counters<br>Remaining operating time before overload tripping<br>Running hours counter/operating time<br>Starting current and time<br>Waiting time after overload tripping<br>Fault recording<br>Event recording<br>Trip context information<br>Trip history information<br>Motor control command recording |
| Logic input number                     | 6                                                                                                                                                                                                                                                                                                                                            |
| Input current                          | 7.5 mA at 240 V<br>3.1 mA at 100 V                                                                                                                                                                                                                                                                                                           |
| Input/Output type                      | Logic input : 79...264 V and $\geq 2$ mA for 25 ms (at state 1)<br>Logic input : 0...40 V and $\leq 15$ mA for 25 ms (at state 0)                                                                                                                                                                                                            |
| Maximum output switching frequency     | 2 Hz                                                                                                                                                                                                                                                                                                                                         |
| 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), I <sub>e</sub> = 1.25 A, 500000 cycles (output)<br>480 VA (AC-15), I <sub>e</sub> = 2 A, 500000 cycles (output)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Operating rate                | 1800 cyc/h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Contacts type and composition | 3 NO<br>1 NO + 1 NC fault signal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Metering type                 | Earth-fault current<br>Phase current I1, I2, I3 RMS<br>Temperature<br>Average current Iavg<br>Imbalance current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Measurement accuracy          | 5 % active and reactive power<br>1 % current<br>0,02 temperature<br>+/- 30 min/year internal clock<br>5 % earth fault current external measurement (< 5 % or 0.01 A)<br>3 % power factor (cos φ > 0.6)<br>1 % voltage (100...830 V)<br>5...15 % earth fault current internal measurement (for current > 0.1 A)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Overvoltage category          | III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Connection pitch              | 5.08 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Connections - terminals       | Connector, 2 solid cable without cable end 0.2...1 mm <sup>2</sup> /AWG 24...AWG 14 for control circuit<br>Connector, 2 flexible cable without cable end 0.5...1.5 mm <sup>2</sup> /AWG 24...AWG 14 for control circuit<br>Connector, 2 flexible cable without cable end 0.2...1.5 mm <sup>2</sup> /AWG 24...AWG 14 for control circuit<br>Connector, 2 flexible cable with cable end 0.2...1 mm <sup>2</sup> /AWG 24...AWG 14 for control circuit<br>Connector, 1 solid cable without cable end 0.2...2.5 mm <sup>2</sup> /AWG 24...AWG 14 for control circuit<br>Connector, 1 flexible cable without cable end 0.25...2.5 mm <sup>2</sup> /AWG 24...AWG 14 for control circuit<br>Connector, 1 flexible cable without cable end 0.2...2.5 mm <sup>2</sup> /AWG 24...AWG 14 for control circuit<br>Connector, 1 flexible cable with cable end 0.25...2.5 mm <sup>2</sup> /AWG 24...AWG 14 for control circuit                                                                                                                                                                                                                                                                                                                                                            |
| Tightening torque             | 0.5...0.6 N.m, 3 mm flat screwdriver for control circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Pollution degree              | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Electromagnetic compatibility | <ul style="list-style-type: none"> <li>• surges common mode (2 kV) control circuit, conforming to EN/IEC 61000-4-5</li> <li>• surges common mode (4 kV) relay outputs and supply, conforming to EN/IEC 61000-4-5</li> <li>• surges serial mode (2 kV) relay outputs and supply, conforming to EN/IEC 61000-4-5</li> <li>• surges common mode (2 kV) communication, conforming to EN/IEC 61000-4-5</li> <li>• surges serial mode (1 kV) control circuit, conforming to EN/IEC 61000-4-5</li> <li>• surges common mode (1 kV) temperature sensor, conforming to EN/IEC 61000-4-5</li> <li>• surges serial mode (0.5 kV) temperature sensor, conforming to EN/IEC 61000-4-5</li> <li>• conducted RF disturbances (10 V), conforming to EN/IEC 61000-4-6</li> <li>• voltage dips and interruptions immunity test (70 %, 500 ms), conforming to EN/IEC 61000-4-11</li> <li>• fast transients immunity test on supply and relay outputs level 4 (4 kV), conforming to EN/IEC 61000-4-4</li> <li>• fast transients immunity test other circuits level 3 (2 kV), conforming to EN/IEC 61000-4-4</li> <li>• radiated RF fields 3 (10 V/m), conforming to EN/IEC 61000-4-3</li> <li>• electrostatic discharge 3 (8 kV air, 6 kV contact), conforming to EN/IEC 61000-4-2</li> </ul> |
| Width                         | 91 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Height                        | 61 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Depth                         | 122.5 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Product weight                | 0.53 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Web services                  | Web server                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Compatibility code            | LTMR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## Environment

|                                       |                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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>KERI<br>LROS (Lloyds register of shipping)<br>NOM<br>RINA<br>RMRoS<br>UL<br>EAC                                                                                                                                                                                          |
| 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                                                                                                                                                                                                       |
| Fire resistance                       | 960 °C conforming to UL 94<br>650 °C conforming to EN/IEC 60695-2-12                                                                                                                                                                                                                                                               |
| Ambient air temperature for operation | -20...60 °C                                                                                                                                                                                                                                                                                                                        |
| Ambient air temperature for storage   | -40...80 °C                                                                                                                                                                                                                                                                                                                        |
| Operating altitude                    | <= 2000 m without derating                                                                                                                                                                                                                                                                                                         |
| Mechanical robustness                 | <ul style="list-style-type: none"> <li>• shocks half sine wave acceleration (15 Gn for 11 ms) conforming to EN/IEC 60068-2-27</li> <li>• vibrations plate mounted (4 Gn, 5...300 Hz) conforming to EN/IEC 60068-2-6</li> <li>• vibrations mounted on symmetrical rail (1 Gn, 5...300 Hz) conforming to EN/IEC 60068-2-6</li> </ul> |