## **Product datasheet**

Specifications





# motor controller LTMR TeSys T - 100..240 V AC 100 A for Profibus DP

LTMR100PFM

### 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         | 5100 A   |
| [Us] rated supply voltage   | 100240 V AC 50/60 Hz   |
| Current consumption         | 862.8 mA   |
| Supply voltage limits       | 93.5264 V AC   |
| Communication port protocol | Profibus DP  |
| Bus type                    | Profibus DP polarised 2-wire RS485 interface, addressing 1125, transmission rate 9.6 kbit/s12 Mbit/s, SUB-D 9 with 2 shielded twisted pairs, type A Profibus DP polarised 2-wire RS485 interface, addressing 1125, transmission rate 9.6 kbit/s12 Mbit/s, terminal block with 2 shielded twisted pairs, type A |

## Complementary

| [Ui] rated insulation voltage          | 690 V conforming to EN/IEC 60947-1<br>690 V conforming to CSA C22.2 No 14<br>690 V conforming to UL 508  |
|--|--|
| [Uimp] rated impulse withstand voltage | 4 kV supply, inputs and outputs conforming to EN/IEC 60947-4-1 6 kV current or voltage measurement circuit conforming to EN/IEC 60947-4-1 0.8 kV communication circuit conforming to EN/IEC 60947-4-1                |
| Short-circuit withstand                | 100 kA conforming to EN/IEC 60947-4-1  |
| Associated fuse rating                 | 4 A gG for output<br>0.5 A gG for control circuit  |
| Protection type                        | Thermal overload protection Power factor variation Overload Locked rotor Thermal protection Reverse polarity protection Phase unbalance Earth-leakage protection Phase failure Load fluctuation Overload (long time) |

| Network and machine diagnosis type | Starting current and time Trip history information Running hours counter/operating time Phase fault and earth fault trip counters Trip context information Event recording Remaining operating time before overload tripping Motor control command recording Waiting time after overload tripping Fault recording  |
|------------------------------------|--|
| Logic input number                 | 6  |
| Input current                      | 3.1 mA at 100 V<br>7.5 mA at 240 V   |
| Current state 0 guaranteed         | Logic input: 040 V and <= 15 mA for 25 ms  |
| Current state 1 guaranteed         | Logic input: 79264 V and >= 2 mA for 25 ms   |
| maximum output switching frequency | 2 Hz   |
| Load current                       | 5 A at 250 V AC for logic output<br>5 A at 30 V DC for logic output  |
| Permissible power                  | 480 VA (AC-15), le = 2 A, 500000 cycles (output)<br>30 W (DC-13), le = 1.25 A, 500000 cycles (output)  |
| Maximum operating rate             | 1800 cyc/h   |
| Contacts type and composition      | 1 NO + 1 NC fault signal<br>3 NO   |
| Metering type                      | Earth-fault current Phase current I1, I2, I3 RMS Temperature Imbalance current Average current lavg  |
| Measurement accuracy               | 515 % earth fault current internal measurement 1 % voltage (100830 V) 3 % power factor 5 % earth fault current external measurement +/- 30 min/year internal clock 0,02 temperature 5 % active and reactive power 0,02 current   |
| Overvoltage category               | III  |
| Connection pitch                   | 5.08 mm  |
| Connections - terminals            | Control circuit: connector 1 cable(s) 0.252.5 mm² (AWG 24AWG 14) flexible with cable end Control circuit: connector 1 cable(s) 0.22.5 mm² (AWG 24AWG 14) flexible without cable end Control circuit: connector 1 cable(s) 0.252.5 mm² (AWG 24AWG 14) flexible without cable end Control circuit: connector 1 cable(s) 0.22.5 mm² (AWG 24AWG 14) solid without cable end Control circuit: connector 2 cable(s) 0.21 mm² (AWG 24AWG 14) flexible with cable end Control circuit: connector 2 cable(s) 0.21.5 mm² (AWG 24AWG 14) flexible without cable end Control circuit: connector 2 cable(s) 0.51.5 mm² (AWG 24AWG 14) flexible without cable end Control circuit: connector 2 cable(s) 0.51.5 mm² (AWG 24AWG 14) flexible without cable end Control circuit: connector 2 cable(s) 0.21 mm² (AWG 24AWG 14) solid without cable end |
| Tightening torque                  | Control circuit: 0.50.6 N.m flat screwdriver 3 mm  |
| Pollution degree                   | 3  |

| Electromagnetic compatibility         | Electrostatic discharge, 3, 8 kV air, 6 kV contact, conforming to EN/IEC 61000-4-2 Radiated RF fields, 3, 10 V/m, conforming to EN/IEC 61000-4-3 |
|---------------------------------------|--|
|                                       | Fast transients immunity test (other circuits), level 3, 2 kV, conforming to EN/IEC 61000-4-4  |
|                                       | Fast transients immunity test (on supply and relay outputs), level 4, 4 kV, conforming   |
|                                       | to EN/IEC 61000-4-4 Voltage dips and interruptions immunity test, 70 %, 500 ms, conforming to EN/IEC   |
|                                       | 61000-4-11   |
|                                       | Conducted RF disturbances, 10 V, conforming to EN/IEC 61000-4-6 Temperature sensor: surges (serial mode), 0.5 kV, conforming to EN/IEC 61000-4-5 |
|                                       | Temperature sensor: surges (serial mode), 1 kV, conforming to EN/IEC 61000-4-5   |
|                                       | Control circuit: surges (serial mode), 1 kV, conforming to EN/IEC 61000-4-5  |
|                                       | Communication: surges (common mode), 2 kV, conforming to EN/IEC 61000-4-5  |
|                                       | Relay outputs and supply: surges (serial mode), 2 kV, conforming to EN/IEC   |
|                                       | 61000-4-5  Policy custouts and cumply current (common mode) 4 kV conforming to EN/IEC  |
|                                       | Relay outputs and supply: surges (common mode), 4 kV, conforming to EN/IEC 61000-4-5   |
|                                       | Control circuit: surges (common mode), 2 kV, conforming to EN/IEC 61000-4-5  |
| Width                                 | 91 mm  |
| Height                                | 61 mm  |
| Depth                                 | 122.5 mm   |
| Net weight                            | 0.53 kg  |
| Web services                          | Web server   |
| Compatibility code                    | LTMR   |
| Environment                           |  |
| Standards                             | EN 60947-4-1   |
|                                       | IACS E10   |
|                                       | CSA C22.2 No 14  |
|                                       | UL 508<br>IEC 60947-4-1  |
| Product certifications                | KERI   |
|                                       | RMRoS  |
|                                       | ABS  |
|                                       | UL   |
|                                       | ATEX   |
|                                       | NOM  |
|                                       | RINA   |
|                                       | BV<br>CCC  |
|                                       | GL   |
|                                       | DNV  |
|                                       | CSA  |
|                                       | LROS (Lloyds register of shipping)   |
|                                       | EAC<br>C-Tick  |
| Protective treatment                  | 12 x 24 hour cycles conforming to EN/IEC 60068-2-30  |
|                                       | 48 h conforming to EN/IEC 60070-2-11   |
|                                       | TH conforming to EN/IEC 60068  |
| Fire resistance                       | 650 °C conforming to EN/IEC 60695-2-12<br>960 °C conforming to UL 94   |
| Anabiant distance 1 5                 | ·  |
| Ambient air temperature for operation | -2060 °C   |
| Ambient air temperature for storage   | -4080 °C   |
| Operating altitude                    | <= 2000 m without derating   |
| Mechanical robustness                 | Vibrations mounted on symmetrical rail: 1 Gn, 5300 Hz conforming to EN/IEC 60068-2-6   |
|                                       | Vibrations plate mounted: 4 Gn, 5300 Hz conforming to EN/IEC 60068-2-6   |
|                                       | Shocks half sine wave acceleration: 15 Gn for 11 ms conforming to EN/IEC 60068-2-27  |
|                                       |  |

## **Packing Units**

IP degree of protection

IP20

| Unit Type of Package 1       | PCE       |
|------------------------------|-----------|
| Number of Units in Package 1 | 1         |
| Package 1 Height             | 10.000 cm |
| Package 1 Width              | 7.200 cm  |
| Package 1 Length             | 13.500 cm |
| Package 1 Weight             | 530.000 g |
| Unit Type of Package 2       | S02       |
| Number of Units in Package 2 | 10        |
| Package 2 Height             | 15.000 cm |
| Package 2 Width              | 30.000 cm |
| Package 2 Length             | 40.000 cm |
| Package 2 Weight             | 5.649 kg  |

## **Contractual warranty**

Warranty 18 months



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Transparency RoHS/REACh

### Well-being performance

| <b>Ø</b> | Mercury Free                       |
|----------|------------------------------------|
| <b>Ø</b> | Rohs Exemption Information Yes     |
| <b>Ø</b> | Pvc Free                           |
| <b>②</b> | Halogen Free Plastic Parts Product |

#### **Certifications & Standards**

| Reach Regulation         | REACh Declaration   |
|--------------------------|---|
| Eu Rohs Directive        | Compliant with Exemptions   |
| China Rohs Regulation    | China RoHS declaration  Product out of China RoHS scope. Substance declaration for your information                         |
| Environmental Disclosure | Product Environmental Profile   |
| Weee                     | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| Circularity Profile      | End of Life Information   |