



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
Current consumption	8...62.8 mA
Supply voltage limits	93.5...264 V AC
Communication port protocol	Modbus
Bus type	Modbus 2-wire RS 485 interface, addressing 1...247, transmission rate 1.2...19.2 kbit/s, RJ45 with 2 shielded twisted pairs Modbus 2-wire RS 485 interface, addressing 1...247, transmission rate 1.2...19.2 kbit/s, terminal block with 2 shielded twisted pairs

Complementary

[Ui] rated insulation voltage	690 V conforming to CSA C22.2 No 14 690 V conforming to EN/IEC 60947-1 690 V conforming to UL 508
[Uimp] rated impulse withstand voltage	4 kV for supply, inputs and outputs conforming to EN/IEC 60947-4-1 6 kV for current or voltage measurement circuit conforming to EN/IEC 60947-4-1 0.8 kV for communication circuit 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 4 A gG for output
Protection type	Earth-leakage protection Phase failure Reverse polarity protection Thermal overload protection Thermal protection Overload Phase unbalance Locked rotor Overload (long time) Load fluctuation Power factor variation
Network and machine diagnosis type	Phase fault and earth fault trip counters

	Remaining operating time before overload tripping Running hours counter/operating time Starting current and time Waiting time after overload tripping Fault recording Event recording Trip context information Trip history information Motor control command recording
Logic input number	6
Input current	3.1 mA at 100 V 7.5 mA at 240 V
Current state 0 guaranteed	Logic input : 0...40 V and ≤ 15 mA for 25 ms
Current state 1 guaranteed	Logic input : 79...264 V and ≥ 2 mA for 25 ms
Maximum operating frequency	2 Hz
Load current	5 A at 250 V AC for logic output 5 A at 30 V DC for logic output
Permissible power	480 VA (AC-15), $I_e = 2$ A, 500000 cycles (output) 30 W (DC-13), $I_e = 1.25$ A, 500000 cycles (output)
Operating rate	1800 cyc/h
Contacts type and composition	1 NO + 1 NC fault signal 3 NO
Metering type	Earth-fault current Phase current I1, I2, I3 RMS Temperature Average current I_{avg} Imbalance current
Measurement accuracy	3 % power factor ($\cos \varphi > 0.6$) +/- 30 min/year internal clock 0.02 temperature 5...15 % earth fault current internal measurement (for current > 0.1 A) 1 % current 1 % voltage (100...830 V) 5 % active and reactive power 5 % earth fault current external measurement (< 5 % or 0.01 A)
Overvoltage category	III
Connection pitch	5.08 mm
Connections - terminals	Connector, 1 flexible cable with cable end 0.25...2.5 mm ² /AWG 24...AWG 14 for control circuit Connector, 1 flexible cable without cable end 0.25...2.5 mm ² /AWG 24...AWG 14 for control circuit Connector, 1 flexible cable without cable end 0.25...2.5 mm ² /AWG 24...AWG 14 for control circuit Connector, 1 solid cable without cable end 0.25...2.5 mm ² /AWG 24...AWG 14 for control circuit Connector, 2 flexible cable with cable end 0.2...1 mm ² /AWG 24...AWG 14 for control circuit Connector, 2 flexible cable without cable end 0.2...1.5 mm ² /AWG 24...AWG 14 for control circuit Connector, 2 flexible cable without cable end 0.5...1.5 mm ² /AWG 24...AWG 14 for control circuit Connector, 2 solid cable without cable end 0.2...1 mm ² /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	• electrostatic discharge 3 (8 kV air, 6 kV contact), conforming to EN/IEC 61000-4-2 • 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 • conducted RF disturbances (10 V), conforming to EN/IEC 61000-4-6 • surges serial mode (1 kV) control circuit, conforming to EN/IEC 61000-4-5 • surges common mode (2 kV) communication, conforming to EN/IEC 61000-4-5 • surges common mode (2 kV) control circuit, conforming to EN/IEC 61000-4-5 • radiated RF fields 3 (10 V/m), conforming to EN/IEC 61000-4-3 • voltage dips and interruptions immunity test (70 %, 500 ms), conforming to EN/IEC 61000-4-11 • surges serial mode (0.5 kV) temperature sensor, conforming to EN/IEC 61000-4-5 • surges common mode (1 kV) temperature sensor, conforming to EN/IEC 61000-4-5 • surges serial mode (2 kV) relay outputs and supply, conforming to EN/IEC 61000-4-5 • surges common mode (4 kV) relay outputs and supply, conforming to EN/IEC 61000-4-5
Width	91 mm
Height	61 mm
Depth	122.5 mm
Product weight	0.53 kg
Web services	Web server

Compatibility code	LTMR
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Environment

Standards	EN 60947-4-1 IACS E10 IEC 60947-4-1 UL 508 CSA C22.2 No 14
Product certifications	ABS ATEX BV CCC CSA C-Tick DNV GL KERI LROS (Lloyds register of shipping) NOM RINA RMRoS UL EAC
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 60695-2-12 960 °C conforming to UL 94
Ambient air temperature for operation	-20...60 °C
Ambient air temperature for storage	-40...80 °C
Operating altitude	<= 2000 m without derating
Mechanical robustness	• shocks half sine wave acceleration (15 Gn for 11 ms) conforming to EN/IEC 60068-2-27 • vibrations mounted on symmetrical rail (1 Gn, 5...300 Hz) conforming to EN/IEC 60068-2-6 • vibrations plate mounted (4 Gn, 5...300 Hz) conforming to EN/IEC 60068-2-6
IP degree of protection	IP20

Contractual warranty

Warranty period	18 months
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