

# LTMR27EFM

motor controller LTMR TeSys T - 100..240 V AC  
27 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	1.35...27 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

[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	Reverse polarity protection Load fluctuation Phase unbalance Earth-leakage protection Thermal overload protection Thermal protection Locked rotor Overload Overload (long time)

	Phase failure Power factor variation
Network and machine diagnosis type	Fault recording Starting current and time Running hours counter/operating time Trip history information Phase fault and earth fault trip counters Waiting time after overload tripping Motor control command recording Trip context information Remaining operating time before overload tripping Event recording
Logic input number	6
Input current	3.1 mA at 100 V 7.5 mA at 240 V
Input/Output type	Logic input : 0...40 V and $\leq 15$ mA for 25 ms (at state 0) Logic input : 79...264 V and $\geq 2$ mA for 25 ms (at state 1)
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	Temperature Phase current I1, I2, I3 RMS Earth-fault current Imbalance current Average current Iavg
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 $> 0.2$ 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 <sup>2</sup> /AWG 24...AWG 14 for control circuit Connector, 1 flexible cable without cable end 0.2...2.5 mm <sup>2</sup> /AWG 24...AWG 14 for control circuit Connector, 1 flexible cable without cable end 0.25...2.5 mm <sup>2</sup> /AWG 24...AWG 14 for control circuit Connector, 1 solid cable without cable end 0.2...2.5 mm <sup>2</sup> /AWG 24...AWG 14 for control circuit Connector, 2 flexible cable with cable end 0.2...1 mm <sup>2</sup> /AWG 24...AWG 14 for control circuit Connector, 2 flexible cable without cable end 0.2...1.5 mm <sup>2</sup> /AWG 24...AWG 14 for control circuit Connector, 2 flexible cable without cable end 0.5...1.5 mm <sup>2</sup> /AWG 24...AWG 14 for control circuit Connector, 2 solid cable without cable end 0.2...1 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>• electrostatic discharge 3 (8 kV air, 6 kV contact), conforming to EN/IEC 61000-4-2</li> <li>• fast transients immunity test other circuits level 3 (2 kV), conforming to EN/IEC 61000-4-4</li> <li>• fast transients immunity test on supply and relay outputs level 4 (4 kV), conforming to EN/IEC 61000-4-4</li> <li>• conducted RF disturbances (10 V), conforming to EN/IEC 61000-4-6</li> <li>• surges serial mode (1 kV) control circuit, 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 common mode (2 kV) control circuit, conforming to EN/IEC 61000-4-5</li> <li>• radiated RF fields 3 (10 V/m), conforming to EN/IEC 61000-4-3</li> <li>• voltage dips and interruptions immunity test (70 %, 500 ms), conforming to EN/IEC 61000-4-11</li> <li>• surges serial mode (0.5 kV) temperature sensor, 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 (2 kV) relay outputs and supply, 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> </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	IACS E10 EN 60947-4-1 CSA C22.2 No 14 IEC 60947-4-1 UL 508
Product certifications	CSA ABS DNV LROS (Lloyds register of shipping) RMRoS RINA EAC CCC C-Tick GL KERI BV NOM ATEX UL
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	<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 mounted on symmetrical rail (1 Gn, 5...300 Hz) conforming to EN/IEC 60068-2-6</li> <li>• vibrations plate mounted (4 Gn, 5...300 Hz) conforming to EN/IEC 60068-2-6</li> </ul>

## Contractual warranty

Warranty period	18 months
-----------------	-----------