Product datasheet
Characteristics

LXM15MD40N4
motion servo drive LXM15M - 7.9 kW - 208..480 V - 3-phase- with EMC filter

Main

Range of product	Lexium 15
Product or component type	Motion servo drive
Component name	LXM15M
Network number of phases	Three phase
[Us] rated supply voltage	208...480 V (- 10...10 %)
EMC filter	Integrated
Continuous output current	14 A three phase
Transient output current	28 A for 5 s three phase
Peak output current	40 A three phase
Nominal power	7.9 kW three phase
Line current	15.4 A at 208 V three phase 17.7 A at 480 V three phase
Apparent power	10 kVA
Earthing system	Compatible TN Compatible IT with additional isolation transformer on the power supply Compatible TT

Complementary

Supply voltage limits	187.2...528 V
Supply frequency	50/60 Hz (- 5...5 %)
Network frequency limits	47.5...63 Hz
Switching frequency	8 kHz
Output voltage	<= power supply voltage
Electrical isolation	Between power and control
Electrical connection	+ 24 VDC, 0 VDC terminal 2.5 mm²(AWG 14) PA/+, PC/-, PBi, PBe terminal 4 mm²(AWG 12) R/L1, S/L2, T/L3 terminal 4 mm²(AWG 12) R1A,R1C,LI1,LI2,LI3,LI4,ENABLE,LO1,LO2,PWRI+/PWRI-,AI1+/AI1-,AI2+/AI2-,AO1,AO2 terminal 2.5 mm²(AWG 14)
Tightening torque	+ 24 VDC, 0 VDC 0.5...0.6 N.m PA/+, PC/-, PBi, PBe 0.5...0.6 N.m R/L1, S/L2, T/L3 0.5...0.6 N.m R1A, R1C, LI1, LI2, LI3, LI4, ENABLE, LO1, LO2, PWR, AI1+/AI1-, AI2+/AI2- 0.5...0.6 N.m
Protection type	Against reverse polarity inputs signal

	Against short-circuits outputs signal
Discrete input number	2 safety 5 logic including ENABLE
Discrete input type	LI1, LI2, LI3, LI4, ENABLE logic PWRI+, PWRI- safety
Sampling duration	Analog AI1+/AI1-, AI2+/AI2 0.0625 ms Discrete LI1, LI2, LI3, LI4 0.25 ms
Discrete input voltage	20...30 V DC logic 24 V DC safety
Discrete input logic	Positive logic (sink) state 0 if < 7 V or input not wired state 1 if > 12 V logic Positive logic (sink) state 0 if < 7 V or input not wired state 1 if > 12 V safety PWR function active at state 0
Safety input response time	<= 1.5 ms
Discrete output number	1 relay 2 logic
Discrete output type	LO1, LO2 logic R1A, R1C relay NO
Discrete output voltage	24 V DC (<= 30 V)
Discrete output logic	Negative logic (sink)
Analogue input number	2
Analogue input type	AI1+/AI1- analog input differential +/- 10 V, resolution 14 bits, input impedance 20000 Ohm AI2+/AI2- analog input differential +/- 10 V, resolution 12 bits, input impedance 20000 Ohm
Response time	Discrete LO1, LO2 0.25 ms Discrete R1A, R1C <= 4 ms
Analogue output number	2
Analogue output type	+/- 10 V analog output, resolution 10 bits, impedance 2200 Ohm (Analog Out 1, Analog Out 2)
Breaking capacity	0.00001 kA logic
Maximum switching current	R1A, R1C on resistive load 500 mA for 125 V AC, cos phi = 1 R1A, R1C on resistive load 500 mA for 30 V DC, cos phi = 1
Feedback type	1 encoder feedback input, 15-way female SUB-D connector (X1) 1 resolver feedback input, 9-way female SUB-D connector (X2)
Input voltage	Encoder : 10 V DC, 100 mA Resolver : 4.75 V AC, <= 35 mA
Sensor power supply	Encoder : 1 V with 2.5 V offset Resolver : 7 V DC +/- 10 % Encoder : 0.5 V at 100 kHz
Control signal type	1 ESIM (Encoder SIMulation) output, 9-way female SUB-D connector (X5) 1 pulse/direction or A/B encoder input, 9-way female SUB-D connector (X5) RS422 and RS485 link compatible input RS422 and RS485 link compatible output
Control signal frequency	A/B encoder input <= 1.5 MHz ESIM output <= 1.5 MHz Pulse direction input <= 100 kHz
Communication port protocol	CANopen RS232 serial link
Connector type	1 common for both CANopen and RX 232 9-way male SUB-D connector (X6)
Method of access	Slave CANopen, CANopen Motionbus
Transmission rate	1 Mbps 20 m 125 kbps 115 m
Number of addresses	1...127
Communication service	CANopen : 1 configurable mapping PDO CANopen : 3 PDO (position control and speed profile modes) RS232 : ASCII command
Safety function	PWR protection of machine:stops or prevents unintended operation of servo motor conforming to IEC/EN 61800-5-2 PWR protection of machine:stops or prevents unintended operation of servo motor conforming to ISO 13849-1 level d
Marking	CE
Sampling repetition time	Position control loop : 250 µs Speed control loop : 250 µs Torque control loop : 62.5 µs
Type of cooling	Fan

Operating position	Vertical +/- 10 degree
Product weight	5 kg

Environment

Electromagnetic compatibility	Conducted and radiated emissions conforming to IEC/EN 61800-3 category C3 EMC immunity conforming to EN/IEC 61000-6-2 level 3 EMC immunity conforming to IEC/EN 61000-6-1 level 3
Standards	EN/IEC 50178 EN/IEC 60204-1 EN 292 EN/IEC 61439-1
Product certifications	UL CUL
IP degree of protection	IP20
Vibration resistance	1 gn (f = 57...150 Hz) conforming to EN/IEC 60068-2-6 1.5 mm peak to peak (f = 10...57 Hz) conforming to EN/IEC 60068-2-6
Shock resistance	4 gn for 22 ms conforming to EN/IEC 60068-2-27
Pollution degree	2 conforming to EN 50178 2 conforming to EN 60204
Environmental characteristic	Category 3C1 conforming to IEC 60721-3-3
Relative humidity	Class 3K3 (5 to 85 %) without condensation conforming to IEC 60721-3-3
Ambient air temperature for operation	> 45...55 °C with derating of the motor output current by 2.5 % per °C 0...45 °C without derating
Ambient air temperature for storage	-25...70 °C
Operating altitude	<= 1000 m without derating > 1000...2000 m with derating of the motor output current by 1.5 % per additional 100 m

Contractual warranty

Warranty period	18 months