

Product datasheet

Specifications



motion servo drive LXM15H - 42.5 kW - 208..480 V - 3-phase - without EMC filter

LXM15HC20N4X

! Discontinued

! Discontinued on: 27 Aug 2020

! End-of-service on: 8 Aug 2023

Main

Range of product	Lexium 15
Product or component type	Motion servo drive
Component name	LXM15H
Network number of phases	Three phase
power supply voltage	208...480 V - 10...10 %
EMC filter	Without EMC filter
Continuous output current	70 A three phase
transient RMS output current	140 A for 5 s three phase
Peak output current	198 A three phase
Nominal power	42.5 kW three phase
Line current	60.6 A at 208 V three phase 60.9 A at 480 V three phase
Apparent power	50 kVA
Earthing system	Compatible TN Compatible IT with additional isolation transformer on the power supply Compatible TT

Complementary

power supply voltage limits	187.2...528 V
power supply frequency	50/60 Hz - 5...5 %
power supply frequency limits	47.5...63 Hz
Switching frequency	8 kHz
Output voltage	<= power supply voltage
Electrical isolation	Between power and control
Electrical connection	Terminal, clamping capacity: 2.5 mm², AWG 14 (+ 24 VDC, 0 VDC) Terminal, clamping capacity: 25 mm², AWG 2 (PA/+, PC/-, PBi, PBe) Terminal, clamping capacity: 25 mm², AWG 2 (R/L1, S/L2, T/L3) Terminal, clamping capacity: 0.5 mm², AWG 20 (R1A,R1C,Li1,Li2,Li3,Li4,ENABLE,LO1,LO2,PWRI+/PWRI-,AI1+/AI1-,AI2+/AI2-,AO1,AO2)
Tightening torque	+ 24 VDC, 0 VDC: 0.3 N.m PA/+, PC/-, PBi, PBe: 6...8 N.m R/L1, S/L2, T/L3: 6...8 N.m R1A, R1C, Li1, Li2, Li3, Li4, ENABLE, LO1, LO2, PWR, AI1+/AI1-, AI2+/AI2-: 0.3 N.m

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Protection type	Against reverse polarity: inputs signal Against short-circuits: outputs signal
Discrete input number	2 safety discrete input(s) 5 logic including ENABLE discrete input(s)
Discrete input type	Logic (LI1, LI2, LI3, LI4, ENABLE terminals) Safety (PWRI+, PWRI- terminals)
input sampling time	AI1+/AI1-, AI2+/AI2: 0.0625 ms analog LI1, LI2, LI3, LI4: 0.25 ms discrete
Discrete input voltage	20...30 V DC for logic 24 V DC for safety
Discrete input logic	Positive logic (sink) state 0 if < 7 V or input not wired state 1 if > 12 V for logic Positive logic (sink) state 0 if < 7 V or input not wired state 1 if > 12 V for safety PWR function active at state 0
Safety input response time	<= 1.5 ms
Discrete output number	1 for relay 2 for logic
Discrete output type	Logic LO1, LO2 Relay R1A, R1C 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
output 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
relay output 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)
feedback power supply	Encoder: 10 V DC, 100 mA Resolver: 4.75 V AC, <= 35 mA
feedback input signal	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	1 configurable mapping PDO for CANopen 3 PDO (position control and speed profile modes) for CANopen ASCII command for RS232
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
Net weight	21 kg

Environment

Electromagnetic compatibility	Conducted and radiated emissions with additional EMC filter conforming to EN 55011 class A group 1 Conducted and radiated emissions with additional EMC filter conforming to IEC/EN 61800-3 category C3 (cable length: 100 m) 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 61439-1 EN/IEC 50178 EN 292 EN/IEC 60204-1
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



Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

Use Longer

Lifetime extension	
Repair	No