

LXM05AD22N4

motion servo drive LXM05A - 2 kW - 380..480 V -
3-phase - with EMC filter



❗ Discontinued

Commercial status

Discontinued on: 31 December 2013

To be end-of-service on: 31 December 2021

LXM05AD22N4 has not been replaced. Please contact your customer care center for more information.

Main

Range of product	Lexium 05
Product or component type	Motion servo drive
Component name	LXM05A
Network number of phases	Three phase
Power supply voltage	380...480 V - 15...10 %
Continuous output current	7 A at 8 kHz 9 A at 4 kHz
Nominal power	2 kW at 4 kHz
Discrete input number	2 safety discrete input(s) 4 logic discrete input(s)
Analogue input number	2
Type of polarization	Integrated and switchable impedances for CANopen No polarization impedances for Modbus

Complementary

Power supply voltage limits	323...528 V
Supply frequency	50/60 Hz - 5...5 %
Power supply frequency limits	47.5...63 Hz
Transient RMS output current	14 A at 8 kHz for 3 s 16 A at 4 kHz for 3 s
Line current	5 A at 480 V 6.3 A at 380 V
Maximum prospective line I _{sc}	5 kA
Switching frequency	8 kHz 4 kHz
Overvoltage category	III
Inrush current	60 A
Maximum leakage current	30 mA
Output voltage	<= power supply voltage
Insulation	Electrical between power and control
Recommended type of cable for mounting in an enclosure	Single-strand IEC cable (temperature: 45 °C) copper 70 °C PVC Single-strand IEC cable (temperature: 45 °C) copper 90 °C XLPE/EPR
Electrical connection	Terminal, clamping capacity: 6 mm ² , AWG 10 (PA/+, PBI, PBe)

	Terminal, clamping capacity: 6 mm ² , AWG 10 (R/L1, S/L2, T/L3)
Tightening torque	PA/+, PBI, PBe: 1.2 N.m R/L1, S/L2, T/L3: 1.2 N.m
Discrete input type	Logic (LI1, LI2, LI3, LI4 terminals) Safety (PWRR_A, PWRR_B terminals)
Sampling duration	ANA1+/ANA1-, ANA2+/ANA2-: 0.25 ms analog LI1, LI2, LI3, LI4: 0.25 ms discrete
Discrete input voltage	24 V DC for logic 24 V DC for safety
Discrete input logic	Negative (LI1, LI2, LI3, LI4) at State 0: > 19 V at State 1: < 9 V conforming to EN/IEC 61131-2 type 1 Positive logic (compliment of PWRR_A, compliment of PWRR_B) at State 0: < 5 V at State 1: > 15 V conforming to EN/IEC 61131-2 type 1 Positive logic (LI1, LI2, LI3, LI4) at State 0: < 5 V at State 1: > 15 V conforming to EN/IEC 61131-2 type 1
Response time	<= 10 ms
Discrete output number	2
Discrete output type	Logic output(s) (LO1, LO2) 24 V DC
Discrete output voltage	<= 30 V DC
Discrete output logic	Negative (LO1, LO2) conforming to EN/IEC 61131-2 Positive (LO1, LO2) conforming to EN/IEC 61131-2
Contact bounce time	1 ms for LI1...LI4
Braking current	50 mA
Response time on output	1 ms (LO1, LO2) for discrete output(s)
Absolute accuracy error	< +/- 1 % 25 °C < +/- 2 % over operating temperature range
Linearity error	< +/- 0.5 %
Analogue input type	ANA1+/ANA1-, ANA2+/ANA2- analog input: differential +/- 10 V, impedance: >= 10000 Ohm, resolution: 14 bits
Protection type	Inputs signal: against reverse polarity Outputs signal: against short-circuits
Safety function	PWR protection of the machine stop and/or prevent unintended operation of the servo motor conforming to IEC/EN 61800-5-2 PWR protection of the machine stop and/or prevent unintended operation of the servo motor conforming to ISO 13849-1 level d PWR protection of the system process stop and/or prevent unintended operation of the servo motor conforming to EN/IEC 61508 level SIL2 PWR protection of the system process stop and/or prevent unintended operation of the servo motor conforming to IEC/EN 61800-5-2
Communication port protocol	CANopen Modbus CANopen Motionbus
Connector type	RJ45 (labelled CN4) for CANopen, CANopen Motionbus RJ45 (labelled CN4) for Modbus Spring terminals (labelled CN1) for CANopen, CANopen Motionbus
Method of access	Slave CANopen, CANopen Motionbus
Physical interface	2-wire RS485 multidrop Modbus RS422 for 1 A/B input(s), <= 400 kHz RS422 for 1 CW/CCW input(s), <= 400 kHz RS422 for 1 ESIM output input(s), <= 400 kHz RS422 for 1 P/D input(s), <= 400 kHz
Transmission rate	50 kbps, 125 kbps, 250 kbps, 500 kbps, 1 Mbps for CANopen, CANopen Motionbus 9600, 19200, 38400 bps for Modbus
Data format	8 bits, no parity, 1 or 2 stop for Modbus 8 bits, odd or even parity, 1 stop for Modbus
Number of addresses	1...127 for CANopen, CANopen Motionbus 1...247 for Modbus
Communication service	1 receive SDO + 1 transmit SDO for CANopen Motionbus 2 PDO for CANopen Motionbus 2 receive SDO + 2 transmit SDO for CANopen 3 PDO + 1 configurable mapping PDO for CANopen CiA DSP 402 profile for CANopen CiA DSP 402 profile for CANopen Motionbus Communication monitoring for Modbus Diagnostics (08) for Modbus Read device identification (43) for Modbus

	Read holding registers (03) for Modbus Read/write multiple registers (23) for Modbus Write multiple registers (16) for Modbus Write single register (06) for Modbus
Diagnostics	Drive voltage: 1 LED (red) Error: 1 LED (CANopen) RUN: 1 LED (CANopen)
Signalling function	Display of faults integrated 7-segment display terminal
Max nodes number	31 for Modbus
Input resistance	5 kOhm
Marking	CE
Type of cooling	Fan
Operating position	Vertical +/- 10 degree
Product weight	2 kg

Environment

EMC filter	Integrated
Electromagnetic compatibility	1.2/50 µs - 8/20 µs surge immunity test level 3 conforming to IEC 61000-4-5 Electrical fast transient/burst immunity test level 4 conforming to IEC 61000-4-4 Electrostatic discharge immunity test level 3 conforming to IEC 61000-4-2 Radiated radio-frequency electromagnetic field immunity test level 3 conforming to IEC 61000-4-3
Standards	EN/IEC 61800-5-1 EN/IEC 50178 EN/IEC 61800-3
Product certifications	cUL UL
IP degree of protection	IP20 on upper part with protective cover removed conforming to EN/IEC 60529 IP20 on upper part with protective cover removed conforming to EN/IEC 61800-5-1 IP41 on upper part with protective cover in place conforming to EN/IEC 60529 IP41 on upper part with protective cover in place conforming to EN/IEC 61800-5-1
Vibration resistance	1 gn (f= 13...150 Hz) conforming to EN/IEC 60068-2-6 1.5 mm peak to peak (f= 3...13 Hz) conforming to EN/IEC 60068-2-6
Shock resistance	15 gn for 11 ms conforming to EN/IEC 60028-2-27
Pollution degree	2 conforming to EN/IEC 61800-5-1
Environmental characteristic	Classes 3C1 conforming to IEC 60721-3-3
Relative humidity	Class 3K3 (5 to 93 %) without condensation conforming to IEC 60721-3-3
Ambient air temperature for operation	0...50 °C
Ambient air temperature for storage	-25...70 °C
Operating altitude	<= 1000 m without derating > 1000...2000 m with conditions

Packing Units

Package 1 Weight	3.180 kg
Package 1 Height	2.300 dm
Package 1 width	2.300 dm
Package 1 Length	3.200 dm

Contractual warranty

Warranty	18 months
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