Product datasheet
Characteristics

LXM05AD17M3X
motion servo drive LXM05A - 1.4 kW - 200..240 V - 3-phase with EMC filter

Main

Range of product	Lexium 05
Product or component type	Motion servo drive
Component name	LXM05A
Network number of phases	Three phase
[Us] rated supply voltage	200...240 V - 15...10 %
Continuous output current	7 A at 8 kHz 8 A at 4 kHz
Nominal power	1.4 kW at 4 kHz
Discrete input number	2 safety input(s) 4 logic input(s)
Analogue input number	2
Type of polarization	Integrated and switchable impedances for CANopen No polarization impedances for Modbus

Complementary

Supply voltage limits	170...264 V
Supply frequency	50/60 Hz - 5...5 %
Network frequency limits	47.5...63 Hz
Output current 3s peak	11 A at 8 kHz for 3 s 12 A at 4 kHz for 3 s
Line current	9 A at 200 V 7.5 A at 240 V
Prospective line Isc	5 kA
Switching frequency	4 kHz 8 kHz
Overvoltage category	III
Inrush current	< 60 A
Leakage current	< 30 mA
Output voltage	<= power supply voltage
Insulation	Electrical between power and control
Type of cable	Without mounting kit :single-strand IEC cable at 45 °C, copper 70 °C PVC Without mounting kit :single-strand IEC cable at 45 °C, copper 90 °C XLPE/EPR
Electrical connection	Terminal, clamping capacity: 6 mm² (AWG 10)PA/+, PBI, PBe Terminal, clamping capacity: 6 mm² (AWG 10)R/L1, S/L2, T/L3

Tightening torque	1.2 N.m (PA/+, PBI, PBe) 1.2 N.m (R/L1, S/L2, T/L3)
Discrete input type	Logic input(s) (LI1, LI2, LI3, LI4) Safety input(s) (PWRR_A, PWRR_B)
Sampling duration	0.25 ms (ANA1+/ANA1-, ANA2+/ANA2-), analog input(s) 0.25 ms (LI1, LI2, LI3, LI4), discrete input(s)
Discrete input voltage	24 V DC (logic input(s)) 24 V DC (safety input(s))
Discrete input logic	Negative (LI1, LI2, LI3, LI4) state 0: > 19 V, state 1: < 9 V conforming to EN/IEC 61131-2 type 1 Positive logic (compliment of PWRR_A, compliment of PWRR_B) state 0: < 5 V, state 1: > 15 V conforming to EN/IEC 61131-2 type 1 Positive logic (LI1, LI2, LI3, LI4) state 0: < 5 V, 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 (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	Analog input (ANA1+/ANA1-, ANA2+/ANA2-) differential +/- 10 V, >= 10000 Ohm, 14 bits
Protection type	Against reverse polarity for inputs signal Against short-circuits for outputs signal
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 CANopen Motionbus Modbus
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 for 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 Modbus 8 bits, odd or even parity, 1 stop Modbus
Number of addresses	1...247 addresses for Modbus 1...127 addresses for CANopen, CANopen Motionbus
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
Status LED	1 LED red signalling drive voltage 1 LED signalling error for CANopen 1 LED signalling RUN for CANopen
Signalling function	Display of faults on integrated 7-segment display terminal
Installed device	31 for Modbus
Input resistance	5 kOhm
Marking	CE
Type of cooling	Fan
Operating position	Vertical +/- 10 degree
Product weight	1.3 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 50178 EN/IEC 61800-5-1 EN/IEC 61800-3
Product certifications	UL CUL
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	1.5 mm peak to peak (f = 3...13 Hz) conforming to EN/IEC 60068-2-6 1 gn (f = 13...150 Hz) conforming to EN/IEC 60068-2-6
Shock resistance	15 gn (duration = 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

Contractual warranty

Warranty period	18 months