



Main

Range of product	Lexium 05
Product or component type	Motion servo drive
Component name	LXM05B
Network number of phases	Three phase
[Us] rated supply voltage	380...480 V - 15...10 %
Continuous output current	11 A at 8 kHz 15 A at 4 kHz
Nominal power	3 kW at 4 kHz
Discrete input number	2 safety input(s) 4 logic input(s)
Type of polarization	No polarization impedances for Modbus

Complementary

Supply voltage limits	323...528 V
Supply frequency	50/60 Hz - 5...5 %
Network frequency limits	47.5...63 Hz
Output current 3s peak	18 A at 8 kHz for 3 s 24 A at 4 kHz for 3 s
Line current	7.7 A at 480 V 9.7 A at 380 V
Prospective line I _{sc}	5 kA
Switching frequency	8 kHz 4 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 mm ² (AWG 10)PA/+, PBI, PBe Terminal, clamping capacity: 6 mm ² (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	Profibus DP Modbus
Connector type	RJ45 (labelled CN4) for Modbus Spring terminals (labelled CN1) for Profibus DP
Physical interface	2-wire RS485 multidrop Modbus 2-wire RS485 multidrop Profibus DP RS422 for 1 A/B input(s), <= 400 kHz RS422 for 1 ESIM output input(s), <= 400 kHz RS422 for 1 P/D input(s), <= 400 kHz
Transmission rate	9600 bps, 19.2, 45.45, 93.75, 187.5, 500 kbps, 1.5, 3, 6, 12 Mbps for Profibus DP 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...126 addresses for Profibus DP
Communication service	12 Process Data bytes for Profibus DP 8 PKW bytes for Profibus DP Communication monitoring for Modbus Communication monitoring for Profibus DP Diagnostics (08) for Modbus PPO type 2 for Profibus DP 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 ERR for Profibus DP 1 LED signalling RUN for Profibus DP
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	2 kg

Environment

EMC filter	Integrated
Electromagnetic compatibility	1.2/50 μ s - 8/20 μ s 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 61800-3 EN/IEC 61800-5-1
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	1.5 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
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