

# LXM32CD12N4

motion servo drive, Lexium 32, 12A, three phase, supply voltage 208 to 480V, 0.9kW, modbus



## Main

|                           |                                                                                                                                                                                                                                                                                  |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range of Product          | Lexium 32                                                                                                                                                                                                                                                                        |
| Product or Component Type | Motion servo drive                                                                                                                                                                                                                                                               |
| Device short name         | LXM32C                                                                                                                                                                                                                                                                           |
| Format of the drive       | Book                                                                                                                                                                                                                                                                             |
| Phase                     | Three phase                                                                                                                                                                                                                                                                      |
| [Us] rated supply voltage | 200...240 V - 15...10 %<br>380...480 V - 15...10 %                                                                                                                                                                                                                               |
| Supply voltage limits     | 170...264 V<br>323...528 V                                                                                                                                                                                                                                                       |
| Supply frequency          | 50/60 Hz - 5...5 %                                                                                                                                                                                                                                                               |
| Network Frequency         | 47.5...63 Hz                                                                                                                                                                                                                                                                     |
| EMC filter                | Integrated                                                                                                                                                                                                                                                                       |
| Continuous output current | 3 A 8 kHz                                                                                                                                                                                                                                                                        |
| Output current 3s peak    | 12 A 208 V 5 s<br>12 A 480 V 5 s                                                                                                                                                                                                                                                 |
| Maximum continuous power  | 800 W 208 V<br>1600 W 400 V<br>1600 W 480 V                                                                                                                                                                                                                                      |
| Nominal power             | 0.7 KW 208 V 8 kHz<br>0.9 KW 400 V 8 kHz<br>0.9 kW 480 V 8 kHz                                                                                                                                                                                                                   |
| Line current              | 3.1 A 79 % 208 V, with external line choke 2 mH<br>3.4 A 90 % 400 V, with external line choke 2 mH<br>2.9 A 98 % 480 V, with external line choke 2 mH<br>3.6 A 136 % 208 V, without line choke<br>2.9 A 177 % 400 V, without line choke<br>2.4 A 182 % 480 V, without line choke |

## Complementary

|                         |                                                                                            |
|-------------------------|--------------------------------------------------------------------------------------------|
| Switching frequency     | 8 kHz                                                                                      |
| Overvoltage category    | III                                                                                        |
| Maximum leakage current | 30 mA                                                                                      |
| Output voltage          | <= power supply voltage                                                                    |
| Electrical isolation    | Between power and control                                                                  |
| Type of cable           | Single-strand IEC cable 122 °F (50 °C)) copper 90 °C XLPE/EPR                              |
| Electrical connection   | Terminal 3 mm², AWG 12 CN8)<br>Terminal 5 mm², AWG 10 CN1)<br>Terminal 5 mm², AWG 10 CN10) |
| Tightening torque       | CN8 4.43 lbf.in (0.5 N.m)<br>CN1 6.20 lbf.in (0.7 N.m)<br>CN10 6.20 lbf.in (0.7 N.m)       |
| Discrete input number   | 2 safety<br>6 logic                                                                        |
| Discrete input type     | Logic DI<br>Safety compliment of STO_A, compliment of STO_B                                |
| Sampling duration       | ANA1+/ANA1-, ANA2+/ANA2- 0.25 ms analog<br>DI 0.25 ms discrete                             |
| Discrete input voltage  | 24 V DC logic<br>24 V DC safety                                                            |

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. 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. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

|                         |                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Discrete input logic    | Positive compliment of STO_A, compliment of STO_B)< 5 V > 15 V EN/IEC 61131-2 type 1<br>Positive DI)> 19 V < 9 V EN/IEC 61131-2 type 1<br>Positive or negative DI)< 5 V > 15 V EN/IEC 61131-2 type 1                                                                                                                                                        |
| Response time           | <= 5 ms compliment of STO_A, compliment of STO_B                                                                                                                                                                                                                                                                                                            |
| Discrete output number  | 5                                                                                                                                                                                                                                                                                                                                                           |
| Discrete output type    | Logic DO)24 V DC                                                                                                                                                                                                                                                                                                                                            |
| Discrete output voltage | <= 30 V DC                                                                                                                                                                                                                                                                                                                                                  |
| Discrete output logic   | Positive or negative DO)EN/IEC 61131-2                                                                                                                                                                                                                                                                                                                      |
| Contact bounce time     | <= 1 ms compliment of STO_A, compliment of STO_B<br>0.25 µs...1.5 ms DI                                                                                                                                                                                                                                                                                     |
| Braking current         | 50 mA                                                                                                                                                                                                                                                                                                                                                       |
| Analogue input number   | 2                                                                                                                                                                                                                                                                                                                                                           |
| Response time on output | 250 µs DO)discrete                                                                                                                                                                                                                                                                                                                                          |
| Absolute accuracy error | < +/- 0.5 %                                                                                                                                                                                                                                                                                                                                                 |
| Linearity error         | < +/- 0.1 %                                                                                                                                                                                                                                                                                                                                                 |
| Analogue input type     | ANA1+/ANA1-, ANA2+/ANA2- analog input differential +/- 10 V >= 20 Ohm 14 bits                                                                                                                                                                                                                                                                               |
| Control signal type     | Servo motor encoder feedback<br>Pulse train output (PTO) RS422 <500 kHz <328.08 ft (100 m)<br>Pulse/Direction (P/D), A/B, CW/CCW 5 V, 24 V link (open collector) <10 kHz <3.28 ft (1 m)<br>Pulse/Direction (P/D), A/B, CW/CCW 5 V, 24 V link (push-pull) <200 kHz <32.81 ft (10 m)<br>Pulse/direction (P/D), A/B, CW/CCW RS422 <1000 kHz <328.08 ft (100 m) |
| Protection type         | Against reverse polarity inputs signal<br>Against short-circuits outputs signal                                                                                                                                                                                                                                                                             |
| Safety function         | STO (safe torque off), Integrated                                                                                                                                                                                                                                                                                                                           |
| Safety level            | SIL 3 EN/IEC 61508<br>PL = e ISO 13849-1                                                                                                                                                                                                                                                                                                                    |
| Communication interface | Modbus, Integrated                                                                                                                                                                                                                                                                                                                                          |
| Connector type          | RJ45 (labelled CN7) Modbus                                                                                                                                                                                                                                                                                                                                  |
| Commissioning port      | 2-wire RS485 multidrop Modbus                                                                                                                                                                                                                                                                                                                               |
| Transmission rate       | 9600, 19200, 38400 bps 131.23 ft (40 m) Modbus                                                                                                                                                                                                                                                                                                              |
| Number of addresses     | 1...247 Modbus                                                                                                                                                                                                                                                                                                                                              |
| Status LED              | 1 LED (Red) servo drive voltage                                                                                                                                                                                                                                                                                                                             |
| Signalling function     | Display of faults 7 segments                                                                                                                                                                                                                                                                                                                                |
| Marking                 | CE                                                                                                                                                                                                                                                                                                                                                          |
| Operating position      | Vertical +/- 10 degree                                                                                                                                                                                                                                                                                                                                      |
| Product compatibility   | Servo motor BMH 2.76 in (70 mm), 1[RETURN]Servo motor BMH 2.76 in (70 mm), 2[RETURN]Servo motor BMH 3.94 in (100 mm), 1[RETURN]Servo motor BSH 2.76 in (70 mm), 1[RETURN]Servo motor BSH 2.76 in (70 mm), 2                                                                                                                                                 |
| Width                   | 1.89 in (48 mm)                                                                                                                                                                                                                                                                                                                                             |
| Height                  | 10.63 in (270 mm)                                                                                                                                                                                                                                                                                                                                           |
| Depth                   | 9.33 in (237 mm)                                                                                                                                                                                                                                                                                                                                            |
| Net Weight              | 3.97 lb(US) (1.8 kg)                                                                                                                                                                                                                                                                                                                                        |

## Environment

|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electromagnetic compatibility         | Conducted EMC, class A group 1 EN 55011<br>Conducted EMC, class A group 2 EN 55011<br>Conducted EMC, environment 2 category C3 EN/IEC 61800-3<br>Conducted EMC, category C2 EN/IEC 61800-3<br>Conducted EMC, environments 1 and 2 EN/IEC 61800-3<br>Electrostatic discharge immunity test, level 3 EN/IEC 61000-4-2<br>Susceptibility to electromagnetic fields, level 3 EN/IEC 61000-4-3<br>1.2/50 µs shock waves immunity test, level 3 EN/IEC 61000-4-5<br>Electrical fast transient/burst immunity test, level 4 EN/IEC 61000-4-4<br>Radiated EMC, class A group 2 EN 55011<br>Radiated EMC, category C3 EN/IEC 61800-3 |
| Standards                             | EN/IEC 61800-5-1<br>EN/IEC 61800-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Product Certifications                | UL[RETURN]CSA[RETURN]TÜV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| IP degree of protection               | IP20 EN/IEC 60529<br>IP20 EN/IEC 61800-5-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Vibration resistance                  | 1 gn 13...150 Hz)EN/IEC 60068-2-6<br>1.5 mm peak to peak 3...13 Hz)EN/IEC 60068-2-6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Shock resistance                      | 15 gn 11 ms EN/IEC 60028-2-27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Pollution degree                      | 2 EN/IEC 61800-5-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Environmental characteristic          | Classes 3C1 IEC 60721-3-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Relative humidity                     | Class 3K3 (5 to 85 %) without condensation IEC 60721-3-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Ambient air temperature for operation | 32...122 °F (0...50 °C) UL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Ambient Air Temperature for Storage   | -13...158 °F (-25...70 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Type of cooling                       | Integrated fan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Operating altitude                    | <= 3280.84 ft (1000 m) without derating<br>> 3280.84...9842.52 ft (> 1000...3000 m) with conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

## Ordering and shipping details

|                   |                                 |
|-------------------|---------------------------------|
| Category          | 18261-LEXIUM 32 SERVO DRIVES II |
| Discount Schedule | PC51                            |
| GTIN              | 3606480076695                   |
| Returnability     | No                              |
| Country of origin | ID                              |

## Packing Units

|                              |                           |
|------------------------------|---------------------------|
| Unit Type of Package 1       | PCE                       |
| Number of Units in Package 1 | 1                         |
| Package 1 Height             | 3.35 in (8.5 cm)          |
| Package 1 Width              | 10.87 in (27.6 cm)        |
| Package 1 Length             | 12.99 in (33 cm)          |
| Package 1 Weight             | 4.99 lb(US) (2.264 kg)    |
| Unit Type of Package 2       | S03                       |
| Number of Units in Package 2 | 3                         |
| Package 2 Height             | 11.81 in (30 cm)          |
| Package 2 Width              | 11.81 in (30 cm)          |
| Package 2 Length             | 15.75 in (40 cm)          |
| Package 2 Weight             | 16.86 lb(US) (7.649 kg)   |
| Unit Type of Package 3       | P06                       |
| Number of Units in Package 3 | 24                        |
| Package 3 Height             | 31.50 in (80 cm)          |
| Package 3 Width              | 31.50 in (80 cm)          |
| Package 3 Length             | 23.62 in (60 cm)          |
| Package 3 Weight             | 151.25 lb(US) (68.604 kg) |

## Offer Sustainability

|                            |                                                                                                                                                                                                                                                                                             |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                                                                                                                                                                                       |
| California proposition 65  | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |
| REACH Regulation           | <a href="#">REACH Declaration</a>                                                                                                                                                                                                                                                           |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope)                                                                                                                                                                                                                                  |
| Mercury free               | Yes                                                                                                                                                                                                                                                                                         |
| China RoHS Regulation      | <a href="#">China RoHS Declaration</a>                                                                                                                                                                                                                                                      |
| RoHS exemption information | <a href="#">Yes</a>                                                                                                                                                                                                                                                                         |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>                                                                                                                                                                                                                                               |
| Circularity Profile        | <a href="#">End Of Life Information</a>                                                                                                                                                                                                                                                     |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.                                                                                                                                                                |
| PVC free                   | Yes                                                                                                                                                                                                                                                                                         |

## Contractual warranty

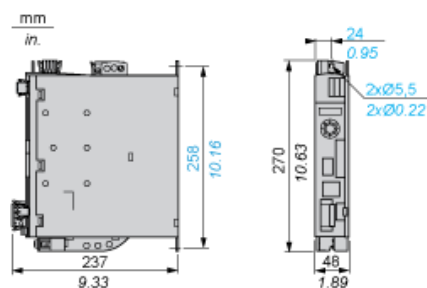
|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

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Lexium 32 Servo Drive

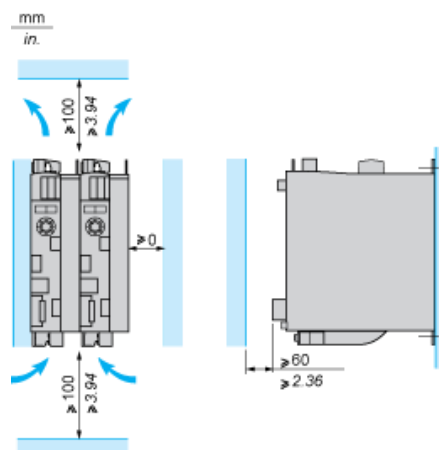
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Dimensions



## Lexium 32 Motion Control Servo Drives

### Mounting Recommendations



LXM32•U45M2, •U90M2 and LXM32•U60N4 servo drives are cooled by natural convection. LXM32•D18M2, •D30M2, LXM32 •D12N4, •D18N4, •D30N4 and •D72N4 servo drives have an integrated fan.

When installing the servo drive in the enclosure, follow the instructions below with regard to the temperature and protection index:

- Provide sufficient cooling of the servo drive
- Do not mount the servo drive near heat sources
- Do not mount the servo drive on flammable materials
- Do not heat the servo drive cooling air by currents of hot air from other equipment and components, for example from an external braking resistor
- Mount the servo drive vertically ( $\pm 10\%$ )
- If the servo drive is used above its thermal limits, control stops due to overtemperature

NOTE: For cables that are connected via the underside of the servo drive, a free space  $\geq 200$  mm/7.87 in. is required under the unit to comply with the bending radius of the connection cables.

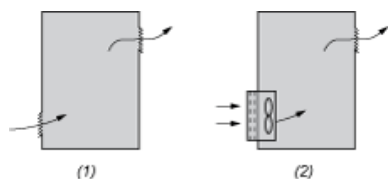
| Ambient temperature | Mounting distances | Instructions to be followed                         |
|---------------------|--------------------|-----------------------------------------------------|
| 0°C...+ 50°C        | $d \geq 0$ mm      | –                                                   |
| + 50°C...+ 60°C     | $d \geq 0$ mm      | Reduce the output current by 2.2% per °C above 50°C |

NOTE: Do not use insulated enclosures, as they have a poor level of conductivity.

### Recommendations for Mounting in an Enclosure

To ensure good air circulation in the servo drive:

- Fit ventilation grilles on the enclosure.
- Ensure that ventilation is adequate, otherwise install a forced ventilation unit with a filter.



- (1) Natural convection
- (2) Forced ventilation

- Any apertures and/or fans must provide a flow rate at least equal to that of the servo drive fans (refer to characteristics).
- Use special filters with IP 54 protection.

### Mounting in Metal Enclosure (IP 54 Degree of Protection)

The servo drive must be mounted in a dust and damp proof enclosure in certain environmental conditions, such as dust, corrosive gases, high humidity with risk of condensation and dripping water, splashing liquid, etc. In these cases, Lexium 32 servo drives can be installed in an enclosure where the internal temperature must not exceed 60°C.