

## Lexium MDrive Motion Control LMDAM571 — PRERELEASE DOCUMENT

NEMA size 23 (57 mm) Quick Reference

### Notes and Warnings

This document is intended to provide an overview of critical specifications, wiring and connections. The product manual must be read and understood prior to using this device. > [Product Manual Downloads](#)

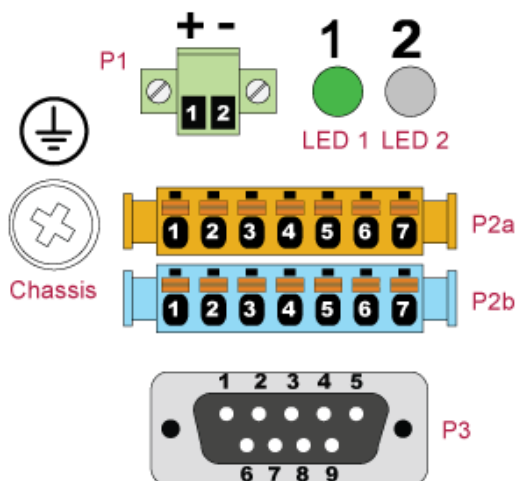
### Overview of product

|                |                               |
|----------------|-------------------------------|
| Part number    | LMDAM571                      |
| NEMA size      | 23 (57 mm)                    |
| Input Voltage  | +12 to +60 VDC                |
| Stack length   | Single                        |
| Holding torque | 103.4 oz-in (73 N-cm)         |
| Feedback loop  | Absolute closed loop with HMT |
| Communication  | RS-422/485                    |

### Connector overview

#### Connectors

- P1: DC Power input
- P2: Multifunction Interface
- P3: RS-422/485 interface



#### LEDs

- LED 1: DC/Aux Power supply status
- LED 2: User defined

Lexium MDrive connectors are keyed and color-coded.

- P1: Green
- P2A (top) – Orange
- P2B (bottom) – Blue

Replacement connector sets may be ordered from SEM. Part number: **CK-15**

### Specifications

|                |                   |         |
|----------------|-------------------|---------|
| Input Voltage  | [+VDC] nominal    | 24 / 48 |
|                | [+VDC] min/max    | 12/60   |
| Supply current | [A] max per unit  | 3.5     |
| Aux supply     | [+VDC]            | 12 / 24 |
| Aux current    | [mA] max per unit | 200     |
| Temperature    | [C°] heat sink    | 85      |
|                | [C°] motor        | 100     |
| IP rating      | -                 | IP20    |

### Connecting the Power Supply

Read the Product Hardware Manual Section 5: Engineering before connecting DC Power.

- Use shielded twisted pairs for cabling with shield earthed at the power supply end.
- Power supply wiring should be shielded twisted pairs. Use 18 AWG wires if load is less than 4 amps, or 16 AWG for more than 4 amps.
- Never use a "daisy-chain" power supply wiring scheme to system components.

|       |                              |
|-------|------------------------------|
| Pin 1 | Power supply output voltage  |
| Pin 2 | Power supply return (Ground) |

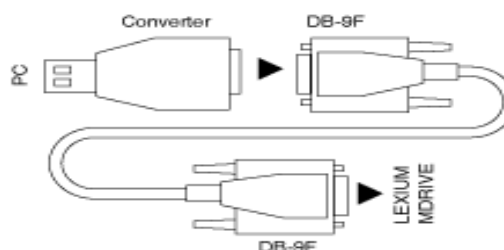
### Connecting communication

SEM recommends using the MD-CC404-000 USB to RS-422/485 communication converter with first Lexium MDrive purchase. This Plug and play adapter and cable kit needs only be connected from your PC to the DB9M connector at P3.

If using a third-part RS-422 / 485 converter or PC card P3 is pinned as follows (Pins not listed are not connected):

|       |            |       |            |
|-------|------------|-------|------------|
| Pin 2 | TRANSMIT - | Pin 6 | COMM_GND   |
| Pin 3 | RECEIVE +  | Pin 7 | TRANSMIT + |
| Pin 4 | COMM_GND   | Pin 8 | RECEIVE -  |

#### MD-CC404-000 USB to RS485 Converter



If using the MD-CC404-000 ensure an Internet connection to the PC is present, drivers should automatically install. If using an operating system other than Microsoft Windows®, or drivers fail to install on plug-in, they may be downloaded from this page: <https://www.ftdichip.com/Drivers/VCP.htm>

### Connecting I/O (Multifunction interface)

See product hardware manual for detailed description of pin functions and interface methods and requirements.

#### Connector P2A (Orange)

|       |                                 |
|-------|---------------------------------|
| Pin 1 | INPUT_REFERENCE                 |
| Pin 2 | INPUT 1/CAPTURE (+5 to +24 VDC) |
| Pin 3 | INPUT 2 (+5 to +24 VDC)         |
| Pin 4 | INPUT 3 (+5 to +24 VDC)         |
| Pin 5 | INPUT 4 (+5 to +24 VDC)         |
| Pin 6 | External Battery +              |
| Pin 7 | External Battery —              |

#### Connector P2B (Blue)

|       |                                      |
|-------|--------------------------------------|
| Pin 1 | AUX_PWR (+12 to +24 VDC, 200 mA max) |
| Pin 2 | OUTPUT 1+ (100 mA max)               |
| Pin 3 | OUTPUT 1— (100 mA max)               |
| Pin 4 | DO NOT CONNECT                       |
| Pin 5 | DO NOT CONNECT                       |
| Pin 6 | SIGNAL_OUTPUT_COLLECTOR (5.5 mA max) |
| Pin 7 | SIGNAL_OUTPUT_EMITTER (5.5 mA max)   |

### LED Indicators

#### LED 1: Power Indication

| Color          | Status                           |
|----------------|----------------------------------|
| Off            | No Power                         |
| Green          | +VDC supply in range             |
| Flashing green | +VDC off, drive on AUX power     |
| Red            | +VDC supply out of range         |
| Flashing red   | +VDC off, AUX power out of range |

#### LED 2: User defined

| Color | Status                    |
|-------|---------------------------|
| Off   | Not configured            |
| Green | No attention state exists |
| Red   | Attention state exists    |

### Software - Motion Control Programmer

Motion Control Programmer is an integrated program editor and ASCII/ANSI terminal emulator used to issue commands and program the Lexium MDrive Motion Control products.

Motion Control Programmer is a component of the Lexium MDrive Software Suite, which contains the software for all SEM Lexium MDrive products and may be downloaded at <https://motion.schneider-electric.com/lmd/lexium-mdrive-software.php>

To install:

1. Download and install the Lexium MDrive Software Suite, open the program.
2. Click the button labeled: Install Lexium MDrive Motion Control Interface.
3. Follow the on-screen prompts. Install button will change to Launch.
4. Launch Motion Control Programmer.

The Manual for the Software Suite contains detailed usage instructions for this software and may be accessed via this link [https://motion.schneider-electric.com/lmd/downloads/literature/lmd\\_software\\_suite.pdf](https://motion.schneider-electric.com/lmd/downloads/literature/lmd_software_suite.pdf)

### Establish RS-422/485 communication

1. Install the Motion Control Programmer component of the Lexium MDrive Software Suite.
2. With the RS-422/485 interface connected, apply power to the Lexium MDrive Motion Control
3. Open the Motion Control Programmer
4. Select the tab labeled "Terminal 1" and click into the text area.
5. On the status bar, double-click the COM port indicator (eg 02:9600) to open the Communication Settings dialog. Select the serial converter is connected on.

Port Open 15:9600 LMDxM

6. Click the Port Status button labeled "Closed" on the status bar, the label should change to "Open"
7. Enter "CTRL+C" into the terminal window. The sign-on message should appear.

Copyright © 2010-2013 Schneider Electric Motion USA

8. The device may now be controlled/programmed.