LW3A QUICK START GUIDE
WITH EVER STUDIO

1ST EDITION, JANAURY 16, 2025

Ever Studio

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Ever Studio with LW3A Overview

This quick start guide is intended to provide users of the Ever Stepper L series drive an overview of using Ever Studio software. The vendor-created software manual that is included as part of Ever Studio is not applicable to the LW3A drive. This non-applicable manual is located under the Help menu → Contents. The "CANopen & EtherCAT DS402 Specification" is for Titanio-Platino-Vanadio Ever Drives, **not** the L drive series Automation Direct sells.

For detailed documentation of the LW3A drive, please see the following:
- *Ever_Studio_Quick_Start_Guide.pdf*
- *LW3A Installation instructions*
- *LW3A Datasheet*

The LW3A drive has limited configuration settings. With DIP switches 3,4, and 5 in the ON position the following settings can be configured in EVER Studio.
- *Motor Direction*
- *Minimum Current*
- *Maximum Current*
- *Motor Resolution (Micro-step setting)*

If any of the DIP switches (3, 4, or 5) are no longer in the ON position then all four of these software defined objects will revert to the DIP switch settings for the drive.

4-lead motors are the easiest to connect, and the speed–torque of the motor depends on winding inductance. To determine the peak output current of the drive, multiply the nameplate motor phase current by 1.4. If the motor runs too hot, then multiply by 1.2 instead. A motor running in closed loop with encoder feedback will run cooler. For 6-lead and 8-lead motor wiring information, please refer to the drive User Manual.

The drives are designed to operate within a specific voltage input (see specifications table). When selecting a power supply, choose a power supply with an output range within the minimum and maximum of the drive, and be sure to leave room for power supply fluctuation and motor back-EMF.
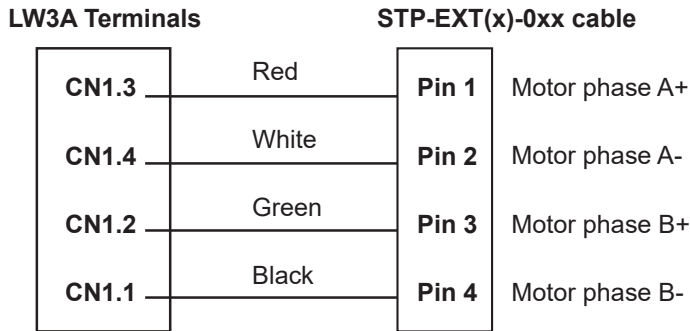
⚠️ *CAUTION: USE ONLY HIGH VOLTAGE STEPPER MOTORS, LIKE STP-MTRAC-XXXXX AND STP-MTRACH-XXXXX, WITH A HIGH VOLTAGE STEPPER DRIVE. THE AC INPUT RESULTS IN HIGH VOLTAGE BEING APPLIED TO THE MOTOR. STANDARD LOW-VOLTAGE STEPPER MOTORS (STP-MTR-XXXXX) WILL BE DAMAGED.*

WIRING

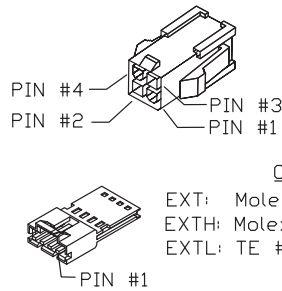### *WIRING THE MOTOR*

Wire the motor according to the diagram below:

LW3A Terminals		STP-EXT(x)-0xx cable	
CN1.3	Red	**Pin 1**	Motor phase A+
CN1.4	White	**Pin 2**	Motor phase A-
CN1.2	Green	**Pin 3**	Motor phase B+
CN1.1	Black	**Pin 4**	Motor phase B-

STP-EXT(x)-0xx Extension Cable Wiring Diagram

EXT & EXTH CABLES

PIN#	COLOR
1	RED
2	WHITE
3	GREEN
4	BLACK

PIN #4 — PIN #3
PIN #2 — PIN #1

EXTL CABLES

PIN#	COLOR
1	RED
2	WHITE
3	GREEN
4	BLACK

PIN #1

CONNECTORS:
EXT: Molex #43020-0401
EXTH: Molex #39-01-2041
EXTL: TE #103653-3

1.0" ref

L

2.00"
1.00"

HEAT SHRINK

UNSHIELDED CABLE:
(4) 20 AWG cond
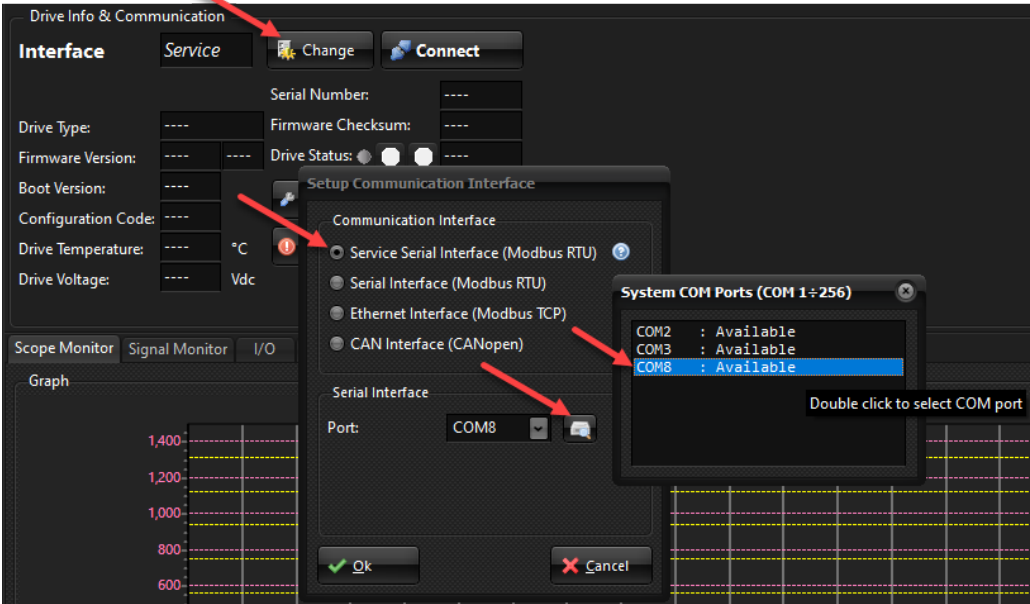(4) 18 AWG cond
(4) 24 AWG cond
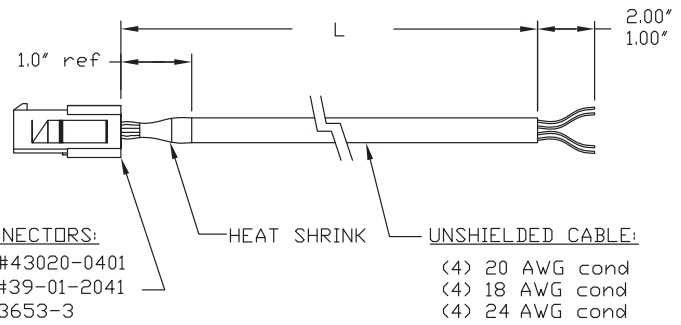
Wiring Pulse and Direction Inputs

The diagram below provides an example for wiring a Producitivity series high speed output card (P2-HSO) pulse and direction connection to the LW3A drive. See the "LW3A Installation instructions. pdf" for more wiring details for Line Driver, NPN, and PNP connections.
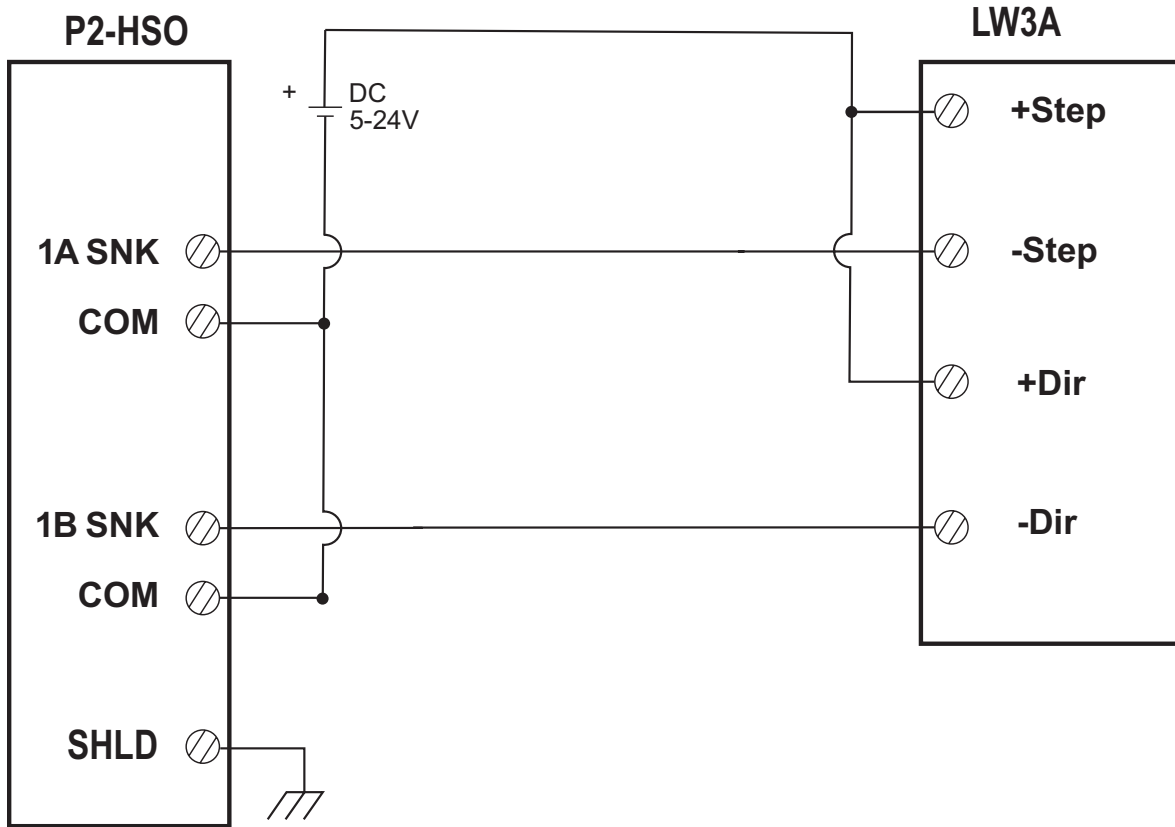
CONNECTING EVER STUDIO

This section covers getting connected to your Ever Stepper drive with Ever Studio configuration software. If using just the available settings that are configurable by DIP switch only then there is no need to connect to Ever Studio.

Step	Action
1	To begin, connect the computer with Ever Studio installed to the Serial Interface (CN6) port on the LW3A drive using the EVER-PGM-2 cable.
2	Open the Ever Studio software on the connected computer.
3	Click **Change** to open the **Setup Communication Interface** window.
4	Select **Service Serial Interface (Modbus RTU)**. This is used with EVER-PGM-2 configuration cable kit.
5	Click the **Show System COM Ports** icon to open the **System COM Ports** window. Double-click on the com port that connects to the LW3A. Click **Ok**.
6	Click **Connect**. The upper left of the Ever Studio window should now report part number LW3A903N2A1-00.

Parameter Configuration

The LW3A drive has limited configuration settings. With DIP switches 3,4, and 5 in the ON position the following settings can be configured in EVER Studio.

- *Motor Direction*
- *Minimum Current*
- *Maximum Current*
- *Motor Resolution (Micro-step setting)*

If any of the DIP switches (3, 4, or 5) are no longer in the ON position then all four of these software defined object will revert to the DIP switch settings for the drive. The image below shows the four available settings in Ever Studio.
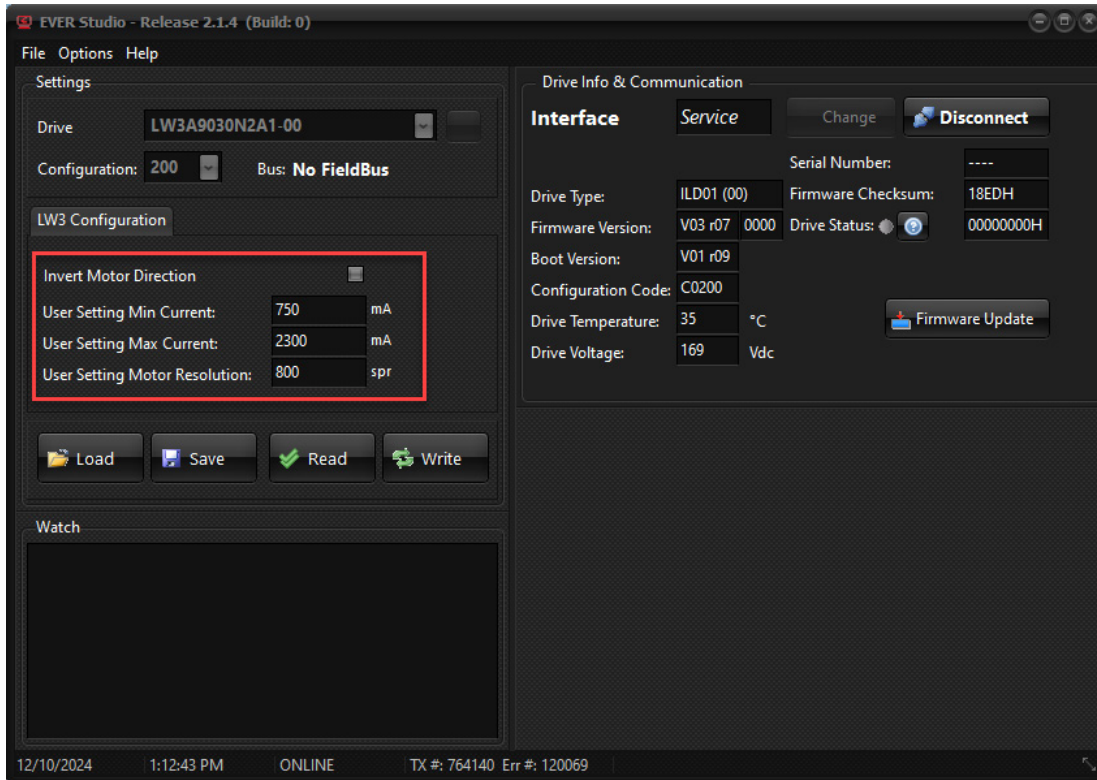
When connected to the LW3A, the 'Watch" window is not valid.

Alarms and Drive Status LEDs

If any Alarms need to be reset, do so in the **Drive Status** window.
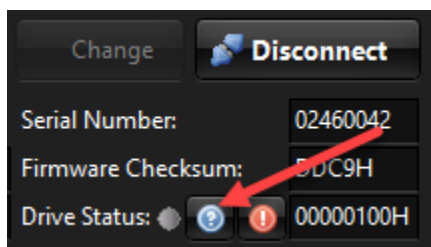
FREQUENTLY ASKED QUESTIONS (FAQ)

Question	Answer
What is the Custom window for?	The Custom window under the Option menu is used for specific customers or for specific functions. This window is not used for any drive Automation Direct sells.
What is Open Transistor Protection?	Open Transistor Protection shows that the transistors are open and there isn't torque on the motor–the drive is not enabled.
What does Motor Move Not Executed mean?	The last movement command was not executed (the application tried to activate the movement in Clock & Direction, but the drive was not enabled).

FIRMWARE UPDATE

In Ever Studio click Firmware Update –> open the appropriate .EBI file and click start. There is no need to change the Node ID: or CK: values. After the firmware has installed completely, power cycle the drive. Check the Automation Direct software downloads page for the latest firmware and application file.