

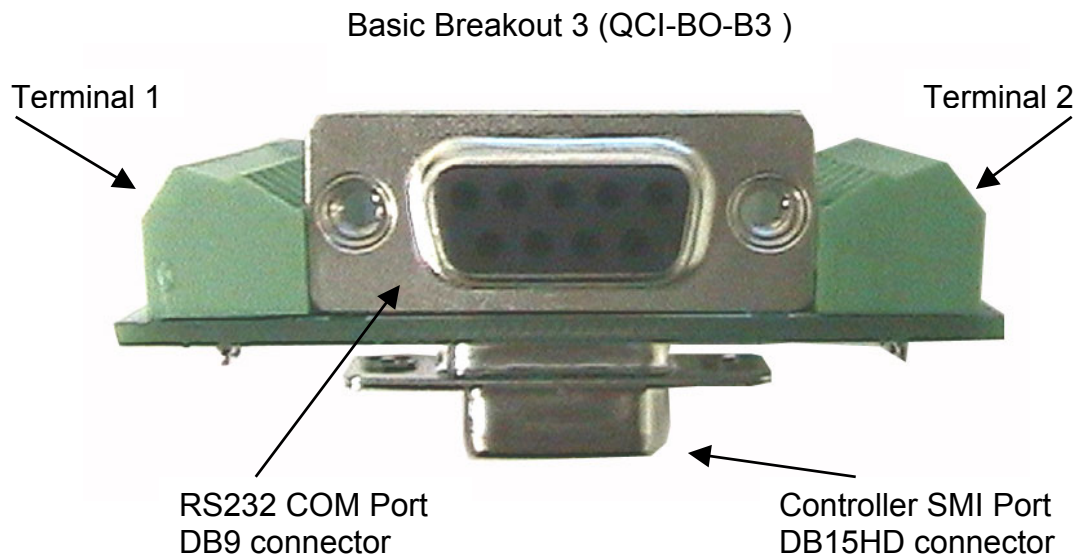
## Start-Up Kit QCI-SKB-N3-EE Setup Instructions

This SilverLode Start-Up Kit provides a simple and inexpensive means to evaluate and prototype with a SilverNugget N3 controller/driver (included). QCI's Basic Breakout 3 Module provides access to the servo's SMI port (I/Os, communication and power).

This kit includes:

**Note:** Motor Not Included

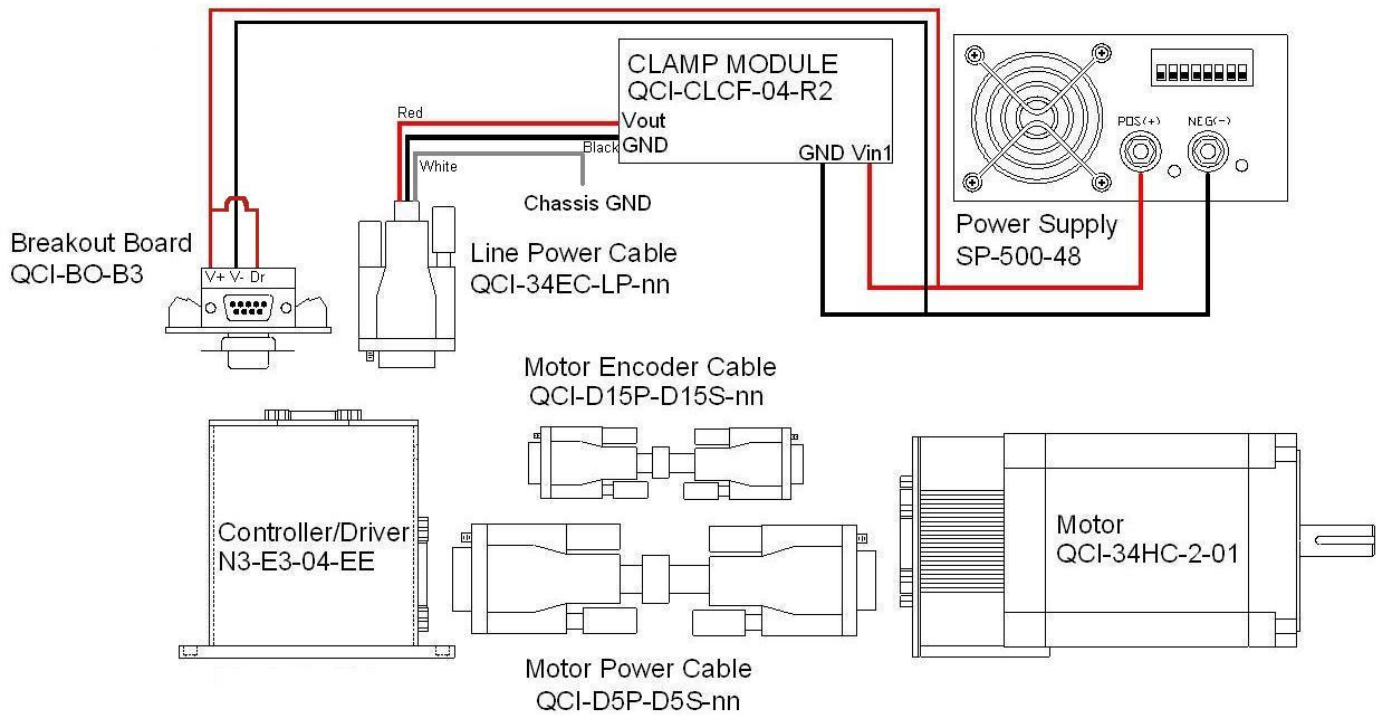
- SilverNugget N3 (QCI-N3-E3-04-EE) & Datasheet (QCI-DS006)
- QuickControl Software CD (QCI-QC)
- User Manual & Command Reference (QCI-SLM)
- Basic Breakout 3 (QCI-BO-B3) & Tech Doc (QCI-TD038)
- Clamp Module (QCI-CLCF-04-R2) & Tech Doc (QCI-TD017)
- Communication Cable (QCI-C-D9M9F-6)
- Power cable (QCI-34EC-LP-10)
- 4' DB15HD Motor I/F Cable (QCI-C-D15P-D15S-4)
- 4' DB5 Motor I/F Cable (QCI-C-D5P-D5S-4)



Technical document QCI-TD038 contains details on the Basic Breakout 3 module operation and specifications.

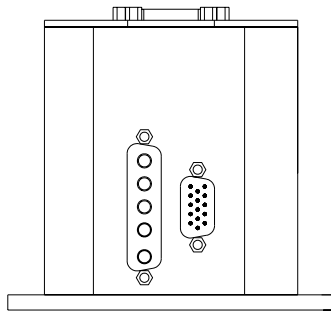
Connections refer to the SilverNugget I-Grade N3 controller / driver - use with NEMA 34 frame motors.

**Warning:** Make sure power supply is OFF before making any connections.

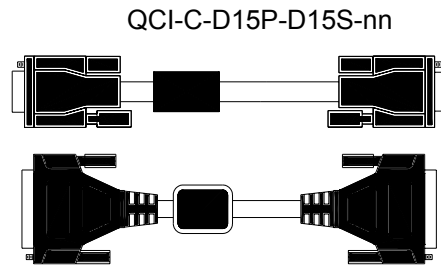


The SilverNugget N3 has separate driver and processor power, allowing for the use of more than one power supply. In addition to driver power, driver enable requires +10 to 48VDC to active the servo's driver circuitry. When using more than one power supply, connect the grounds of the power supplies together.

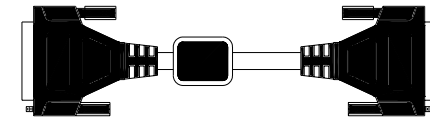
1. Connect the SilverNugget N3 controller/driver to a 34 frame motor/encoder using the motor interface cables (QCI-C-D15P-D15S-nn : encoder power/feedback) and (QCI-D5P-D5S-nn : motor winding power).
  - a. Attach the pin side of the motor I/F cable DB15 to the SilverNugget N3 DB15.
  - b. Attach the socket side of the motor I/F cable DB15 to the motor/encoder DB15.
  - c. Attach the pin side of the motor I/F cable DB5 to the SilverNugget N3 DB5.
  - d. Attach the socket side of the motor I/F cable DB5 to the motor/encoder DB5.



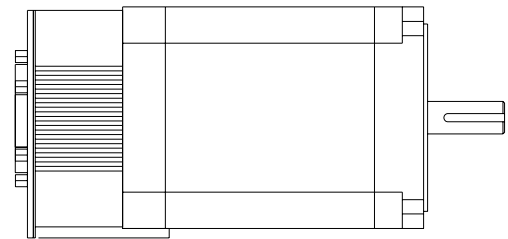
SilverNugget N3  
Controller/Driver  
(i.e QCI-N3-E3-04-EE)



QCI-C-D15P-D15S-nn

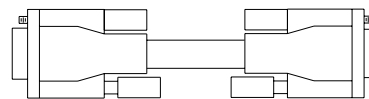
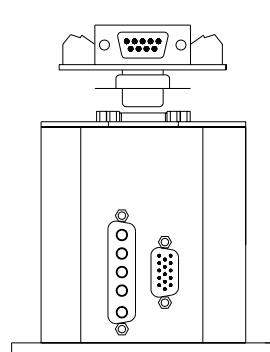


QCI-C-D5P-D5S-nn



34 Frame Motor/Encoder  
(i.e QCI-A34H-1)

2. Connect the Basic Breakout to the SilverNugget N3 and PC COM Port. The Basic Breakout will mount directly onto the SilverNugget N3 while the communication cable (QCI-C-D9M9F-6) is used to connect the PC.
  - a. Attach the Basic Breakout to the top of the SilverNugget N3 DB15 SMI port.
  - b. Attach the pin side of the communication cable to the Basic Breakout DB9.
  - c. Attach the socket side of the communication cable to the PC COM Port.



QCI-C-D9M9F-6

TO PC COM Port

3. Connect the power supply and Clamp Module using the Power Cable (QCI-34EC-LP-nn).
  - a. Attach the pin side of the Power Cable to the SilverNugget N3 DB3.
  - b. The other end of the Power Cable has exposed wires. Wire the red wire to the Clamp Module terminal 3, black to terminal 4 and white to earth ground. (White wire is represented by the green wire / ground symbol in diagram)

\*Power supply wires not provided.

- c. Wire the negative terminal of the power supply to the Basic Breakout 3 V- terminal slot.
- d. Wire the positive terminal of the power supply to the Basic Breakout 3 Drv Ena and V+ terminal slots and PS negative to Gnd.
  - i. Processor must be +12 to 48 VDC.
  - ii. Driver Enable must be +10 to 48 VDC.
- e. Connect earth ground to the Basic Breakout 3 terminal Chasis.

**DO NOT** make any other connections to the outputs on the Voltage Clamp other than the Power Cable (QCI-34EC-LP-nn). When regenerating, any added circuitry connected to Clamp's outputs is not protected and could be damaged by the back EMF.

4. Install QuickControl® and initialize servo (see Getting Started in the User Manual).