

LHX / DXL

CONFIGURATION WIZARDS



LHX / DXL CONFIGURATION WIZARDS

System Configuration = 0

► Basic RUN/STOP operation

This is the factory default configuration for basic operation of the drive that allows RUN/STOP control of the motor in AUTO mode using a dry contact on AUX1 and/or AUX2.

System Configuration = 1

► Analog Constant Pressure

Use this setting to operate analog constant pressure systems with a 4-20 mA transducer.

System Configuration = 2

► Analog Constant Pressure with A redundant sensor and up to two PSI Setpoints

This configuration allows the use of two 4-20 mA transducers.

System Configuration = 3

► Analog Constant Pressure with redundant sensors and up to four PSI Setpoints

This configuration allows the use of two 4-20 mA transducers.

System Configuration = 4

► Speed Reference I1

Use this setting for motor speed control by an external 4-20 mA source connected to the I1 Control Terminals.

System Configuration = 5

► Speed Reference I2

Use this setting for motor speed control by an external 4-20 mA source connected to the I2 Control Terminals.

System Configuration = 6

► Speed Pot Control

Use this setting for motor speed control by a potentiometer or an external 0-10 VDC source connected to the 0-10 VDC Control Terminals.

System Configuration = 7

► Analog Constant Pressure with HOA and Speed Potentiometer

This setting allows the user to either turn the motor off, control motor speed with a potentiometer, or operate in analog constant pressure mode using an HOA switch.

System Configuration = 8

► Analog Constant Pressure Swap Sensors

This configuration allows the use of two 4-20 mA transducers.

System Configuration = 9

► HOA Speed Reference Selector

This configuration allows multiple speed references to be used.

System Configuration = 10

► Pump Down Open Loop

This configuration determines pump speed based on fluid level as measured by a 0-10 VDC or 4-20 mA transducer.



See LHX Series / DXL Series operation and installation manual for details on system configuration setup.



SYSTEM CONFIGURATION = 0

► Basic RUN/STOP operation

LHX / DXL SERIES

Control Board v3.0

Description

This is the factory default configuration for basic operation of the drive that allows RUN/STOP control of the motor in AUTO mode using a dry contact on AUX1 and/or AUX2.

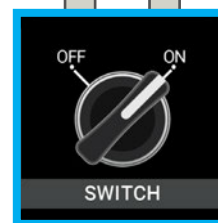
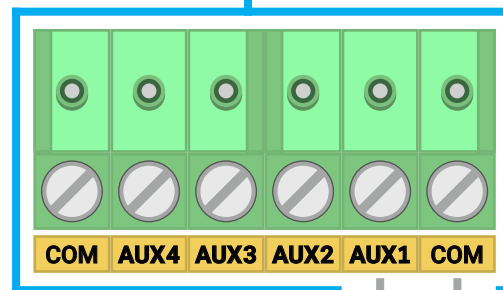
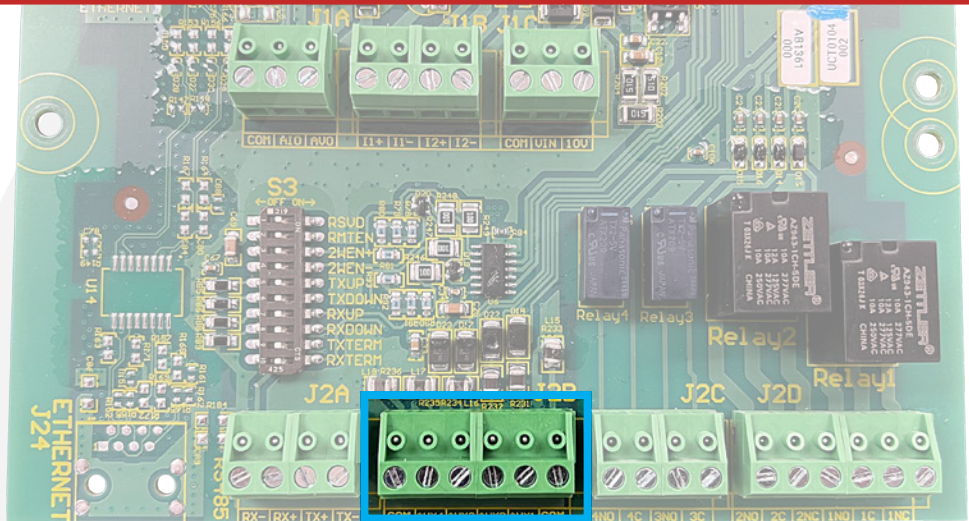
Application Usage

- Float Switch
- Pivot Relay
- Start/Stop Signal

Pro Tips

AUX 1 and 2 must be "ON (Closed)" for the system to run

To check the state of your Auxiliaries, navigate to 3.19 and 3.20 in Read Measured Values



Switch #1



SYSTEM CONFIGURATION = 1

► Analog Constant Pressure

LHX / DXL SERIES

Control Board v3.0

Description

Use this setting to operate analog constant pressure systems with a 4-20 mA transducer.

Application Usage

- Simple Constant Pressure

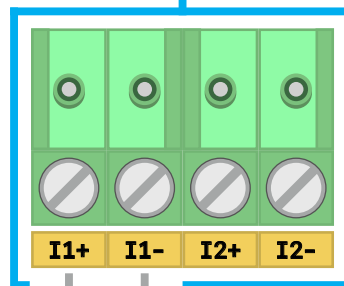
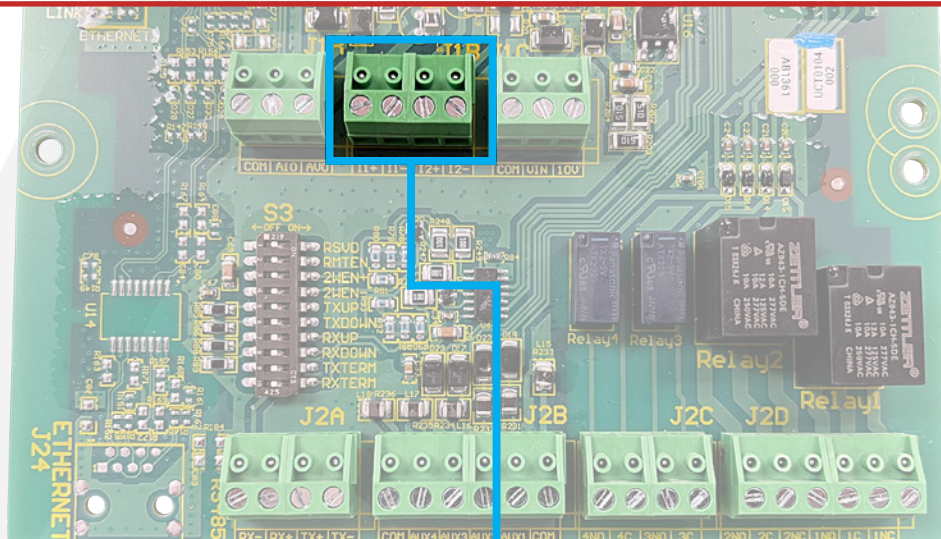
Pro Tips

AUX 1 and 2 must be "ON (Closed)" for the system to run

To check the state of your Auxiliaries, navigate to 3.19 and 3.20 in Read Measured Values

To check the quality of your analog signals, navigate to 3.22 in Read Measured Values

At zero PSI on the system the analog signal should be 3.8-4.2mA



Transducer #1



SYSTEM CONFIGURATION = 2

► Analog Constant Pressure with a redundant sensor and up to two PSI Setpoints

LHX/DXL SERIES

Control Board v3.0

Description

This configuration allows the use of two 4-20 mA transducers.

AUX3	PSI Setpoint
Off	1
On	2

Application Usage

► Multiple Setpoints

Pro Tips

AUX 1 and 2 must be "ON (Closed)" for the system to run

To check the state of your Auxiliaries, navigate to 3.19 and 3.20 in Read Measured Values

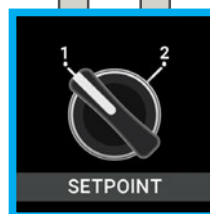
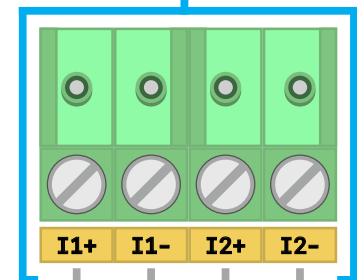
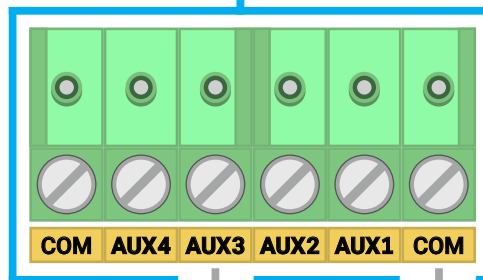
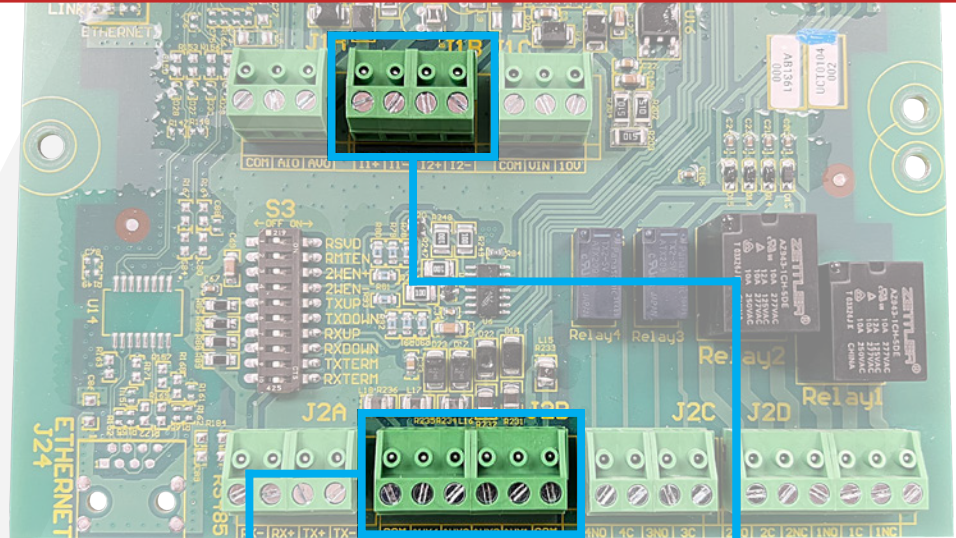
I1+ and I1- will always be the primary sensor. Navigate to 1.4.1 to program PSI Setpoint 1

I2+ and I2- will automatically take over control should the primary sensor fail. Navigate to 1.4.2 to program PSI Setpoint 2

To toggle between setpoints without programming AUX 3 each time, install an on/off switch as shown.

To check the quality of your analog signals, navigate to 3.22 in Read Measured Values

At zero PSI on the system the analog signal should be 3.8-4.2mA



Switch #1



Transducer #1



Transducer #2



SYSTEM CONFIGURATION = 3

► Analog Constant Pressure with a redundant sensor and up to four PSI Setpoints

LHX/DXL SERIES

Control Board v3.0

Description

This configuration allows the use of two 4-20 mA transducers.

AUX3	AUX4	PSI Setpoint
Off	Off	1
On	Off	2
Off	On	3
On	On	4

Application Usage

► Multiple Setpoints

Pro Tips

AUX 1 and 2 must be "ON (Closed)" for the system to run

To check the state of your Auxiliaries, navigate to 3.19 and 3.20 in Read Measured Values

I1+ and I1- will always be the primary sensor. Navigate to 1.4.1 to program PSI Setpoint 1

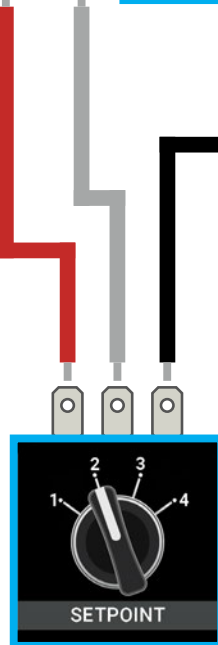
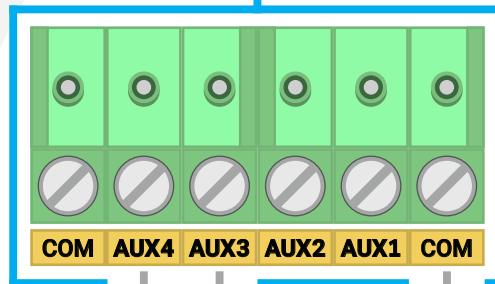
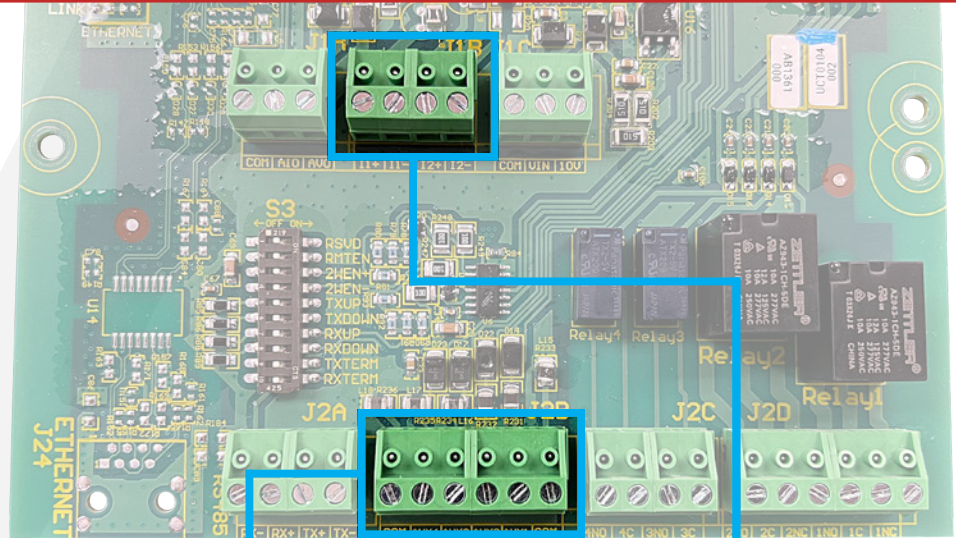
I2+ and I2- will automatically take over control should the primary sensor fail. Navigate to 1.4.2 to program PSI Setpoint 2

Setpoint 3 can be programmed at 1.4.3 and setpoint 4 at 1.4.4

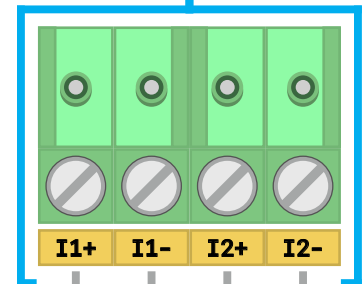
Install a 4 way selector switch as shown.

To check the quality of your analog signals, navigate to 3.22 in Read Measured Values

At zero PSI on the system the analog signal should be 3.8-4.2mA



Switch #1



Transducer #1



Transducer #2



SYSTEM CONFIGURATION = 4

► Speed Reference I1

LHX / DXL SERIES

Control Board v3.0

Description

Use this setting for motor speed control by an external 4-20 mA source connected to the I1 Control Terminals.

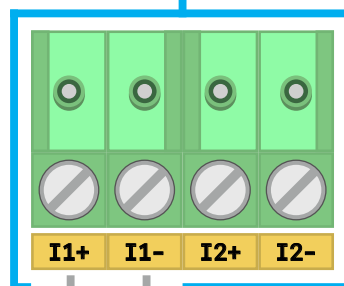
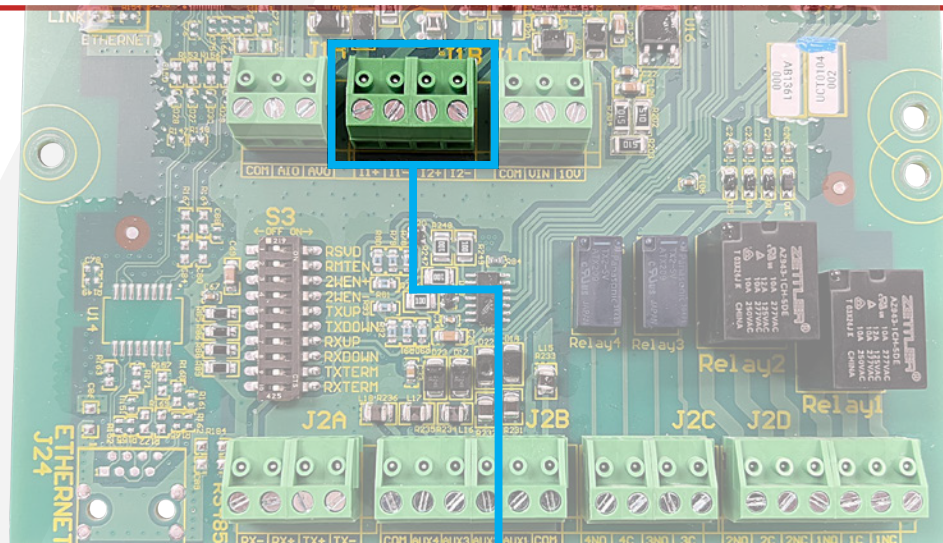
Application Usage

- PLC Control
- HVAC

Pro Tips

AUX 1 and 2 must be "ON (Closed)" for the system to run

To check the state of your Auxiliaries, navigate to 3.19 and 3.20 in Read Measured Values



PLC Control
(4-20 mA Input)



SYSTEM CONFIGURATION = 5

► Speed Reference I2

LHX / DXL SERIES

Control Board v3.0

Description

Use this setting for motor speed control by an external 4-20 mA source connected to the I2 Control Terminals.

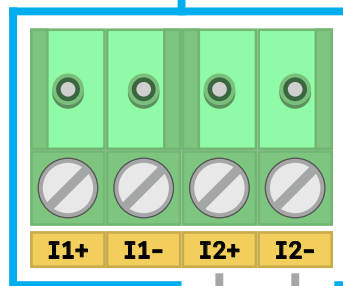
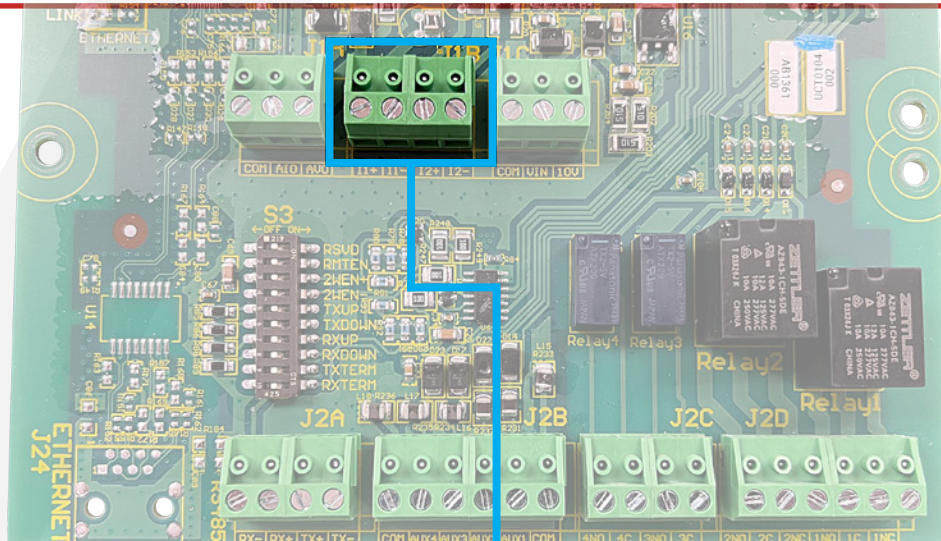
Application Usage

- PLC Control
- HVAC

Pro Tips

AUX 1 and 2 must be "ON (Closed)" for the system to run

To check the state of your Auxiliaries, navigate to 3.19 and 3.20 in Read Measured Values



PLC Control
(4-20 mA Input)



SYSTEM CONFIGURATION = 6

► Speed Pot Control

LHX / DXL SERIES

Control Board v3.0

Description

Use this setting for motor speed control by a potentiometer or an external 0-10 VDC source connected to the 0-10 VDC Control Terminals.

Application Usage

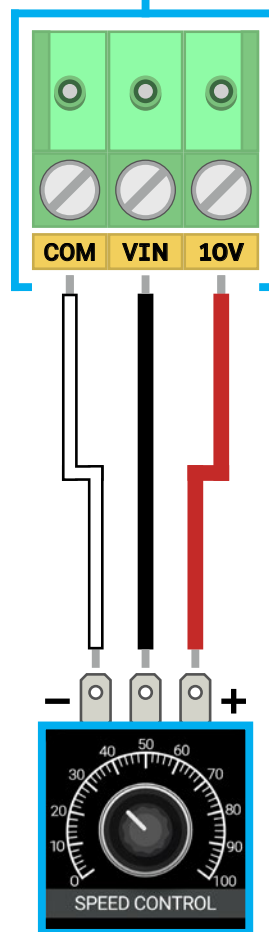
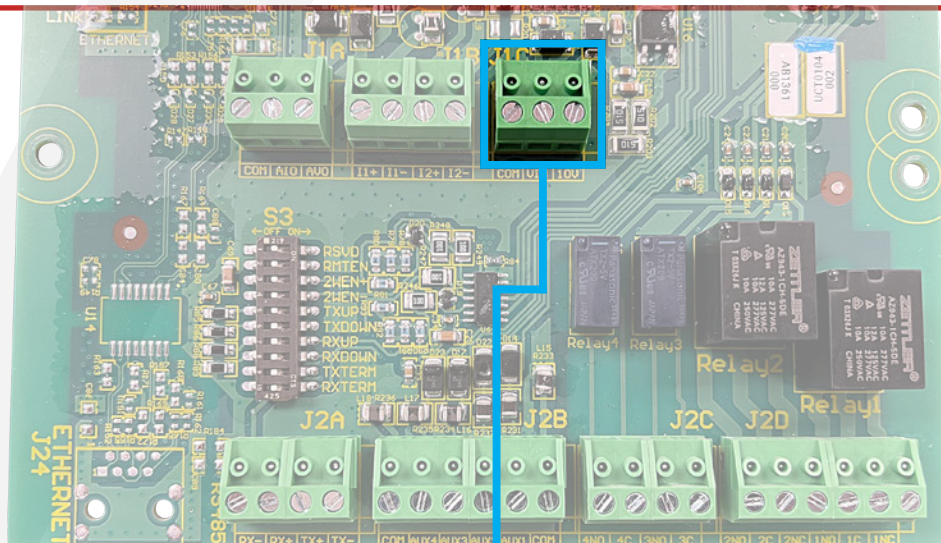
- PLC Control
- HVAC
- Manual Speed Control

Pro Tips

AUX 1 and 2 must be "ON (Closed)" for the system to run

To check the state of your Auxiliaries, navigate to 3.19 and 3.20 in Read Measured Values

1.1.1 Min Frequency default is 30Hz. For speed control across the full scale change 1.1.1 to 5Hz



Speed Pot



SYSTEM CONFIGURATION = 7

► Analog Constant Pressure with HOA and Speed Potentiometer

LHX/DXL SERIES

Control Board v3.0

Description

This setting allows the user to either turn the motor off, control motor speed with a potentiometer, or operate in analog constant pressure mode using an HOA switch.

AUX3	Function
Off	Analog Constant Pressure
On	Speed Control

Application Usage

- **Constant Pressure - with Optional Manual Speed Control**

Pro Tips

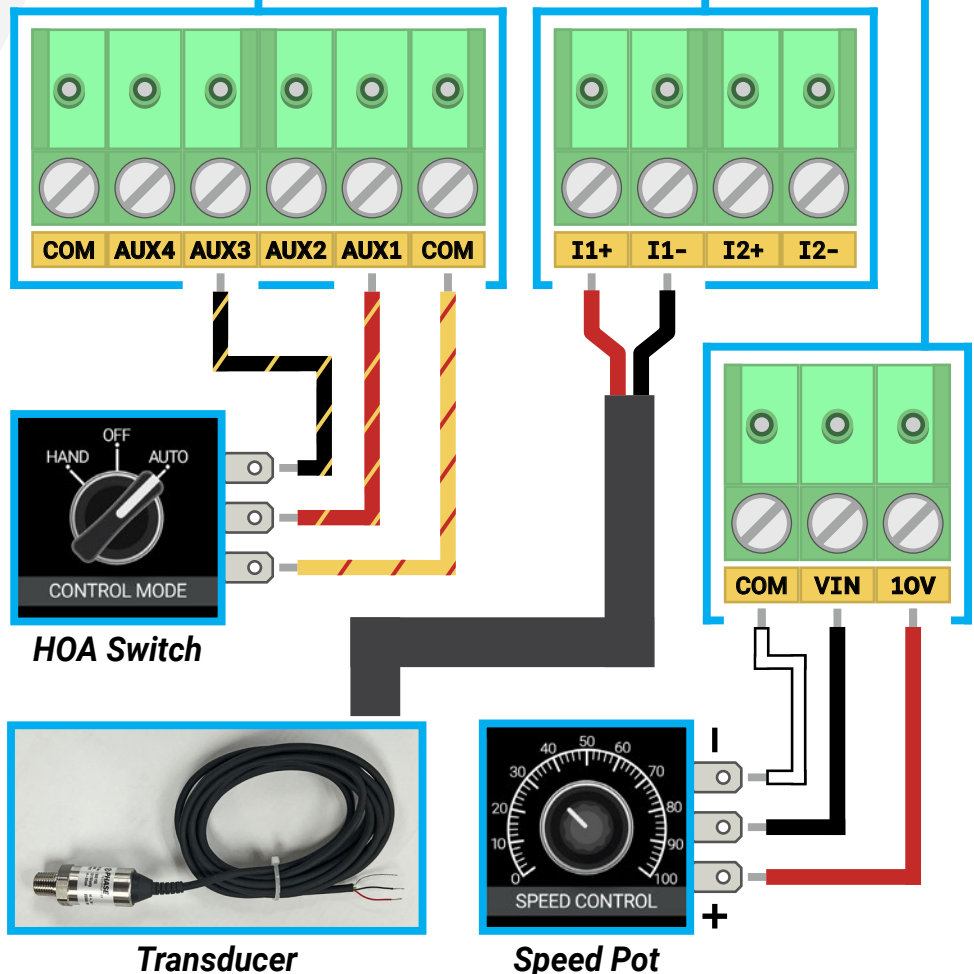
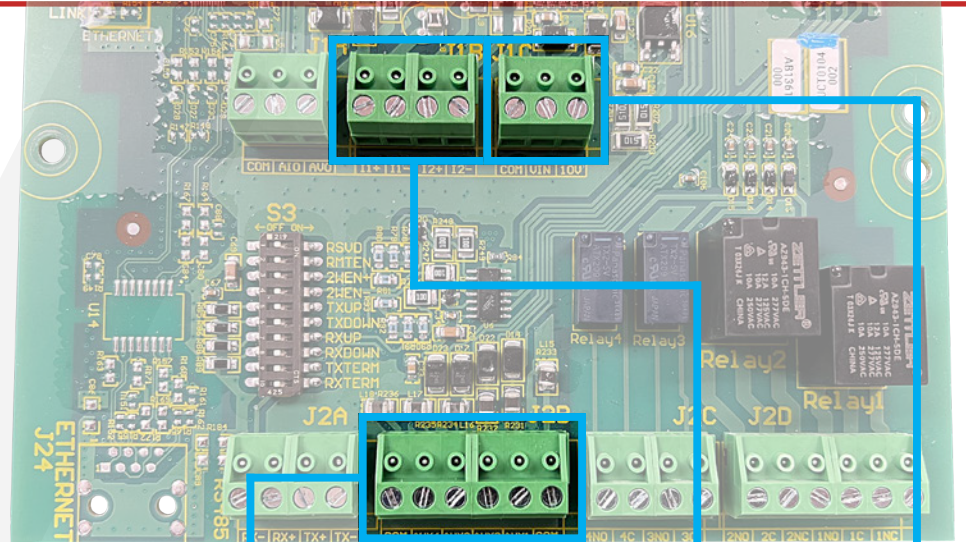
AUX 1 and 2 must be "ON (Closed)" for the system to run

To check the state of your Auxiliaries, navigate to 3.19 and 3.20 in Read Measured Values

An HOA switch does the same thing as your "Manual" button on the keypad. Careful pushing the "Manual" button on your keypad, it will still change the state of your auxiliaries.

To check the quality of your analog signal, navigate to 3.22 in Read Measured Values

At zero PSI on the system the analog signal should be 3.8-4.2mA



SYSTEM CONFIGURATION = 7 W/ PIVOT

► Analog Constant Pressure with HOA and Speed Potentiometer

LHX/DXL SERIES

Control Board v3.0

Description

This setting allows the user to either turn the motor off, control motor speed with a potentiometer, or operate in analog constant pressure mode using an HOA switch.

AUX3	Function
Off	Analog Constant Pressure
On	Speed Control

Application Usage

- **Constant Pressure** - with Optional Manual Speed Control

Pro Tips

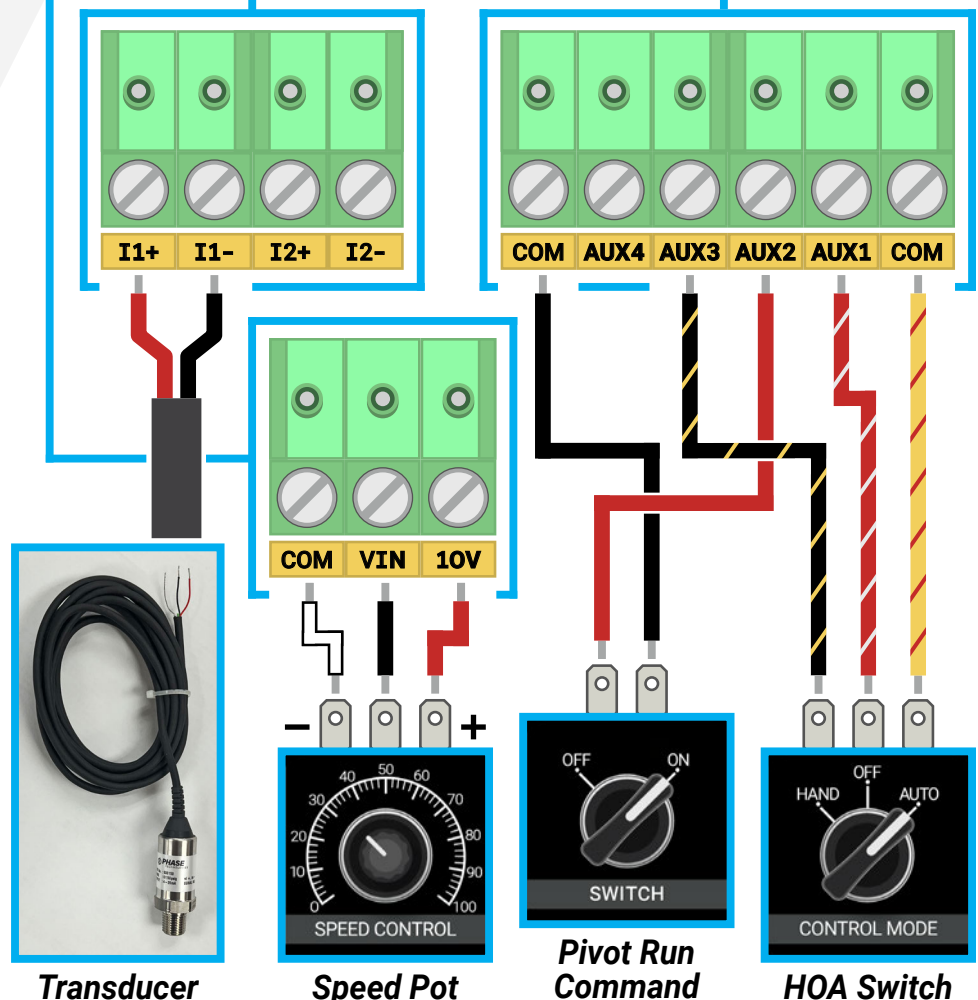
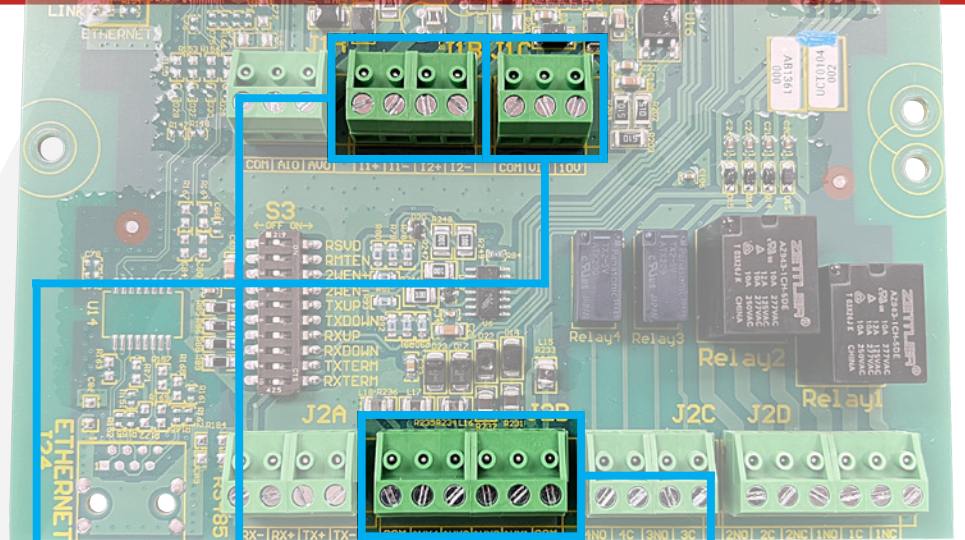
AUX 1 and 2 must be "ON (Closed)" for the system to run

To check the state of your Auxiliaries, navigate to 3.19 and 3.20 in Read Measured Values

An HOA switch does the same thing as your "Manual" button on the keypad. Careful pushing the "Manual" button on your keypad, it will still change the state of your auxiliaries.

To check the quality of your analog signal, navigate to 3.22 in Read Measured Values

At zero PSI on the system the analog signal should be 3.8-4.2mA



SYSTEM CONFIGURATION = 8

► Analog Constant Pressure Swap Sensors

LHX / DXL SERIES

Control Board v3.0

Description

This configuration allows the use of two 4-20 mA transducers.

AUX3	PSI Setpoint
Off	Analog Constant Pressure
On	Backup Sensor

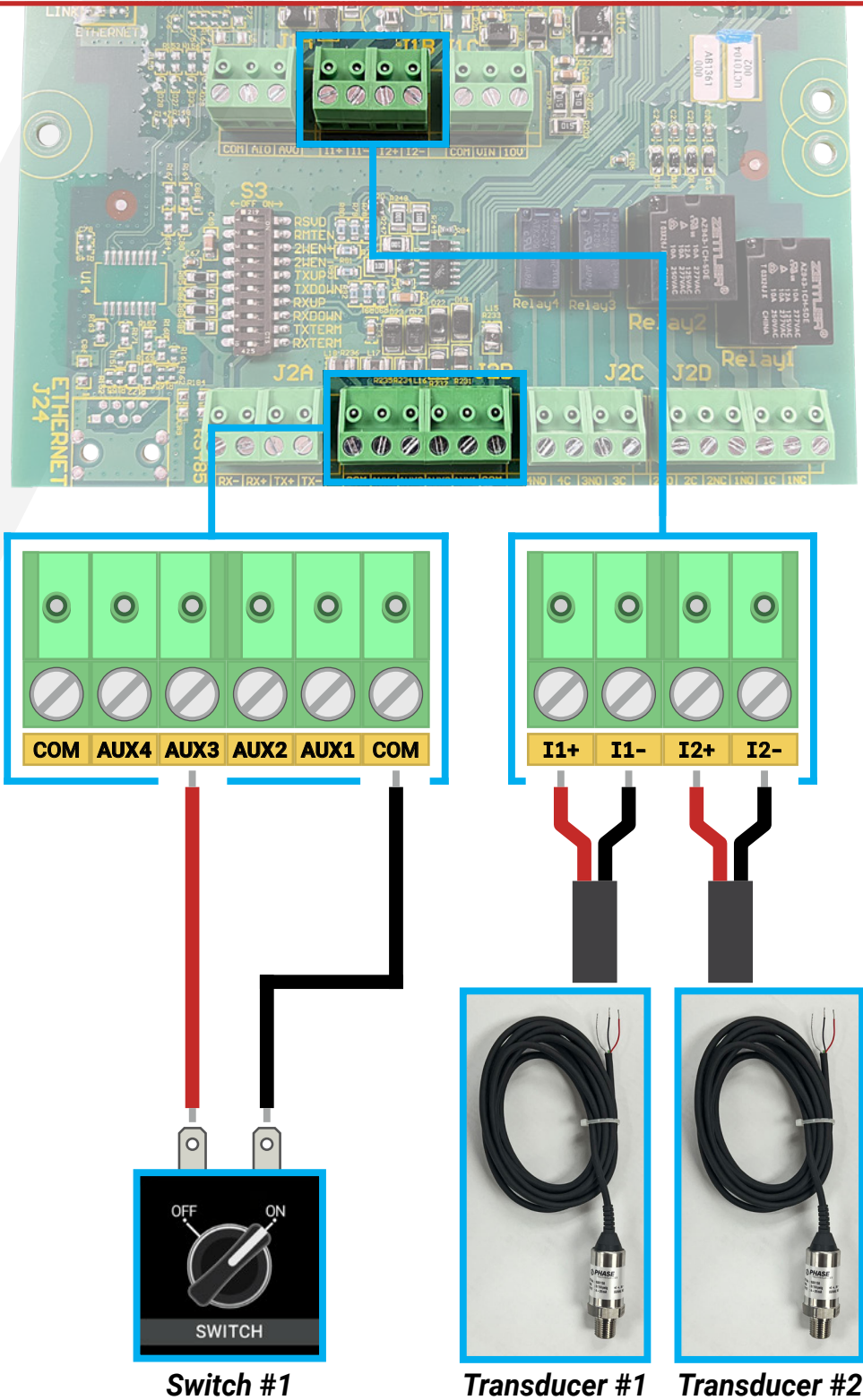
Application Usage

- Multiple Zones

Pro Tips

AUX 1 and 2 must be “ON (Closed)” for the system to run

To check the state of your Auxiliaries, navigate to 3.19 and 3.20 in Read Measured Values



SYSTEM CONFIGURATION = 9

► HOA Speed Reference Selector

LHX / DXL SERIES

Control Board v3.0

Description

This configuration allows multiple speed references to be used.

AUX1	AUX3	PSI Setpoint
On	On	0-10 VDC Speed Reference
On	Off	I1 4-20 mA Speed Reference

Application Usage

- Speed Control - with Backup Speed Reference

Pro Tips

AUX 1 and 2 must be "ON (Closed)" for the system to run

To check the state of your Auxiliaries, navigate to 3.19 and 3.20 in Read Measured Values

