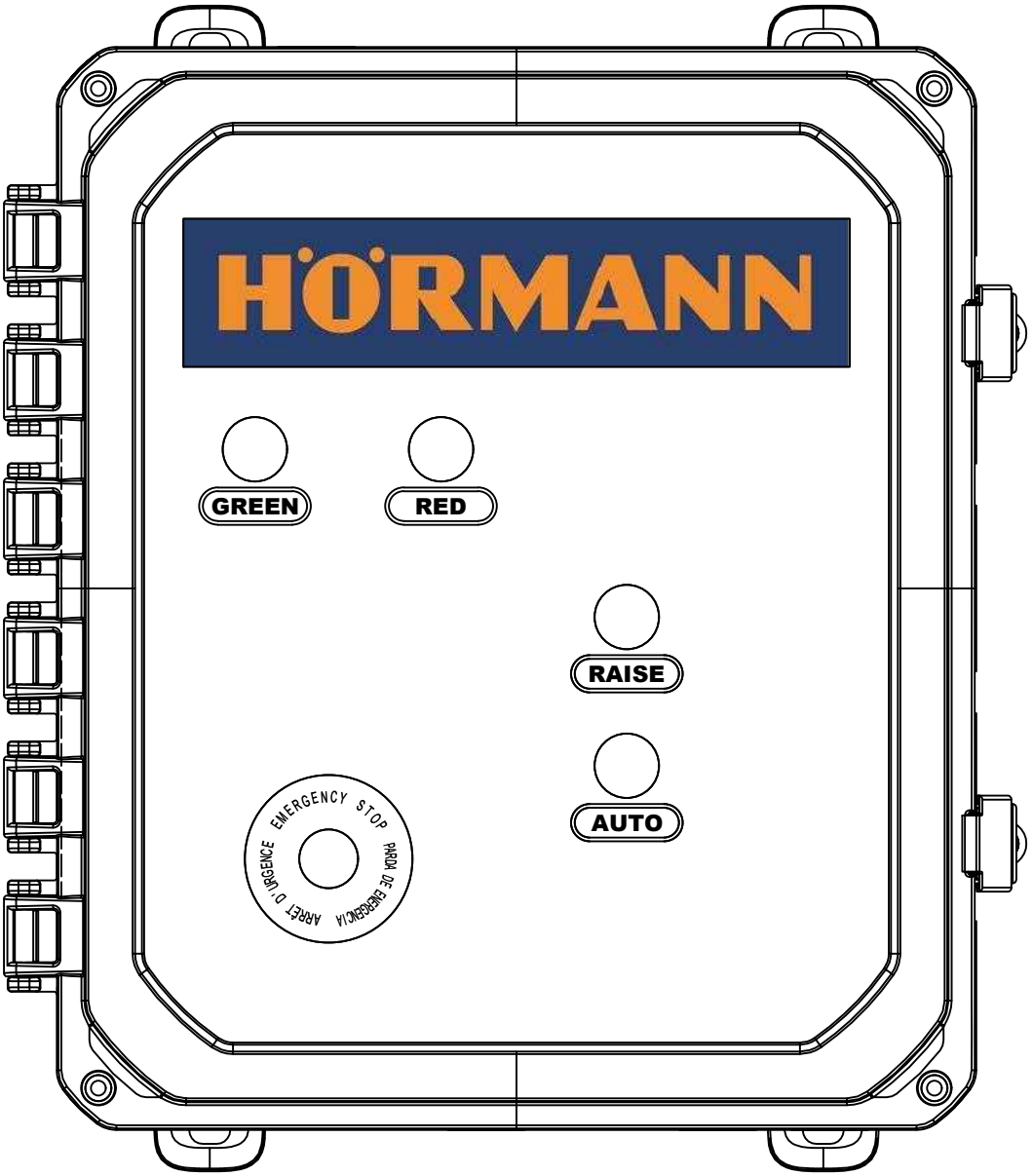

EN

Electrical Installation Manual

Dock Leveler Control: Advanced

10000253_C - Electrical Installation Manual – 04/22/2025

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LIMITED LIABILITY!

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This edition replaces all earlier versions.

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Table of Contents

1. Performance Specification

The Advanced dock leveler control utilizes a constant pressure contact operation to control a hydraulic valve dock leveler system. This system offers an emergency stop to lock the platform at its current position. Also, an Automatic Return feature for return the platform to the original home position.

2. Validity

This manual is valid for the following models.

- Dock Level Control Advanced 1Φ: 120V
  DLC-A11 #10000200
- Dock Level Control Advanced 1Φ: 230V
  DLC-A13 #10000202
- Dock Level Control Advanced 3Φ: 208V
  DLC-A32 #10000198
- Dock Level Control Advanced 3Φ: 230V
  DLC-A33 #10000204
- Dock Level Control Advanced 3Φ: 460V
  DLC-A34 #10000206

3. Certifications

cUL US Listed
Enclosed Industrial Control Panel
No. G 59204672

4. General Notes

- The rules for prevention of accidents as well as operating and installation instructions when installing and commissioning are to be observed.
- Connecting, testing and maintenance work on the system should only be done when the dock is not in use. Observe especially those items indicated under safety instructions.
- Cable connections to the control system should be shorten and lead directly to the connecting terminal, (no kinks or loops)
- All Connections are to be made with copper wiring.

5. Safety Instructions

- All installation, startup and maintenance work must be performed only by qualified specialists.
- All electrical work must be performed in accordance with local and state building codes.
- All electrical work must be performed under **Lock Out Tag Out** conditions.
- These safety advisories make no claim to completeness. If you have questions about the product, contact your vendor.

6. Technical Data

i. Mechanical Data

Controller Variant	DLC – A11	DLC – A13	DLC – A32	DLC – A33	DLC – A34
Enclosure Type	NEMA 4/4X	NEMA 4/4X	NEMA 4/4X	NEMA 4/4X	NEMA 4/4X
Dimensions (W x H x D)	12.60 x 10.60 x 7.22in. 320 x 269.2 x 183.4mm.	12.60 x 10.60 x 7.22in. 320 x 269.2 x 183.4mm.	12.60 x 10.60 x 7.22in. 320 x 269.2 x 183.4mm.	12.60 x 10.60 x 7.22in. 320 x 269.2 x 183.4mm.	12.60 x 10.60 x 7.22in. 320 x 269.2 x 183.4mm.
Protection Type	UL Enclosed Industrial Control Panel	UL Enclosed Industrial Control Panel	UL Enclosed Industrial Control Panel	UL Enclosed Industrial Control Panel	UL Enclosed Industrial Control Panel
Weight	10 lbs. / 4.6 kg	10 lbs. / 4.6 kg	10 lbs. / 4.6 kg	10 lbs. / 4.6 kg	10 lbs. / 4.6 kg
Installation Position	Vertical Use Only	Vertical Use Only	Vertical Use Only	Vertical Use Only	Vertical Use Only
Vibration	Low Vibration mounting, for example on a concrete wall	Low Vibration mounting, for example on a concrete wall	Low Vibration mounting, for example on a concrete wall	Low Vibration mounting, for example on a concrete wall	Low Vibration mounting, for example on a concrete wall
Cable Entries	Bottom of Enclosure, Top allowable for power. Conduit	Bottom of Enclosure, Top allowable for power. Conduit	Bottom of Enclosure, Top allowable for power. Conduit	Bottom of Enclosure, Top allowable for power. Conduit	Bottom of Enclosure, Top allowable for power. Conduit
Temperature Range	-4°F TO +140°F (-20°C TO +60°C)	-4°F TO +140°F (-20°C TO +60°C)	-4°F TO +140°F (-20°C TO +60°C)	-4°F TO +140°F (-20°C TO +60°C)	-4°F TO +140°F (-20°C TO +60°C)
Storage	-58°F TO +176°F (-50°C TO +80°C)	-58°F TO +176°F (-50°C TO +80°C)	-58°F TO +176°F (-50°C TO +80°C)	-58°F TO +176°F (-50°C TO +80°C)	-58°F TO +176°F (-50°C TO +80°C)
Altitude	<6500 ft (2000m)	<6500 ft (2000m)	<6500 ft (2000m)	<6500 ft (2000m)	<6500 ft (2000m)

ii. Electrical Data

Controller Variant	DLC – A11	DLC – A13	DLC – A32	DLC – A33	DLC – A34
Main Supply (Input)	1Φ 120V	1Φ 230V	3Φ 208V	3Φ 230V	3Φ 460V
Short Circuit Current Rating	5kA	5kA	5kA	5kA	5kA
Amperage Rating	16A	11A	8A	8A	5A
Horsepower	0.75kW	0.75kW	0.75kW	0.75kW	0.75kW
Connection Type	Screw Terminal	Screw Terminal	Screw Terminal	Screw Terminal	Screw Terminal

7. Installation

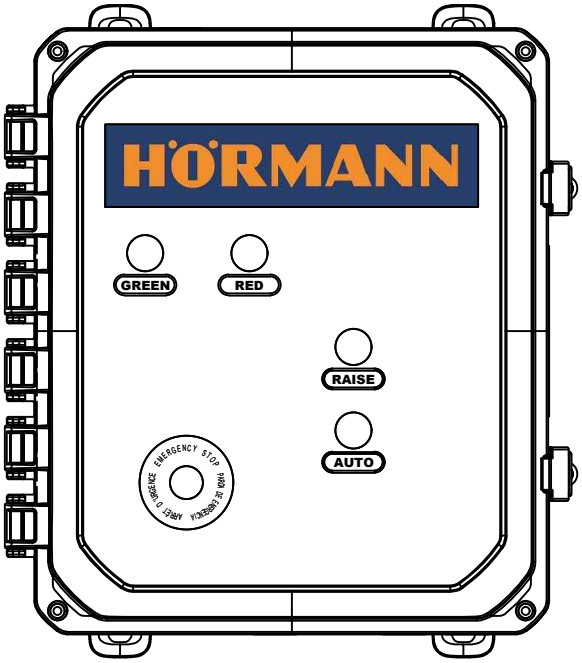
All installation, startup and maintenance work must be performed only by qualified specialists.
All electrical work must be performed in accordance with local and state building codes.
All electrical work must be performed under **Lock Out Tag Out** conditions.

⚠ WARNING
Failure to observe the safety advisories can result in physical harm or damage.

⚠ WARNING
Before installing, check the control box for any transport or other damage. Damage inside the control box may result in hazards to the user.

i. Mounting Advance Controller

- Determine adequate placement.
- Minimum distance from ground (48”).
- Do not exceed the permissible loads on walls.
- Choose suitable connection elements for the mounting surface.
- Requires installation of conduit.
- Refer to following diagram for enclosure punchout locations.

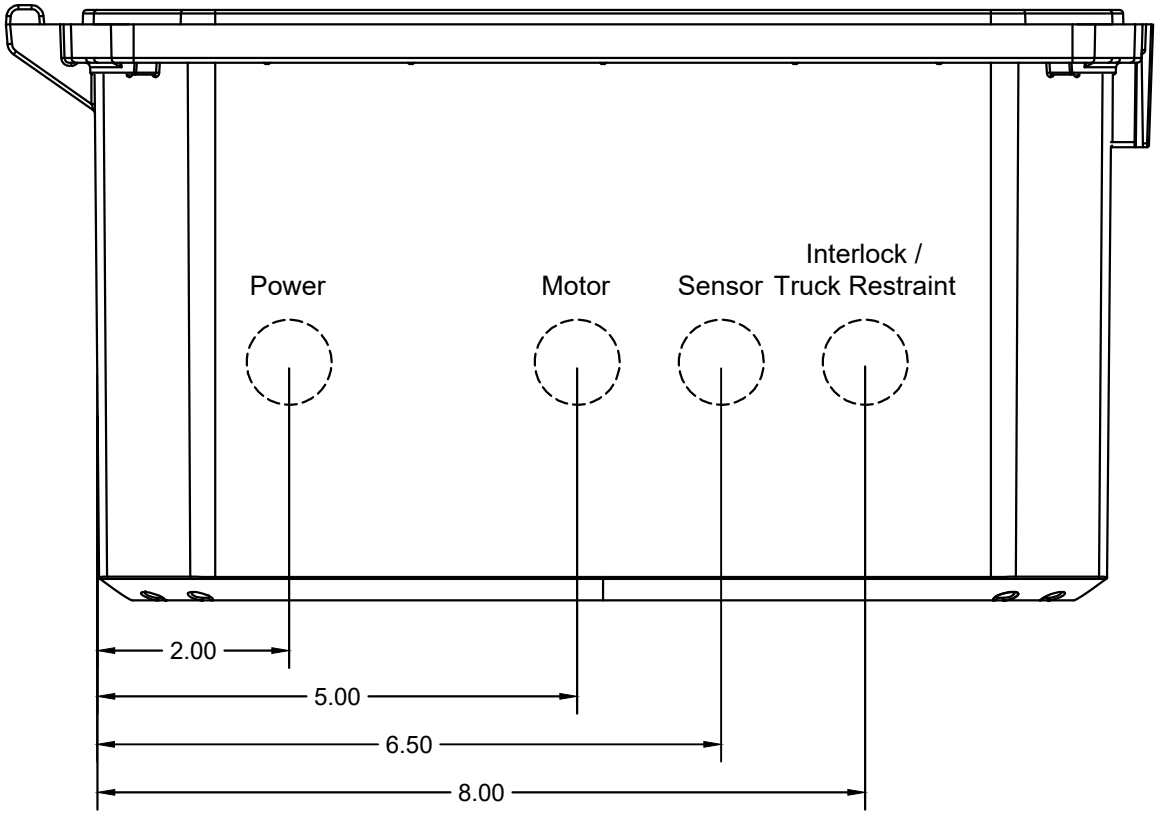


<u>Power Source</u>
Fused Disconnect

DLC – A11
1PH 120V: Rated Fuse 16A
DLC – A13
1PH 230V: Rated Fuse 11A
DLC – A32
3PH 208V: Rated Fuse 8A
DLC – A33
3PH 230V: Rated Fuse 8A
DLC – A34
3PH 460V: Rated Fuse 5A

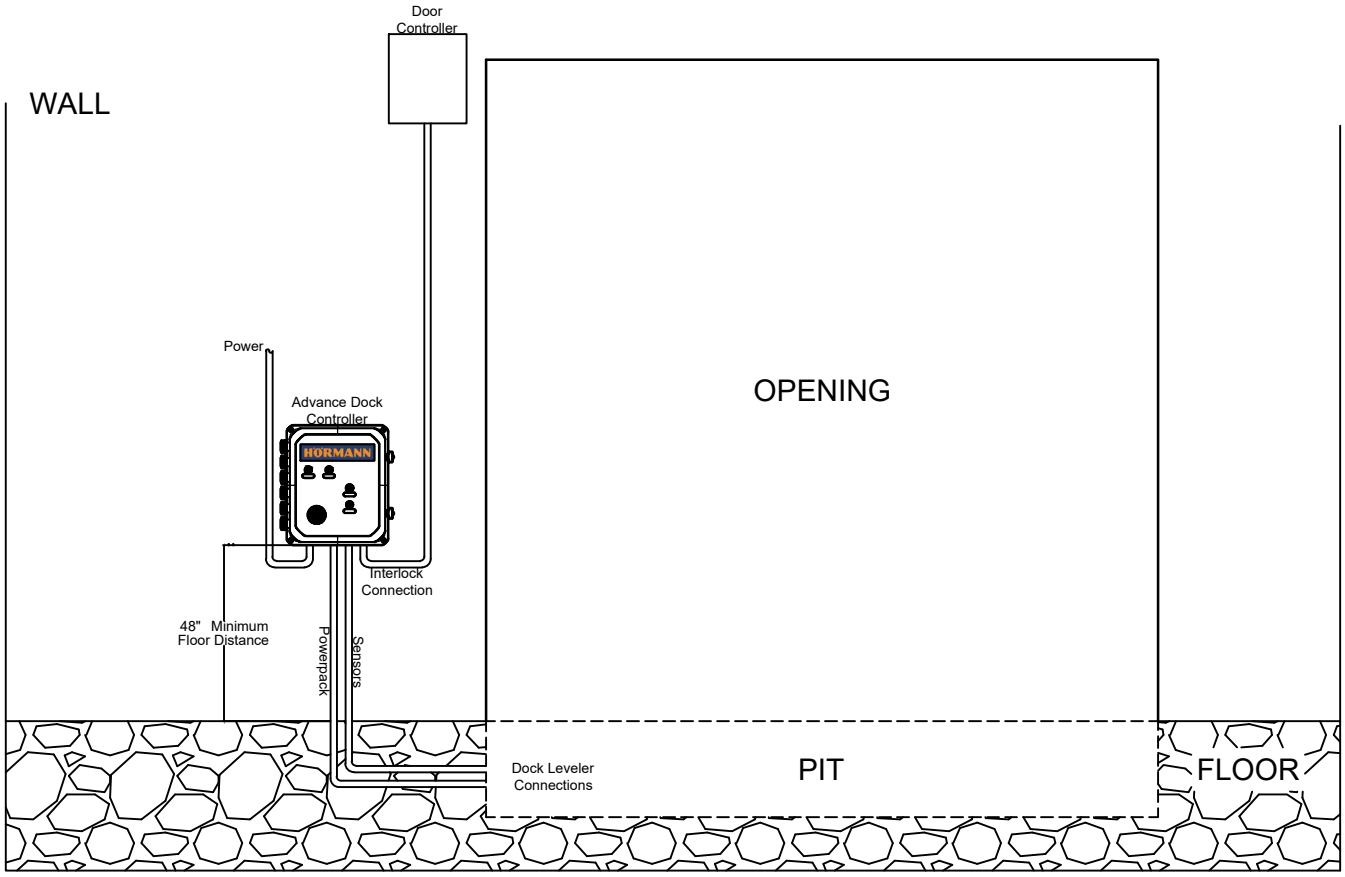
Diagram: Punchout Locations

Use recommended locations for installation.
Cut entry points to conduit installation size and location of the Pit conduit.
Top or bottom entry for power location, use best location for installation.

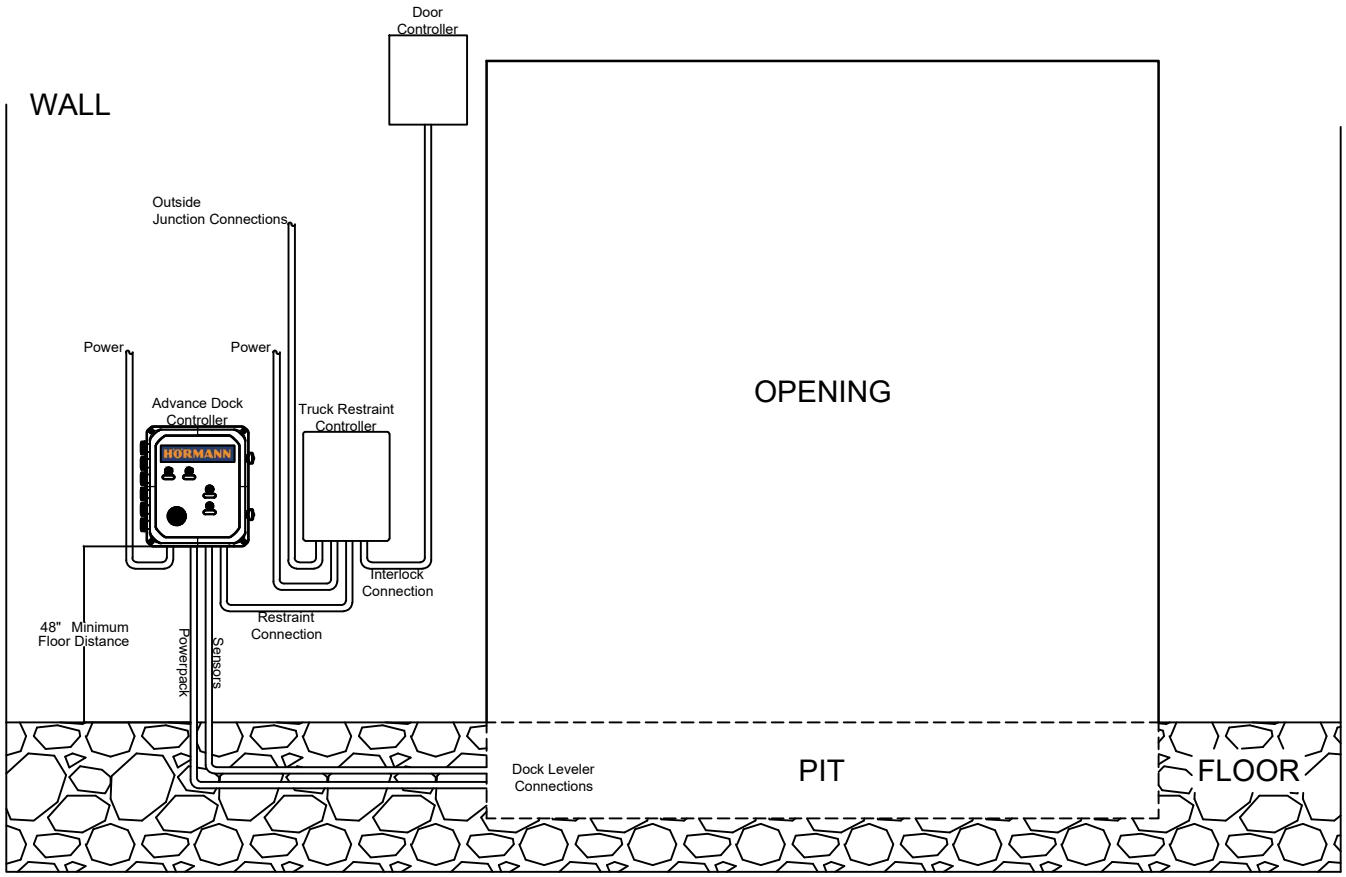


⚠ WARNING
When adding entry locations be careful to mitigate debris into the enclosure. Remove debris.

ii. Advance Controller Layout



iii. Advance Controller Layout w/ Truck Restraint



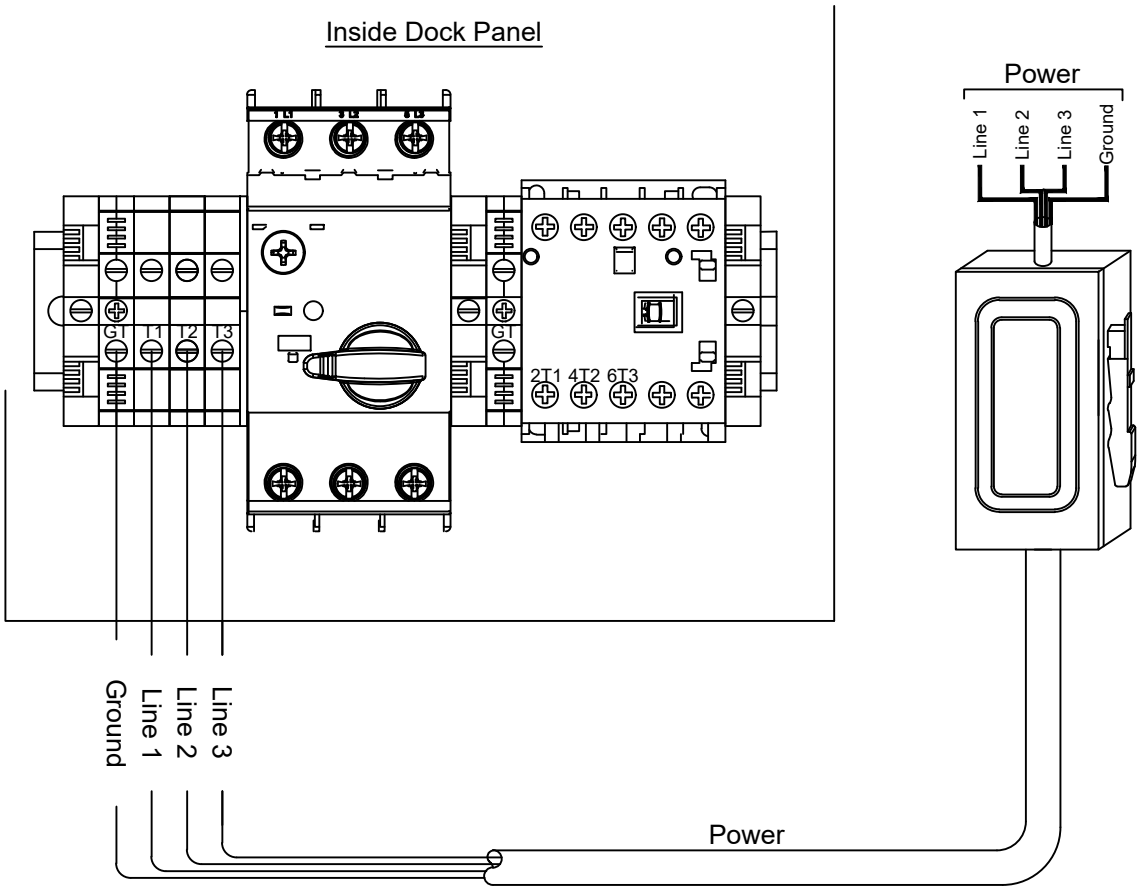
iv. Electrical Connections

Power Connections

Power Cable: Not Supplied

1Φ Power	
Terminal 1	Line
Terminal 2	Neutral
Ground Terminal	Ground

3Φ Power	
Terminal 1	Line 1
Terminal 2	Line 2
Terminal 3	Line 3
Ground Terminal	Ground

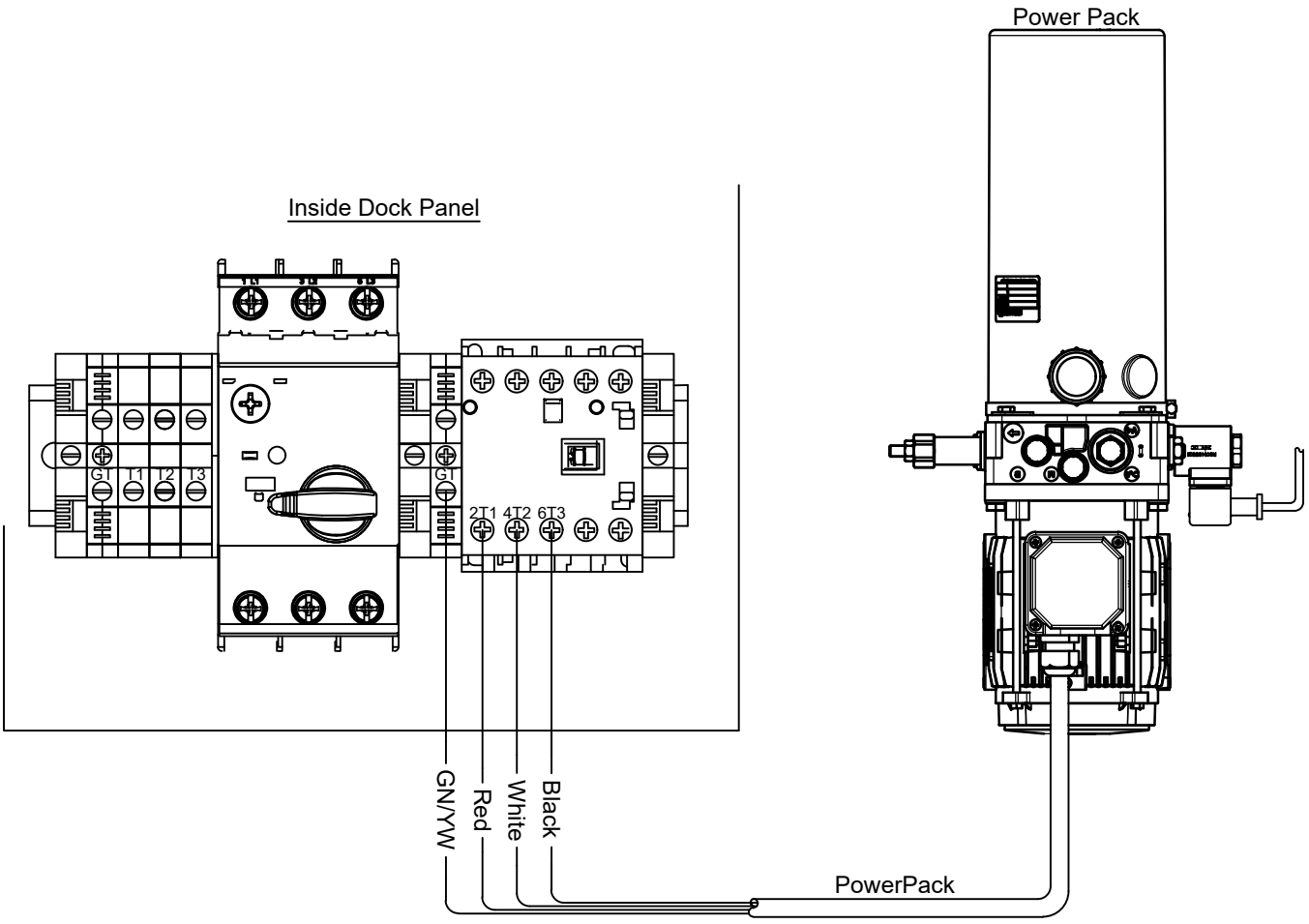


Powerpack Connections

Powerpack Cable: Supplied

1Φ Powerpack	
2L1	Black #1
4L2	Black #2
Ground Terminal	Green / Yellow

3Φ Powerpack	
2L1	Red
4L2	White
6L3	Black
Ground Terminal	Green / Yellow

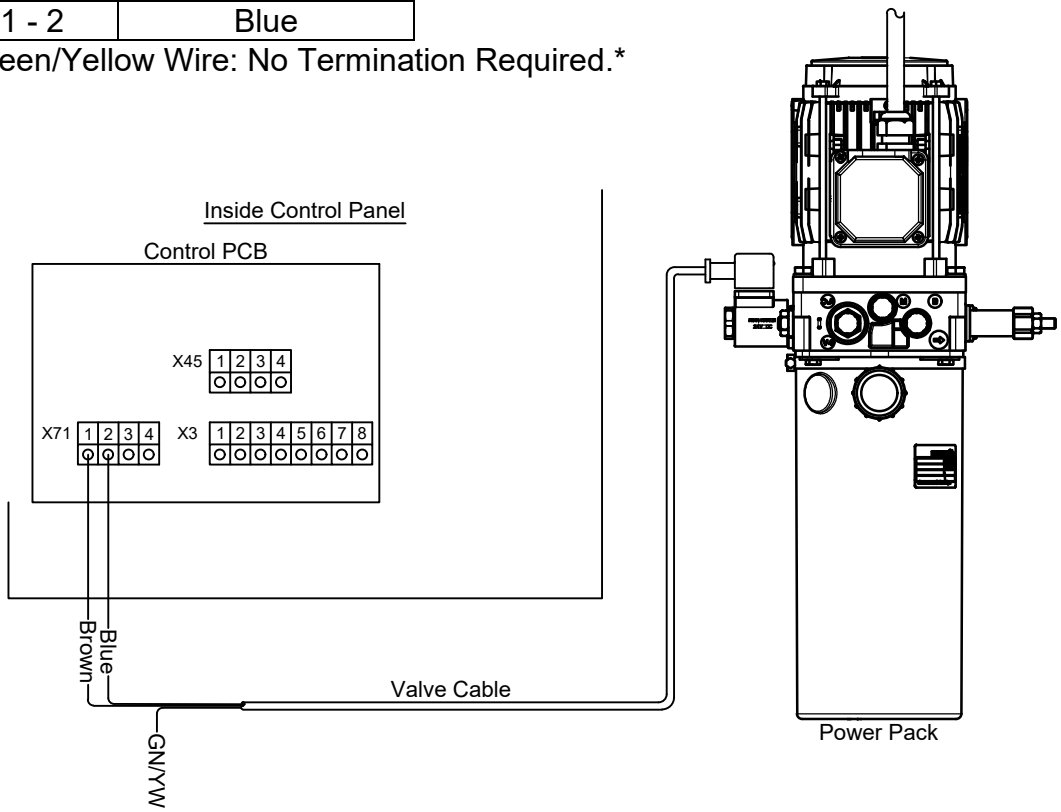


Valve Sensor

Sensor Cable: Supplied

Connections	
PCB: X71 - 1	Brown
PCB: X71 - 2	Blue

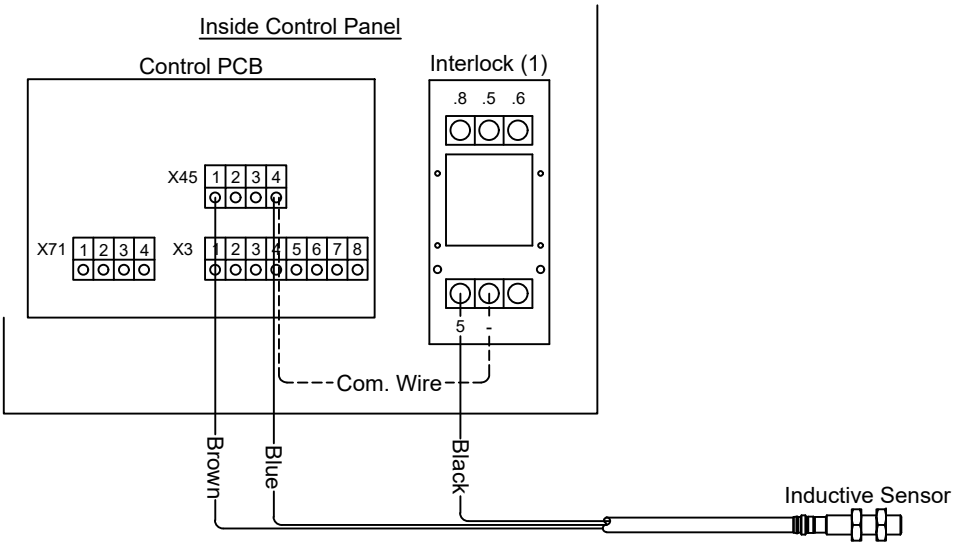
Remove Green/Yellow Wire: No Termination Required.



Inductive Sensor

Sensor Cable: Supplied

Connections	
PCB: X45 - 1	Brown
PCB: X45 - 4	Blue
Interlock (5)	Black



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Door Interlock

Interlock Cable: Supplied

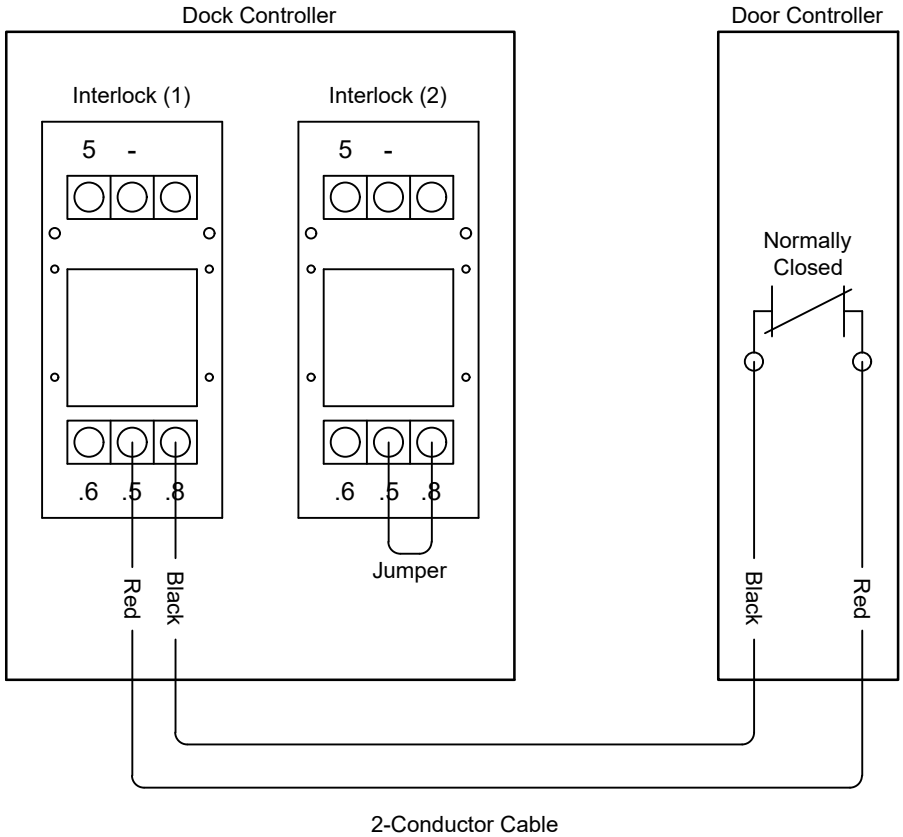
Complete the connections between the advance dock leveler controller and door controller. (2-conductor cable supplied.)

Jumpers required across interlock terminals (.5,.8) if the following are not required.

- Door interlocking – Interlock (1)
- Truck Restraint – Interlock (2)

Interlock (1)	
.5	Red
.8	Black

Door Controller
Wire Interlock connections into the Door's controller: Normally closed function.



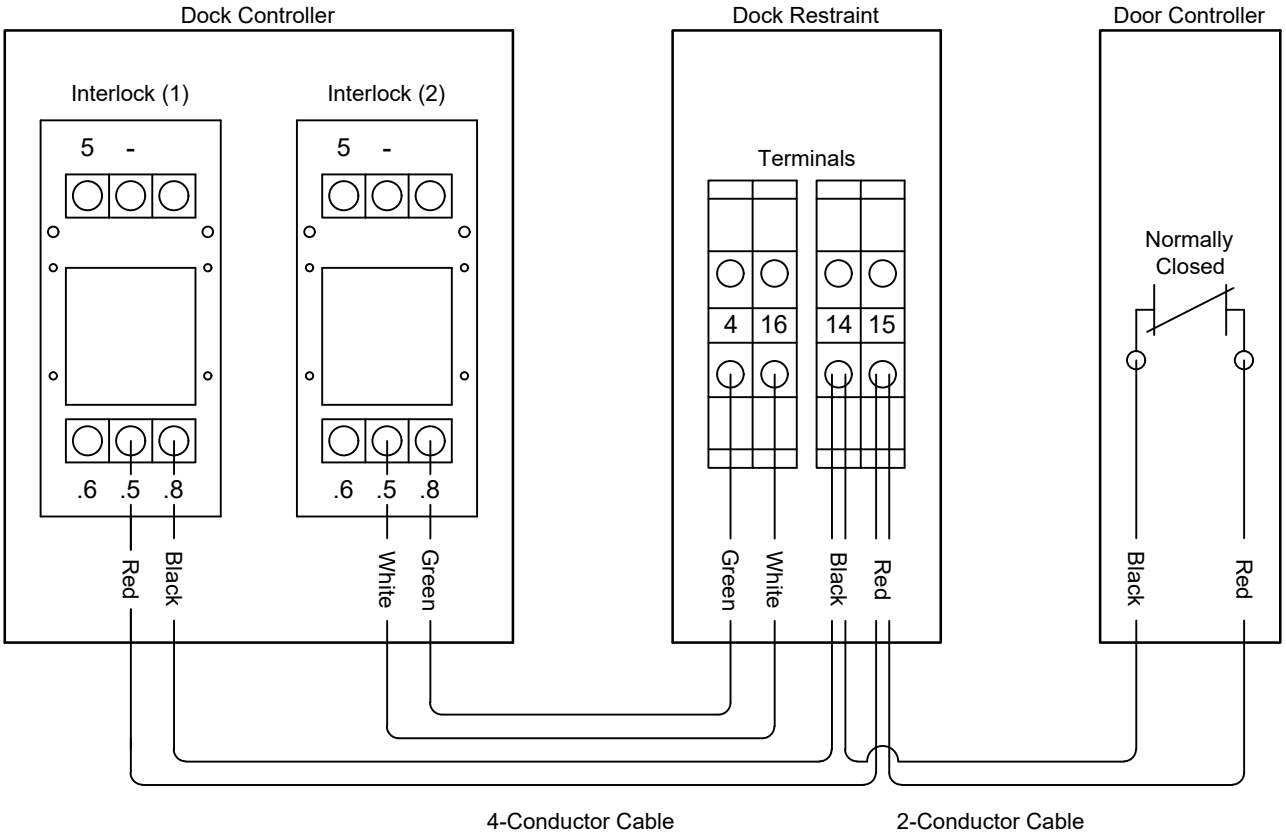
Truck Restraint

Interlocking Cables: Supplied
Refer to Truck Restraint Installation Manual.
Complete the connections between the advance dock leveler controller, restraint controller, and door controller. (4-conductor and 2-conductor cable supplied.)

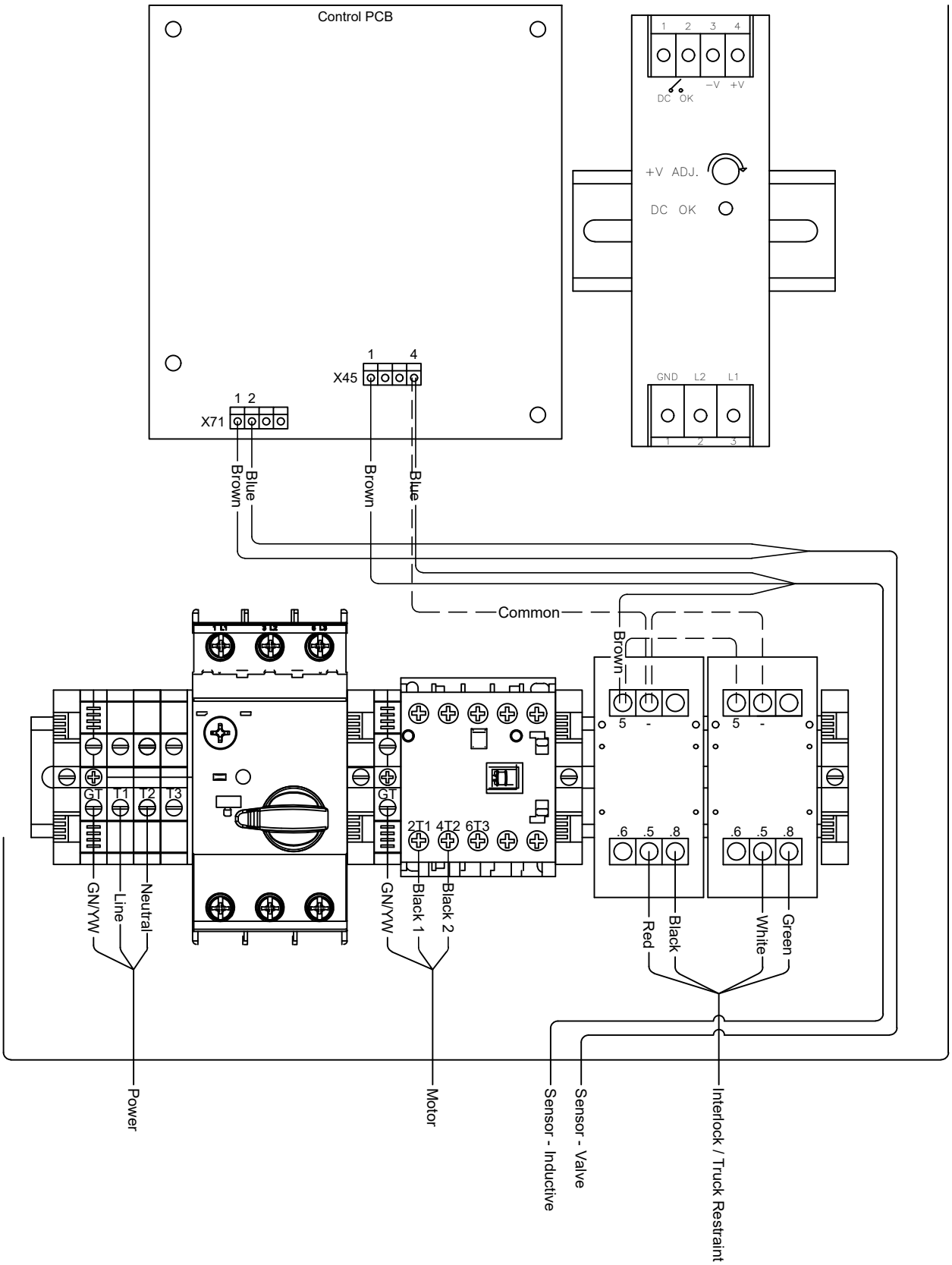
Interlock (1)		
Terminal	Restraint	Wire Color
.5	Terminal 4	White
.8	Terminal 16	Green

Interlock (2)		
Terminal	Restraint	Wire Color
.5	Terminal 14	Red
.8	Terminal 15	Black

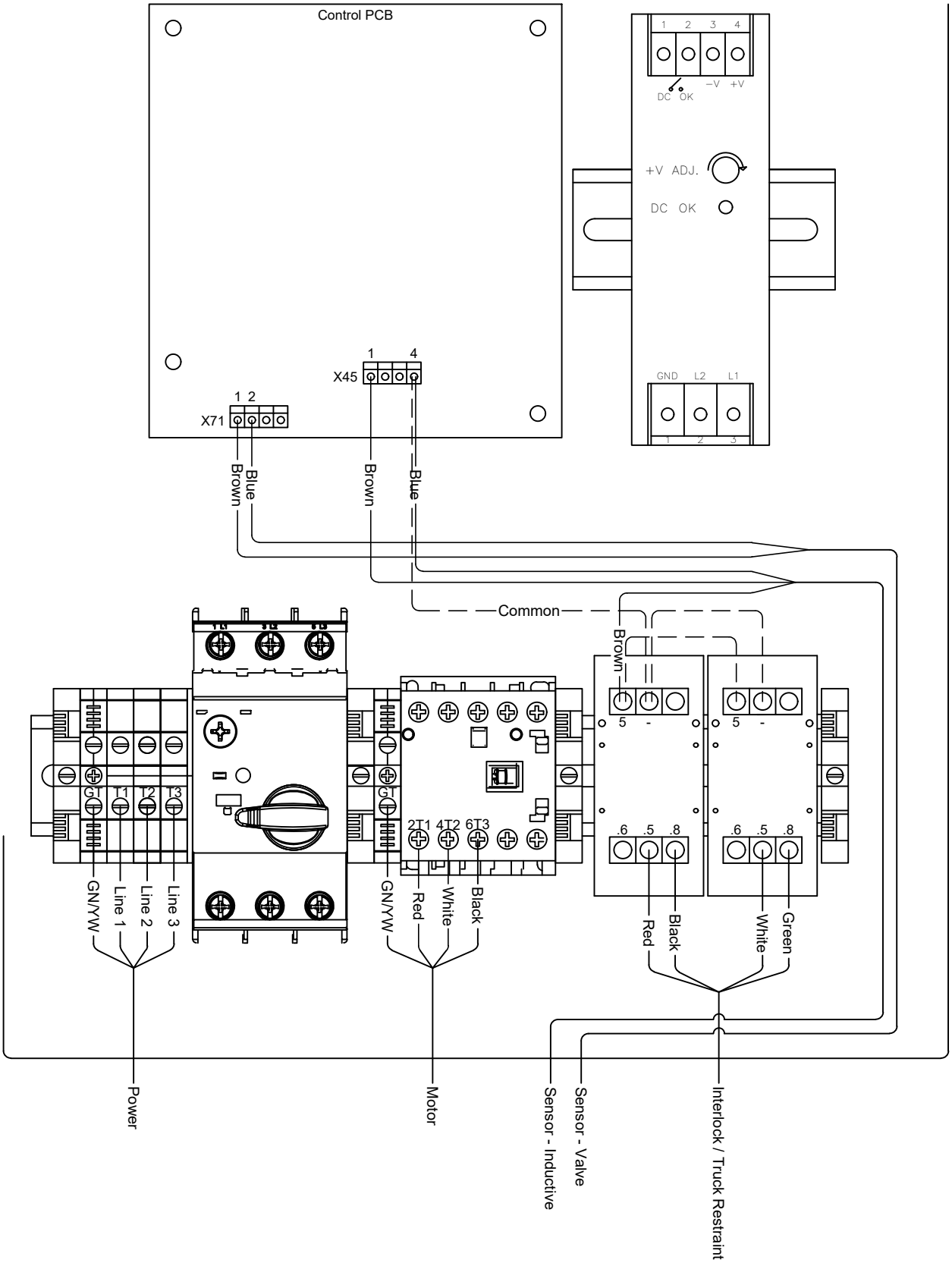
Door Controller
Wire Terminals 14 (Red) / 15 (Black) into the Door Controller: Normally closed function.



1PH System Layout



3PH System Layout



v. Powerpack Configurations

1-PH. Powerpack

Voltage	Configuration	Amperage	Frequency	Cosϕ	kW
120V	Delta	10.3A	60	0.98	0.75
230V	Wye	7.3A	60	0.84	0.75

3-PH. Powerpack

Voltage	Configuration	Amperage	Frequency	Cosϕ	kW
208V	Delta	5.0A	60	0.58	0.75
230V	Delta	5.0A	60	0.58	0.75
460V	Delta	2.5A	60	0.57	0.75

8. Operation

After completed installation. Apply power to the system.

i. Commands

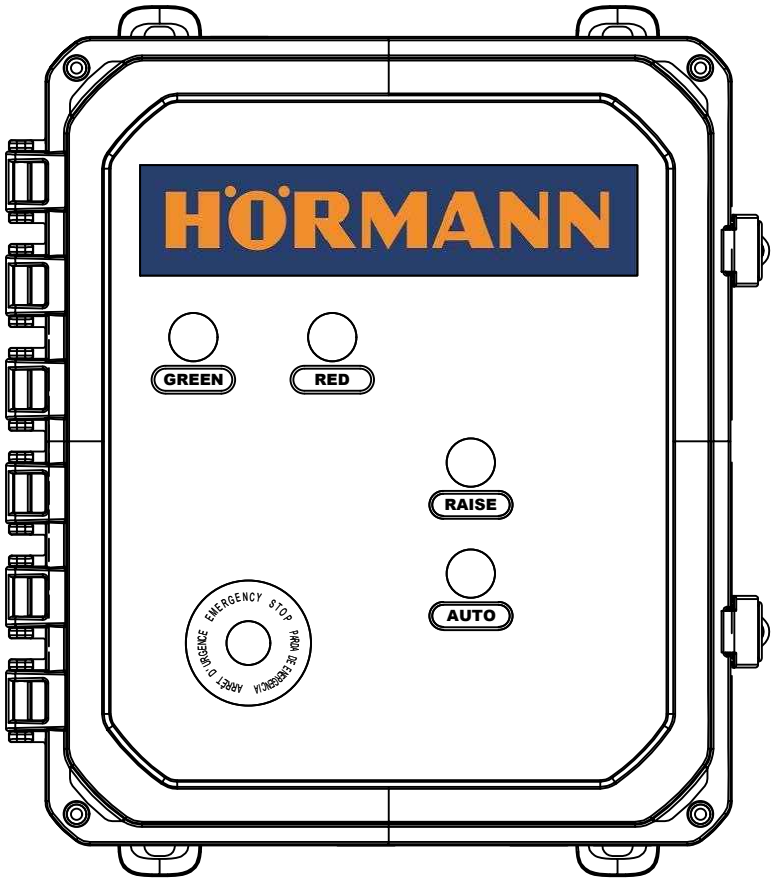
RAISE Activation of Dock Platform

AUTO Automatic Return of Dock Platform

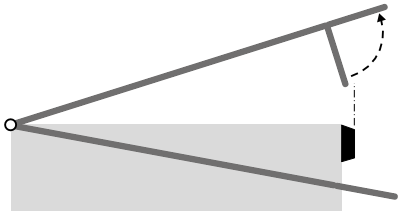
Emergency Stop Lock the Dock Platform to the current Position

Indicator: Green Refer to Section: Status Display (Pg.18)

Indicator: Red Refer to Section: Status Display (Pg. 18)



ii. Functionality Test



1. Hold [**Raise**] time duration (<3s)
   Dock platforms raise from home position.

2. Press in [**Emergency Stop**]
   Dock platform position locked.

3. Release [**Emergency Stop**]
   Dock platform position released from locked position.

4. Hold [**Raise**] (>3s)
   Dock platform raises to full height and dock lip is fully extended.

5. Release [**Raise**]
   Dock platform will descend into lower position.

6. Press [**Auto**]
   Dock platform returns to home position.

iii. Status Display

LED Operation Indicator
Flashes or is illuminated depending on operating condition.

- LED is illuminated in **Green.**
  - Control voltage present.
  - System read for operation.
- LED is briefly illuminated in **Green** after a button / signal input is actuated.
  - Report that a corresponding signal was recognized.
- LED flashes **Green**.
  - Restart inhibition active.
- LED flashes **Red**.
  - See Section: Error Display

Each error number is assigned to a red LED flash code. This flash code is comprised of long LED flashes corresponding to the tens position of the error number (e.g. 33) followed by a pause then a sequence of short flashes for the unit's position of the error number (e.g. 33). A pause follows and then the flash code is repeated.

Example error number **33**:

- Long on / pause / long on / pause / long on / pause = **3**3
- Short on / pause / short on / pause / short on / pause = 3**3**
- Repetition with long on / pause / long on / pause / long on / pause etc.

Error Number	Error Description	Cause of Error Trouble Shooting
01	Hold circuit Plug **X3** Terminal **7,8**	Plug not in the plug socket. Connected stop button (push-to-lock) actuated. No wire jumper between terminals 7, 8.
11	Dock locking Plug **X45** Terminal **1,2**	Door open end-of-travel position was not reached. Wheel Chock was not actuated.
22	Motor Running Time exceeded	Allow the hydraulics to cool. (until the dock unlocks)
31	Internal system error	Contact the technical service department if this error re-occurs after switching the control back on. Exchange control unit.
47	RAM test failed	Contact the technical service department if this error re-occurs after switching the control back on. Exchange control unit.
48	ROM test failed	Contact the technical service department if this error re-occurs after switching the control back on. Exchange control unit.

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