


Courion iSYSTEM Wiring Schematic Notes

Read and Understand These Items Before Wiring Your Courion System





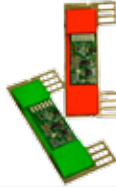





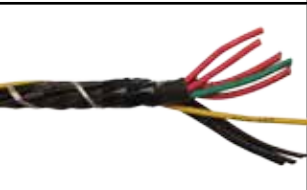

1. Courion's iSYSTEM requires only one (1) iLEARN Door Control per hoistway, including single-sided, pass-through, and staggered hoistways.
2. **POWER REQUIREMENTS** - Courion's iLEARN Door Control requires 110 VAC. Courion's Hoistway and Car Top Equipment requires a 240 VAC 3-Phase Power Supply. When the power supply exceeds 260 VAC, step-down transformers will be supplied by Courion. If the power supply is below 208 VAC, booster transformers may be supplied by Courion. See Courion's iLEARN System Manual for additional details.
3. **POWER SUPPLY DISCONNECT** - A means to disconnect the 240 VAC 3-Phase and the 110 VAC Single Phase is generally required as part of the electrical code. A disconnect switch with 10 AMP fuses should be provided by the General Contractor for the 240VAC 3-Phase service.
4. **HOISTWAY WIRING MATERIAL** - Courion's iSYSTEM includes the following wiring bundles (provided by Courion) as referred to in these drawings:
- iWIRE Motor Bundle (#90-947400) includes four (4) 16 AWG insulated conductors (M1, M2, M3, Spare).
 - iWIRE CANbus Bundle (#90-947405) includes two sets of shielded twisted pair wires for the CANbus Network (C01, C02, C03, C04) and a Drain Wire.
 - iWIRE Hoistway Bundle (#90-947409) includes five (5) 16 AWG insulated conductors (L1, L2/N, L3, G and SP01), one (1) 18 AWG insulated conductor (C05/C06) for the Address In/Out on Courion's CANbus Network, and three (3) spare 18 AWG insulated conductors (SP02, SP03, SP04).
 - iWIRE Floor/Gate Bundle (#90-947415) includes fifteen (15) 18 AWG insulated conductors for the Interlock Zone Contact, EUD, Push Buttons, Gate Contact, and Safety Access Switch (01, 02, 03, 04, 05, 06, 07, DI, DI, DI, GC01, GC02, GC03, SC01, SC02)
 - iWIRE Traveling Cable (#90-947416) includes five (5) 16 AWG insulated conductors (L1, L2/N, L3, G, SP01), one (1) Beldin Device Net Cable, and three (3) 18 AWG insulated conductors as spares (SP02, SP03, SP04).
 - iWIRE Interconnection Cable (#90-947423) includes three (3) 16 AWG insulated conductors, and twenty (20) 18 AWG insulated conductors for the interconnection of the iLEARN Door Control and the Elevator Control.
5. **iWIRE CANBUS NETWORK** - The iWIRE CANbus Cable (2 twisted pair and drain wire) is DAISY CHAINED from the iLEARN Door Control to each iDRIVE VFD Floor Control and then to the Car Top iDRIVE VFD Gate Control(s). **IMPORTANT:** To insure proper communication over the iSYSTEM CANbus Network:
- Each iDRIVE must be wired **IN SERIES - NO BRANCHES** are allowed on the CANbus Network.
 - GROUND all shielding and drain wires in the Machine Room. Drain wires must be continuous up the hoistway to the Car Top.
 - SEPARATE all power lines (L1, L2, L3) and motor wires (M1, M2, M3) from your CANbus Cable. **DO NOT INCLUDE IN THE SAME CONDUIT.**
6. **iWIRE CANbus ADDRESS WIRE** - iDRIVE Floor Controls are addressed in the order they are wired from the iLEARN Door Control in the machine room (e.g. iDRIVE 1, iDRIVE 2, iDRIVE 3). CANbus Port C05 (Address In) and C06 (Address Out) are run in series as shown from one iDRIVE Floor Control to the next. There is no C05/C06 Address Wire required for the Car Top VFD Controls.
7. **INTERLOCK DOOR CLOSED CONTACT (Normally Closed) and INTERLOCK DOOR LOCKED CONTACT (Normally Closed)** See Elevator Control Wiring Diagrams for wiring information. Q Style Interlock Shown on these prints. Courion P Style Interlocks do not have a Door Closed Contact.
8. **INTERLOCK ZONE CONTACT (Normally Open)** Closes when the Elevator is at the floor and the Retiring Cam drops to actuate the Interlock. **If you have Front Openings, the Interlock Contacts are wired between DI and 03. If you have Rear Openings, the Interlock Zone Contacts are wired between DI and 01.**
9. **EMERGENCY UNLOCKING DEVICE (EUD) (Normally Closed)** Opens when the EUD switch is activated. **If you do NOT have an EUD at a particular floor, this input must be closed with a permanent jumper.**
10. **HALL AND COP PUSH BUTTONS (Not By Courion)**
- Stop - (Normally Closed) **If you do not have a STOP Button, this input must be closed with a permanent Jumper.**
- Close - (Normally Open)
- Open - (Normally Open)
- Reset - (Normally Open)
11. **FRONT AND REAR CAR GATES** - If you have a FRONT and REAR Car Gate, the iWIRE CANbus Cable MUST terminate in the FRONT Gate iDRIVE VFD Control. All iDRIVE.G Car Top Controls are set up for a FRONT Car Gate. **If you have a REAR Car Gate - 1. Remove the resistor from terminals C03 and C04 inside the iDRIVE.G VFD Control, and 2. Place a jumper between terminals J4-1 and J4-2 entitled "Rear Gate" on the iDRIVE.G Expansion Module.**
12. **REVERSING EDGE (Normally Closed Circuit)** - Opens when Reversing Edge is obstructed by an object. If there is no obstruction and Reversing Edge Contact is not made, adjust the contact on the Gate Panel for proper actuation.
13. **DOOR MOTOR WIRING** - Door Motors are to be wired to run in opposite directions. Invert one pair of Motor Wires between the Motors. For example, connect the Interlock side motor M1-Red, M2-WHT, and M3-BLU. Connect the non-Interlock side motor M1-BLU, M2-WHT, and M3-Red. Wire each Opening the same. When Starting-Up, if the Door Panels move in the opposite direction expected, reverse the M1 and M2 Wires inside the iDRIVE VFD Door Control.
14. **DEFAULT DOOR OPERATION** - iLEARN Door Control default operation is Constant Pressure Close. See iLEARN Control Manual for procedure to change default door operation.
15. **START-UP - DO NOT** complete the Elevator Control Interconnections until after completing the Initial Start-Up Steps described in the Courion iLEARN Control Manual. Detailed Interconnection information can be found in the iLEARN Control Manual and in your Elevator Control Wiring Schematics. **Before Start-Up, INS-Inspection, HPB-Hall Push Button, and FSH-Fire Service Hold input circuits must be closed with a temporary jumper in order to operate the Courion Hoistway Doors and Car Gate.**
16. **WIRING SCHEMATICS** - Hoistway Wiring Schematic (2 pages), Floor Wiring Schematic Detail, Car Top Wiring Schematic Detail, iLEARN Door Control Detail, Transformer Wiring Detail.

		Courion 3044 Lambdin Avenue St. Louis, MO 63115 (314) 533-5700 or (800) 533-5760	
TITLE	REV	SCALE	SHT
Hoistway Wiring Schematic iLEARN Door Control	B	N/A	1 of
	DATE	09/21/16	

Courion iSYSTEM Wiring Schematic Notes

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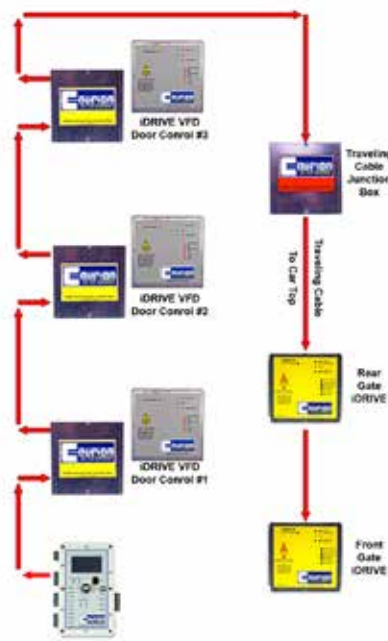
SYSTEM PART IDENTIFICATION

iLEARN Door Control	iDRIVE VFD Floor Control	iDRIVE VFD Gate Control	iDRIVE Gate Expansion Module	Door iSENSOR	Gate iSENSOR
					
iWIRE Motor Bundle	iWIRE CANbus Cable	iWIRE Floor/Gate Bundle	iWIRE Traveling Cable	iWIRE Hoistway Cable	iWIRE Interconnection Bundle
					

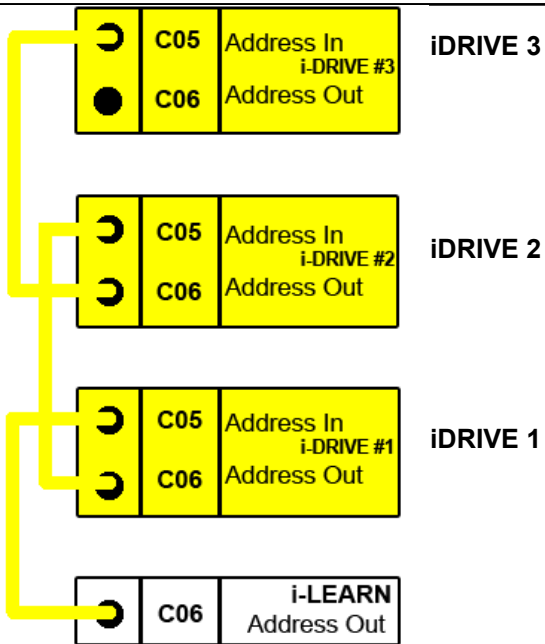
The CANbus Cable must be DAISY CHAINED from the iLEARN Door Control to each iDRIVE Unit. **NO BRANCHES ALLOWED** in the iSYSTEM CANbus Network.

Wire the CANbus Address Wire C05/C06 in SERIES from the iLEARN Door Control to each iDRIVE VFD Door Control.

CANbus Network

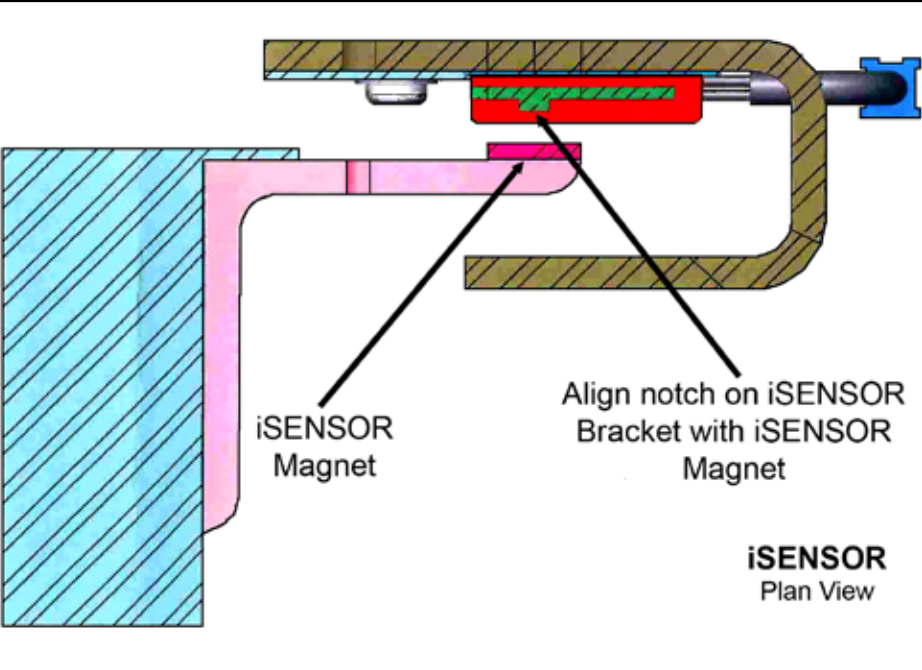
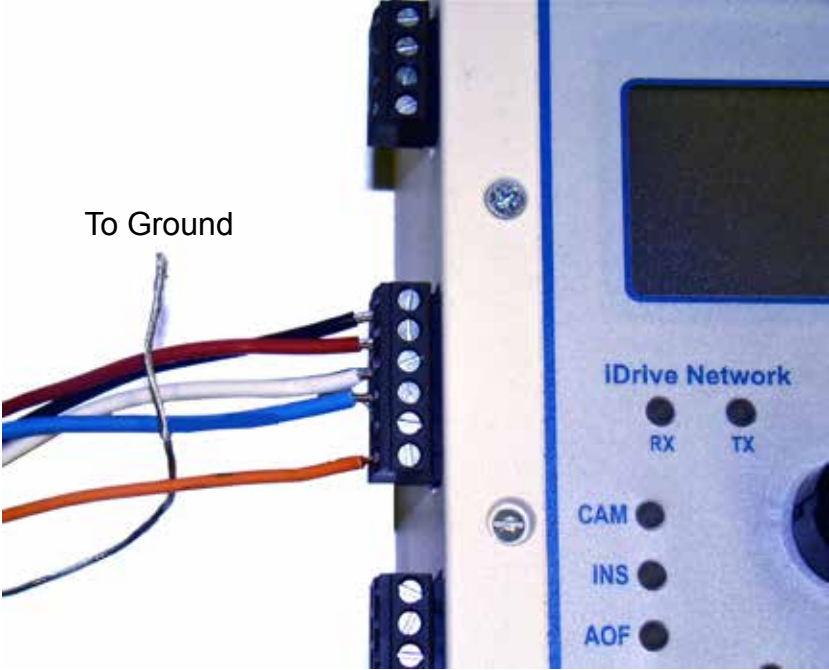


CANbus Address Wire

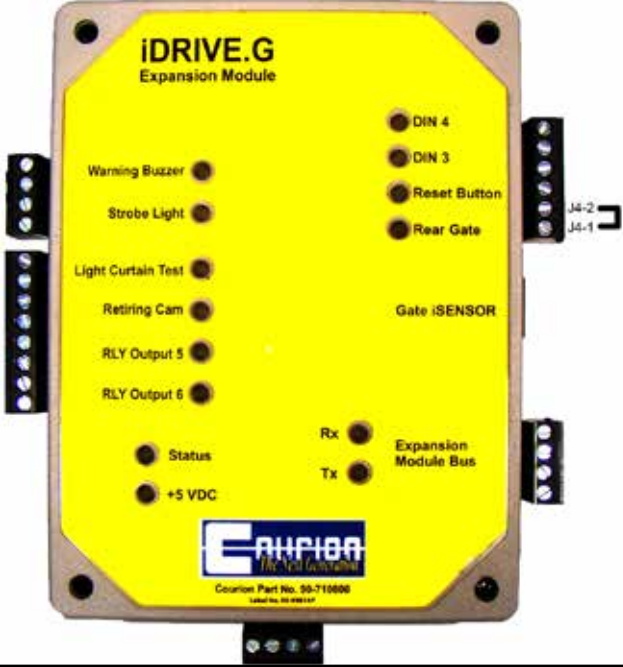


Ground the CANbus Drain Wire ONLY in the iLEARN Control Box and keep continuous throughout the iSYSTEM Network.

Ensure that all Door iSENSORS are properly aligned with the iSENSOR Magnet on the Interlock Side of the Lower Door Panel.



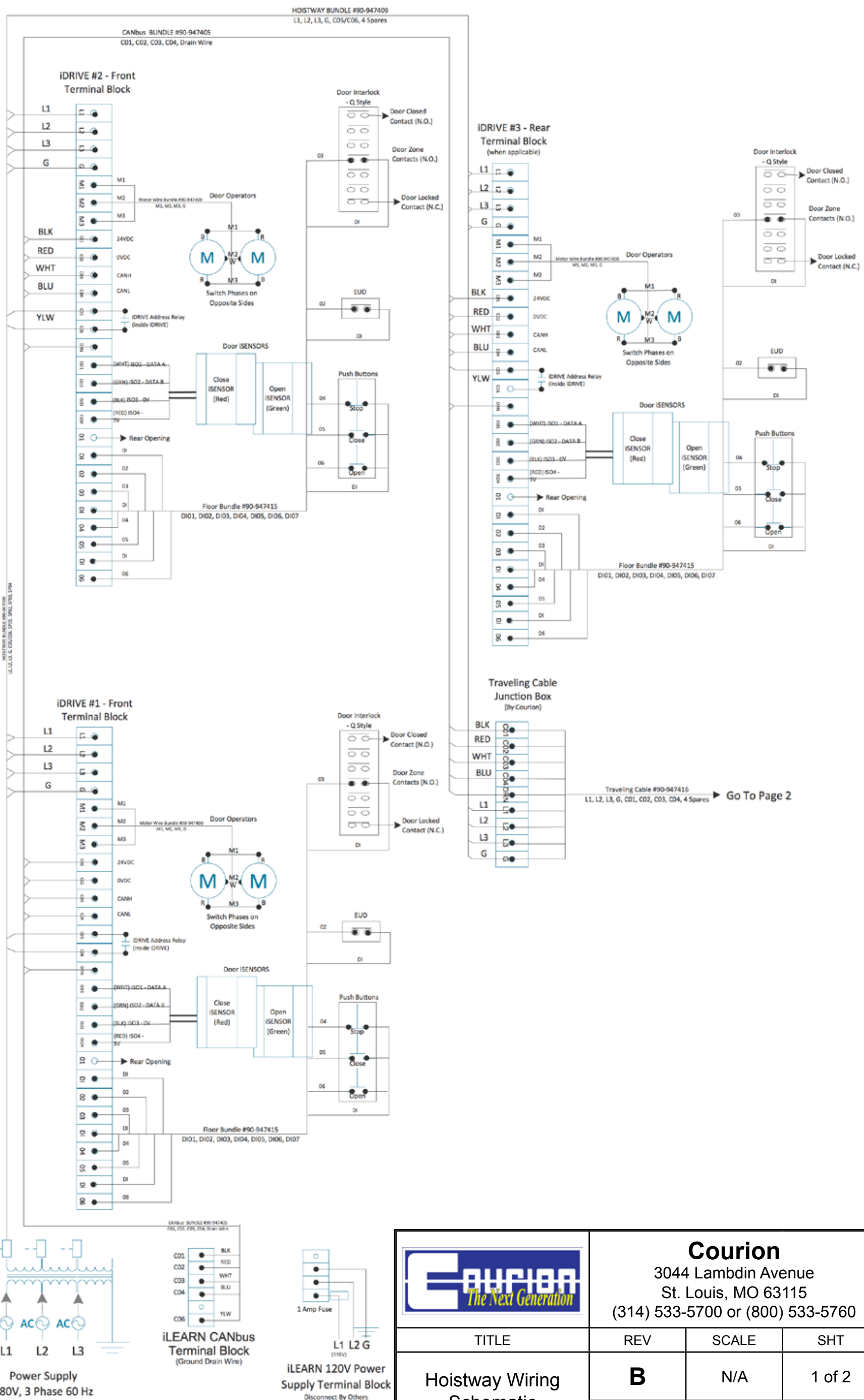
REAR GATE - Remove the resistor from terminals C03 and C04 inside the iDRIVE.G VFD Gate Control and place a JUMPER between terminals J4-1 and J4-2 "Rear Gate" on the iDRIVE.G Expansion Module.



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Hoistway Wiring Schematic iLEARN Door Control	B	N/A	1 of
	DATE	09/21/16	

See Notes 4 - Wiring Material
Provided By Courion



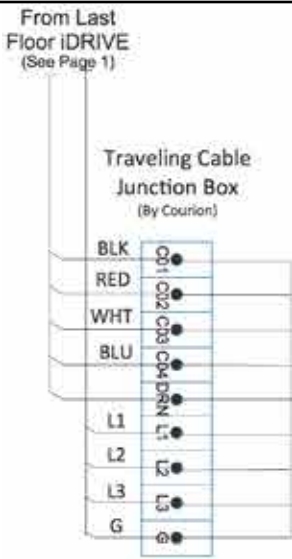
See Notes 5 and 6 regarding CANbus Wiring Requirements



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See Notes 2 and 3 - Power Supply and Disconnects

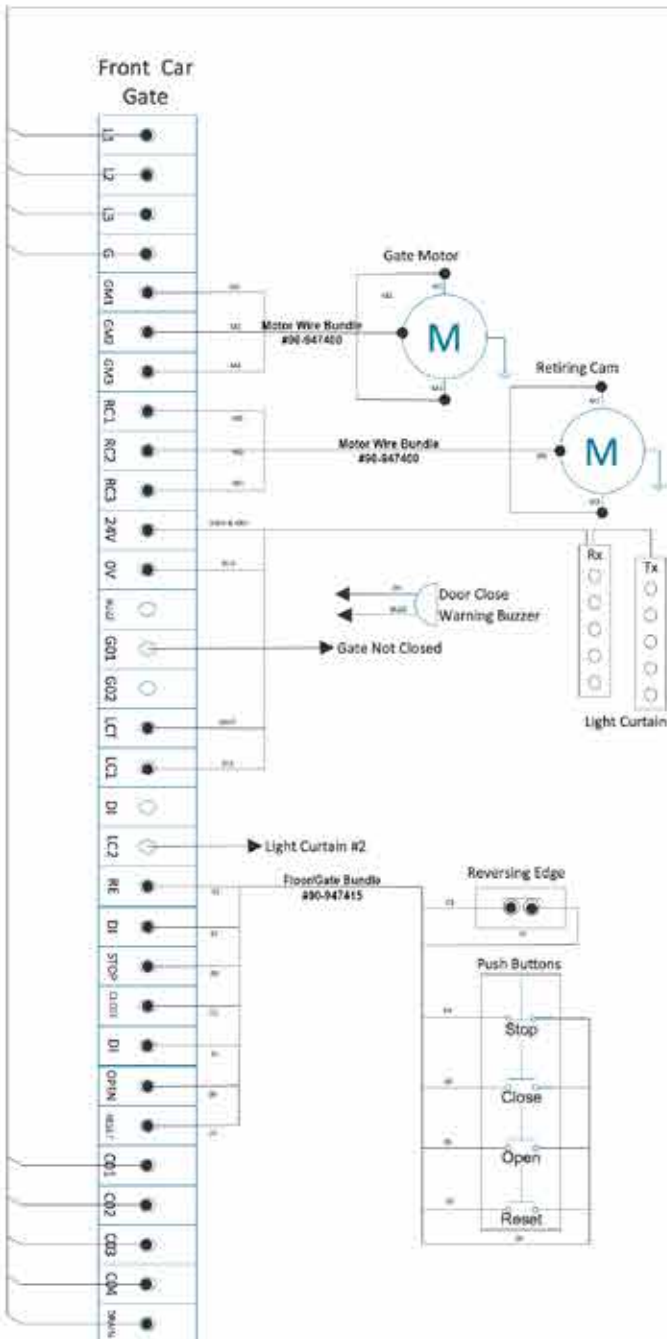
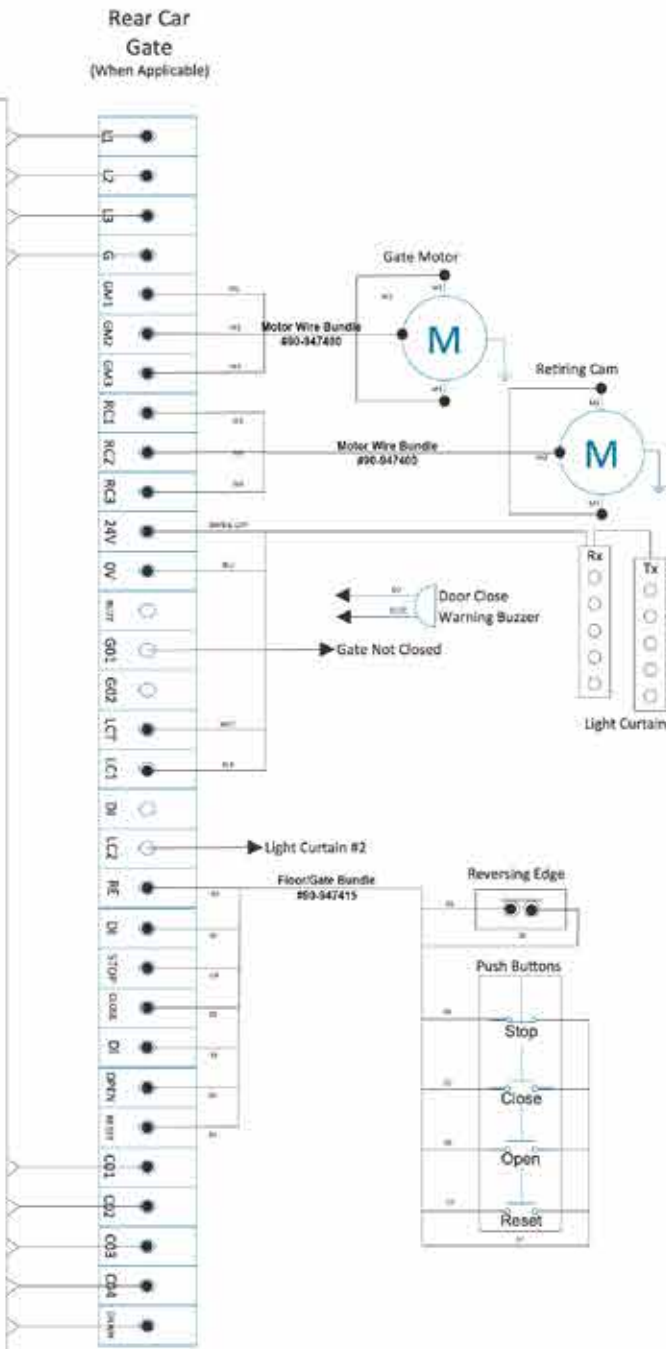
TITLE	REV	SCALE	SHT
Hoistway Wiring Schematic	B	N/A	1 of 2
iLEARN Door Control	DATE	04/14/16	



Traveling Cable - #90-947416
L1, L2, L3, G, C01, C02, C03, C04, 4 Spares

FRONT AND REAR CAR GATES - If you have a FRONT and REAR Car Gate, the iWIRE CANbus Cable MUST terminate in the FRONT Gate iDRIVE VFD Control. All iDRIVE.G Car Top Controls are set up for a FRONT Car Gate.

- If you have a REAR Car Gate:
1. Remove the resistor from terminals C03 and C04 inside the iDRIVE.G VFD Control, and
 2. Place a jumper between terminals J4-1 and J4-2 entitled “Rear Gate” on the iDRIVE.G Expansion Module.



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Hoistway Wiring Schematic iLEARN Door Control	A	N/A	2 of 2
	DATE	09/01/14	

TYPICAL HOISTWAY FLOOR DETAIL

Interlock Door Closed Contact - Normally Closed
See Elevator Control Wiring Diagrams for wiring information

LO = Doors are NOT Closed.

HI = Doors are Closed.

Courion Q Style Interlock Shown. Courion P Style Interlock does not have a Door Closed Contact.

Interlock Door Locked Contact - Normally Closed
See Elevator Control Wiring Diagrams for wiring information

LO = Interlock has been actuated by the Retiring Cam.

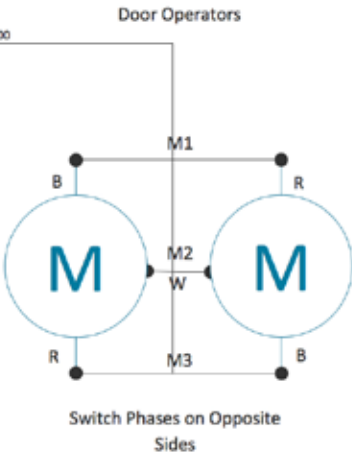
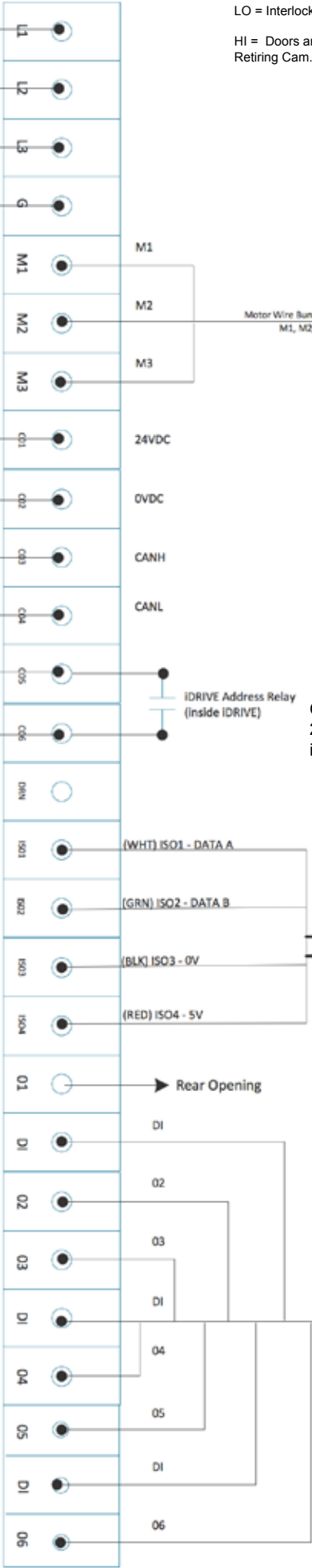
HI = Doors are Closed and Locked, and Interlock has not been actuated by the Retiring Cam.

To Next
iDRIVE

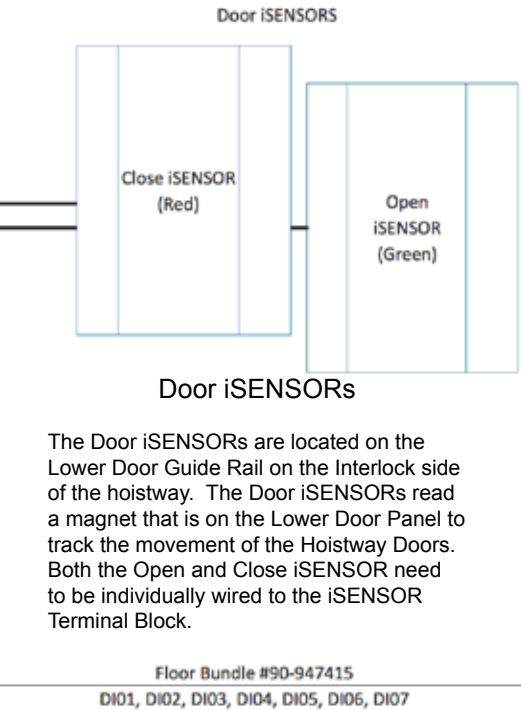
Hoistway Bundle #90-947409
L1, L2/N, L3, G, SP01, SP02, SP03,
SP04, C05/C06

CANbus Bundle #90-947405
C01, C02, C03, C04, Drain

From
iLEARN
or iDRIVE

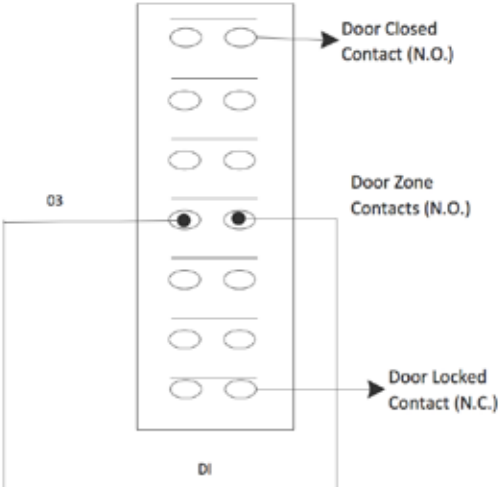


Address Relay
Closes when C05 (Address In) receives 24VAC from C06 (Address Out) on the iDRIVE or iLEARN Door Control below.



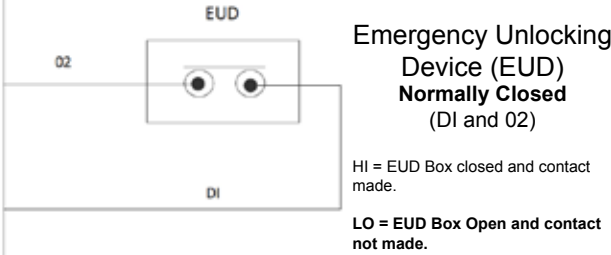
Floor Bundle #90-947415
DI01, DI02, DI03, DI04, DI05, DI06, DI07

Door Interlock - Q Style

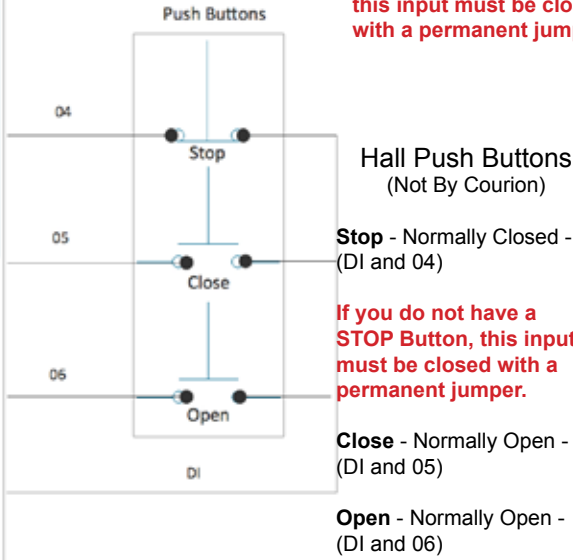


Interlock Zone Contact - Normally Open
Front Opening (DI and 03) - Rear Opening (DI and 01)

HI = Elevator is at floor and the Retiring Cam has actuated the Interlock.



If you do not have an EUD at a particular floor, this input must be closed with a permanent jumper.



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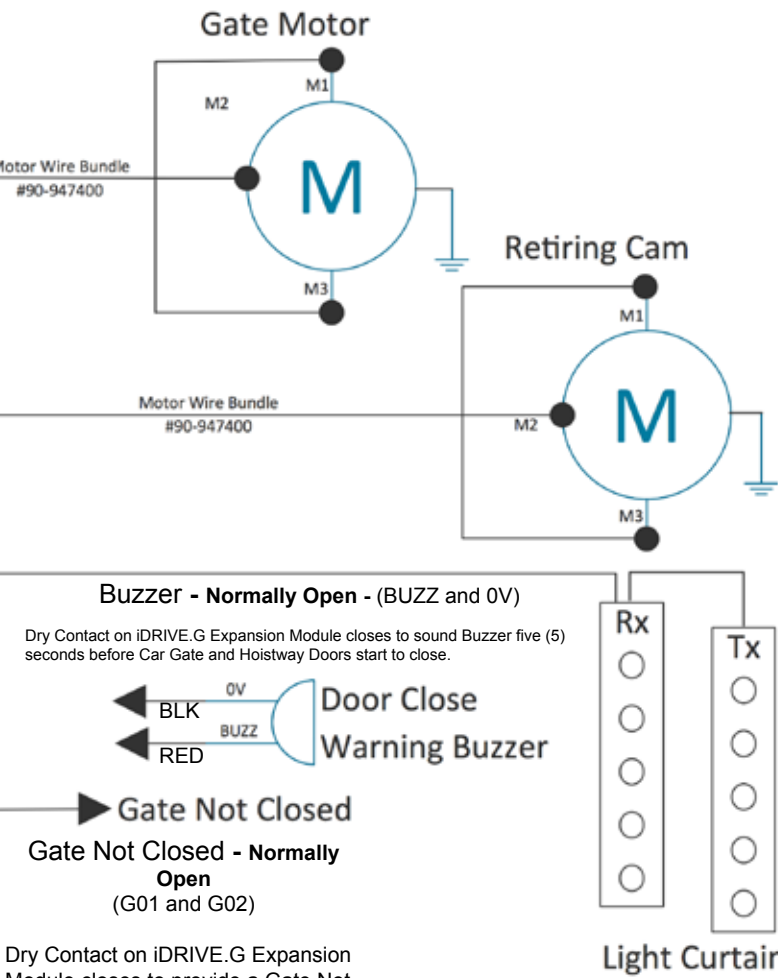
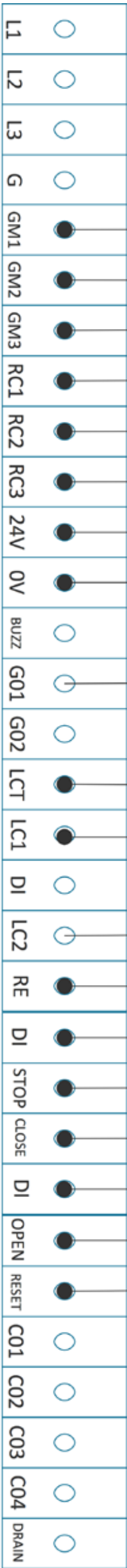
TITLE	REV	SCALE	SHT
Floor Wiring Schematic iLEARN Door Control	B	N/A	1 of 1
	DATE	04/14/16	

TYPICAL CAR TOP DETAIL

FRONT AND REAR CAR GATES - If you have a FRONT and REAR Car Gate, the iWIRE CANbus Cable MUST terminate in the FRONT Gate iDRIVE VFD Control.

All iDRIVE.G Car Top Controls are set up for a FRONT Car Gate. If you have a REAR Car Gate -

1. Remove the resistor from terminals C03 and C04 inside the iDRIVE.G VFD Control, and
2. Place a jumper between terminals J4-1 and J4-2 entitled “Rear Gate” on the iDRIVE.G Expansion Module.



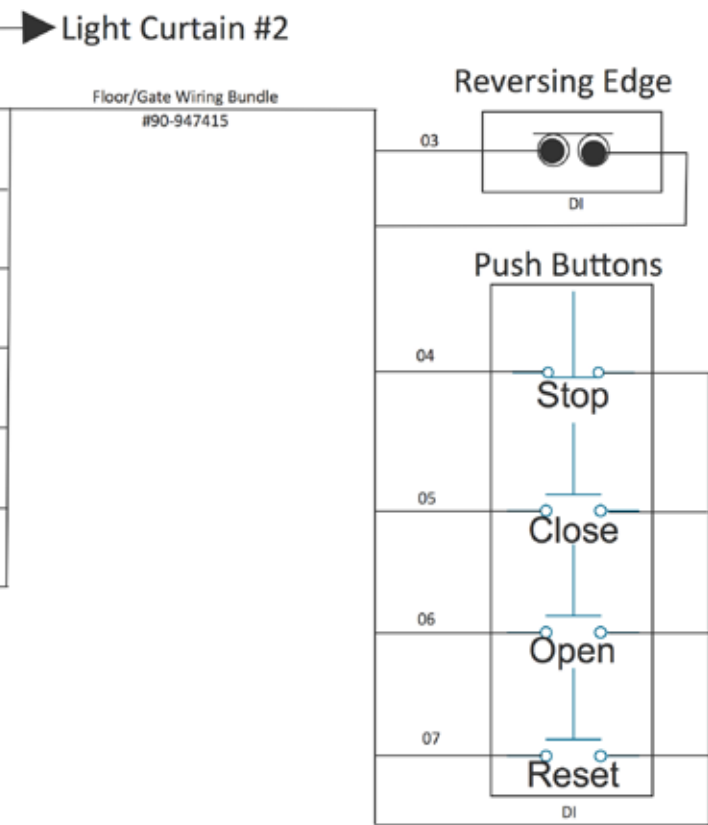
Light Curtain
Normally Closed
(24V, LCTEST, LC1, 0V)

LO = Light Curtain Obstructed.
HI = Light Curtain Clear

The CARE Light Curtain connects directly to the Car Top Control Terminal Strip. There is no intermediate control or power supply.

Second Light Curtain

If you have a second light curtain on the same Car Gate, then remove the jumper between LC2 and DI and wire Output 1 on the second light curtain (BLK) to the LC2 terminal - all other wiring is the same.



Reversing Edge
Normally Closed
(RE and DI)

LO = Reversing Edge Obstructed.
HI = Reversing Edge Clear

If there is no obstruction and Reversing Edge Contact is not made, adjust the contact on the Gate Panel for proper actuation.

Car Push Buttons
(Not By Courion)

Stop - Normally Closed - (DI and 04)

If you do not have a STOP Button, this input must be closed with a permanent jumper.

Close - Normally Open - (DI and 05)

Open - Normally Open - (DI and 06)

Reset - Normally Open - (DI and 07)

Gate iSENSOR Encoder
(By Courion)

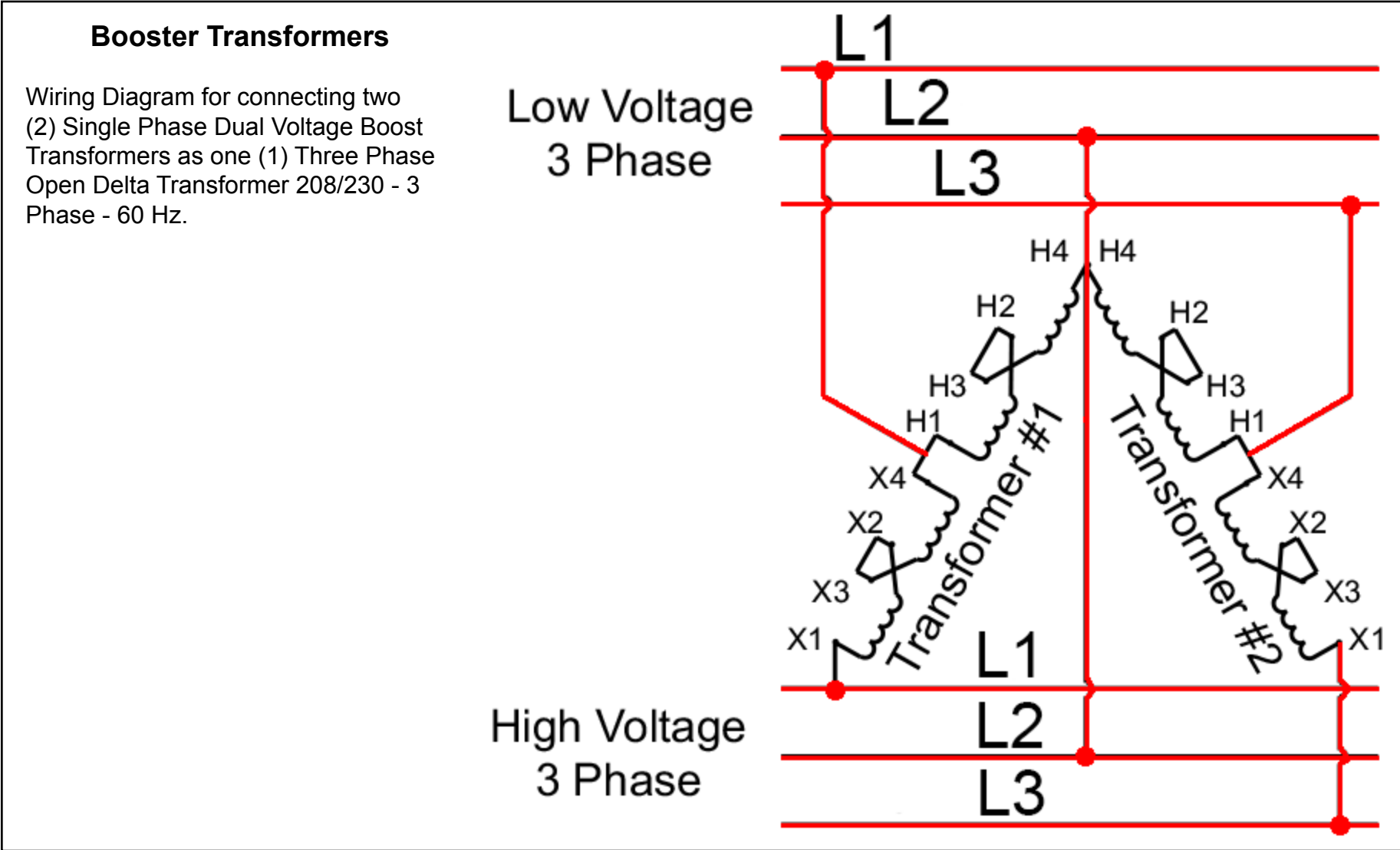
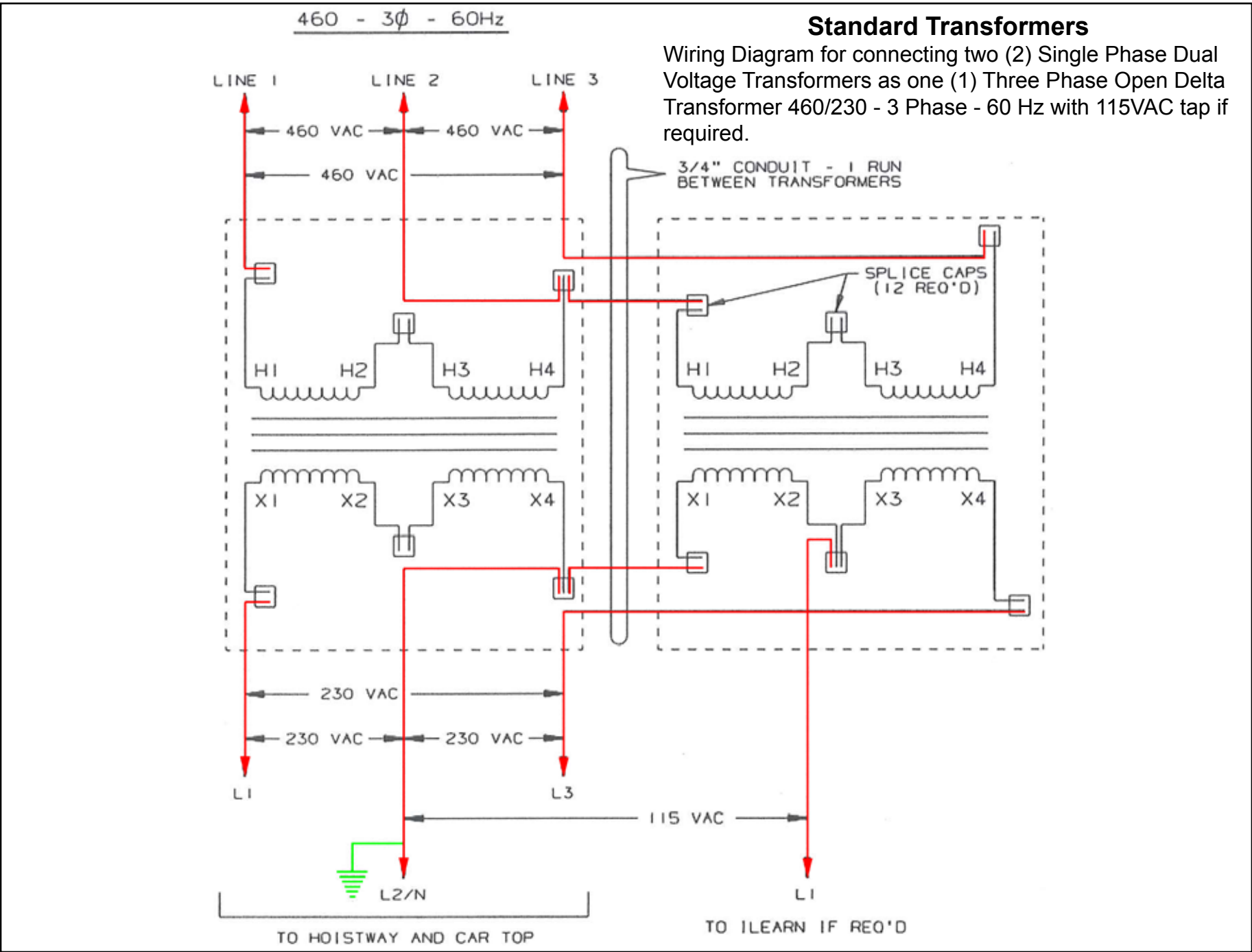
Plug the Gate iSENSOR into the side of the iDRIVE.G Expansion Module inside the iDRIVE.G Control Box. Ground the iSENSOR.G Assembly to the Car Top.



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Car Top Wiring Schematic iLEARN Door Control	A	N/A	1 of 1
	DATE	09/01/14	



Recommended Wire Size:

- Transformer - 14 GA
- All Motors - 16 GA
- Control Circuits - 18 GA

Note:

If 16 GA wires are not available, use two (2) 18 GA wires.

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TITLE	REV	SCALE	SHT
Transformer Wiring Schematic iLEARN Door Control	A	N/A	1 of 1
	DATE	09/01/14	