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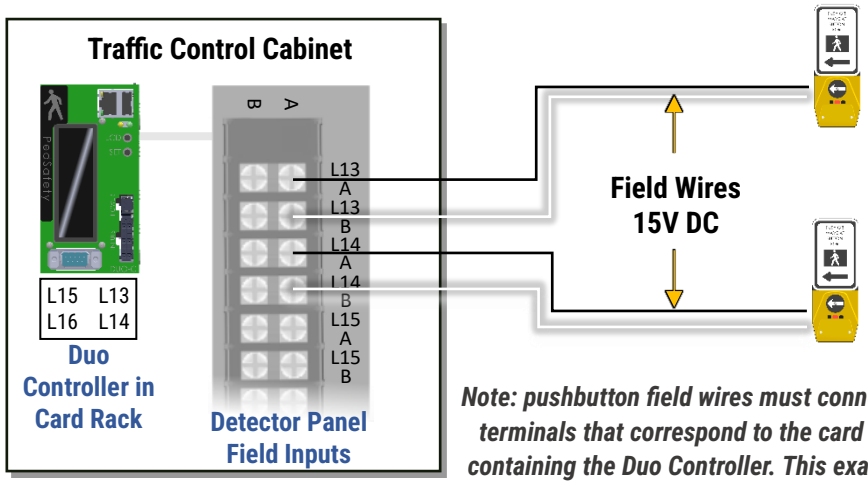
SCAN ME:
User Manual
Installation Manual

Guardian Duo Wiring Quick Guide

Connecting Duo Controller to Duo Stations

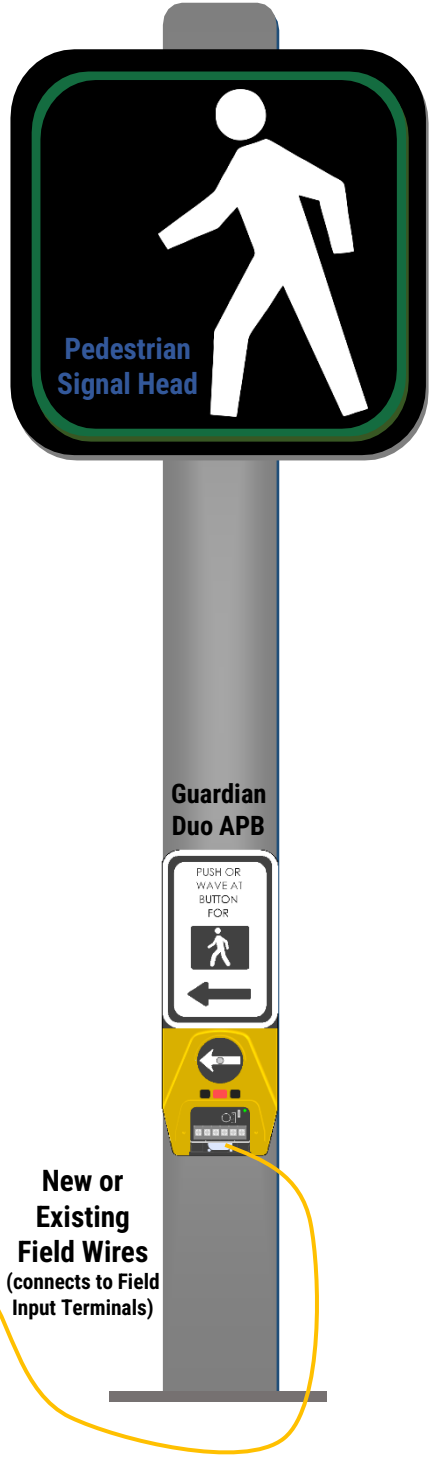


(enlarged - not to scale)

Note: pushbutton field wires must connect to terminals that correspond to the card slot containing the Duo Controller. This example shows terminals L13, L14, L15, and L16.

Traffic Control Cabinet (Duo Controller connects to stations via field terminal interface panel from inside the cabinet)

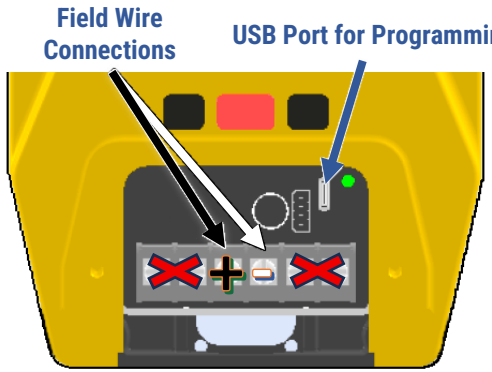
- ✓ Utilizes the existing or new **field wires** from **cabinet** to **Guardian Duo APBs**.
  - Connect the **field wires** from the detector interface panel in the **cabinet** to **Guardian Duo APBs**.
- ✓ **Duo Controller** acts as a 4-channel pedestrian isolator card, placing calls to the **traffic control cabinet** through the card rack.
  - For cabinets that cannot accept ped calls through the card rack, the **Duo Controller** supports ped call outputs through a 9-pin cable.



Recommended Installation Sequence

1) **Remove existing pushbutton equipment.**
2) **Install Duo Controller, Duo Power Supply, and associated cabling in the traffic cabinet.**
3) **Install Guardian Duo APBs.**
4) **Press the "SET" button on Duo Controller to automatically detect APB IDs and phasing.**
5) **Verify correct system operation.**

Duo Station (enlarged view of the terminal block on the front)



*Station field wire connections are polarity dependent

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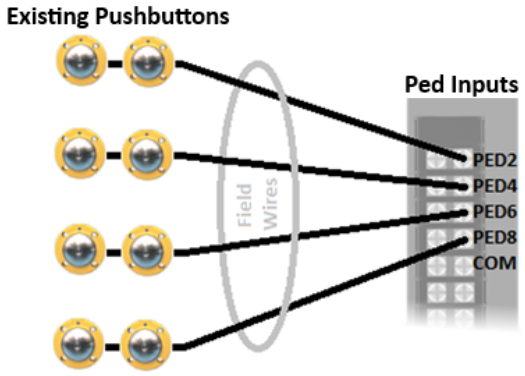
Guardian Duo

Cabinet Wiring Overview

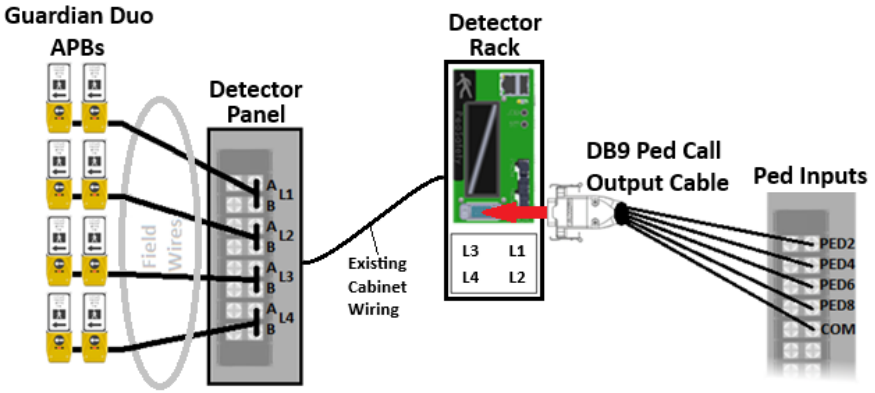
The Guardian Duo cabinet wiring process depends on whether the traffic cabinet uses isolator cards for pedestrian detection. For cabinets without pedestrian isolator cards (typical of NEMA cabinets), refer to the wiring diagrams on Page 3. For cabinets with pedestrian isolator cards (typical of 332 and ATC cabinets), refer to the wiring diagrams on Page 4.

NEMA-Style Cabinet Wiring
(Cabinets without pedestrian isolator cards)

Before:

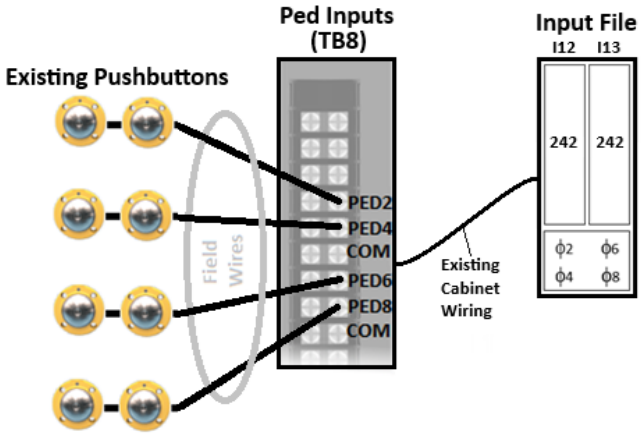


After:

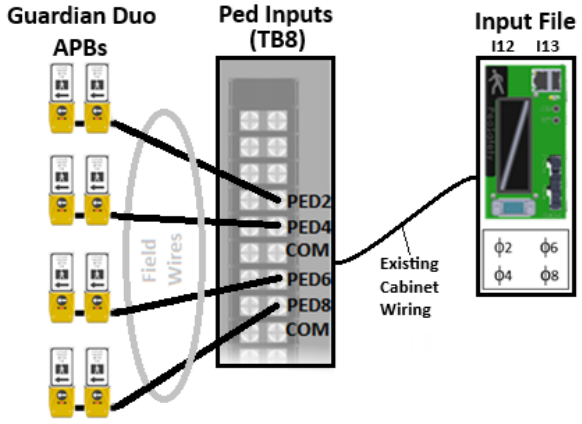


332/ATC-Style Cabinet Wiring
(Cabinets with pedestrian isolator cards)

Before:



After:



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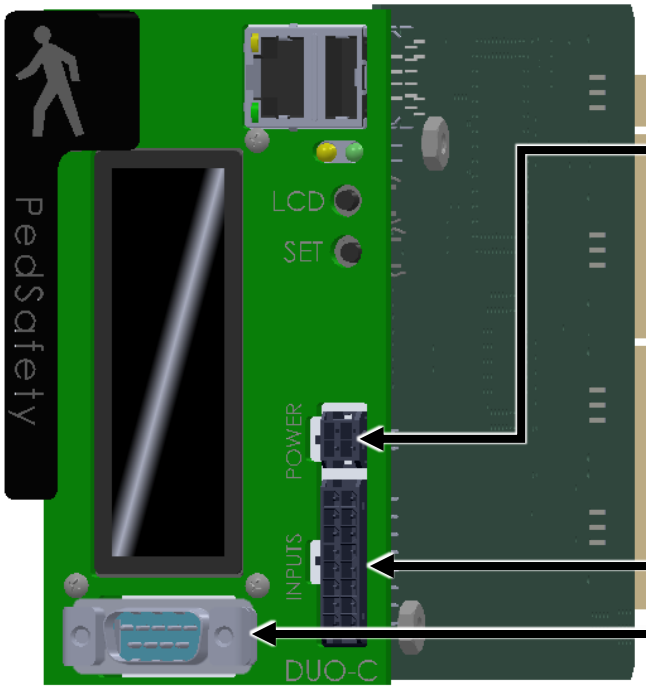
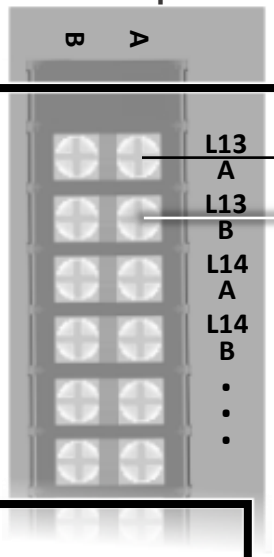
Guardian Duo
NEMA-Style Cabinet Wiring



Duo Controller
(Install in any open pair of detector rack slots. Slot L13,L14,L15,L16 shown for reference.)



Guardian Duo APB

*Pushbutton field wires must be moved from ped inputs to detector panel.

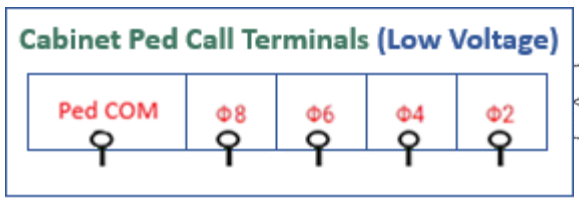
Troubleshooting Tip: Once the Duo Controller is installed and powered, the terminal pairs for pushbutton wiring will be energized with 15V DC.

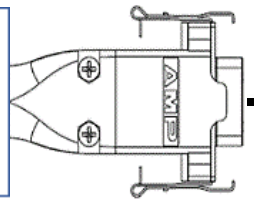
Signal Input Cable (120 VAC)			
Label / Channel	Pin	Color	NEMA-Style Phasing
NEUTRAL	1	White	AC Neutral
	16	White / Black Stripe	
W1	5	Black	Φ2 WALK
DW1	7	Black / White Stripe	Φ2 DON'T WALK
W2	12	Green	Φ4 WALK
DW2	6	Green / Black Stripe	Φ4 DON'T WALK
W3	13	Orange	Φ6 WALK
DW3	15	Orange / Black Stripe	Φ6 DON'T WALK
W4	4	Blue	Φ8 WALK
DW4	14	Blue / Black Stripe	Φ8 DON'T WALK
AUXIN_A	9	Red / Black Stripe	PRE-EMPTION (LINE)
AUXIN_B	10	Red / White Stripe	PRE-EMPTION (NEUT)
INTER_FLASH	11	Green / White Stripe	(Reserved)

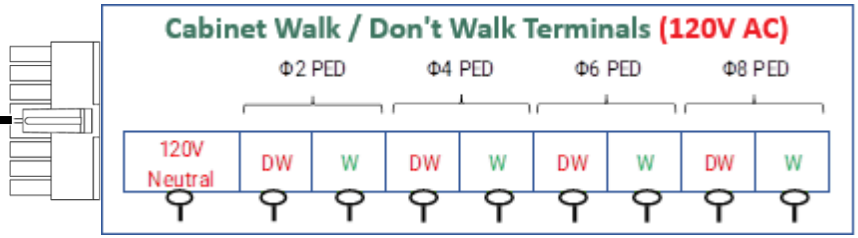
DB9 Ped Call Output Cable			
Label	Pin	Color	Phasing
CH 1	6	Green / Black Stripe	ϕ2
CH 2	7	Red / Black Stripe	ϕ4
CH 3	8	White / Black Stripe	ϕ6
CH 4	9	Blue	ϕ8
COM	5	Green	COM

***Note**: DB9 may be eliminated by re-mapping detector rack inputs to accept ped calls.*

Some cabinets have dedicated (+) and (-) ped call input terminals for each phase. In these cabinets, the (-) terminals may be connected together and wired to COM. Contact tech support for further assistance.







***Note**: Channels may be assigned to any ped phase. CH1=ϕ2, CH2= ϕ4, CH3= ϕ6, CH4= ϕ8 is typical for NEMA cabinets. Proper operation must be verified at the time of installation.*

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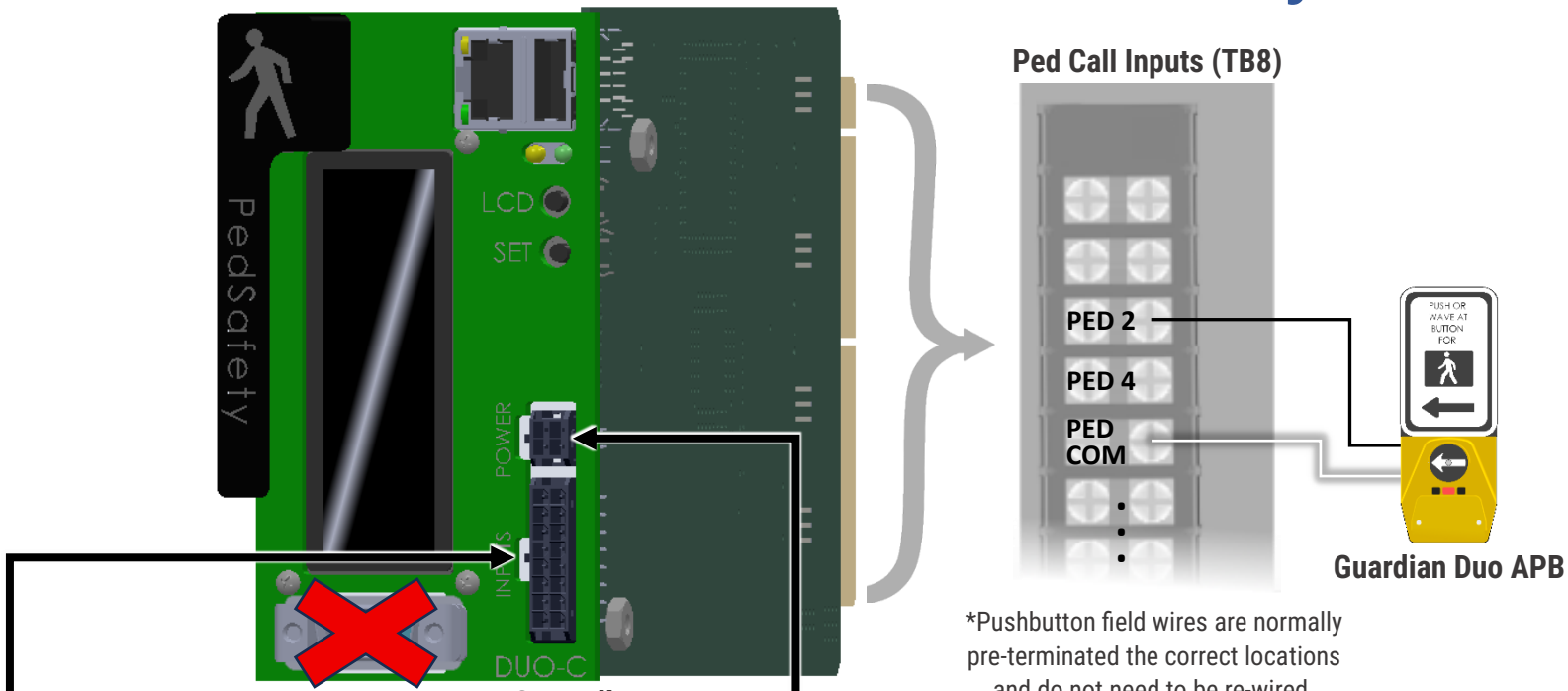
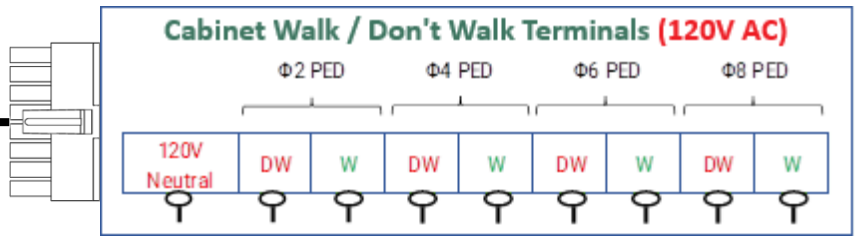
Guardian Duo
332/ATC-Style Cabinet Wiring



*Pushbutton field wires are normally pre-terminated the correct locations and do not need to be re-wired.



Signal Input Cable (120 VAC)			
Label / Channel	Pin	Color	332-Style Phasing
NEUTRAL	1	White	
	16	White / Black Stripe	
W1	5	Black	Φ6 WALK
DW1	7	Black / White Stripe	Φ6 DON'T WALK
W2	12	Green	Φ8 WALK
DW2	6	Green / Black Stripe	Φ8 DON'T WALK
W3	13	Orange	Φ2 WALK
DW3	15	Orange / Black Stripe	Φ2 DON'T WALK
W4	4	Blue	Φ4 WALK
DW4	14	Blue / Black Stripe	Φ4 DON'T WALK
AUXIN_A	9	Red / Black Stripe	PRE-EMPTION (LINE)
AUXIN_B	10	Red / White Stripe	PRE-EMPTION (NEUT)
INTER_FLASH	11	Green / White Stripe	(Reserved)

***Note**: Channels may be assigned to any ped phase. 332 and ATC cabinets often differ from the typical NEMA configuration. CH1=ϕ6, CH2= ϕ8, CH3= ϕ2, CH4= ϕ4 is typical for these cabinet types. Proper operation must be verified at the time of installation.*