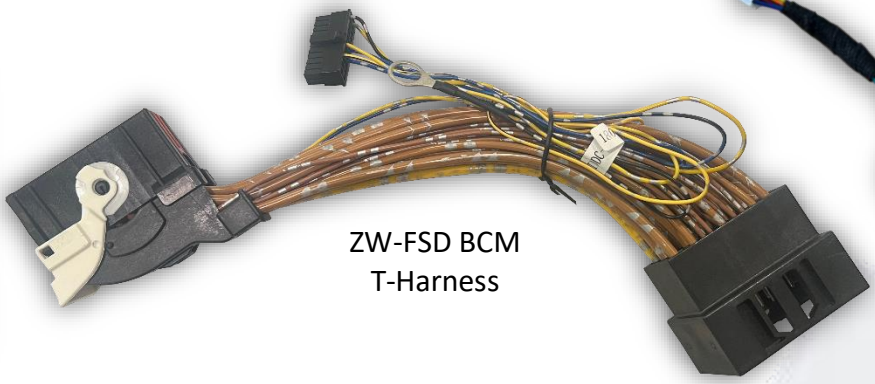
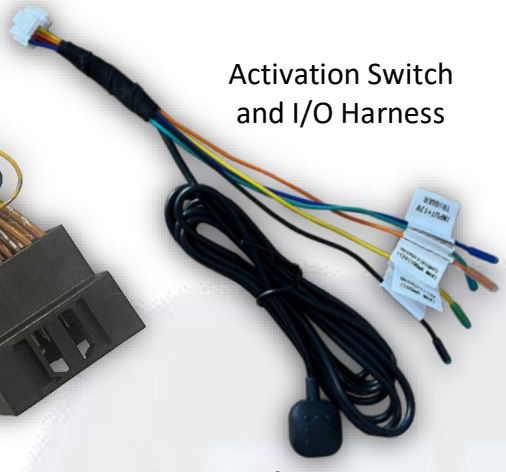
Z-WAGZ ZW-FSD

Plug & Play, OE Light-Controller for ’24 FORD F150 & ‘23+ SuperDuty



ZW-FSD BCM
T-Harness

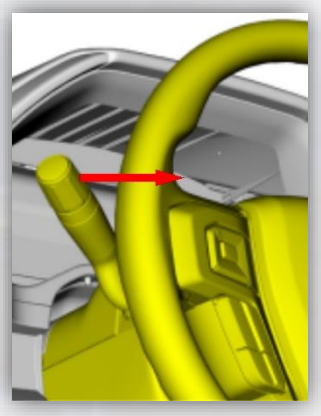


Activation Switch
and I/O Harness

Thank you for purchasing a genuine Z-WAGZ unit, the simplest Plug & Play module for flashing OEM lights with a press of a button. This unit comes pre-programmed with 3 different light patterns and has options for disabling specific lights.

ZW-FSD Operation:

1. Install the Z-WAGZ unit to the factory Body Control Module (BCM). *Follow instructions on page 2* for more details and important information with this process.
2. Turn Ignition ON or start vehicle (Ignition must be ON or vehicle running for proper operation)
3. ***To activate Z-WAGZ:***
    - Press and HOLD the ***high beam*** lever (5 sec) OR
    - Press and HOLD the provided push button (3 sec) OR
    - Send a 12v (+) signal to the ***blue wire*** (designed to be extended for OE up-fitter switches or any aftermarket toggle). *For this input method, as long as the wire has 12v (+), the Z-WAGZ unit will stay active.*



Pattern 1 will begin to flash. Once pattern 1 begins, the cluster turn signal (indicators) will blink 1 time, indicating Pattern 1 has been selected. The LED on the unit will blink BLUE. *See chart on page 4 for remaining pattern color indication.*

4. ***To switch to Pattern 2:*** (Pattern 1 must be currently active)
    - Engage either turn signal, then press and HOLD the ***high beam*** lever once more (5 sec). OR
    - Press & release the provided push button one time

The cluster turn signal (indicators) will blink twice indicating Pattern 2 has been selected. *Repeat this process to switch to the next pattern*.

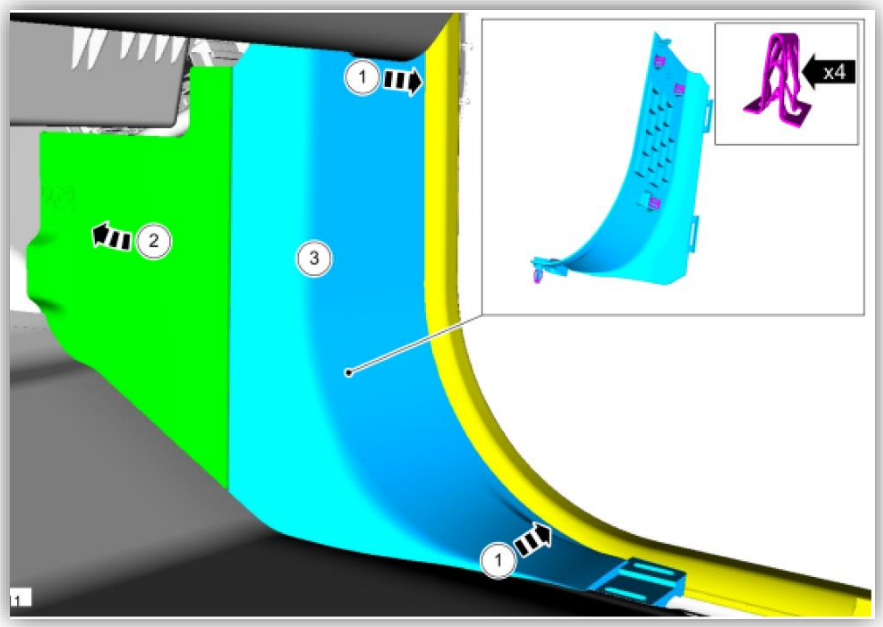
5. ***To deactivate Z-WAGZ:***
    - Press and HOLD the ***high beam*** lever (5 sec) OR
    - Press and HOLD the provided push button (3 sec) OR
    - Release 12v (+) signal to the ***blue wire*** (if connected this way) OR
    - Turn vehicle OFF

GENERAL NOTES:

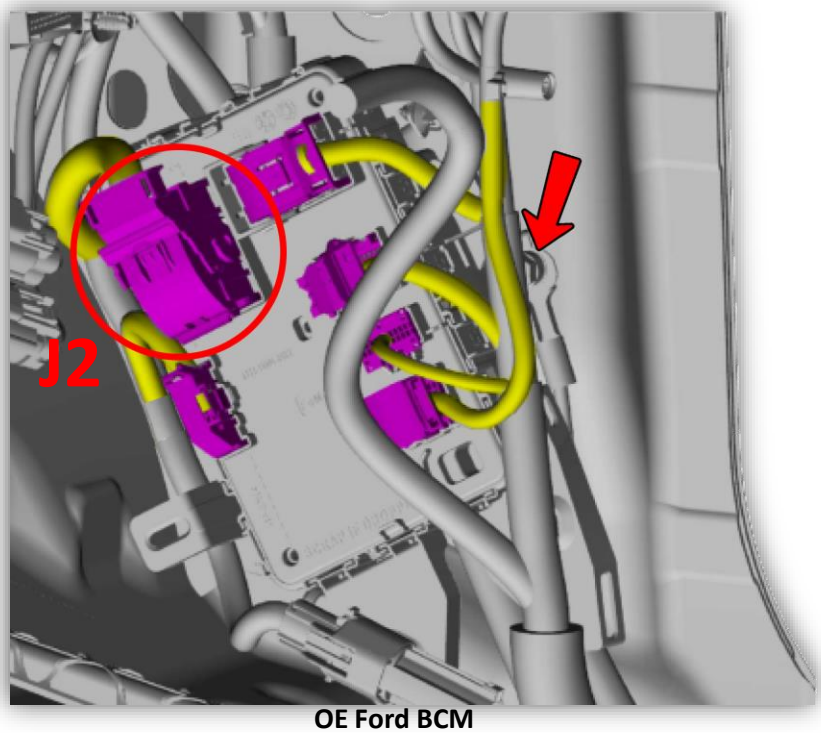
- Vehicles equipped with LED lights should use LED patterns. Vehicles equipped with standard bulbs should use bulb patterns but may get away with LED patterns (although some consistency may be lost).
- Not all lights on the vehicle are necessarily used, some lights are not controllable via CAN data commands.
- Z-WAGZ will retain the last used pattern, even after being disconnected from the harness (if ever).
- Turn signals, headlights & reverse lights will override pattern flashing when used, until turned off again.
- Lights on the external mirrors will only flash if wired with turn signals from factory.
- ‘Plow Mode’, when active (INPUT 2), disables High & Low beam flashing and slows the pattern down so that the relay box (plow module) can keep up with the flashing (prevents overheating).

ZW-FSD Vehicle module installation

1. On the passenger side of the truck, remove the weather stripping near the kick panel.
2. Remove the BCM access cover.
3. Release (4) clips and remove the right-hand side lower cowl trim panel to expose the BCM.



4. ***With the vehicle OFF***: disconnect the (1) circled plug shown. Connect the male side of the provided T-Harness to the BCM and the removed, OE plug into the female side of the Z-WAGZ BCM harness. This connector can only fit in one place and connect in one way. Make sure the cam-lock is closed all the way and the connector is seated fully.
5. Connect the provided ground to the factory Ford ground location *(indicated by the red arrow).*
6. Connect the ZW-FSD unit to the 22-pin connector, tie-wrap the unit to another harness if desired.
7. Return to page (1) for operation instructions.



OE Ford BCM

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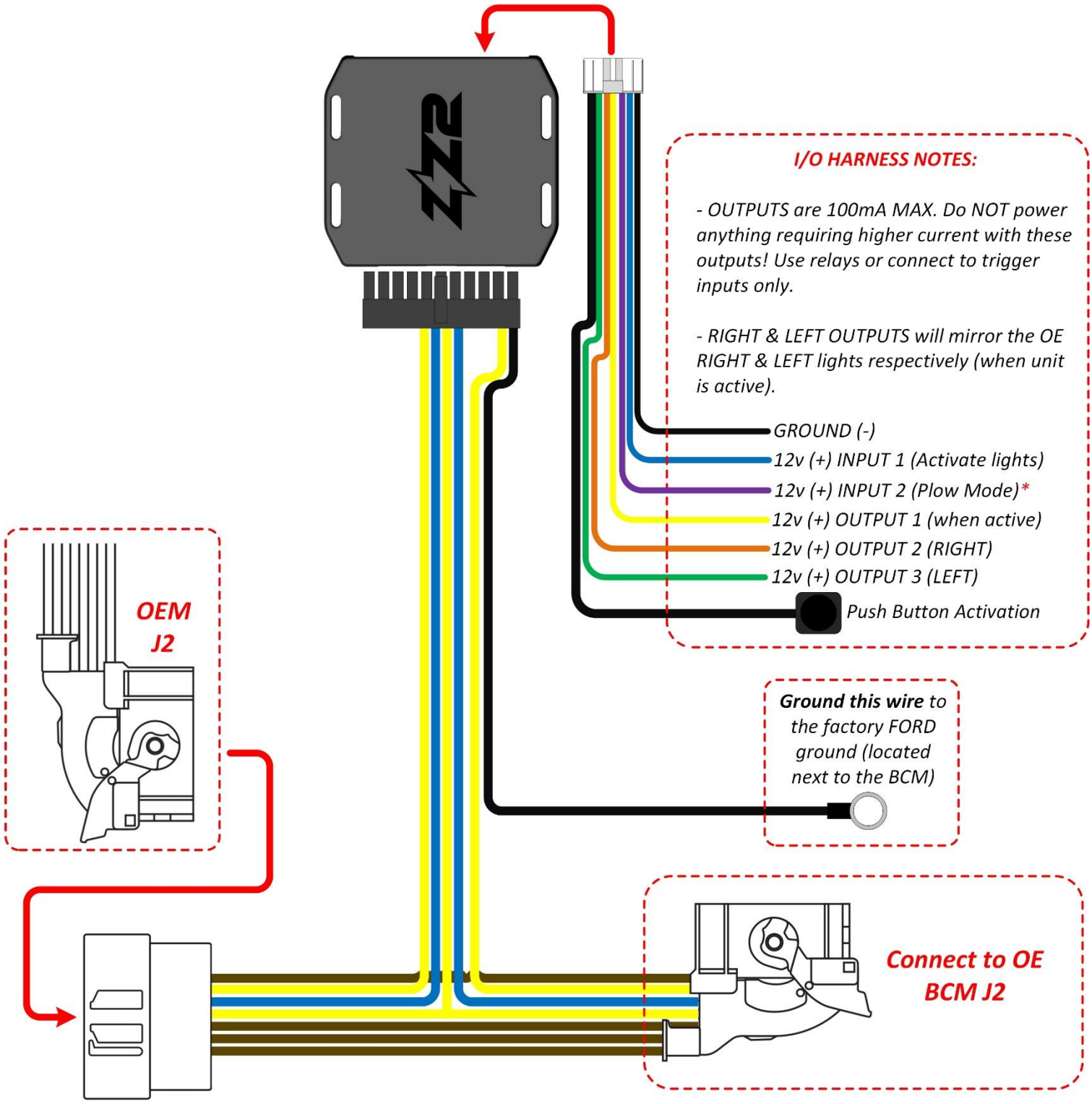

Compatible Vehicles:

MAKE	MODEL	YEAR
Ford	F150	2024
	F250, F350, F450	2023+

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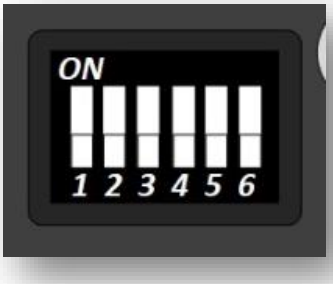
DIP Switch Settings



Located on the back side of the unit is a bank of (6) dip switches – you will need a pick-tool to adjust.

All dip switches are LIVE, do not unplug the module to adjust.

DIP	1	2	3	4	5	6*
ON	***Disable*** *High Beam*	***Disable*** *Low Beam*	***Enable Reverse Light*** *(May cause reverse camera to show on screen while active)*	***For HALOGEN equipped*** *(slower)*	***Disable STROBE Mode*** *(Removes strobe every 3 seconds)*	*BRAKE + SIGNAL* ***SEPARATE***
OFF	***Enable*** *High Beam*	***Enable*** *Low Beam*	***Disable Reverse Light***	***For LED equipped*** *(faster)*	***Enable*** *STROBE Mode*	*BRAKE + SIGNAL* ***TOGETHER***

***DIP 6 ON:** For vehicles with separated Brake light and turn signal bulbs (separate housings, rear of vehicle)
***DIP 6 OFF:** For vehicles with Brake light and turn signal bulbs combined into the same housing (same housing, rear of vehicle)

ZW-FSD Notes:

- *'Plow Mode'*, when active (INPUT 2), disables High & Low beam flashing and slows the pattern down so that the relay box (plow module) can keep up with the flashing (prevents overheating). This should be enabled whenever a plow is connected. *NOTE: this input must see 12v (+) before activating the Z-WAGZ for proper functionality.*
- When high beam is ON (high beam priority), low beam will be OFF.
- When low beam is ON (low beam priority), high beam will stop flashing.
- If low beam priority fails, disable high beam flashing (DIP switch 1 ON).
- 'Strobe Mode' is disabled automatically ***if the vehicle has limitations with turn signal commands.***
- When the vehicle is turned OFF, all flashing and unit will also deactivate.
- If Reverse camera shows up on screen when unit is active, DIP 3 (reverse) is enabled. Turn (3) OFF to disable reverse.
- High Beam Lever / External Button / INPUT 1 +12V requires ACC ON to function properly.
- When the unit is flashing, if both turn signal and brake lights are ON while the vehicle is braking, flip DIP 6.
- Priority lights (lights which when enabled from factory levers, stop flashing): HIGH BEAM / LOW BEAM / TURN SIGNALS / BRAKES / REVERSE

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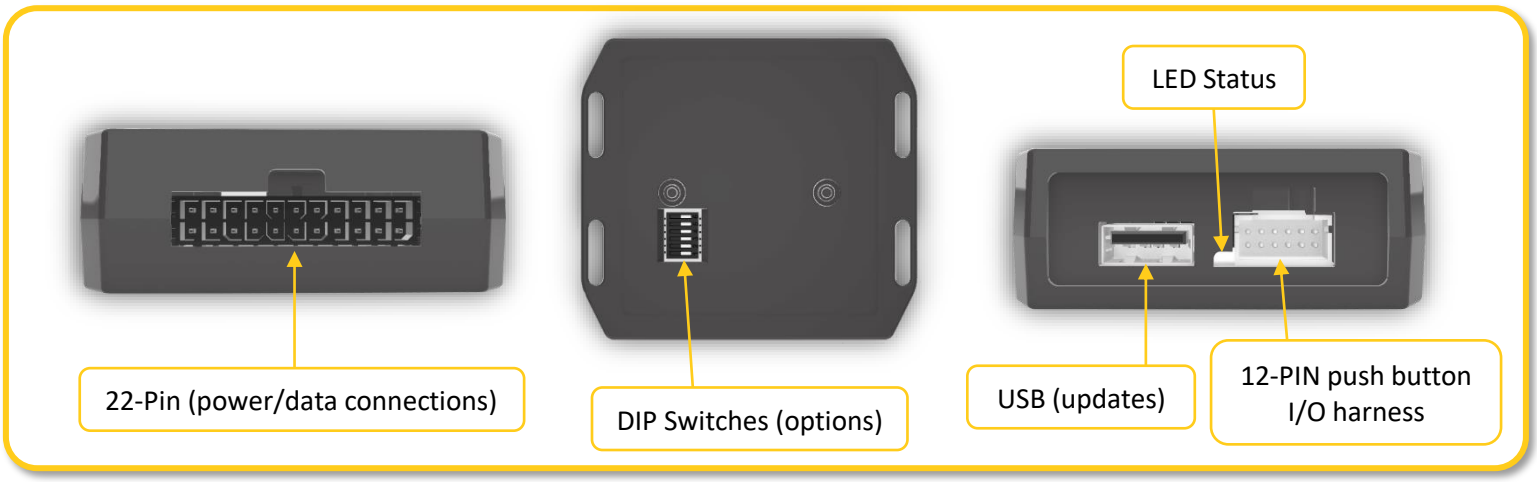

ZW-FSD Supported Lights*

FRONT LIGHTS		
SUPPORTED LIGHTS	**DIP PARAMETER**	**NOTES**
Low Beams	Dip Adjustable	--
Front Turn Signals	N/A	--
High Beams	Dip Adjustable	Model Dependent
Fog Lights	N/A	--
Driver Running Lights (DRL)	N/A	Some models may not flash if Low Beam is ON
Mirror Lights	N/A	--
REAR LIGHTS		
3rd Brake Light	N/A	Center High-Mounted
Brake Lights	N/A	--
Rear DRLs	N/A	--
Rear Turn Signals	N/A	--
Reverse Lights	Dip Adjustable	--
Plate Lights	N/A	--

*NOTE: As new variants of vehicles are released over time, some lights may not flash due to manufacturer design changes (software or the wiring to the housings themselves). The chart above is accurate for vehicles the ZW-FSD was tested on.

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ZW-FSD LED Status / Patterns

START-UP INDICATION		
Description	***LED Status***	***More Information***
Initial Wake Up	Blinks BLUE (1 time)	Upon initial power connection
Unit recognizes CAN bus (car side ONLY)	Blinks BLUE (3 times)	Upon CAN data wake
Unit recognizes CAN bus (module side ONLY)	Blinks GREEN (3 times)	Upon CAN data wake
Unit recognizes CAN bus (properly)	Binks BLUE,GREEN (x3)	Upon CAN data wake
Unit detects ACC info	Blinks GREEN (1 time)	Upon Turning Ignition ON
Unit detects GEAR info	Blinks VIOLET (1 time)	Upon switching gears
Unit detects HIGH BEAM pull OR External button press (for activation)	Solid GREEN	Upon pressing High Beam lever or provided push button
Unit receives negative response for light commands	Blinks VILOET (x3)	*--Contact ZZ2--*
Unit not receiving confirmation for light commands	Blinks RED (x1)	*--Contact ZZ2--*
When unit goes to sleep	Blinks WHITE (x1)	When CAN shuts down
CAN bus communication problem	Blinks RED + GREEN	While Z-WAGZ is activated
PATTERN INDICATION		
Description	***LED Status***	***More Information***
Pattern 1	Blinks BLUE	***BASE PATTERN***
Pattern 2	Blinks GREEN	***WATERFALL PATTERN***
Pattern 3	Blinks RED	***DOUBLE BLINK PATTERN***
POWER CONSUMPTION / ADDITIONAL SPECS		
Description	***Specification***	***More Information***
Current Draw Active:	100mA max	
Current Draw idle:	7mA max	
INPUT 1 Trigger wire act:	12v (+)	Hardwire activation trigger
INPUT 2 Trigger wire act:	12v (+)	Hardwire activate PLOW mode
OUTPUT 1: 12v (+)	100mA max	Outputs 12v (+) whenever unit is active
OUTPUT 2 (RIGHT): 12v (+)	100mA max	Mimics RIGHT turn signal pattern
OUTPUT 3 (LEFT): 12v (+)	100mA max	Mimics LEFT turn signal pattern
Trigger wire idle:	3.3V	
Current limit:	10mA	

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