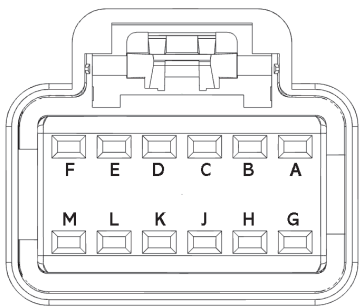
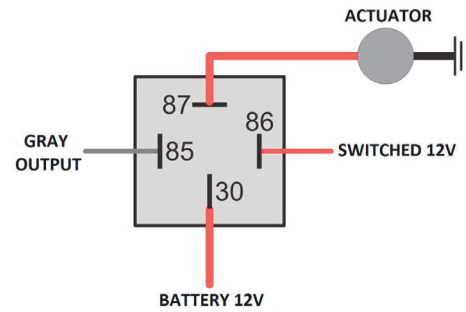


Outputs A

OUTPUTS A		
Pin	FT550 Extra Outputs	Function/Sensor
A	Blue output #9	
B	Blue output #10	
C	Blue output #11	
D	Blue output #12	
E	Yellow output #4	
F	Yellow output #3	
G	Yellow output #2	
H	Yellow output #1	
J	Red	12V input from relay
K	Black	Negative battery
L	NOT USED	
M	NOT USED	

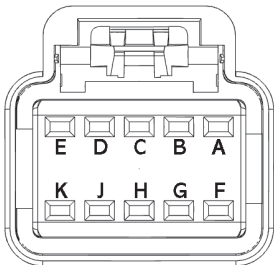



Yellow outputs are specialized outputs. They are HALF BRIDGE or PUSH PULL type outputs. This means that they can feed 5A both by negative or positive. This is important and necessary to control Electronic drive-by-wire throttle (DC motors) and stepper motor 4 wire idle control valves. They can be also used to control any type of LO SIDE or HI SIDE actuator (LO SIDE means the ECU will switch ground to activate the device, HI SIDE means the ECU will switch 12V to activate the device), noting that they'll always rest at the opposite of what they're set to trigger (If set to trigger at 12v, it'll rest at ground).

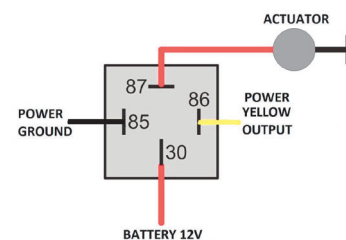
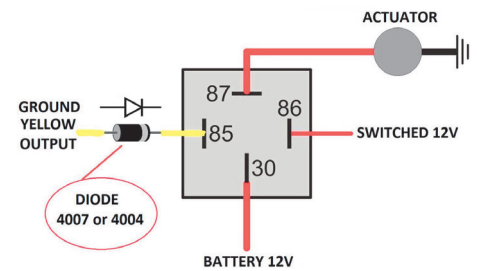
When used to trigger by ground, it's possible for the internal coil of the relay to backfeed 12v into the ECU and keep it turned on even after the ignition is turned off. To prevent this, use the same switched 12v source as the ECU for the relay coil, or change the circuit to trigger by 12v. If that is not possible, then a diode (4004 or 4007) must be wired in series with the yellow output to filter out this backfeed.

Outputs B

OUTPUTS B		
Pin	FT550 Extra Outputs	Function/Sensor
A	Gray output #1	
B	Gray output #2	
C	Gray output #3	
D	Gray output #4	
E	Gray output #5	
F	Gray output #6	
G	Gray output #7	
H	Gray output #8	
J	Red	12V input from relay
K	Black	Negative battery



Both ways of wiring this output described above, are shown in the following diagrams:



There are some relays with a built-in diode, like Hella 003437101.

If the system being activated requires a 12v trigger, the yellow outputs are capable of ground or 12v. If no yellow outputs are available, it's possible to drive a relay by ground using one of the gray outputs to get the proper 12v by following this diagram: