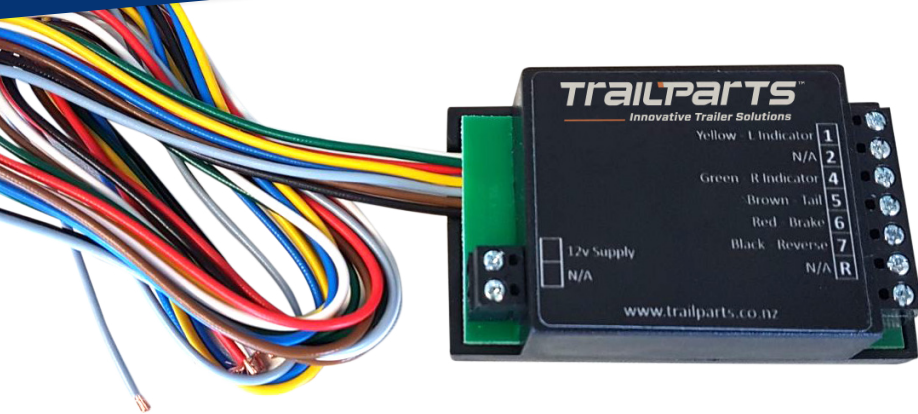


Fitting Instructions

7 Way Universal Bypass Relay including Buzzer



DESCRIPTION

This 7 way bypass relay may be used on negative earth vehicles of all types, from those that just require a simple bypass function for circuit protection or to avoid confusing the bulb failure warning systems, to those with part or full multiplexed systems and including modulated outputs (appearing as low voltages) to the various rear lamp clusters.

It is capable of detecting, analysing and rerouting modulated signals present on an increasing number of modern vehicles which would otherwise cause incorrect bulb operation, relay chatter, dimming and even non functioning of bulbs if a standard bypass relay were fitted.

DIRECTIONS FOR USE

1. Prepare the socket and cables:

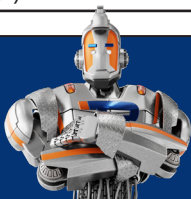
- Fit the prewired 7 pin socket (or 13 pin socket as appropriate) onto a backplate fitted to the towing hook mounting points.
- Drill a 13 mm hole (or larger dependant on the size of the multicore cable used) into the floor of the boot adjacent to the socket. Protect the bare metal with rust inhibitor.
- Slide correctly sized grommet onto the cable. Pass the cable into the boot and make a seal with the grommet at the entry point.
- Strip back a portion of the cable outer sleeve and strip the wire ends. Connect a ring terminal to the white wire.
- Route 2 sq mm cable from car battery or fuse box to the boot, fitting an inline 15a blade type fuseholder. Do not insert the fuse at this stage.

2. Make connections from relay into the car loom.

- Using scotch locks, solder joints or similar, attach the various signal wires coming from the side of the relay into the car loom, teeing in at a point close to the car lamp circuit that is being sampled and avoiding any multiplex wiring or other devices.

****** If the car has a common wire feeding tail & brake, or tail & fog, the brown and black signal wires should not be connected to this common wire. ie For a common tail & brake combination, connect only the red signal lead to the common car harness lead and tape up the brown and black. Similarly connect just the blue signal lead from the relay for a fog/tail combination.

SIGNAL WIRE	CONNECTION TO VEHICLE LOOM
Yellow	Near Side Flasher
Blue	Fog Lamp
Green	Off Side Flasher
Brown	Off Side Tail Lamp**
Red	Brake Lamp
Black	Near Side Tail Lamp**
Grey	Reverse Lamp
White	Secure firmly to vehicle chassis via ring terminal (Combine with socket earth)



3. Connecting 7 core cable (or 13 core) and power cable to the relay.

- Offer up the 7 core cable and the power cable to the relay and make secure connections into the terminal blocks on the relay according to the chart below.

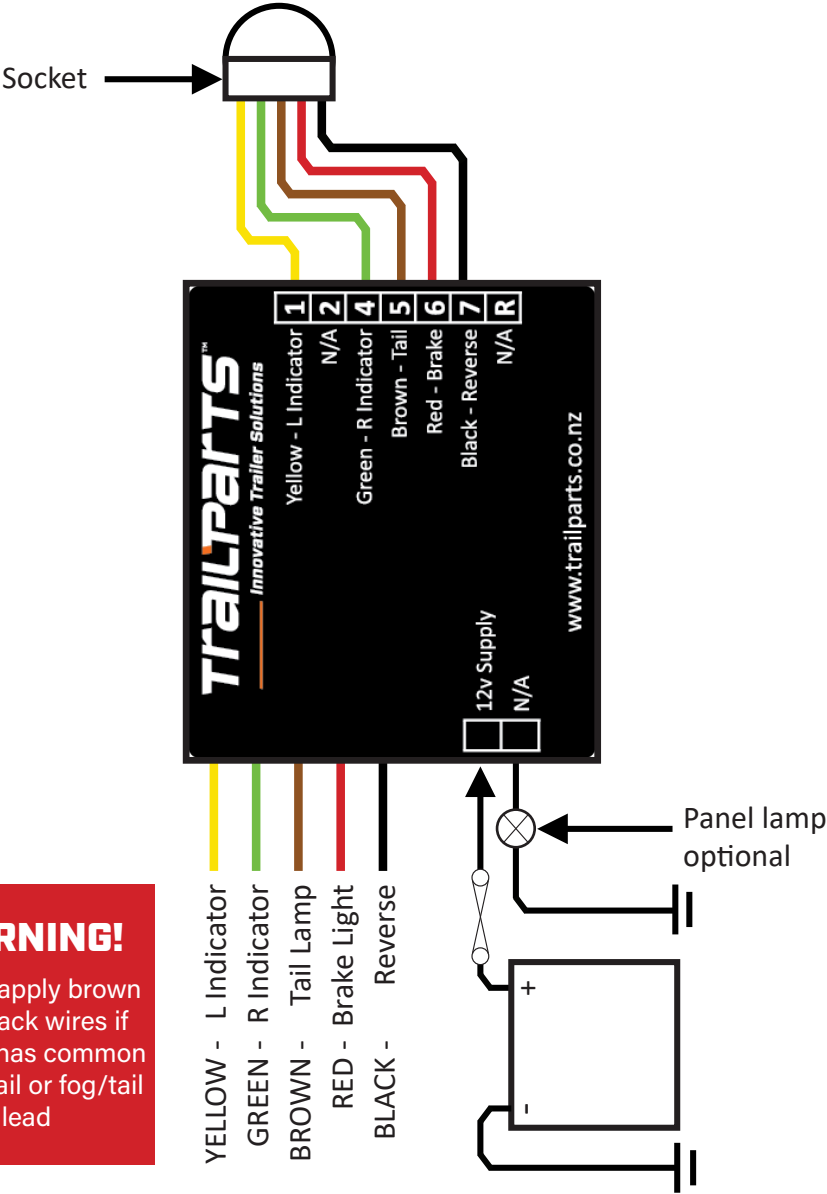
SIGNAL WIRE	CONNECTION TO VEHICLE LOOM
12v	2.0 sq mm cable from car battery or fuse box
C2	If external C2 function required, connect to panel lamp on console via fine signal wire and then from the panel lamp to earth.
1	7 Core cable Yellow Lead
2	7 Core cable Blue Lead
4	7 Core cable Green lead
5	7 Core cable Brown Lead
6	7 Core cable Red Lead
7	7 Core cable Black lead
R	13 Core cable where fitted Pink lead 7 Core 12 S Cable where fitted Yellow Lead

- The ring terminal of the white earth lead of the 7 core cable should be connected to a convenient earth lug on the chassis. The relay white earth lead may also be connected to the same earthing point. If necessary, drill and fit a new earth lug and protect with inhibitor.
- Secure the relay to the harness or similar preferably using a cable tie
- Insert the inline fuse and test. If test board is used, it should have 21w bulbs on the flasher circuits as the C2 function only works under load conditions.

WARNING!

- This relay should be fitted to negative earth vehicles only.
- The relay must be located where there is no possibility of moisture ingress. This is very important with vans where the relay should be positioned well above the lamp cluster.
- Great care should be taken if the relay is fitted to a vehicle having multiplexed circuitry, and no attempt should be made to interrupt or interfere with the BUS, the ESUs or the power cable of a multiplexed system. Power should be taken from the main fuse box or battery and signal sampling from the regular 12v system directly feeding the rear lamp clusters.

WIRING DIAGRAM



WARNING!

Do not apply brown and black wires if vehicle has common brake/tail or fog/tail lead

