

MP389 SEVEN WAY UNIVERSAL BY-PASS RELAY WITH AUDIBLE SENSOR

For use where the direct connection of towing electrics to vehicles may affect bulb failure monitoring, multiplex wiring, or other electronic systems.

FITTING INSTRUCTIONS

- Suitable for 12v negative earth vehicles only.
- Examine the car carefully to see that all electrical circuits are working correctly and that no warning lights are showing.
- Follow the vehicle manufacturer's instructions, decide whether to disconnect the car battery, or remove fuses. Take into account: Would disconnection disrupt memory circuits, alarms, engine management, audio etc. (You may need a device to maintain these circuits if the battery is disconnected.
- Can you make the necessary electrical connections safely with the battery connected?

The relay is not a waterproof device and should be fixed in a dry ventilated space in a position providing protection from physical damage and close to the trailer socket. Drip loops should be formed in the cables connected to the relay to avoid water ingress.

When wired as below the relay switches power directly from the vehicle battery to operate the trailer lamps and draws typically around 1 milliamp from the vehicle lighting circuits, this current is not detected by vehicle monitoring or switching devices.

1. Locate the wiring to the rear lights of the vehicle (usually on one side) and select a suitable point at which to mount the By-pass relay and make the necessary relay and 7 core cable connections. Connections must be made to conductors carrying a 12 Volt supply to the bulbs and not to data cables.
2. If access for the socket cables is not provided, drill suitable holes in the boot floor, close to the socket mounting point on the tow bar, taking care not to damage wires, pipes or vehicle bodywork. Remove any sharp edges from the holes with a file, treat with rust inhibitor and fit suitable grommets.
3. Feed the cables from the towing sockets through the grommets to the area selected for location of the relay and secure.
4. The White wire of the socket cable must be connected to a good earth, connection should be made to the vehicle chassis or bodywork, a good connection is important which should be bare metal, free from paint or rust.
5. Relay Terminal "+12V" - If the vehicle manufacturer provides a spare fuse way suitable for towing electrics, this should be used. Alternatively run a power supply cable 28/0.3 (2.0mm²) from the battery to the terminal "+12V" of the relay, fitting a 15 amp in line fuse holder close to the battery, this supply should not feed any other circuit. The cable should be routed where it will not be cut or crushed, particularly attention should be paid to places where the cable passes through bulkheads etc. **(do not insert fuse until the installation is complete).**
6. Relay Terminal "GND" - Connect to a suitable good earth, connection should be made to the vehicle chassis or bodywork, a good connection is important which should be bare metal, free from paint or rust.
7. The 7 long signal wires of the vehicle signal lead must be connected to the individual vehicle lamp circuits (avoiding any data wiring or other devices) as shown in the table below. Identify the function of individual vehicle rear lamp wires by tracing back to the bulb holder or using a digital meter to detect 12 Volt supply.

Socket Pin No.	Cable Colour	to	Relay Terminal Number
Pin 1	Yellow		1
Pin 2	Blue		2
Pin 3	White		Suitable good Earth
Pin 4	Green		4
Pin 5	Brown		5
Pin 6	Red		6
Pin 7	Black		7
Pin 8	Pink (Yellow)		8

Relay Signal Wire Colour	to	Vehicle Circuit
Yellow		L/H Flasher
Blue		Fog Lamp
-		-
Green		R/H Flasher
Brown		R/H Tail light
Red		Brake Lights
Black		L/H Tail Lights
Pink		Reverse

8. Relay output "BUZZER" - The relay is equipped with an internal buzzer to provide an audible signal when the trailer indicators are working correctly. In addition a dashboard warning LED repeater light (MP3894B) or an external piezo buzzer (MP3892B) can be plugged into the terminals on the relay marked "BUZZER".
9. Check all wiring connections and if correct, reconnect the battery or replace fuses and connect the auxiliary (trailer) lighting. Check that both the vehicle lights and the auxiliary lights function correctly. Auxiliary (trailer) indicator lamps should flash in unison with vehicle indicator lamps and the buzzer / panel lamp should operate. If any lamp fails to operate, check all wiring connections and the bulb. The buzzer will not operate if the auxiliary (trailer) lighting is not connected or if the auxiliary (trailer) indicator lamps fail.
10. The MP290B includes short circuit protection on each output circuit. When a short circuit is detected, the faulty circuit is turned off until the fault is repaired. When the fault has been repaired the circuit will turn on again automatically. Only the faulty circuit will be affected and the 15 Amp supply fuse will not be affected.
11. Bulb failure warning lights will only operate if a fault occurs on the towing vehicle. With the exception of indicator circuits trailer lamps are not monitored.

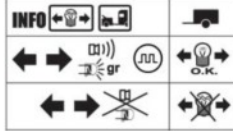


WHO

Catalogue No.
MP389B

E20 10R-04 3694

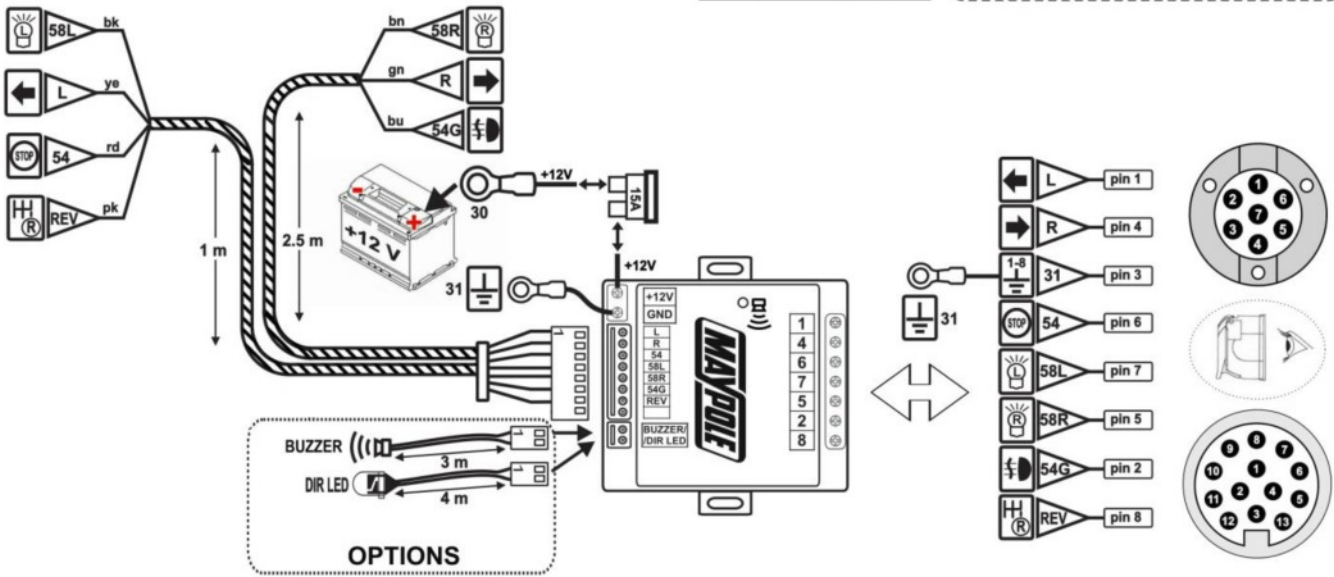
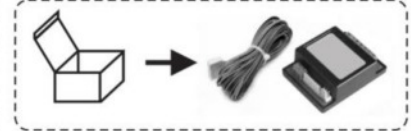
**! DIRECTION INDICATOR
BUZZER OR LED OPTIONS**



	bk	wh	bn	gn	rd	ye	bu	pk	gy
GB	black	white	brown	green	red	yellow	blue	pink	grey

	max	min
1/L	10W + 21W	0,50 mm ²
4/R	10W + 21W	0,50 mm ²
5/58R	3 x 5W	0,75 mm ²
7/58L	3 x 5W	0,75 mm ²
6/54	3 x 21W	0,75 mm ²
2/54G	21W	0,50 mm ²
8/REV	21W	0,50 mm ²
3/GND	-	1,50 mm ²
+12V	-	2,50 mm ²

KIT CONTENTS



www.maypoleltd.co.uk

In case of difficulty in fitting this product, advice can be obtained by consulting an auto electrician or phoning 028 867 65354