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FITTING INSTRUCTION

ZR1328A Batch 0000-PCT-00	**Towing Interface Relay** **(7 Channels, Audible Monitor with C2 Output, Resettable Fuses, Power On LED Indicator)** SUITABLE FOR USE ON 12V NEGATIVE EARTH VEHICLES ONLY (Not Jaguar S or XJS) e11 02-0830

PRODUCT DESCRIPTION

Prevents any faults on, or the additional load of, the towed unit's road lights system damaging the towing vehicle's road lights system. Designed to switch power directly from the towing vehicle's battery/alternator, to the towed unit's road lights using very small signals from the towing vehicle's road lights system, without the towing vehicle's check control sensory systems being adversely affected. Includes a built in audible device (and C2 output pin) which buzzes when the towed unit's directional indicators operate. Includes resettable fuses on the 12N socket indicator and side light outputs and an LED 'Power On' Indicator.

- multiplexed bulb failure, digital controlled lighting
- dual function/complex low voltage lighting systems

SUITABLE FOR USE ON 12V NEGATIVE EARTH VEHICLES ONLY

COMPONENTS

ITEM	QTY	DESCRIPTION
A	1	ZR1328A Towing Interface Relay (7 Channels, Audible Monitor with C2 Output, Resettable Fuses, Power On LED Indicator)
B	7	Red IDC Tap connectors
C	7	Connection Identification Warning Labels

FITTING PROCEDURE

⇒ Before commencing with installation please read all pages of this fitting instruction and product information sheet carefully.

⇒ Ensure vehicle circuits are de-energised, isolated and safe to work on (Always follow vehicle manufacturer's instructions).

⇒ Locate the vehicle's wiring harness.

⇒ Connect terminal A of the ZR1328A to vehicle earth (-0volts), using 9/0.3mm wire.

⇒ Connect terminal B of the ZR1328A to +12volts dc supply, through a 15 amp fuse, using 28/0.3mm wire. The source of supply for the ZR1328A should not feed any other system or load. The source of +12volts dc should be a spare fuse on the vehicle's fuse board (Check vehicle manual).

⇒ Using a high impedance automotive tester or digital volt meter check that vehicle +12volts dc is present on terminal B. The "Power On" LED should now be lit. (**WARNING** Only test for voltages through the wire aperture on the terminal blocks and not the screw head.)

⇒ Connect each of the ZR1328A's control input wires to the vehicle's rear road lights, as specified in the fitting diagram below using the red IDC tap connectors supplied. Test the appropriate output terminal for +12volts dc after each connection. (**WARNING** Only test for the vehicle road light function wires using a high impedance automotive tester or a digital volt meter.)

⇒ When all vehicle road light input wires have been connected and the output terminals have tested OK, connect the 12N socket 7 core cable, and the reversing light wire in the 12S socket 7 core cable to the ZR1328A output terminals as specified in the fitting diagram below.

⇒ The connection identification warning labels should now be attached by folding around the relevant wires adjacent to the joints on the vehicle's wiring loom. (Remember to include contact details on warning label).

⇒ Reconnect vehicle power (Always follow vehicle manufacturer's instructions.)

COMMISSIONING AND TEST PROCEDURE

1. Switch the vehicle engine off and remove the 15 Amp supply fuse to the ZR1328A.
2. Re-insert the 15 Amp supply fuse, and check the "Power On" LED is lit.
3. **Start the vehicle engine** and turn on and off the vehicle road lights in the following sequence:-
   Side lights, Brake lights, Left indicator light, Right indicator light, Fog lights, Reversing lights (12N/12S towing electrics installations only)
4. As each vehicle road light function is switched on in the sequence indicated above, test the corresponding 12N/12S socket output (as shown in the fitting diagram), +12 volts dc should be measured on each corresponding output.

The ZR1328A contains electronic resettable fuses on the 12N socket outputs d to g. if any of the relevant 12N/12S socket outputs fails to be energised +12volts dc, turn off the vehicle road light function that is being tested, disconnect the corresponding socket road light function wire at the ZR1328A terminal, and re-test the ZR1328A output terminal. If the output terminal is measured +12volts dc, this shows that a fault exists in the 12N/12S socket wiring. Replace or repair socket and/or cable as necessary and repeat from stage 3 of the Commissioning and Test Procedure.

5. With the vehicle engine running, commission the installation by plugging a 12N socket tester or trailer test board into the 12N socket. (**Note** some 12N socket testers do not trigger the directional indicator audible warning.) The complete 12N towing electrics installation can now be tested. The operation of the tester or test board should mirror the vehicle's rear road light operation. The same test operation should then be undertaken on the 12S reversing light output using an appropriate 12S socket tester.

It is important to remember that the ZR1328A incorporates electronic resettable fuses on the 12N socket outputs d to g. If at this stage of commissioning the 12N or 12S socket test equipment indicates that one of the 12N socket outputs or the 12S socket reversing light output is not energising, turn off all the vehicle road light functions, disconnect the socket tester and test the socket road light function output that was not energising using a high impedance automotive tester or a digital volt meter, if the socket output is now found to be energised +12volts dc (when switched on), this shows that a fault exists in the socket tester/trailer board. Repair or replace as necessary.

6. All the vehicle road light functions should now be turned on together to 'pressure test' the complete ZR1328A installation. All input cables and terminations should be checked for 'cool' operation. All the road light functions should be seen to operate on the 12N socket tester. When a trailer test board or trailer is connected to the 12N socket and the directional indicators operate, an audible indication of operation should be heard and the C2 pin output should become energised. This output is for use with a second buzzer or LED dashboard warning light.

If the customer's towed unit's lights fail to operate correctly, turn off all the vehicle road light functions, disconnect the customer's towed unit and test the socket road light function output that was not energising using a high impedance automotive tester or a digital volt meter, if the socket output is now found to be energised +12volts dc (when switched on), this shows that a fault exists in the customer's towed unit.

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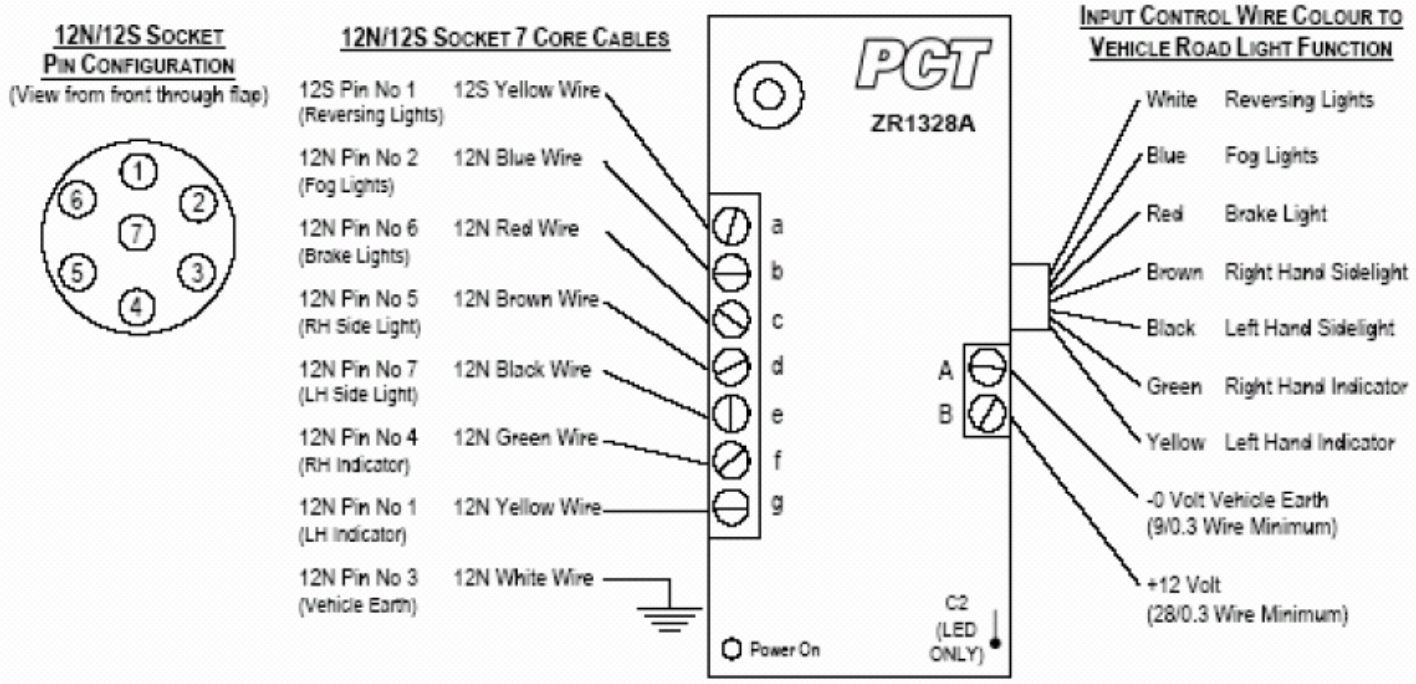
FITTING DIAGRAM



The C2 output pin becomes energised at the same time as the audible buzzer sounds. The C2 output pin is for use with a second buzzer or an LED dashboard warning light.

PCT Automotive recommends:-

- ZL1083 LED Warning Light
- ZR1018 Mini Buzzer
- ZR1019 Mini Buzzer in Box