



RELAY TESTER

24692





1.

User Manual for: Relay Tester

Stock No: 24692 Part No: FTRT

Read this manual in full before using this product and retain it for future use. Always use the latest version of the manual.

Please visit **drapertools.com/manuals** for the latest version.

2. Product Introduction

2.1 Intended Use

This tester is designed to carry out tests on three popular 4-Pin and 5-Pin automotive relay types; suitable for most vehicles with 12 or 24 voltage systems. An adaptor is also supplied for use with larger relays.

Any other application beyond the conditions established for use will be considered misuse. Draper Tools accepts no responsibility for improper use of this product.

This product is suitable for use by enthusiasts and tradespersons alike.

2.2 Specification

Stock No.	24692
Part No.	ETRT
Power Supply:	12V or 24V vehicle battery
Relay configuration:	4-Pin & 5-Pin
Net Weight:	296g
Tester Dimensions (L X W X H):	140 X 90 X 35mm
Positive/Negative Lead Length:	1500mm
Working Temperature:	0 to 50°C
Storage Temperature:	-20 to 60°C

3. Health and Safety Information



Important: Read all the Health and Safety instructions before attempting to operate, maintain or repair this product and retain for future reference. Failure to follow these instructions may result in injury or damage to the user, the product or the vehicle.



WARNING! Always follow the vehicle
manufacturer's instructions, warnings and
service procedures. Familiarise yourself with
the fuses and relays layout, normally shown on
the fuse and relay housing cover or in the
vehicle manual before using this tester.



WARNING! Use extra caution when working with high voltages. If in doubt consult with a qualified electrician.

- Wear eye protection during use of this tester.
- ALWAYS switch off the engine and ignition before removing or replacing relays or fuses to prevent any hazards or damage.
- Always replace a relay with an identical relay, never use one that is similar, but may perform different functions.

- Always replace a fuse with the identical fuse and rating and never use one with a different rating.
- If the engine is running use the tester in a well-ventilated area and avoid breathing in the exhaust emission and vapour. DO NOT smoke in the vicinity and keep away from flames.
- DO NOT exceed the maximum voltage specified for the tester.
- DO NOT use this device if the tester or cables are damaged in any way.
- DO NOT get water inside the case and do not use with wet hands.
- DO NOT attempt to repair or service this device; it contains no user-serviceable parts.

4. Symbols



Read the instruction manual



Warning!



Wear suitable eye and face protection



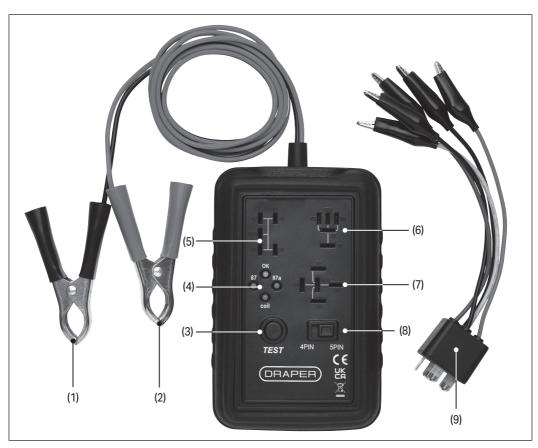
WEEE - Waste Electrical & Electronic Equipment

Do not dispose of Waste Electrical & Electronic Equipment in with domestic rubbish

5. Identification

Carefully remove the product from the packaging and examine it for any signs of damage that may have occurred during shipment. If any part is damaged or missing, do not attempt to use the product.

Please contact the Draper Helpline; contact details can be found at the back of this manual.



- (1) Black negative (-) battery clip
- (2) Red positive (+) battery clip
- (3) 'TEST' button
- (4) Test result indicators
- (5) Relay socket 1
- (6) Relay socket 2
- (7) Relay socket 3

- (8) 4-Pin & 5-Pin switch
- (9) Relay adaptor *
 - 87 Blue
 - 87A Yellow
 - 86 Black
 - 30 Red
 - 85 Black

Please visit drapertools.com for our full range of accessories and consumables.

^{*} Pin numbers marked on relay adaptor



Important: Before operating this product, read and understand all the safety instructions listed in this manual. Ensure that the product is fully assembled and correctly prepared for use.



CAUTION!

- To prevent damage to the relay and to obtain accurate results, ensure the specified voltage of the relay matches the vehicle battery connected.
- Ensure the correct pin switch position is selected and matches the number of pins on the relay being tested.
- Some relays have integrated diodes which require the correct polarity to Pin '85'and '86'to enable the coil. If the relay diode is reversed the adaptor may be required.

6.1 Relay Testing

1. Ensure the engine is switched off.



Fig. 1

2. Select the correct relay pin type by moving the switch (8) to either the '4-Pin' or '5-Pin' position. (Fig. 1)

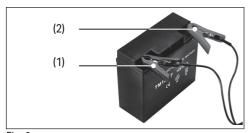


Fig. 2

3. Then connect the black (-) clip to the negative terminal of the car battery and the red (+) clip to the positive terminal of the battery. (Fig.2)

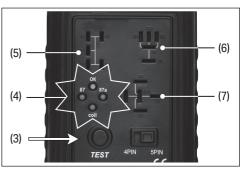


Fig. 3

- Plug the relay to test into the relevant relay socket (5), (6), (7) and press and hold the 'TEST' button (3) to start the test. (Fig.3)
- During testing the indicators (4) will keep flashing until the test is complete. Do not release the button until the indicators show the test result. (Fig.3)

Diagnostic Testing		
LED Indicators (4)	Relay Condition	Action Required
' OK ' lit	Relay functioning correctly.	None
'87' or '87a' remains lit	Either Pin No'87' or '87a' has short circuited with other pins.	Replace relay and check the relative connectors. Check voltage is passing through pin normally.
'87' or '87a' flashing	Connection of Pin No'87' or '87a' is poor due to open loop or poor conductivity.	Replace relay and check the relative connectors. Check voltage is passing through pin normally.
'Coil' is flashing	Relay coil between Pin No'85' or '86' is open loop.	Check the supplied voltage matches the relay requirements.
Coil' remains lit	Relay coil between Pin No'85' or '86' has shorted.	Check the relay datasheet as may require a correct polarity connection to activate the coil. Use the relay adaptor supplied.

6. Operation

6.2 Using the Relay adaptor (9)



CAUTION!

- For correct operation ensure the pin number on the relay adaptor matches the connected test relay.
- To prevent short circuiting between the clips, ensure the insulated sleeve is positioned to prevent the conductor being under exposed.
- 1. If the test relay pin is too large to fit the tester sockets use the relay adaptor supplied.



Fig. 4

- 2. Plug the relay adaptor (9) into 'SOCKET 3' (7). (Fig.4)
- 3. Connect the adaptor clips to the relays being tested according to the pin numbers.
- 4. Press the 'TEST' button (3) to start the test.

7. Maintenance and Disposal



- Wipe the case with a damp cloth and a mild detergent. DO NOT use solvents or abrasives to clean the tester.
- At the end of its working life, dispose of the product responsibly and in line with local regulations.
 Recycle where possible.
- DO NOT dispose of this product with domestic waste; most local authorities provide appropriate recycling facilities.



8. Warranty

24 months from date of purchase.

Visit drapertools.com/warranty for full details.

Contact Details

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Please contact the Draper Tools Product Helpline for repair and servicing enquiries.