



## TEST MANUAL

### 6RJ15-10 H/ER Contacts & Flag

### HIGH SPEED TRIP RELAY

Issue Level	Date	Summary of changes
A	02/05/2005	Initial issue.

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**1. ASSOCIATED DRAWINGS**

Refer to Job Card and associated documentation.  
Relay Connection Diagram

**2. HIGH VOLTAGE TESTING**

- a) Apply 2KV RMS 50Hz between terminal Groups 1 and 2 in Table 1 for 1 minute.
- b) Apply three 5KV 1/50us pulses of each polarity between terminal Groups 1 and 2 in Table 1.

**TABLE 1**

**GROUP 1**

Coil  
Each contact set

**GROUP 2**

All other connections and Frame  
All other connections and Frame

**PASS**

**3. TEST PROCEDURE**

Check the job card for any special requirements of the relay to be tested.

- a) Connect the relay to a dual channel storage oscilloscope; connect the CH1 probe across the contact set as per the diagram in figure 1 and CH2 probe to the trigger input.
- b) Apply the auxiliary supply and adjust the trigger and vertical sensitivity on the CRO to obtain a waveform which displays the time between the trigger point and the contact closure.
- c) Ensure that this time is less than 10mS at nominal voltage.
- d) As the relay has an electrical reset, apply nominal reset volts to the reset input this will then reset the relay after each operation.
- e) Repeat this test for each contact in turn.

**PASS**

- f) Reduce the auxiliary voltage input to 65% on nominal volts and by repeating one operation as in c) above ensure that the relay operates fully.

**PASS**

**4. OPERATE CURRENT**

- a) On the constant voltage & current limited power supply, set the voltage to nominal and turn the current control to its minimum, then bring the current up slowly and watch the current reading on the power supply meter. Note the current at which the relay operates fully ( latched), this must be greater than 50mA.

**\*\*Note:-** The test is performed as a slow ramp to ensure that the power supply does not suffer from voltage sag or current limit that could happen by the inrush if a pre-adjusted step input was used.

- b) Ensure that the operated burden is zero.

**PASS**

**6. ELECTRICAL RESET**

- a) Apply 65% of nominal voltage to the electrical reset input and ensure that the relay contacts and flag can be remotely reset.

PASS

**7. HAND RESET**

- a) Operate the relay then press the hand reset button and ensure that the contacts and the flag reset correctly.

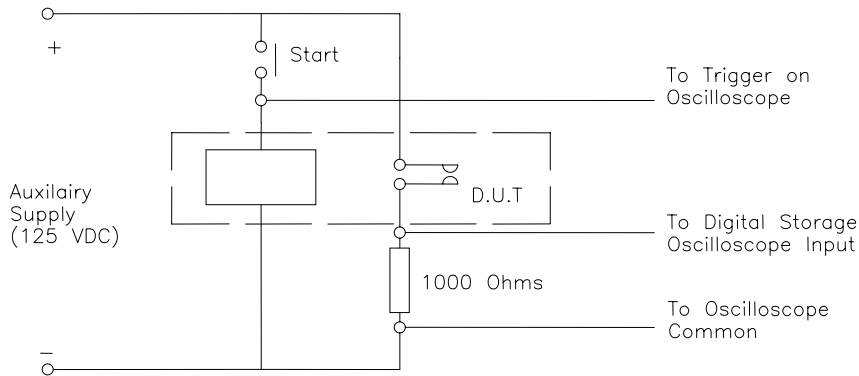
PASS

**8. GENERAL & FUNCTIONAL**

- a) Check that the relay is electrically sound and mechanically robust as per Standard Inspection & Test Schedule 903-000-026.

PASS

**CONTACT TEST SETUP**



Contact Test Setup. Pictorial representation shown actual schematic contains switches and various components.

**Figure 1**

TESTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_