



Order Number

Serial Number

PRODUCT/TEST MANUAL

3A32K25

ITR INTERTRIP SEND AND RECEIVE RELAY

Issue Level	Date	Summary of changes
B	04/02/1998	Initial issue.
C	9/09/2002	TFA was 168948
D	10/04/2006	Added timing description to receive element
E	28/04/2006	Removed 5kV Impulse and replaced it with 1000Volt Megger test
F	20/01/2009	Update for TFA issue D
G	26/08/2013	Update for TfA issue E

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1. ASSOCIATED DRAWINGS

172-032-125 Wiring Diagram
 TfA 062240 Issue E 08/09/09

2. INSULATION RESISTANCE CHECK

Check the insulation resistance at 500VDC for the following cases in Table 1. Note that the resistance shall be **no less than 100MΩ**.

Table 1

Terminals A	Terminals B
5	1&3, 10&12 , 17&19
1&3	5, 10&12 , 17&19
10&12 ,	5, 1&3, 17&19
17&19	5, 10&12 , 17&19
All	Earth

3. HIGH VOLTAGE TESTING

Apply 2kV RMS 50Hz between terminals as in Table 1 above for 1 minute.

Apply three 5kV 1/50us pulses of each polarity between terminals as in Table 1 above.

3. TEST PROCEDURE

3.1 SEND ELEMENT (S)

a) Check coil resistance is **200 Ω +/- 10%**.

Ω

b) Check that relay **operates at < 8V DC and > 5V DC**

V

c) Energise the SEND coil by applying 20VDC between terminal 1 (+) and 3 (-).

d) Check that the time for the armature operated contacts to close by **measuring across terminals: 5 &19 (20R), 3 & 17 (20R) and 1&5 (0R)** is as follows:

Timing > 140ms at 20 V DC

Check that the coil power on 1& 3 is de-energised by its coil series flag operated contact .

ms

3.2 RECEIVE ELEMENT (R)

- a) Check coil resistance is 200 Ω +/- 10%.

Ω

- b) Check that relay operates at < 8V DC and > 5V DC

V

- c) Energise the RECEIVE coil by applying 20VDC between terminal 19 (+) and 17 (-).

- d) Check that the time for the armature operated contacts to close by measuring across terminals: 12&10 (0R), and 3 & 17 (20R) is as follows:

Timing < 70ms at 20 V DC

Check that the coil power on 1 & 3 is de-energised by its coil series flag operated contact .

ms

- d) Apply AC withstand of 85 - 90 VAC 50Hz to the receive element.
Ensure element does not pick up under 85VAC when the voltage to the coil is increased slowly.

OK

4. GENERAL & FUNCTIONAL

- a) Check that relay nameplate is engraved

INTERTRIP RELAY
RECEIVE SEND

and that the relay base is engraved with "ITR" and the stockcode number 62240.

- b) Check that relay is shockproof and that the flag resetting mechanism operates correctly.

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

PASS

TESTED BY: _____ DATE: _____