



172-010-905
Issue A 05/05/1997
Sheet 1 of 5

Order Number

Serial Number

PRODUCT / TEST MANUAL

3A10K5

AC AUXILIARY RELAY

Issue Level	Date	Summary of changes
A	05/05/1997	Initial issue.

Due to RMS continuous product improvement policy this information is subject to change without notice.

Document updated	Checked	Registered	.pdf file created	.pdf uploaded to web site

1. DESCRIPTION OF RELAY

The 3A10K5 is designed to be used as an AC auxiliary relay. It is a dual element unit mounted in a standard back connected enclosure. Each relay element has a two resistors connected in series with the coil and the junction of the two resistors are brought out to external terminals. This allows the relay to be used on supplies of 110 volts and 63.5 volts simply by changing wiring to these terminals.

2. SPECIFICATION

AC Auxiliary Supply	110 & 63.5 Volts AC nominal
Auxiliary Supply Tolerance	85% to 110% of nominal
Supply Burden	
110 volts	Approximately 8 VA
63.5 volts	Approximately 5 VA
Output Contacts	2 changeover contacts/relay

Output Relay Contact Ratings

Make and Carry Continuously

3000 VA AC resistive with maximums of 660 Volt and 12 Amp
 3000 VA DC resistive with maximums of 660 Volt and 12 Amp

Make and Carry of 0.5 Second

7500 VA AC resistive with maximums of 660 Volt and 30 Amp
 7500 VA DC resistive with maximums of 660 Volt and 30 amp

AC Break Capacity

3000 VA AC resistive with maximums of 660 Volt and 12 Amp

DC Break Capacity (Amps)

Voltage			24V	48V	125V	250V
Resistive rating		a	12	1.5	0.5	0.25
		b	12	12	10	5
L/R=40mS	Maximum break	a	12	1	0.4	0.2
		b	30	15	5.5	3.5
	1K operations (N3 Rating)	b	12	12	5	2.5

a = Without magnetic blowouts b = With magnetic blowouts

* As tested by Powernet Yarraville laboratories in Victoria.

2. SPECIFICATION (Cont)

Enclosure

VYT20

Insulation Withstand

In accordance with AS2481-1981 (Clause 5-4), 2KV 50Hz between input and frame, output and frame and between output and input. In accordance with AS2481-1981 (Clause 5-4), 1.2/50 5KV impulse between each terminal and earth, between circuits not normally connected together and between terminals of the same circuit.

3. TEST EQUIPMENT REQUIRED

AC Variable Voltage & Frequency Source
HV Test Equipment

4. ASSOCIATED DRAWINGS

Wiring Diagram 172-010-105

5. HIGH VOLTAGE TESTING

Apply 2KV RMS for one minute between terminals groups 1 & 2 in Table 1.

Apply three 5KV $1/_{50}$ uS pulses of each polarity between the terminal groups 1 & 2 in Table 1.

TABLE 1

GROUP 1

2,3,4,6,7,9,10,11,12

2,3,4,6,7,9,17,18,19

2,3,4,13,14,16

GROUP 2

1,5,8,13,14,16,17,18,19

1,5,8,10,11,12,13,14,16

1,5,6,7,8,9,

6. TEST PROCEDURE

- a) Apply AC to terminals 7 & 9, adjust amplitude of AC voltage until the relay picks up. This voltage is to be 50 volts +/- 5%. If not adjust relay to ensure it meets this requirement.

Actual Volts

- b) Reduce the AC voltage slowly until the relay drops out. This voltage is to be 10 volts +/- 5%. Adjust relay to meet this requirement.

Actual Volts

- c) Repeat test (a) but using terminals 14 & 16. Record results as before.

Actual Volts

- d) Repeat test (b) above and record the results.

Actual Volts

- e) Check that the relays operate on 63.5 volts when this voltage is applied on terminals 6 & 9 for relay one and 13 & 16 for relay two. This test is to ensure the voltage tap point is wired correctly.

7. GENERAL & FUNCTIONAL

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

PASS

TESTED BY: _____

DATE: _____

8. CONNECTION DIAGRAM

