

Order Number

Serial Number

## PRODUCT / TEST MANUAL

**3A200K13 DABAB(2M2B)**

**PILOT RECEIVE RELAY**

<b>Issue Level</b>	<b>Date</b>	<b>Summary of changes</b>
A	22/03/2005	Initial issue.

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

<b>Author</b>	<b>Checked &amp; Registered</b>	<b>.pdf file created</b>	<b>Released</b>
ERL	DG	DG	

**1. DESCRIPTION OF RELAY**

The 3A200 was designed to be used as a copper wire pilot receive relay. The relay has a high immunity to induced AC, which makes it ideal for this application. The special design includes a copper sleeve, which is wound on the core of the relay prior to the winding of the coil and also includes a bypass capacitor across the coil to further enhance the AC rejection feature. It will give positive operation on pilots of 2000 ohms loop resistance and is immune to AC voltages up to 300. The relay is fitted with a hand reset operation indicator.

**2. SPECIFICATION**

DC Auxiliary Supply	110 Volts DC nominal
Auxiliary Supply Tolerance	85% to 110% of nominal
Supply Burden	Approximately 2 Watts
AC withstand	Immune to AC voltages to 300 volts
Operate time	Approximately 60 milliseconds
Output Contacts	3 normally open + 1 normally closed
Operation indicator	Hand reset mechanical flag

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	125 V	250V
Resistive rating		a	12	1.5	0.5	0.25
		b	12	12	10	5
L/R=40 mS	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.

Enclosure

2M28

Insulation Withstand  
 2KV

In accordance with AS2481-1981 (Clause 5-4),  
 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**

DC Auxiliary Supply  
AC Variable Voltage & Frequency Source  
HV Test Equipment

**4. ASSOCIATED DRAWINGS**

Wiring Diagram            172-200-113

**5. HIGH VOLTAGE TESTING**

Apply 5KV RMS for one minute between terminals groups 1 & 2 in Table 1.

Apply three 5KV <sup>1</sup>/<sub>50</sub> uS pulses of each polarity between the terminal groups 1 & 2 in Table 1.

<b>TABLE 1</b>	
<u><b>GROUP 1</b></u>	<u><b>GROUP 2</b></u>
27 & 28	17,19,18,20,21,23,22,24
All Terminals	Frame

**6. TEST PROCEDURE**

- a) Apply 300 volts AC to terminals 27 & 28, relay should not operate.
- b) Remove the AC voltage.
- c) Apply nominal voltage in series with a 2700-ohm resistor to 27 & 28, relay should now pick up. Adjust armature travel or spring tension to achieve pick up.
- d) Check operation of relay at specified minimum and maximum DC auxiliary.  
  
Minimum 85% =        106VDC  
Maximum 110%=       137VDC
- e) Check flag operates at minimum auxiliary voltage.

**7. GENERAL & FUNCTIONAL**

- a) Check that flag self resets.
- b) 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

CASE EARTH

