



172-201-800

3A201 PILOT SEND RELAY

Product Test Procedure

Version Control

Issue	Date	Summary of Changes	Author
A	27/08/2010	Update for new format	MVL
B	18/05/2012	Update to timing specification	MVL

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Author	Checked	PDF file created	Registered & Released
MVL	MLD	MLD	DW



1. DESCRIPTION OF RELAY

The 3A201 is designed to be used as a copper pilot wire send interface relay.

2. TEST EQUIPMENT REQUIRED

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

3. ASSOCIATED DRAWINGS

Wiring Diagram 172-201-1xx

HIGH VOLTAGE TESTING

Determine if unit is specified for 2kV, 5kV or 15kV RMS coil / contact/ case isolation, by referring to the following ordering code:

3A201-x-x-A: 2kV isolation
 3A201-x-x-B: 5kV isolation
 3A201-x-x-C: 15kV isolation

Apply this RMS isolation voltage for one minute between terminals Groups 1 & 2 in Table 1.

Apply three 5kV test pulses of each polarity between the terminal Groups 1 & 2 in Table 1.

TABLE 1

GROUP 1	GROUP 2
11,12 (2kV & 5kV models)	1,3,2,4,5,7,6,8 (2kV & 5kV models)
9,10 (15kV models- 4M10 case)	1,3,2,4,5,7,6,8 (15kV models- 4M10 case)
1,2 (15kV models- Y case)	3,4,5,6,7,8 (15kV models- Y case)
All terminals	frame

5. TEST PROCEDURE

Send (transmit) relay

- a) Connect all specified MAKE contacts in series and connect this to the contact sensor/ timer.
- b) Check the operation of the relay with the specified minimum and maximum DC operating voltage applied to the coil terminals [11(+), 12(-) for 2kV & 5kV models, 9(+), 10(-) or 1(+), 2(-) for 15kV models], according to the following table. If required adjust the relay to obtain the minimum pickup value. Also check operation of all BREAK contacts.

Model	Nominal Voltage	Minimum voltage (75%)	Maximum voltage (120%)
3A201-C	48V	36	58
3A201-D	110V	82	132
3A201-E	125V	93	150

Check

- c) Check flag operates at minimum voltage.



Check

- d) Connect the counter / timer to measure the operating time at nominal voltage. This should be **approximately 30ms**.

Check

- e) Check the operating burden is $< 7W$ at nominal voltage, according to the following table:

Model	Nominal Voltage	Max. operating current (mA)
3A201-C	48V	146
3A201-D	110V	64
3A201-E	125V	56

Check

6. GENERAL & FUNCTIONAL

- a) Determine if the unit is specified for presence of magnetic blowouts on contacts, by referring to the following ordering code:

3A201-x-A: Magnetic blowouts fitted.

Check

- b) Check that the flag is specified correctly and is visible within the relay in the operated condition, according to the following order code:

3A201-x-x-x-x-A: Hand reset flag fitted.

3A201-x-x-x-x-B: Self reset flag fitted.

Check

- c) Check that the label has been engraved correctly as per the wiring diagram

Check

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

Check