Serial Number | | Number in Batch | |

6RX31-X / 1TM12

HR Flag with 3 elements

TRIP CIRCUIT SUPERVISION RELAY

Issue Level	Date	Summary of changes
A	03/11/2010	Initial release
B	10/12/2010	TB update

Author	Checked & Registered	.pdf file created	Released
MVL	DW	DW	DietmarWeinkoetz Digitally signed by DietmarWeinkoetz DN: CN = DietmarWeinkoetz, C = AU, O = RMS Date: 2010.12.17 08:19:02 +11'00'

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	GROUP 2
Each coil	All other connections and Frame
Each contact set	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 all specified MAKE contacts in series, and connect to contact sensor/ timer.

b) Manually operate the relay by pushing the armature towards the pole face of the relay. Ensure that the contacts have sufficient over travel by ensuring that all of the contacts have made before the armature is fully home.

Check ☐

c) Check operation of relay at specified minimum and maximum DC operating voltage, when the relay is de-energised, according to the following table. Also check operation of all BREAK contacts. Also check that the armature is fully home.

Model	Nominal Voltage	Minimum voltage (80%)	Maximum voltage (120%)
6RX31-A	24V	19	29
6RX31-B	32V	25	39
6RX31-C	48V	38	58
6RX31-D	110V	88	132
6RX31-E	125V	100	150
6RX31-F	250V	200	300
6RX31-G	220V	176	264
6RX31-H	240V	192	288

Check ☐

d) Reduce the supply voltage to determine that the drop out voltage is as per the following table. Adjust the residual screw if necessary.

Model	Nominal Voltage	Min. drop out voltage (25%)	Max. drop out voltage (40%)
6RX31-A	24V	6	9.5
6RX31-B	32V	8	13
6RX31-C	48V	12	19
6RX31-D	110V	28	44
6RX31-E	125V	31	50
6RX31-F	250V	63	100
6RX31-G	220V	55	88

6RX31-H	240V	60	96

Check ☐

e) Check that the HR flag operates at minimum voltage, when the relay is de-energised from either RL2 or RL3 (check both).

Check ☐

f) Connect the counter / timer to measure the drop delay of the relay: in the first case de-energise slugged element RL2 is from nominal voltage (via pins 13 & 14). In the second case de-energise slugged element RL3 is from nominal voltage (via pins 21 & 22). In both cases the drop out delay should be greater than 300ms.

Check ☐

g) Check that the supervision current for powering each of (R1 and RL2- pins 13 & 14) and (R2 and RL3- pins 21 & 22) is as according to the following table:

Model	Nominal Voltage	Max. operating current (mA)
6RX31-B	32V	31
6RX31-C	48V	21
6RX31-D	110V	14
6RX31-E	125V	16
6RX31-F	250V	10
6RX31-G	220V	10
6RX31-H	240V	10

Check ☐

5. GENERAL & FUNCTIONAL

a) Check that the label has been engraved correctly as per the wiring diagram.

Check ☐

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

Check ☐

PASS ☐

TESTED BY: _____ DATE: _____