RELAY TEST TERMINAL BLOCK
&
RELAY TEST PLUG

Features

- On load testing of relays and meters without disconnecting or disturbing panel wiring
- Reduced cost of commissioning and routine maintenance
- Simplified and safer testing

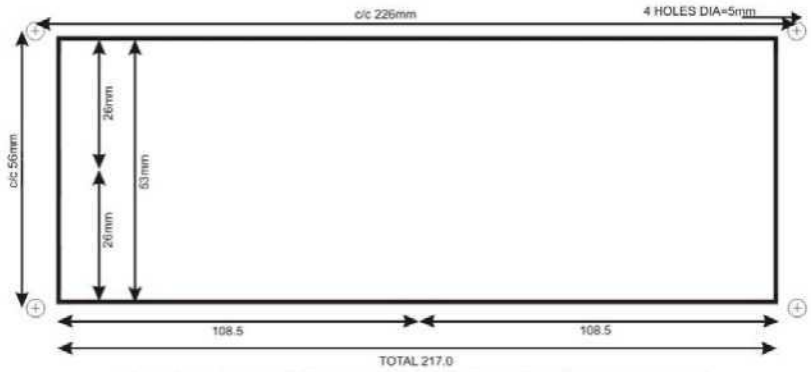
Application

In conjunction with relay test block, test plug is used for testing relays and meters innon-drawoutcase

DEEPL ELECTRICALS PVT. LTD.

ISO :9001:2000 anjani.agrawal@gmail.com | www.deepl.co.in

RELAY TEST TERMINAL BLOCK & RELAY TEST PLUG



PANEL CUT OUT DIMENSIONS FOR RELAY TEST PLUG

Description

Test plug have 13 pairs of nickel plated finger contacts which are linked to the test sockets. The top and bottom contact strips of each finger are separated by insulation for 5 contacts which get shortened once cover is inserted . Each of the balance 8 pairs of contacts is spring loaded .Permanent connections are made between Test Block and relay and meter and the test plug is inserted into the Block for testing purposes. A protective cover is fitted into the Block when not in use . The Contacts of the Test Block close automatically when test plug is removed from it except the trip contact which remains open unless and until the cover is replaced. It is therefore possible to isolate the trip circuit by just removing the test block cover and thus preventing unnecessary tripping during testing .

Insulation

The Test Plug and Test Block meets the requirement of IS 3231 /IEC 255-5 series C
2KV for one minute

Connection

The Test Block is provided with mounting screws and connection diagram pasted on it.

Note: Relay Test Terminal Block and Test Plug are suitable for use in tropical environments

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D125, Ansa Industrial Estate, **Saki** vihar Road, Sakinaka, Mumbai 400072. INDIA

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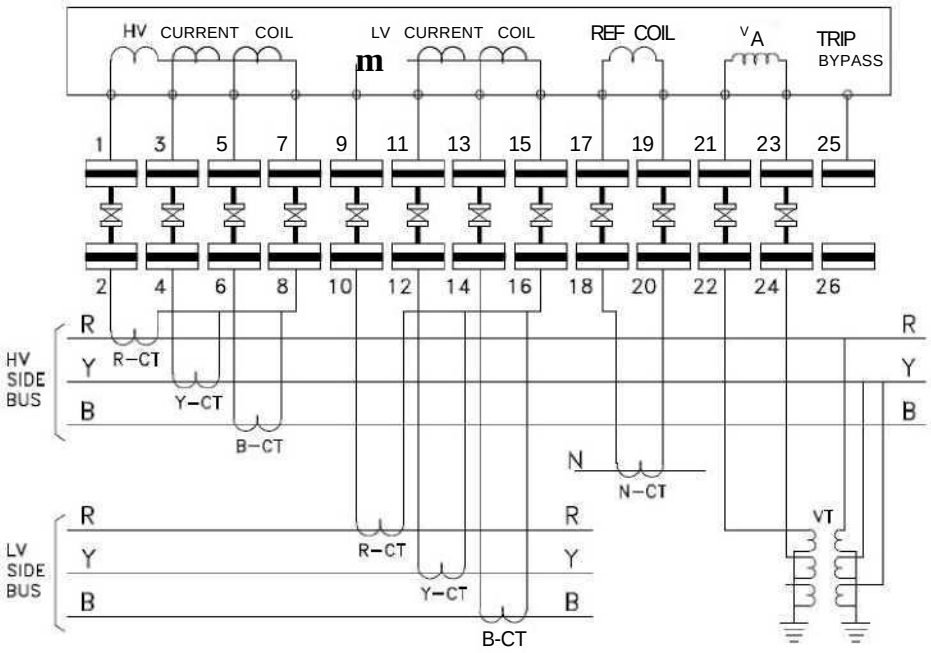

TYHCAL CONNECTION FOR DLFFERENIIAL RELAY TESTING

OESCRIPTION:

TEST TEPMHAL BLOCK *W*IT-i PLUQ IS USED FOB ONLINE TEST OFTHE FOLLOW IMG.

1 - OISTANCE PROTECTION BELAY:
- RY3NCT:-1 -BTERMINALS
- RYBN PT:- 9 -1BTEHMINALS
- TRIP BYPASS:-J6-ZBTERMINALS

Z - OIFFEHENTIAL PROTECTION RELAY:
- RYBN HVCT:- 1 -B TERMINALS
- RYBN LVGT:- 9 - IB TERMINALB
- NCT:-17 -20 TERMINALS
- *VI?* (OVERFLUXING):-»- 24 TEIWINALB
- TRIP BYPASS :-ZB-ZBTERMII«LS

3 - DIRECTIONAL a NON DIRECTIONAL <*XO I.* DF RELAY;

A) O/C:
- RYBN OT :-1 - B TERMINALS
- RYBN PT:- 9 •« TERMNALS
- TRIP BYPASS;- *25* -IB TERMINALS

- RYBN HVCT :-1 -a TERMINALS
- RY3H LVCT :- 9 - IB TERMINALS
- OPEN DELTA:-17-50 TERMINALS
- TSIP BYPASS : - M. 20TERMWALB

INSTRUCTIONS / MOTES:

1 - WHEN TEST BLOCK IS FITTED WITH COVERJRIP CIRCUIT IS IN NORMAL TOSIIIQH.

1 • WHEN TEST PLUQ IS I US ERTEB, ALL INCOMI *US* AM3 OUTGOINQ CONTACTS SETSEPAnATEO.

3 - VERY IMPORTANT: INCOMING CTTERMINALS ARE TO BE SHORTED EXTERNALLY BEFORE INSERTION TO BLOCK AM] PLUG TO BE INSERTED FIRMLY TO THE BLOCK.

4 - CONTACT SHOWN ARE WHEN TEST PLUG IS INSERTED.

i - ENSURE TEST PLUS IB INSERTED PROPERLY.BEFORE IN JECTINC TEST CURRENT/VOLTAGE.

B • IF ADDITIONAL 3Y PASS CONTACT REQUIRED FOR SCHEME TESTING AHY OF THE SPAHE{LEFT COT} CONTACTS CAN SE USED.

Rev	Revision	Appd	Date

Project :
Customer :
Consultant : —

Drawing approved by: HSP
Drawing checked by: TK
Prepared by: RJK

DEEPL ELKTBICALS FVTUD
HUME4I - 100072
WIRING DRAWING
Iss by Dept — Q3/04/03

Drg No. —

Scale 1:1
Rev 0
Sheet 1
Cont. 1

MSME
सूक्ष्म, लघु एवं मध्यम उद्यम
MICRO, SMALL 4 MEDIUM ENTERPRISES
MSME - TECHNOLOGY DEVELOPMENT CENTKE,
MUMBAI

TEST REPORT

IDEMI

Work Order No. : WO/ETL/007/09-10
Date : 17.04.2009

Test Report No. : TR/ETL/007/09-10
Date of Testing : 24 -25.04.2009

Test Item : Relay Test Terminal Block

Tested for : M/S, Deepl Electrical Pvt. Ltd., 0-125, Ansa Industrial Estate. Saki Vihar Road, Andheri (E), Mumbai- 400 072
Tested at: IDEM!, Mumbai. 400 022

Specification of Items Under Test	Specification of Standards Used
Manufacturer : M/s. Deepl Electricats Pvt. Ltd. Mumbai - 72 Condition of Item on reciept : Good Range /Rating / Size: 50 A Model/Markings.: Deepl Electricals Pvt, Ltd Relay Test Terminal Block Accuracy : N.A	1) RE High votage tester Range:0 to 5KV.AC Calibration Validity up to : 24.03.2010 2) GANZ insulation Tester Range: 0 To 10000M Ohms Calibration Validity up to : 07.04.2010 3) Digital Temp. Indicator with Probe Model FLUKE 54II, Calibration Validity up to : 22.02.2010 4) Blue Star Tenny Chamber Temp : -40 to 2Q0°C, RH : 30 % to 95% Calibration Validity up to : 21.12.2009 5) Zaran High Current Test Set (0-500A) Traceabiiity: Standard Used for Testing is Traceable to NPL, New Delhi

Ambient Conditions :

Temperature : 25°C ± 2.5"C Relative Humidity : 35% to 65%

Remarks : Please refer page 2 to 3 for Test Resuits.

1) Procedure of Test : The above mentioned item is'tested as per Customer Request

S.R. VICHARE
TECHNICAL MANAGER
AUTHORISED SIGNATORY

ELECTRICAL TESTING LABORATORY

Test Report for Sr. No.: —
Test Report No.: TR/ETL/007/09-10
Date of Testing : 24-25.04.2009
Page No. : 2 of 3

Test Result of: Relay Test Terminal Block

1. Insulation Resistance Test:

By applying 500V DC between fc'lowing points for 1 minute the IR values measured were as below.

(1) Between two Terminals. - Above 5000 MQ
(2) Between all Terminals shorted together & Body - Above 5000 Mfi

2. Pi -electric Test:

An AC, 2.5 kV, 50 Hz RMS was applied between following points for 1 minute.

(1) Between two Terminals.
(2) Between all Terminals shorted together & body

Test Result - No breakdown or flashover observed.

Z Insulation Resistance at 40°C

Relay Test Terminal Block was kept in the chamber and Temperature was adjusted to 40°C and It was maintained for 1 hour and at the end of one hour applying 500V DC between the points given below for one minute the IR value measured were as follows.

i) Between two live Terminals - 600 MD
ii) Between all terminal shorted together & body - 3000 MQ

TESTED BY

CHECKED BY

FLECTPICAL TESTING LABORATORY

Test Report for Sr. No.: —
Date of Testing : 24- 25.04.2009

Test Report No.: TR/ETU007/09-10
Page No. : 3 of 3

4. Insulation Resistance at Dry Heat (80°C)

The chamber was adjusted to 80°C jnd then Relay Test Terminal Block i«as kept their for one hour and at the end of one hour applying 500V DC between the points given below for one minute the Ift value measured were as follows,

t) Between two live terminals - Above 75 MD
ii) Between all terminals shorted together & body - Above 2000 MO

5. Temperature Rise Test:

Temperature rise was measured at 50 Amp. Current (till stable temp was achieved) at the following points

Ambient Temp.: 28°C

Test Terminal	Temp Rise (Measured Temp – Ambient Temp.)
Terminal 1	35.0 °C
Terminal 2	35.9°C
Terminal 3	42.6°C
Terminal 4	41.0°C
Terminal 5	52.0°C
Terminal 6	50.1°C
Enclosure	10.9 °C

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MUMEAI

TEST REPORT

IDEMI

Work Order No.: WO/ETL/007/09-10
Date : 17.04.2009

Test Report No. : TR/ETL7008/09-10
Date of Testing : 24-25.04.2009

Test Item : Relay Test Plug

Tested for : M/S. Deep! Electrical Pvt. Ltd., D-125, Ansa Industrial Estate. Saki Vihar Road, Andheri (E), Mumbai- 400 072
Tested at : IDEMI, Mumbai. 400 022

Specification of Items Under Test	Specification of Standards Used
Manufacturer : M/s. Deepl Electricals Pvt. Ltd. Mumbai - 72 Condition of Item on reciept : Good Range /Rating / Size: 50 A Model/Markings.: Deepl Electricals Pvt, Ltd Relay Test Terminal Block Accuracy : N.A	1) RE High votage tester Range:0 to 5KV.AC Calibration Validity up to : 24.03.2010 2) GANZ Insulation Tester Range: 0 To 10000M Ohms Calibration Validity up to : 07.04.2010 3) Digital Temp. Indicator with Probe Model FLUKE 54il, Calibration Validity up to: 22.02.2010 4) Blue Star Tenny Chamber Temn : -40 to 200°C, RH : 30 % to 95% Calibration Validity up to : 21.12.2009 5) Zaran High Current Test Set (0-50CA) Traceabiiity: Standard Used for Testing is Traceable to NPL, New Delhi

Ambient Conditions :

Temperature^ 25"C ± 2.5°C Relative Humidity : 35% to 65%

p^niarks : Please refer page 2 to 3 for Test Results.

1) Procedure of Test : The above mentioned item is tested as per Customer Request

S.R. ViCHARE
TECHNICAL MANAGER
AUTHORISED SIGNATORY

सूक्ष्म, लघु एवं मध्यम उद्यम
MICRO, SMALL & MEDIUM ENTERPRISES
MSME - TECHNOLOGY DEVELOPMENT CENTRE
MUMQAI

वैधुतिक मापन उपयंत्र अभिकल्प संस्थान, मुंबई - 400 022.
INSTITUTE FOR DESIGN OF ELECTRICAL
MEASURING INSTRUMENTS, MUMBAI - 400 022.

IDEMI

ELECTRICAL TESTING LABORATORY

Test Report for Sr. No.: —
Date of Testing ; 24- 2b.O4 2009

Test Report No.: TR/ETL/008/09-10
Page No. .: 2 of 3

Test Result of: Relay Test Plug

1. **Insulation Resistance Test**:

By applying 500V DC between following points for 1 minute the IR values measured were as below.

(1) Between two Terminate. - Above 5000 MQ
(2) Between all Terminals shorted together & Body - Above 5000 MQ.

2. Di **-electric** Test:

An AC, 2.5 kV, 50 Hz RMS was applied between following points for 1 minute.

(1) Between two Terminals.
(2) Between all Terminals shorted together & body

Test Result - No breakdown or flashover observed,

3. **Insulation Resistance at 40°C**

Relay Test Plug was kept in the chamber and Temperature was adjusted to 40°C and it was maintained for 1 hour and at the end of one hour applying 500V DC between the points given below for one minute the IR vaiue measured were as follows

i) Between two live Terminals - 600 MQ
ii) Between a!l terminal shorted together & body - 3nnn MO

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Test Report for Sr. No.: —
Date of Testing : 24 25.04.2009

Test Report No.: TR/ETU008/09-10
Page No. : 3 of 3

4. Insulation Resistance at Dry Heat (8O°C)

The chamber was adjusted to 80°C and then Relay Test Plug was kept their for one hour and at the end of jjng hour applying 500V DC between the points given below for one minute the IR tfaiue measured were as follows.

i) Between two live terminals - Above 80 *WSl*
ii) Between all terminal snorted together & body - Above 2000 MO

5. Temperature Rise Testj

Temperature rise was measured at 50 Amp. Currerit •(tili stable temp was achieved) at the following points

Ambient Temp.: 28.3 °C

Test Termir *n*	Temp Rise (Measured Temp.- Ambient Temp)
Terminal 1	33,1 °C
Terminal 2	32.1 °C
Terminal *Z*	31.2°C
Terminal *A*	32.4°C
Terminal §	40.2°C
% Enclosure	5.4 °C

TESTED BY

CHECKED BY

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