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| **Logo, company name  Description automatically generated** | **ADOR WELDING LIMITED**  WELDING EQUIPMENT GROUP |

**TITLE:** Instruction for Inspection and Testing of ‘3-PH PROTECTIONPCB ASSY’ (017.01.008.0350)

1. **SCOPE**
2. Applicable for testing of 3-ph Protection PCB Assy. as per BOM 017.01.008.0350:
3. **DETAILS OF THE INSTRUCTION**
4. Inspection / Measuring / Test Equipment. :
   1. AC Power Supply
   2. Digital Multimeter.
5. Record the test results in the test report as the testing Progresses**. (INSP4678/I5/R1)**
6. In the case of any nonconformity at any stage of inspection and testing. Refer to the procedure NCCR2001.
7. For visual inspection and vibration test refer to the inspection instruction INSP3207.
8. **ELECTRICAL TEST:**
9. Connect the PCB under test, as per the given below connection diagram.

RIN

YIN

BIN

1

1

S2

2

2

3

10V AC

CN1

CN1

CN9

3

5

1

4

4

**2**

PROTECTION PCB

5

DISPLAY PCB

(017.01.008.0350)

(017.01.008.0352/017.01.008.0347)

1

CN2

S1

s1

2

To control transformer on test jig.

1. As per given above Connection diagram.Apply Input power supply 415V, 3Ph 50Hz to 3-Phase Protection

PCB at RIN, YIN & BIN Position.

1. Apply AC supply 0-10V to display PCB.
2. Mains ON LED will glow after switching on 10V AC Power Supply.
3. Keep switch S1 on OFF position and ERR CONNECTION switch ON position.
4. Now check the error signal on display pcb as per table given below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** | **TEST DESCRIPTION** | **TEST CONDITION** | **VOLTAGE LEVELS** | **ERROR ON DISPLAY PCB** |
| 1 | NORMAL TEST | APPLY 3 PHASE 415V AC 50HZ SUPPLY TO RIN, YIN & BIN |  | NO ERROR |
| 2 | UNDER VOLTAGE TEST | DECREASE VOLTAGE BELOW 345V AC | BETWEEN 300VAC TO 345VAC | ERR 1 |
| 3 | OVER  VOLTAGE TEST | INCREASE VOLTAGE ABOVE 475V AC | BETWEEN 475VAC TO 490VAC | ERR 2 |
| 4 | SINGLE  PHASE TEST FOR R PHASE | REMOVE  R PHASE @415V |  | ERR 1 |
| 5 | SINGLE  PHASE TEST FOR Y PHASE | REMOVE  Y PHASE @415V AC |  | Display PCB OFF |
| 6 | SINGLE  PHASE TEST FOR B PHASE | REMOVE  B PHASE @415V AC |  | Display PCB OFF |
| 7 | TEMP TRIP TEST | SWITCH ON SWITCH S1 |  | ERR 3 |
| 8 | PROTECTION BYPASS ERROR | REMOVE CONNECTOR CN1 |  | ERR 11 |

**Note: In case of Single-Phase test proper insulate the the removing test jig phase wire for human safety.**