



**ELECTRICAL A. MODERN FACTORY COMPANY**

**ROUTINE VERIFICATION CERTIFICATE**

Format No. FM 19-04 Rev.04

Date: 01/02/2021

Order No.: 10617

Tag No.: MDB.6

Customer: MZQ CONTRACTING EST.

Drawing No.: DP-34347-20

Item No.: 01

√ Power switchgear and controlgear assembly (PSC) Un: 400VAC

Distribution boards intended to be operated by ordinary persons (DBO) InA: 4000A

IEC 61439  
Section

Test Description

YES

NO

N/A

**11.2 Degree of protection of enclosures**

- Degree of protection as specified (Visual test)
- All gaskets intact
- Door is aligned ( no damages )

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**11.3 Clearances and creepage distances**

- Clearances and creepage distances as per standard

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**11.4 Protection against electric shock and integrity of protective circuits**

- All live terminals are covered to IP2X
- Doors are earthed
- Earth is connected to metal frame in all sections

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**11.5 Incorporation of built-in components**

- Busbar dimensions and supports are as specified
- Busbars identification are as specified
- Breakers ratings and settings are as specified

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**11.6 Internal electrical circuits & connections**

- Loose-free connection at joints
- Pressure washers on sides of connection
- Torque checked of all connections/joints

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**11.7 Terminals for external conductors**

- Terminals sizes and numbers are sufficient
- Terminals identification are as specified
- Sufficient space for incoming/outgoing cables

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**11.8 Mechanical operation**

- All mechanical interlocks are working
- All manually operated components are working
- Doors (including locks) are easily open and close

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**11.9 Dielectric properties**

- The Test voltage for power switchgear and control gear assemblies with a rated insulation voltage between 300-690V AC is 2,670 V d.c. for 1 second.

Phase/Phase

≥1000

MΩ

Phase/Neutral

≥1000

MΩ

Phase/Earth

≥1000

MΩ

Neutral/Earth

≥1000

MΩ

- For assemblies with incoming protection rated up to 250 A, the verification of insulation resistance may be by measurement at a voltage of 500 V d.c.

Test is satisfactory if the insulation resistance between circuits and exposed conductive parts is at least 1000 Ω/V

Insulation Resistance:

≥1000 Ω/V

**11.10 Wiring, operational performance & function**

- Busbar and power continuity test point to point
- Earth continuity test
- Overload and tripping functions

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Date

QA/QC

Elect. Engineer

01/02/2021



Handwritten signature of the Electrical Engineer