

SPECIFICATIONS FOR 400/231V LOW VOLTAGE CABINET WITH ALUMINUM BUSBARS FOR POLE MOUNTED TRANSFORMERS

Saudi Electricity Company

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1. SCOPE

This SEC Distribution Material Specification (SDMS) specifies the minimum technical requirements for design, materials, manufacturing, testing, inspection and performance for low voltage distribution cabinet for pole mounted transformers, to be used in the distribution network of the Saudi Electricity Company (SEC) in Saudi Arabia.

2. CROSS REFERENCES

This Material Standard Specification shall be read in conjunction with the SEC Specification No: 01-SDMS-01 (latest revision), titled "General Requirements for All Equipment/ Materials", which shall be considered as an integral part of this SDMS, also be read in conjunction with SEC Purchase Order requirements or Contract Schedules.

3. APPLICABLE CODES & STANDARDS

The latest revision of the following codes and standards shall be applicable for the equipment/materials covered in this specification. In case of any deviation, the vendor/manufacturer may propose equipment/material conforming to an alternate code or standard without jeopardizing the requirements of this specification. However, the provision in this specification shall supersede the provision of the standards in case of any differences.

Table 1: List of applicable standards

Number	Title
37-SDMS-01	Low Voltage Molded Case Circuit Breakers for Service connection.
37-SDMS-03	Molded Case Circuit Breakers for Low Voltage PMT Cabinets
38-SDMS-03	Low-Voltage Digital Panel Meters
50-SDMS-01	Specifications for Current Transformers up to 36kV
IEC-60529	Degrees of Protection Provided by Enclosures (IP Code)
IEC-60947	Low Voltage Switchgear and Control gear.
IEC 61439-1	Low-Voltage Switchgear and Control gear Assemblies – Part 1: General Rules
IEC 61554	Panel Mounted Equipment – Electrical Measuring Instruments – Dimensions for Panel Mounting
IEC 61869-1	Instrument Transformers – Part 1: General Requirements
ASTM A153	Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM-B-103	Standard Specification for Phosphor Bronze Plate, Sheets, Strip & Rolled Bar.
ASTM B117	Standard Practice for Operating Salt Spray (Fog) Apparatus
ASTM B236M	Standard Specification for Aluminum Bars for Electrical Purposes (Bus Bars) (Metric)
ASTM B545	Standard Specification for Electrodeposited Coatings of Tin
ASTM D1535	Standard Practice for Specifying Color by the Munsell System
ASTM D1654	Standard Test Methods for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments

4. SERVICE CONDITION

- 4.1 The cabinet shall be suitable for operation under the service condition as per SEC latest revision of General Specification No. 01-SDMS-01.
- 4.2 The cabinet complete with all its fittings and attachments shall be capable of withstanding the effects of direct solar radiation at their installed locations. The temperature of metal surfaces exposed to direct solar radiation shall be regarded as 75°C, plus the effect of any internal heating.

5. DESIGN & CONSTRUCTION REQUIREMENTS

5.1 GENERAL

- 5.1.1 All cable terminations shall be easily accessible from the front.
- 5.1.2 All insulating materials shall be non-hygroscopic and resistant to tracking and cracking.
- 5.1.3 All parts of equal size and shape shall be inter-changeable.
- 5.1.4 All bolted electrical joints shall be secured by means of grade 8.8 stainless steel nuts and bolts.

5.2 ENCLOSURE

- 5.2.1 The enclosure shall be weatherproof and provided with watershed top. Enclosure shall be made of galvanized steel at least 3 mm or Aluzinc at least 2 mm thickness.
- 5.2.2 The cabinet should be suitable for mounting directly on poles as following:
 - The 200A Cabinet for 100KVA PMT shall be provided on the roof top with cable entry hole of size 87mm diameter with cable clamps for in-coming cable up to 185 mm² and another one hole for out-going flexible conduit pipe of size 78mm diameter to accommodate quadruplex conductor of 120 mm². It shall be provided at the bottom another one hole of size 87mm to enable the use of underground cable up to 185 mm², all holes shall be covered with weather resistant removable grommet rubber plugs.
 - The 300A and 400A Cabinets for 200KVA PMT shall be provided on the roof top with cable entry hole of size 87mm diameter with cable clamps for in-coming cable up to 300mm² and two holes on each side for out-going flexible conduit pipe of size 78mm diameter for two flexible conduit pipes 78mm diameter to accommodate out-going quadruplex cables of 120 mm². It shall be provided at the bottom another one hole of size 87mm to enable the use of underground cable up to 300 mm², all holes shall be covered with weather resistant removable grommet rubber plugs.

- The 400A and 600A Cabinets for 300KVA PMT shall be provided on the roof top with two cables entry holes of size 87mm diameter with cable clamps for in-coming cables up to 300mm² and two holes on each side for out-going flexible conduit pipe of size 78mm diameter for two flexible conduit pipes 78mm diameter to accommodate out-going quadruplex cables of 120 mm². It shall be provided at the bottom another one hole of size 87mm to enable the use of underground cable up to 300 mm², all holes shall be covered with weather resistant removable grommet rubber plugs.
- 5.2.3 The cabinet shall have adequate mechanical strength to withstand rough handling as may be expected in normal uses.
- 5.2.4 Access to the cabinet shall be from the front by means of door with gasket and stainless steel hinges duly welded, and locking arrangement as following:
- a) The door shall be fitted with two (2) stainless steel welded hinges.
 - b) Pressure fit type gasket or extruded type gasket shall be provided. Glue fit type is not acceptable.
 - c) The door shall be provided with door stopper and locking at 120° open position to protect them from swinging in order to avoid accidents.
 - d) The door shall be provided with two (2) stainless steel quarter-turn tubular cam-locks at the top and bottom with locking provisions to fit padlocks per SEC specification SEC-02-02.
 - e) A suitable provision shall be made for fixing circuit numbering plate.
- 5.2.5 The inner side of the door shall have the following provisions:
- a) Storing pocket.
 - b) Nameplate with single-line diagram made of 1.0 mm thick aluminum plate.
- 5.2.6 The cabinet shall have an adequate ventilation system and degree of protection of IP54 in accordance with IEC 60-529.
- 5.2.7 Finished color of the cabinet shall be adequately protected against corrosion and the color shall be RAL 7035 or as per latest revision of SEC specification 01-SDMS-01.

5.3 BUS-BARS

- 5.3.1 The bus bars shall be electrical grade aluminum alloy in conformance with ASTM B236M and shall be tin coated uniformly in conformance with ASTM-B545 or approved equivalent. The minimum tin coating thickness shall be 20μm.
- 5.3.2 Tin coating process shall be carried out after all bus bar profiles are done, i.e. cutting, bending, and punching.
- 5.3.3 The cross sectional area of busbars shall be as per the Table (2).

Table 2: PMT cabinet schedules

Components	TRANSFORMER RATING				
	100 KVA	200 KVA		300 KVA	
			400/231		
	W/ MAIN CB	W/ BRANCHES	W/ MAIN CB	W/ BRANCHES	W/ MAIN CB
Phase B.B Minimum Rating, (A)	200	400	300	600	400
Phase B.B Minimum Cross-Section, (mm ²)	1x10x20	1x10x40	1x10x30	1x10x60	1x15x30
Neutral B.B Minimum Rating, (A)	100	200	150	300	200
Neutral B.B Minimum Cross-Section, (mm ²)	1x5x20	1x10x20	1x5x30	1x10x30	1x10x20
CT Rating on Incoming B.B (A)	200/5	400/5	300/5	600/5	400/5
Number of Outgoing MCCB's	1	2	1	3	1
MCCB's Rating (A)	200	200	300	200	400
NO. of Incoming Feeders	1	1	1	2	2
Size of Incoming Feeders mm ²	185	300	300	300	300
NO. of O.H Outgoing Feeders	1	2	-	3	-
NO. of U.G Outgoing Feeders	1	2	1	3	1
Size of O.H Outgoing Feeders mm ²	1x120	2x120	-	3x120	-
Size of U.G Outgoing Feeders mm ²	1x185	2x185	1x300	3x185	1x300
Pole Type	Single-Pole	H-Pole	H-Pole	H-Pole	H-Pole

- 5.3.4 The bus bars shall be supported by epoxy resin insulators in a robust and secure manner. Three (3) bus bars for phases and one (1) for neutral bar shall be provided.
- 5.3.5 The general design shall be made with minimum possible number of joints.
- 5.3.6 Phase bus bars shall be color marked in sequence from top to bottom red, yellow, blue and neutral bus bar shall be marked black. The marking shall be by indelible paint at a clearly visible location.
- 5.3.7 The bus bar links for branch MCCBs shall be provided with insulated colored sleeves (red yellow and blue).

5.4 TERMINALS

All incoming circuit terminal and outgoing circuit breaker terminals shall be suitable for fixing aluminum cables with the use of cable lugs according to Table-2. The lugs will be provided by SEC but bolts and nuts size (M12) shall be provided with cabinet by the supplier.

5.5 CURRENT TRANSFORMERS

Three (3) current transformers conforming with the latest revision of SEC specification 50-SDMS-01 shall be installed at the incoming bus bars of all ratings of cabinets for metering purposes. CTs secondary neutral terminals shall be earthed. The current rating is indicated in Table-2 of this specification, Insulation Class-E and 120°C.

5.6 DIGITAL PANEL METER

Cabinet shall be equipped with a digital panel meter according to SEC specification No. 38-SDMS-03 latest revision and supplied from SEC approved manufacturer, CT ratio shall be preprogrammed by panel manufacturer.

5.7 MOLDED CASE CIRCUIT BREAKERS

- 5.7.1 Provision for installation of MCCBs shall be made available for each out-going feeder and suitable for installing at least three SEC approved MCCBs.
- 5.7.2 All MCCBs shall comply with SEC Specifications No: 37-SDMS-01 and 37-SDMS-03 latest revision, terminals shall be suitable for connecting busbar in the incoming and cable lugs for the outgoing according to cable sizes mentioned in Table-2, tin coated aluminum terminal spreaders can be used to achieve good isolation between lugs.

5.7.3 The MCCBs shall comply the following:

- Easily inter-changeable with at least five (5) of approved MCCBs.
- Without key lock.
- With current limiting functions.

5.8 INTERNAL LIGHTING

The cabinet shall be fitted with led lamp controlled by the door's operated switch. The auxiliary circuit supplying the lamp shall have a separate miniature circuit breaker located at an accessible position on the metering panel.

5.9 GROUNDING

- 5.9.1 Two terminals having M12 stud and nut shall be provided on enclosure of the cabinet with identified clear grounding mark.
- 5.9.2. Grounding studs shall be internally connected with the neutral busbar by an insulated copper wire link with terminal lugs in both sides.
- 5.9.3 All hinged parts shall be connected to the frame work (enclosure) through minimum 35mm² bolted copper braids.

5.10 LABELS

- 5.10.1 Each out-going circuit shall be numbered in sequence from right to left facing the cabinet.
- 5.10.2 Numbers shall be engraved on three layers trafolyte plate (white/black/white) of 3mm thickness of dimension 30mm x 80mm. These labels shall be fixed above the MCCB in suitable place.
- 5.10.3 Insertion Pocket for circuit number sheet shall be provided in the inner side of the door of cabinet.

5.11 DIMENSIONS

The maximum overall dimensions for PMT cabinet shall be as follows in Table-3:

Table 3: PMT cabinet maximum allowable dimensions

Trans. Rating (KVA)	Cabinet Rating (A)	Height (mm)	Width (mm)	Depth (mm)
100	200	1100	550	300
200	300	1100	700	300
	400	1100	700	300
300	400	1100	700	300
	600	1100	700	300

6. NAME PLATE

Each PMT cabinet shall be provided with an aluminum name plate fixed on the inner side of the door bearing the following information engraved on it as minimum in Arabic and in English.

- Reference to SEC specification
- Rated voltage (V)
- Rated current of bus bar (A)
- Short circuit current rating (kA)
- SEC purchase order number
- SEC item number
- Manufacturer's/Vendor's name
- Year of manufacture
- Gross weight when fully equipped (Kg)
- Serial number
- Tender Number

7. MONOGRAM & DANGER PLATE

- 7.1 Danger Plate and SEC Monogram as per SEC drawing Nos. SEC-01-01 and FIG. 49A of 20-SDMS-02 respectively shall be provided and installed at the front (on SEC approved location) of the PMT cabinet using M5 stainless steel (oval head rounded neck bolts with nuts and external tooth lock washers) not removable/accessible from the front, that is, without opening the door/front cover.
- 7.2 SEC shall approve location and samples of Danger Plate and Monogram Plate prior to the installation.

8. TESTING

The PMT cabinet shall be tested in accordance with the latest standards and as specified herein. All test results shall be provided for review and acceptance by SEC.

8.1 Type Test

8.1.1 Short Circuit Test:

The PMT cabinet shall be capable of carrying the short circuit current (rms, symmetrical) for one second.

8.1.2 Temperature Rise Test:

- a) Temperature rise test shall be conducted as per IEC61439-1.
- b) Temperature rise test at any point shall not exceed 60°C relevant to the maximum ambient temperature as specified in SEC specification No: 01-SDMS-01.
- c) For instruments inside the cabinet, the temperature rise shall not exceed the allowable temperature of the instruments.

8.1.3 Type test reports:

Certified test reports of type test performed including IP test on an identical unit shall be submitted to SEC for review and approval during bidding stage.

8.2 Routine Tests:

All routine tests prescribed in the relevant IEC shall be performed on all units prior to the delivery to SEC.

9. INSPECTION

SEC may wish to witness the tests or to visit factory during manufacture of anyor all items covered in this specification. Accordingly the supplier shall notify SEC in advance, the manufacturing and test schedule.

10. PACKING & SHIPPING

Packing and shipping shall generally be as per SEC General Requirements 01-SDMS-01 latest revision including the following:

- 10.1 The PMT cabinet shall be delivered ready for service.
- 10.2 Supplier shall contact Material Department of SEC for additional packing, handling and shipment instructions as applicable.
- 10.3 Packing crates shall be marked with the following:
 - Manufacturer's name
 - Country of origin
 - SEC purchase order number
 - SEC item number
 - Gross weight in kilogram
 - Handling instructions
 - Final destination store

11. GUARANTEE

The vendor shall guarantee the PMT cabinet against all defects arising out of faulty design or workmanship or defective materials for a period of five (5) years from the date of delivery.

12. SUBMITTALS

- 12.1 The vendor shall fill and submit one copy of the attached Technical Data Schedule with the quotation. In addition to Technical Data Schedule, clause by clause compliance to this specification shall also be confirmed and submitted.
- 12.2 Detailed dimensional drawings of the PMT cabinet showing all mounting arrangements, terminals, electrical clearances between phase and earth, hinges, cable clamps, locking arrangement and name plate shall be submitted.
- 12.3 Single line diagram shall be submitted.
- 12.4 Type test reports and certificate from SEC approved laboratory.
- 12.5 Certification and test reports stating that the aluminum bus bars supplied has been sampled, tested, and inspected in accordance with ASTM B236M.
- 12.6 A comprehensive list of manufacturer's recommended spare parts with full details (item description, part number, manufacturer name, supplier name, etc.) shall be submitted separately.
- 12.7 Catalogue that indicates part numbers of all the components inside the PMT cabinet shall be submitted.
- 12.8 Detail drawing showing the installation of CT as required in this specification, shall be submitted.

13. TECHNICAL DATA SCHEDULE.

Table 4: PMT Cabinet with Aluminum Busbars– Design and Construction Requirements

(Sheet 1 of 3)

SEC Inquiry No:

Item No:

Clause	Description	SEC Specified Values	Vendor proposed values**
5.	DESIGN & CONSTRUCTION REQUIREMENTS		
5.1	General		
	Rated Voltage	400V/231V, $\pm 5\%$	
	Symmetrical Short Circuit Rating for 1 second (rms)	kA	
	Phase busbar rating	(A)	
	Neutral busbar rating	(A)	
	Minimum clearance between phases & phase/ground	25.4 mm	
5.2	Enclosure: Material Thickness of Sheet Degree of Protection Locking Arrangement Finishing Color Number of incoming cables	Steel Sheet/Aluzinc 3 mm / 2 mm IP54 Clause 5.2.4 As per 01-SDMS-01 As per Table-2	
5.3	Busbars		
	Material	Aluminum (Tin Coated)	
	Minimum thickness of tin plating	20 μ m	
	Size of phase bus bar		
	Electrical joints (bolts, nuts, washers)	Stainless Steel (Grade 8.8)	
	Insulating barrier to cover live parts	Yes	
	Bus color	Red/Yellow/Blue Black for Neutral	

Table 4: PMT Cabinet with Aluminum Busbars– Design and Construction Requirements

(Sheet 2 of 3)

SEC Inquiry No:

Item No:

Clause	Description	SEC Specified Values	Vendor proposed values**
5.5	Current Transformer: Class Burden Error co-efficient Insulation class Type and make	0.5 10 VA < 5 Class-E, 120°C	
5.6	Digital Panel Meter		
	Scale	*	
	Size	96mm x 96mm	
5.7	Out-going MCCBs: Type, Model & Make Rated current Dimensions (LxWxD) mm Number of supplied MCCBs Number of provisions for fixing MCCBs	* * * * *	
	Neutral busbar rating	(A)	
	Minimum clearance between phases & phase/ground	25.4 mm	
5.8	Grounding: Two terminals of M12 stud Copper braid for hinged parts		
5.9	Internal Lighting	Led lamp	
5.10	Labels		
5.11	Dimensions LxWxH (mm)		
5.12	Monogram & Danger Plates	Yes	

Table 4: LV PMT Cabinet with Aluminum Busbars– Design and Construction Requirements
(Sheet 3 of 3)

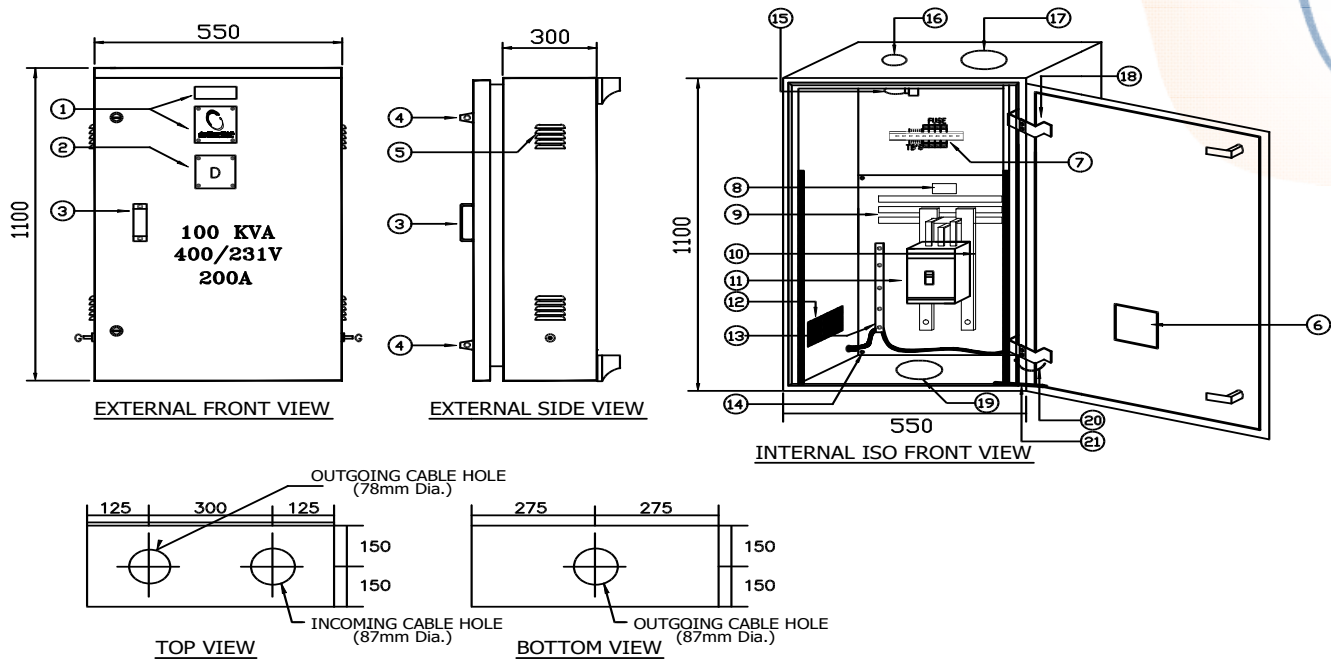
SEC Inquiry No:

Item No:

- Additional Technical Information or Features Specified by SEC
- Additional Supplementary Data or Features Proposed by Bidder/Vendor/Supplier.
- Other Particulars to be filled-up by the Bidder/Vendor/Supplier.
- List of Deviations and Clauses to which exception is taken by the Bidder/Vendor/Supplier. (Use separate sheet, if necessary).

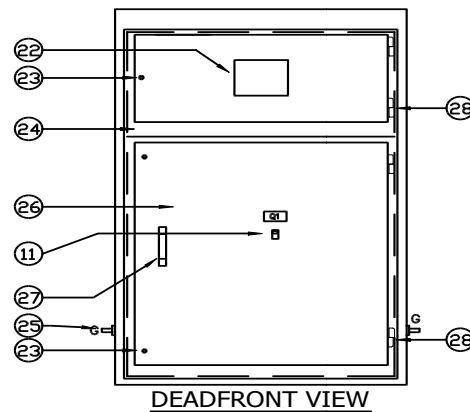
Description	Manufacturer of Material/Equipment	Vendor/Supplier
Name of Company		
Location and Office Address		
Name and Signature of Authorized Representative with Date		
Official Seal / Stamp		

14. DRAWINGS.

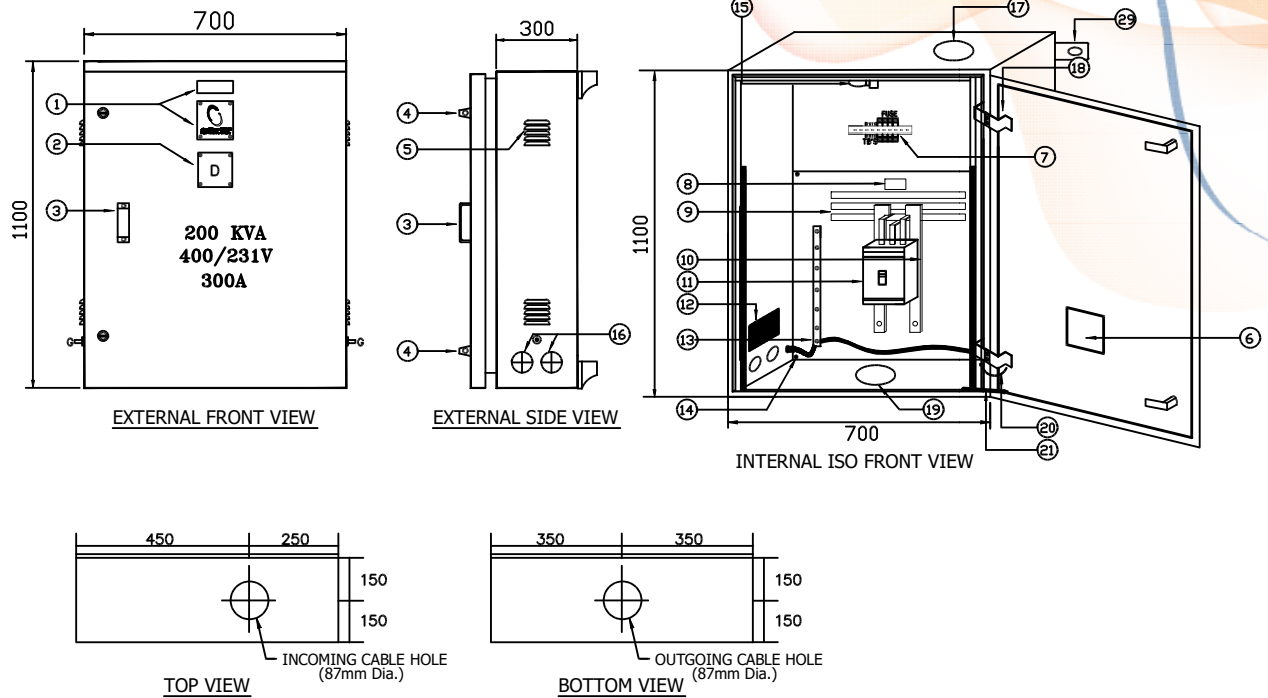


PANEL PART SCHEDULE

- 1 - TAG NAME AND SEC MONOGRAM
- 2 - DANGER PLATE
- 3 - DOOR HANDLE
- 4 - STAINLESS STEEL TUBULAR CAM-LOCKS
- 5 - VENTILATION LOUVERS ON BOTH SIDES OF ENCLOSURES
- 6 - NAME PLATE
- 7 - CT TERMINAL BLOCK AND FUSES
- 8 - CURRENT TRANSFORMER
- 9 - MAIN BUSBARS
- 10 - BREAKER MOUNTING SUPPORT
- 11 - BREAKER 200A
- 12 - SCREEN FILTER
- 13 - EARTH & NEUTRAL BUSBAR (CONNECTED WITH INSULATED COPPER WIRE LINKS WITH TERMINAL LUGS IN BOTH SIDES)
- 14 - BOLT FOR MOUNTING PLATE
- 15 - LED BULB
- 16 - 1 NO OUTGOING HOLE 78mm Dia
- 17 - INCOMING HOLE 87mm Dia
- 18 - CONCEALED HINGES
- 19 - OUTGOING HOLE 87mm Dia
- 21 - DOOR STOPPER
- 22 - DIGITAL METER
- 23 - DOOR METERING AND BREAKER COVER
- 24 - METERING COVER SUPPORT
- 25 - GROUNDING BOLT (M12 WITH CLEAR GROUNDING MARK)
- 26 - FRONT PLATE FOR BREAKER
- 27 - FRONT PLATE HANDLE
- 28 - HINGES

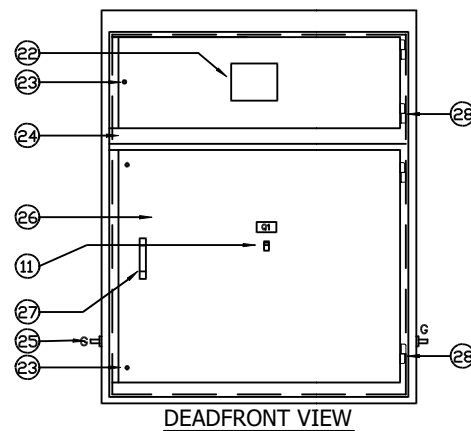


L.V. CABINET FOR POLE MOUNTED TRANSFORMER 100KVA-200A

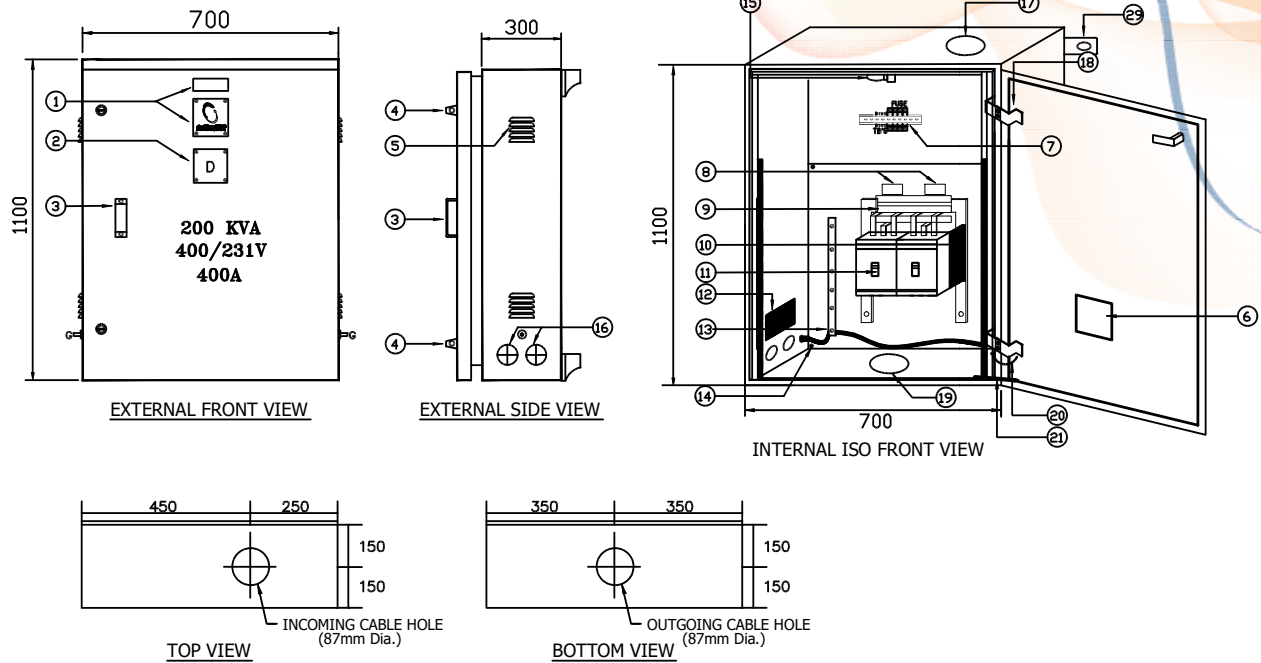


PANEL PART SCHEDULE

- 1 - TAG NAME AND SEC MONOGRAM
- 2 - DANGER PLATE
- 3 - DOOR HANDLE
- 4 - STAINLESS STEEL TUBULAR CAM-LOCKS
- 5 - VENTILATION LOUVERS ON BOTH SIDES OF ENCLOSURES
- 6 - NAME PLATE
- 7 - CT TERMINAL BLOCK AND FUSES
- 8 - CURRENT TRANSFORMER
- 9 - MAIN BUSBARS
- 10 - BREAKER MOUNTING SUPPORT
- 11 - BREAKER 300A
- 12 - SCREEN FILTER
- 13 - EARTH & NEUTRAL BUSBAR (CONNECTED WITH INSULATED COPPER WIRE LINKS WITH TERMINAL LUGS IN BOTH SIDES)
- 14 - BOLT FOR MOUNTING PLATE
- 15 - LED BULB
- 16 - 2 NOS OUTGOING HOLE BOTH SIDE 78mm Dia
- 17 - INCOMING HOLE 87mm Dia
- 18 - CONCEALED HINGES
- 19 - OUTGOING HOLE 87mm Dia
- 21 - DOOR STOPPER
- 22 - DIGITAL METER
- 23 - DOOR METERING AND BREAKER COVER
- 24 - METERING COVER SUPPORT
- 25 - GROUNDING BOLT (M12 WITH CLEAR GROUNDING MARK)
- 26 - FRONT PLATE FOR BREAKER
- 27 - FRONT PLATE HANDLE
- 28 - HINGES
- 29 - WALL MOUNTING SUPPORT

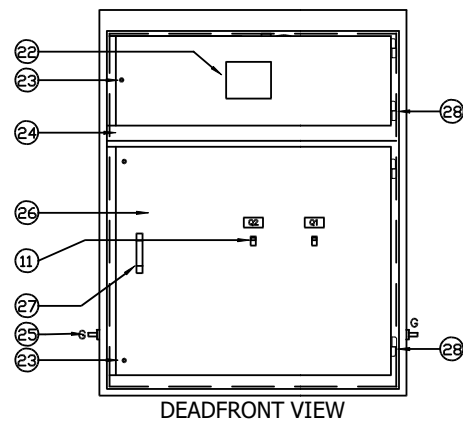


L.V. CABINET FOR POLE MOUNTED TRANSFORMER 200KVA-300A

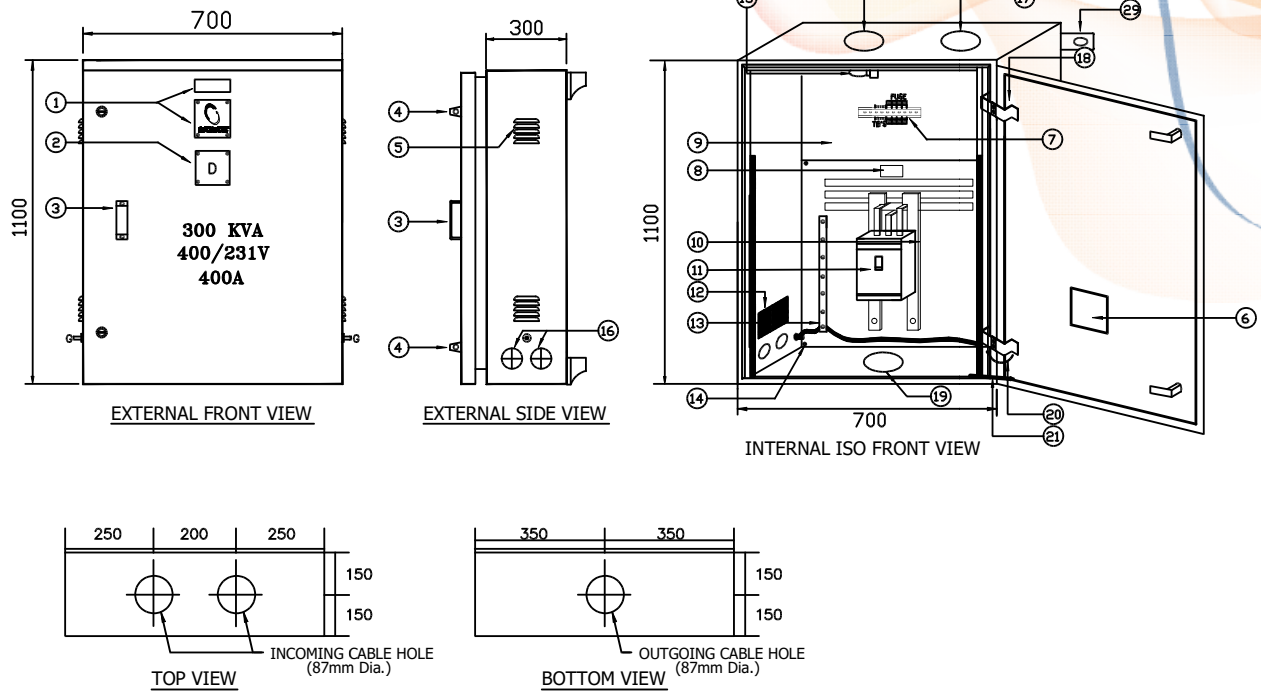


PANEL PART SCHEDULE

- 1 - TAG NAME AND SEC MONOGRAM
- 2 - DANGER PLATE
- 3 - DOOR HANDLE
- 4 - STAINLESS STEEL TUBULAR CAM-LOCKS
- 5 - VENTILATION LOUVERS ON BOTH SIDES OF ENCLOSURES
- 6 - NAME PLATE
- 7 - CT TERMINAL BLOCK AND FUSES
- 8 - CURRENT TRANSFORMER
- 9 - MAIN BUSBARS
- 10 - BREAKER MOUNTING SUPPORT
- 11 - BREAKERS 2x200A
- 12 - SCREEN FILTER
- 13 - EARTH & NEUTRAL BUSBAR (CONNECTED WITH INSULATED COPPER WIRE LINKS WITH TERMINAL LUGS IN BOTH SIDES)
- 14 - BOLT FOR MOUNTING PLATE
- 15 - LED BULB
- 16 - 2 NOS OUTGOING HOLE BOTH SIDE 78mm Dia
- 17 - INCOMING HOLE 87mm Dia
- 18 - CONCEALED HINGES
- 19 - OUTGOING HOLE 87mm Dia
- 21 - DOOR STOPPER
- 22 - DIGITAL METER
- 23 - DOOR METERING AND BREAKER COVER
- 24 - METERING COVER SUPPORT
- 25 - GROUNDING BOLT (M12 WITH CLEAR GROUNDING MARK)
- 26 - FRONT PLATE FOR BREAKER
- 27 - FRONT PLATE HANDLE
- 28 - HINGES
- 29 - WALL MOUNTING SUPPORT

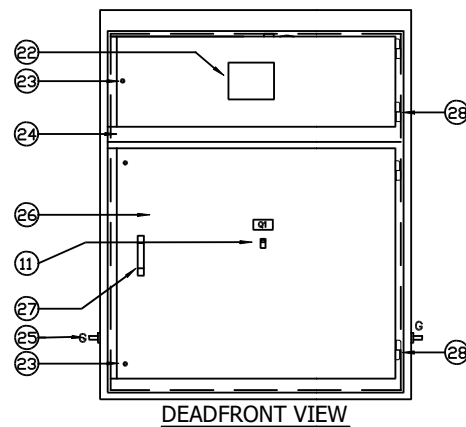


L.V. CABINET FOR POLE MOUNTED TRANSFORMER 200KVA-400A

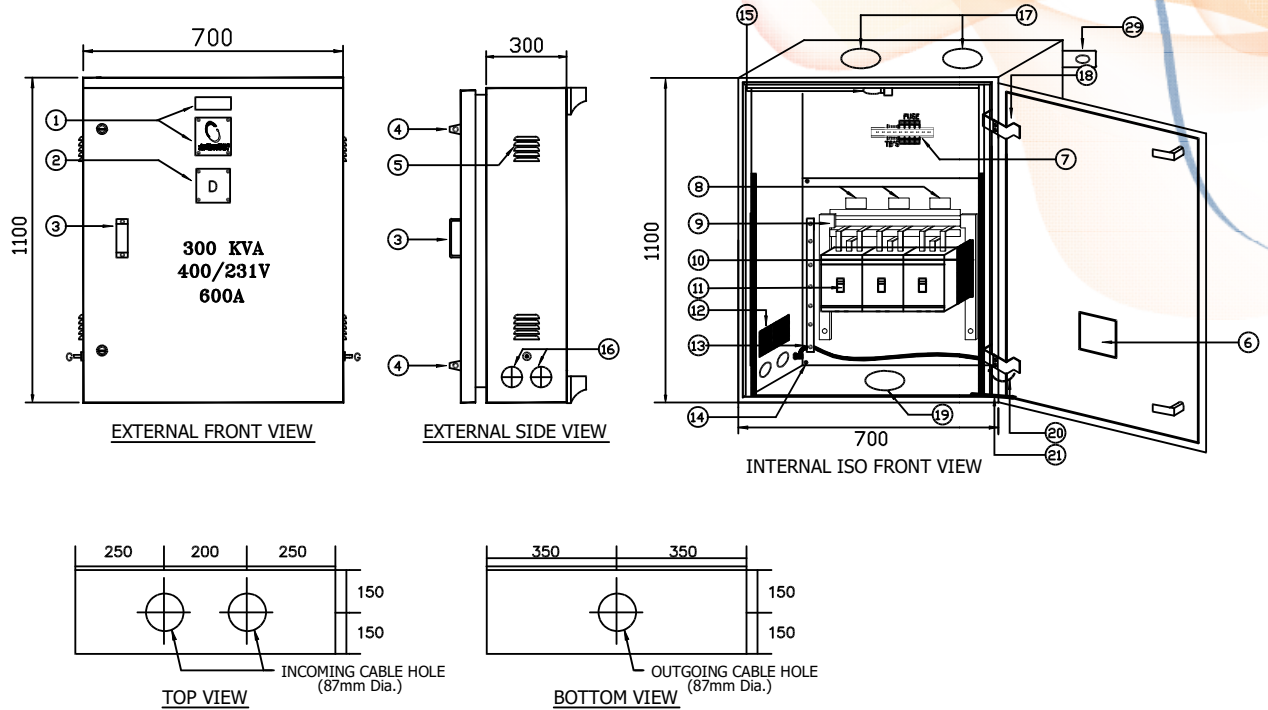


PANEL PART SCHEDULE

- 1 - TAG NAME AND SEC MONOGRAM
- 2 - DANGER PLATE
- 3 - DOOR HANDLE
- 4 - STAINLESS STEEL TUBULAR CAM-LOCKS
- 5 - VENTILATION LOUVERS ON BOTH SIDES OF ENCLOSURES
- 6 - NAME PLATE
- 7 - CT TERMINAL BLOCK AND FUSES
- 8 - CURRENT TRANSFORMER
- 9 - MAIN BUSBARS
- 10 - BREAKER MOUNTING SUPPORT
- 11 - BREAKER 400A
- 12 - SCREEN FILTER
- 13 - EARTH & NEUTRAL BUSBAR (CONNECTED WITH INSULATED COPPER WIRE LINKS WITH TERMINAL LUGS IN BOTH SIDES)
- 14 - BOLT FOR MOUNTING PLATE
- 15 - LED BULB
- 16 - 2 NOS OUTGOING HOLE BOTH SIDE 78mm Dia
- 17 - 2 NOS INCOMING HOLE 87mm Dia
- 18 - CONCEALED HINGES
- 19 - OUTGOING HOLE 87mm Dia
- 21 - DOOR STOPPER
- 22 - DIGITAL METER
- 23 - DOOR METERING AND BREAKER COVER
- 24 - METERING COVER SUPPORT
- 25 - GROUNDING BOLT (M12 WITH CLEAR GROUNDING MARK)
- 26 - FRONT PLATE FOR BREAKER
- 27 - FRONT PLATE HANDLE
- 28 - HINGES
- 29 - WALL MOUNTING SUPPORT

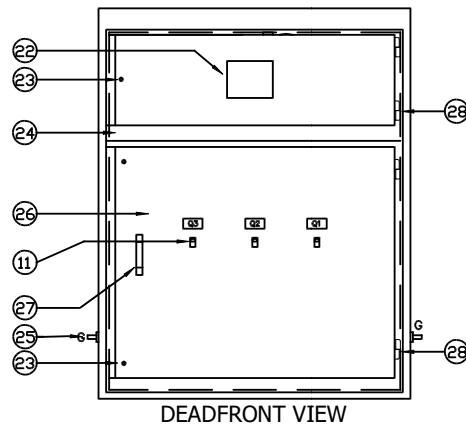


L.V. CABINET FOR POLE MOUNTED TRANSFORMER 300KVA-400A

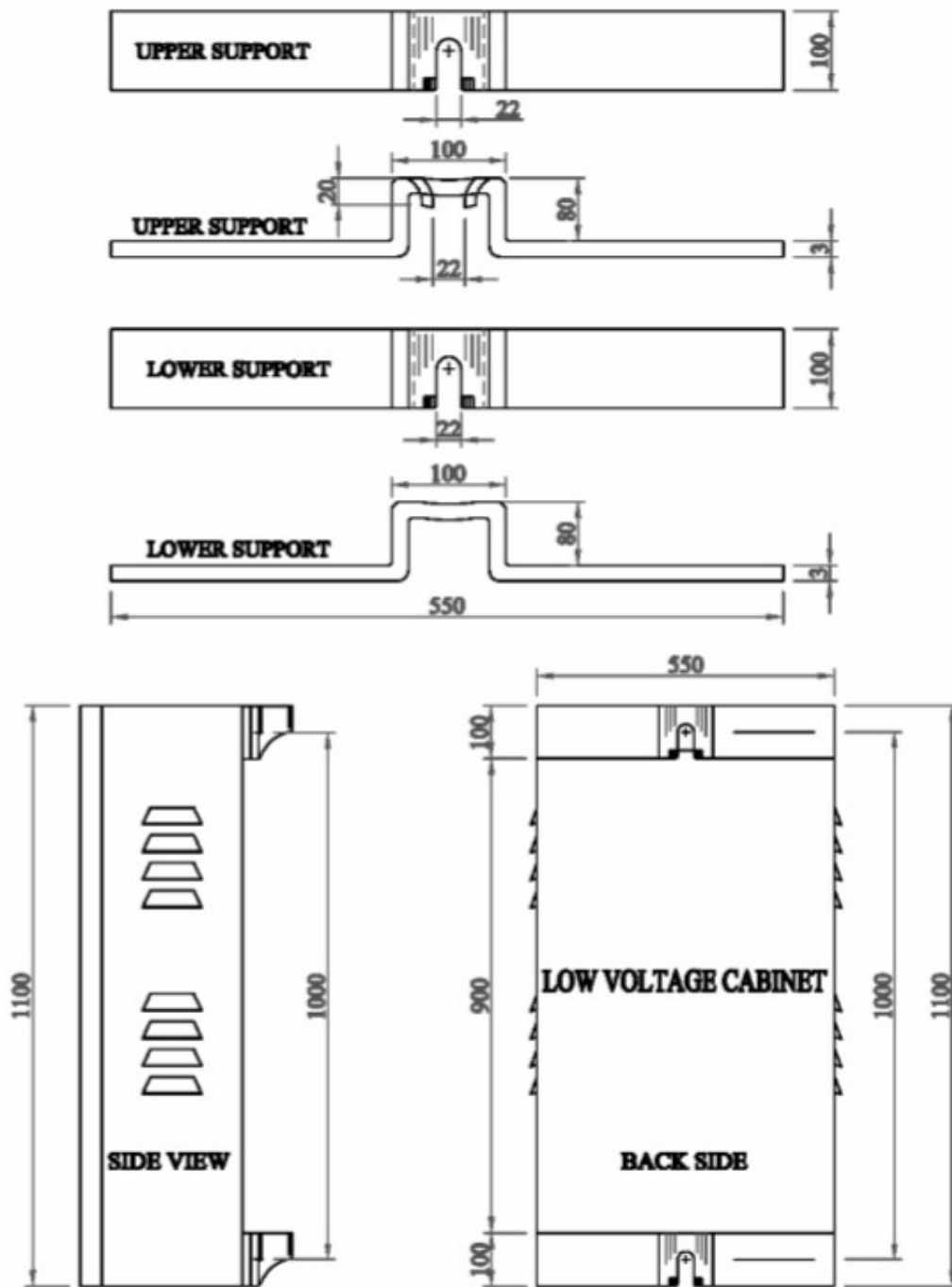


PANEL PART SCHEDULE

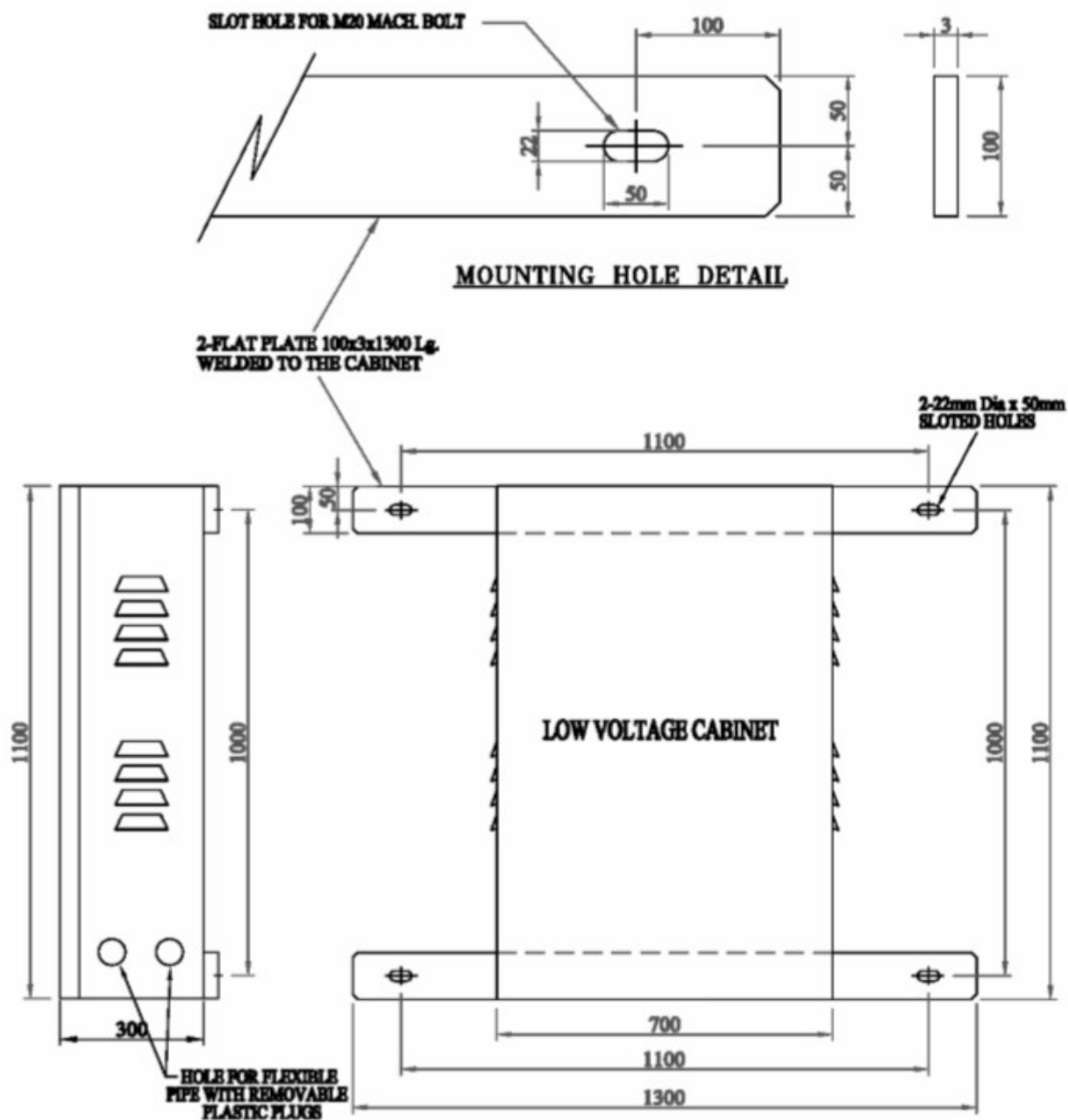
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- 5 - VENTILATION LOUVERS ON BOTH SIDES OF ENCLOSURES
- 6 - NAME PLATE
- 7 - CT TERMINAL BLOCK AND FUSES
- 8 - CURRENT TRANSFORMER
- 9 - MAIN BUSBARS
- 10 - BREAKER MOUNTING SUPPORT
- 11 - BREAKER 3x200A
- 12 - SCREEN FILTER
- 13 - EARTH & NEUTRAL BUSBAR (CONNECTED WITH INSULATED COPPER WIRE LINKS WITH TERMINAL LUGS IN BOTH SIDES)
- 14 - BOLT FOR MOUNTING PLATE
- 15 - LED BULB
- 16 - 2 NOS OUTGOING HOLE BOTH SIDE 78mm Dia
- 17 - 2 NOS INCOMING HOLE 87mm Dia
- 18 - CONCEALED HINGES
- 19 - OUTGOING HOLE 87mm Dia
- 21 - DOOR STOPPER
- 22 - DIGITAL METER
- 23 - DOOR METERING AND BREAKER COVER
- 24 - METERING COVER SUPPORT
- 25 - GROUNDING BOLT (M12 WITH CLEAR GROUNDING MARK)
- 26 - FRONT PLATE FOR BREAKER
- 27 - FRONT PLATE HANDLE
- 28 - HINGES
- 29 - WALL MOUNTING SUPPORT



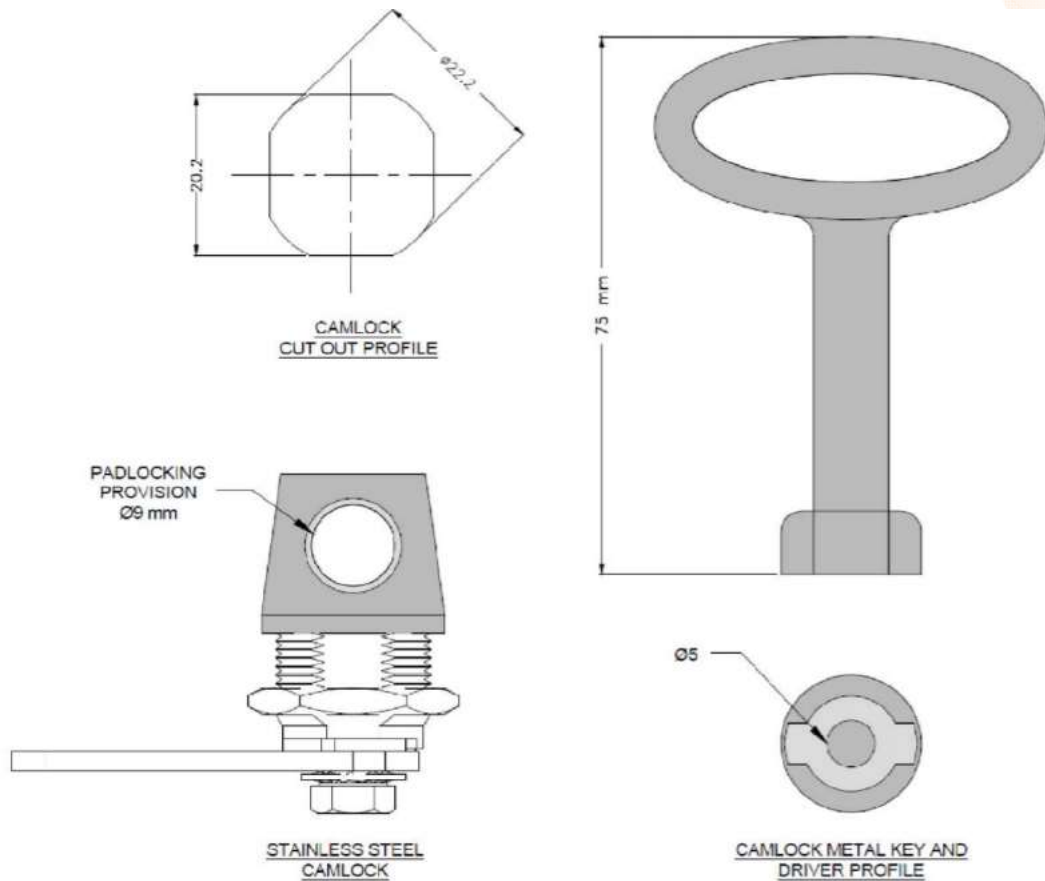
L.V. CABINET FOR POLE MOUNTED TRANSFORMER 300KVA-600A



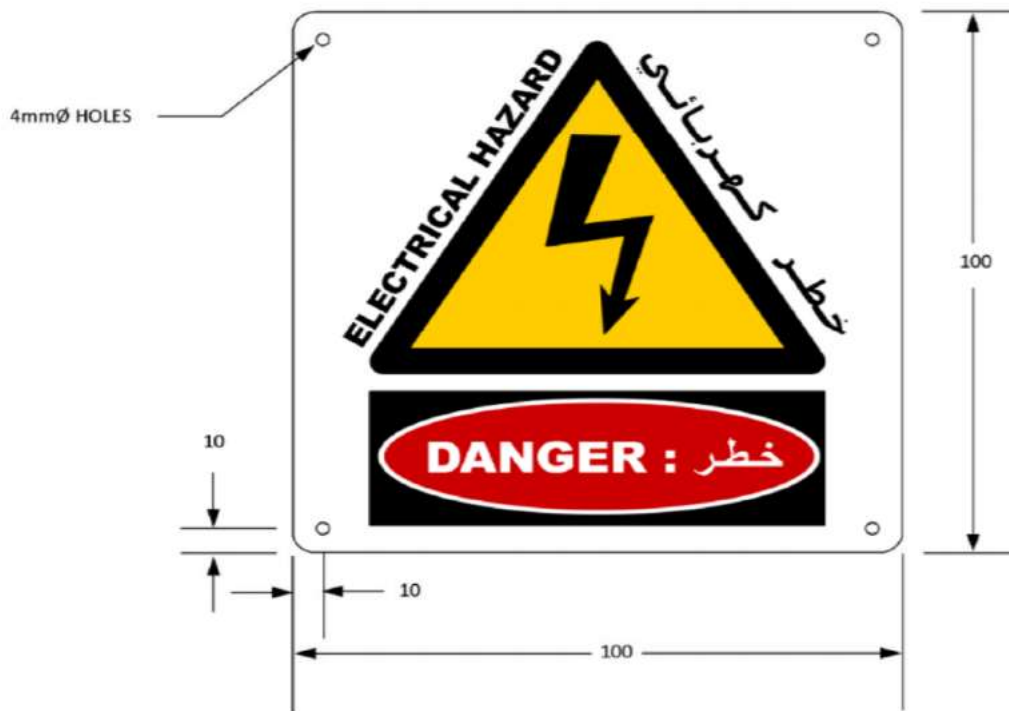
DETAILED DRAWING FOR L.V. CABINET MOUNTING SUPPORT
 100KVA TRANSFORMER



DETAILED DRAWING FOR L.V. CABINET MOUNTING SUPPORT
 200KVA & 300KVA TRANSFORMER



DRAWING SEC/DP-06: CAMLOCK DETAILS



ALUMINUM PLATE: 1.5 mm THICK

-  - RAL 9005 JET BLACK
-  - RAL 1023 TRAFFIC YELLOW
-  - RAL 3001 SIGNAL RED
-  - RAL 9016 TRAFFIC WHITE

DANGER SIGN PLATE FOR LOW-VOLTAGE EQUIPMENT