Standard Bidding Document

Procurement of 10,916-Nos. of Asset Performance Management System (APMS) for Pole Mounted Distribution Transformers as per PPMC specification No. DS-01:2026 including Supply, Installation, Testing & Commissioning with allied accessories .
(Goods)

International

Single Stage-One Envelope

CORRIGENDUM # 1	CORR-P138519-001
Initiation Date	October 26, 2026

October 26, 2026

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REQUEST FOR BIDS

PROCUREMENT OF GOODS

1. The **Chief Engr. Dev PMU SEPCO (SEPCO)** has reserved Funds for the procurement planned for FY **2026-27**. The **Chief Engr. Dev PMU SEPCO (SEPCO)** intends to apply part of the proceeds of this Fund to cover eligible payments under the contract for the "**Procurement of 10,916-Nos. of Asset Performance Management System (APMS) for Pole Mounted Distribution Transformers as per PPMC specification No. DS-01:2026 including Supply, Installation, Testing & Commissioning with allied accessories .**" with the reference of **"P138519"**

2. The **Chief Engr. Dev PMU SEPCO (SEPCO)** invites sealed Bids from eligible Bidders for procurement of goods described in the bidding documents on **EPADS v2.0**.

3. **Single Stage-One Envelope** will be used by adopting **Least Cost Based Selection (LCBS)** Technique for the subject procurement, in line with the Public Procurement Rules, 2004 and any Regulations, Regulatory Guides, Procurement Guidelines or Instructions issued by the Authority from time to time.

4. All Bids must be accompanied by a Bid Security amounting described in Bid Security Section in Bidding Document in the form of **Pay Order, Banker's Cheque, Call at Deposit, Bank Guarantee** or all bids must be accompanied by bid securing declaration in the format specified in the Bidding documents

5. E-Bidding documents, containing detailed terms & conditions, specifications and requirements etc. are available on **e-Pak Acquisition and Disposal System (EPADS)** at **https://epads.gov.pk/opportunities/federal/procurements/138519** for all the interested bidders registered on **EPADS v2.0**. Bidders are required to get themselves registered on **EPADS v2.0** to participate in Bidding process.

6. The e-bids, prepared in accordance with the instructions in the e-Bidding Documents, must be submitted through **EPADS v2.0** on or before **Thursday, November 5, 2026 11:30 AM**. E-bids will be opened using **EPADS v2.0** on

the same day at **Thursday, November 5, 2026 12:00 PM**. Manual submission of Bids shall not be entertained. Those vendors who have not yet registered on the new version of **EPADS v2.0,** may register themselves on **https://vendors.epads.gov.pk/**. A tutorial to explain the registration process is available at **https://www.youtube.com/watch?v=MNW6T38v7tc**

In terms of Rule 48 of Public Procurement Rules, 2004 Grievance Redressal Committee (GRC) is notified for the subject procurement and notification copy is available on the procuring agency's website and on Authority's website at (**www.ppra.org.pk**).

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Instructions to Bidders

A. Introduction

1.Scope of Bids

1.1 The Procuring Agency (PA), as indicated in the **Bids Data Sheet (BDS)** invites Bids **through EPADS v2.0** for the provision of Goods for as specified in the BDS and **in Section V – Evaluation Criteria, Specifications & Schedule of Requirements**. The name, identification, and number of items/deliverables are provided in the **BDS**. The successful Bidders will be expected to provide the goods within the specified period and timeline(s) as stated in the **BDS**.

2. Source of Funds

2.1 Source of funds is referred in Clause-1 of Invitation for Bids.

3. Eligible Bidders

3.1 A Bidder may be natural person, company or firm or public or semi-public agency of Pakistan or any foreign country**,** or any combination of them with a formal existing agreement (on Judicial Papers) in the form of a joint venture, consortium, or association. In the case of a joint venture, consortium, or association, all members shall be jointly and severally liable for the execution of the Contract in accordance with the terms and conditions of the Contract. The joint venture, consortium, or association shall nominate a Lead Member as nominated in the BDS, who shall have the authority to conduct all business for and on behalf of any and all the members of the joint venture, consortium, or association during the Bidding process, and in case of award of contract, during the execution of the contract.

3.2 Verifiable copy of the agreement that forms a joint venture, consortium or association shall be required to be submitted as part of the Bid.

3.3 The appointment of Lead Member in the joint venture, consortium, or association shall be confirmed by submission of a valid Power of Attorney to the Procuring Agency.

3.4 Any bid submitted by the joint venture, consortium or association shall indicate the part of proposed contract to be performed by each party and each party shall be evaluated (or post qualified if required) with respect to its contribution only, and the responsibilities of each party shall not be substantially altered without prior written approval of the Procuring Agency and in line with

any instructions issued by the Authority.

(The limit on the number of members of JV or Consortium or Association may be prescribed in BDS, in accordance with the guidelines issued by the PPRA).

3.5 The invitation for Bids is open to all prospective suppliers, manufacturers, or authorized agents / dealers subject to any provisions of incorporation or licensing by the respective national incorporating agency or statutory body established for that particular trade or business. Procuring agencies shall specify the registration/licensing requirements for the foreign bidders keeping in view the requirement of that business.

3.6 A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest with one or more parties in this Bidding process, if they:

1. are associated or have been associated in the past, directly or indirectly with a firm or any of its affiliates which have been engaged by the Procuring Agency to provide consulting services for the preparation of the design, specifications and other documents to be used for the procurement of the Goods to be purchased under this Invitation for Bids.

2. have controlling shareholders in common; or

3. receive or have received any direct or indirect subsidy from any of them; or

4. have the same legal representative for purposes of this Bid; or

5. have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bids of another Bidder, or influence the decisions of the Procuring Agency regarding this Bidding process; or

6. Submit more than one Bid in this Bidding process.

3.7 A Bidder may be ineligible if –

1. he is declared bankrupt or, in the case of company or firm, insolvent;

2. payments in favor of the Bidder is suspended in accordance with the judgment of a court of law other than a judgment declaring bankruptcy and resulting (in accordance with the national laws) in the total or partial loss of the right to administer and dispose of its property;

3. the Bidder is convicted, by a final judgment, of any offence involving professional conduct;

4. the Bidder is blacklisted locally or by international organizations and hence debarred due to involvement in corrupt and fraudulent practices, or performance failure or due to breach of Bid securing declaration.

3.8 As and when required, bidders shall provide to the Procuring Agency evidence of their eligibility, proof of compliance with the necessary legal requirements to carry out the contract effectively.

3.9 Bidders shall submit Bids relating to the nature, conditions and modalities of sub-contracting wherever the sub-contracting of any elements of the contract amounting to more than ten (10) percent of the Bid price is envisaged.

4. Eligible Goods and Related Services

4.1 All goods and related services to be supplied under the contract shall have their origin in eligible source countries, and all expenditures made under the contract will be limited to such goods and services. For purpose of this Bid, ineligible countries are the countries declared ineligible by the Federal Government.

5. One Bid per Bidder

5.1 A bidder shall submit only one Bid, in the same bidding process, either individually as a Bidder or as a member in a joint venture or any similar arrangement.

5.2 The Bidder shall not engage a subcontractor for any portion of the contract if the value of such subcontracting exceeds thirty percent (30%) of the total contract amount.

6. Cost of Bidding

6.1 Any cost incurred by the bidder relating to the preparation and submission of its Bid shall be borne by the bidder, and the Procuring Agency shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

B. Bidding Documents

7. Contents of Bidding Document

7.1 The Goods required, Bidding procedures, and terms and conditions of the contract are prescribed in the Bidding Documents. In addition to the Invitation for Bids, the Bidding documents which should be read in conjunction with any addenda issued in accordance with **ITB 9.1** include:

Section I -Invitation to Bids

Section II Instructions to Bidders (ITB)

Section III Bid Data Sheet (BDS)

Section IV Evaluation Criteria, Specifications, Schedule of Requirements

Section V Bid Forms

Section VI General Conditions of Contract (GCC)

Section VII Special Conditions of Contract (SCC)

Section VIII Contract Forms

7.2 The Bidder is expected to examine all instructions, forms, terms and specifications in the Bidding documents. Failure to furnish all the information required in the Bidding documents through **EPADS v2.0** will be at the Bidder's risk and may result in the rejection of his Bids.

8. Clarification of Bidding documents

8.1 A prospective Bidder requiring any clarification of the Bidding documents may notify the Procuring Agency through **EPADS v2.0.**

8.2 The Procuring Agency will within three (3) working days after receiving the request for clarification, respond to any request for clarification through **EPADS v2.0** provided that such request is received not later than three (03) days prior to the deadline for the submission of Bids as prescribed in **ITB 22**

8.3 Copies of the Procuring Agency's response will be forwarded to all identified Prospective Bidders through **EPADS v2.0**, including a description of the inquiry, but without identifying its source.

8.4 Should the Procuring Agency deem it necessary to amend the Bidding document as a result of a clarification, it shall do so following the procedure under **ITB 9.**

8.5 If indicated **in the BDS**, the Bidder's designated representative is invited at the Bidder's cost to attend a pre-Bid meeting at the place, date and time mentioned **in the BDS**. During this pre-Bid meeting, prospective Bidders may request clarification of the schedule of requirement, the Evaluation Criteria or any other aspects of the Bidding document.

8.6 Minutes of the pre-Bid meeting, if applicable, including the text of the questions asked by Bidders, including those during the meeting (without identifying the source) and the responses given, together with any responses prepared after the meeting will be uploaded on **EPADS v2.0**. Any modification to the Bidding documents that may become necessary as a result of the pre-Bid meeting shall be made by the Procuring Agency exclusively through the use of an Addendum pursuant to **ITB 9**. Non-attendance at the pre-Bid meeting will not be a cause for disqualification of a Bidder.

9. Amendment of Bidding documents

9.1 Before the deadline for submission of Bids, the Procuring Agency for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder or Pre-Bid meeting may modify the Bidding documents by issuing addenda through **EPADS v2.0**.

9.2 The Procuring Agency shall promptly publish the addendum through **EPADS v2.0**.

9.3 Any addendum issued including the notice of any extension of the deadline shall also be communicated through EPADS v2.0 to all the bidders who have already submitted their bids. Such bidders shall have the right to withdraw their already submitted bid and re-submit the revised bid prior to the original or extended bid submission deadline.

9.4 To give prospective Bidders reasonable time in which to take an addendum/corrigendum into account in preparing their Bids, the Procuring Agency may, at its discretion, extend the deadline for the submission of Bids through **EPADS v2.0**:

Provided that the Procuring Agency shall extend the deadline for submission of Bids, if such an addendum is issued within last three (03) days of the Bids submission deadline.

C. Preparation of Bids

10. Language of Bid

10.1 The Bid prepared by the bidder, as well as all correspondence and documents relating to the Bids exchanged by the Bidder and the Procuring Agency shall be written in the English language unless otherwise specified in the BDS**.** Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation of the relevant pages in the English language unless otherwise specified in the **BDS**, in which case, for purposes of interpretation of the Bidder, the translation shall govern.

11. Documents and samples Constituting the Bid

11.1 The Bid prepared by the Bidder shall constitute thedocuments required in the **BDS**.

Details of sample(s) where applicable and requested in the BDS.

1. Documentary evidence established in accordance with ITB that the Bidder is eligible and/or qualified for the subject bidding process;

2. Documentary evidence establish that the Bidder has been authorized by the manufacturer to deliver the goods into Pakistan, where required and where the supplier is not the manufacturer of those goods;

3. Documentary evidence establish that the goods and related services to be supplied by the Bidder are eligible goods and services, and conform to the Bidding Documents;

4. Bid security or Bid Securing Declaration furnished in accordance with **ITB 18.**

12. Documents Establishing Eligibility of the Goods and Conformity to Bidding documents

12.1 To establish the conformity of the bidder to the Bidding document, the Bidder shall furnish as part of its Bids the documentary evidence that Goods provided conform to the technical specifications and standards.

13. Documents Establishing Eligibility and Qualification of the Bidder

13.1 The Bidder shall furnish, as part of itsBid, all those documents establishing the Bidder's eligibility to participate in the Bidding process and/or its qualification to perform the contract if its Bid is accepted.

14. Form of Bids

14.1 The Bidder shall fill the Form of Bid furnished in the Bidding documents.The Bids Form must be completed without any alterations to its format and no substitute shall be accepted.

15. Bids Prices

15.1 The Bids Prices quoted by the Bidder in the Form of Bid and in the Price Schedules shall conform to the requirements specified below or exclusively mentioned hereafter in the Bidding documents.

15.2 All items in the Schedule of Requirement must be listed and priced separately in the Price Schedule(s). If a Price Schedule shows items listed but not priced and neither explicitly denied, their prices shall be construed to be included in the prices of other items.

15.3 Items not listed in the Price Schedule shall be assumed not to be included in the Bid, and provided that the Bid is still substantially responsive in their absence or due to their nominal nature, the corresponding average price of the respective item(s) of the remaining substantially responsive Bidder(s) shall be construed to be the price of those missing item(s)

15.4 The Bid price to be quoted in the Form of Bid in accordance with **ITB 14.1** shall be the total price of the Bid.

15.5 The Bidder shall indicate on the appropriate Price Schedule, the unit prices (where applicable) and total Bid price of the Goods it proposes to provide under the contract.

15.6 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account. A Bid submitted with an adjustable price will be treated as non-responsive and shall be rejected.

16. Bids Currencies

16.1 Prices shall be quoted in Pakistani Rupees unless otherwise specified in the BDS in accordance with Rule 30 (2) of the Public Procurement Rules, 2004.

17. Bids Validity Period

17.1 Bids shall remain valid for the period specified in the **BDS** after the Bid submission deadline prescribed by the Procuring Agency. A Bid valid for a shorter period shall be rejected by the Procuring Agency as non-responsive**.** The period of Bid validity will be determined from the complementary Bid securing instrument, i.e. the expiry period of Bid Security or Bids Securing Declaration as the case may be.

17.2 The procuring agency shall ordinarily be under an obligation to process and evaluate the bid and to issue letter of award within the stipulated bid validity period.

17.3 Under exceptional circumstances, prior to the expiration of the initial Bid validity period, the Procuring Agency may request the Bidders' consent to an extension of the period of validity of their Bids only once through **EPADS v2.0**, for the period not more than the period of initial bid validity. The Bid Security provided under **ITB 18** shall also be suitably extended. A Bidder may refuse the request without forfeiting its Bid security or causing to be executed its Bid Securing Declaration. A Bidder agreeing to the request will not be required nor permitted to modify its Bid, but will be required to extend the validity of its Bid Security or Bid Securing Declaration for the period of the extension.

18. Bid Security or Bid Securing Declaration

18.1 The Bidder shall furnish as part of its Bid, a Bid Security in accordance with Rule 25 of the Public Procurement Rules, 2004.

18.2 The original Bid Security shall be enclosed within the sealed envelope and to be submitted physically before closing time for submission of bids. Whereas, scanned copy of bid security shall be uploaded electronically through EPADS v2.0 before closing hours for submission of bids.

18.3 The Bidder who failed to submit the original Bids security before the submission deadline shall be disqualified straightaway.

18.4 The Bid Security or Bid Securing Declaration is required to protect the Procuring Agency against the risk of Bidder's conduct which would warrant the security's forfeiture, pursuant to **ITB 18.7.**

18.5 The Bid Security shall be denominated in the local currency, and it shall be a Bank Draft in the name of the Procuring Agency and valid for twenty-eight (28) days beyond the end of the validity of the Bid. This shall also apply if the period

for Bids/Bid Validity is extended. In either case, the form must include the complete name of the Bidder.

18.6 The Bid Security shall be payable promptly upon written demand by the Procuring Agency in case any of the conditions listed in **ITB 18** are invoked.

18.7 Unsuccessful Bidders' Bid Security will be discharged or returned as promptly as possible, however in no case later than thirty (30) days after the expiration of the period of Bids Validity prescribed by the Procuring Agency pursuant to **ITB 17**. The Procuring Agency shall make no claim to the amount of the Bid Security, and shall promptly return the Bid Security document, after whichever of the following that occurs earliest:

a. the expiry of the Bid Security;

b. the entry into force of a procurement contract and the provision of a Performance Guarantee, for the performance of the contract if such a guarantee, is required by the Bid documents;

c. the rejection by the Procuring Agency of all Bids;

d. the withdrawal of the Bids prior to the deadline for the submission of Bids, unless the Bids documents stipulate that no such withdrawal is permitted.

18.8 The successful Bidder's Bids Security will be discharged upon the Bidder signing the contract**,** or furnishing the Performance Guarantee.

18.9 The Bid Security may be forfeited or the Bid Securing Declaration executed:

a. if a Bidder:

b. withdraws its Bid during the period of Bid Validity as specified by the Procuring Agency, and referred by the Bidder on the Form of Bids except as provided for in **ITB 17.2**; or

c. does not accept the correction of errors**;** or

d. in the case of a successful Bidder, if the Bidder fails:

e. to sign the contract; or

f. to furnish Performance Guarantee**.**

19. Withdrawal, Substitution, and Modification of Bid

19.1 Before Bid submission deadline, any Bidder may withdraw, substitute, or modify its Bid after it has been submitted through EPADS v2.0. Bids requested to be withdrawn, shall be returned unopened to the Bidders through **EPADS v2.0**.

20. Format and Signing of Bid

20.1 The Bidder shall prepare and submit Bids with due diligence after carefully reading all the terms and condition **before bid submission deadline** through EPADS v2.0.

D. Submission of Bids

21. Submission of Bids through EPADS v2.0

21.1 The Technical and Financial Bids if required to submitted, shall be submitted on **EPADS v2.0**.

22. Deadline for Submission of Bids

22.1 Bids shall be received by the Procuring Agency through **EPADS v2.0** before bid submission deadline.

22.2 The Procuring Agency may, under exceptional circumstances, extend the deadline for the submission of Bids, after recording reasons in writing and in an equal opportunity manner.

In such case, all rights and obligations of the Procuring Agency and the Bidders that were previously governed by the original deadline shall thereafter be subject to the revised deadline.

E. Opening and Evaluation of Bids

23. Opening of Bids

23.1 The Bid Evaluation Committee of the Procuring Agency shall open all Bids through the EPADS v2.0, on the date and time specified in the Bid Data Sheet (BDS).

23.2 The Bid Evaluation Committee **shall generate minutes through EPADS v2.0 containing brief details of bid opening process.** The record of the Bid opening shall include, as a minimum: the name of the Bidder, the Bid price if applicable, and the presence or absence of a Bid Security or Bid Securing Declaration.

23.3 The procuring agency shall live broadcast the opening of bids on national media or on their website or digital channels, if the volume of procurement exceeds five hundred million rupees in case of goods and services and one thousand million rupees in case of works.

23.4 In case the date of opening of bid has been declared as public holiday or the procuring agency fail to open bid due to any EPADS v2.0 related issues, the submission and opening of bids shall be shifted to the next working day on the same time.

23.5 In case of Single Stage One Envelope Procedure, the Bidders names, the Bid prices, the total amount of each Bid and, the presence or absence of Bid Security, Bid Securing Declaration and such other details as the Procuring Agency may consider appropriate, will be announced by the Bid Evaluation Committee.

24. Clarification of Bids

24.1 To assist in the examination, evaluation and comparison of Bids of the Bidders, the Procuring Agency may, ask any Bidder for a clarification of its Bid including breakdown of prices.

24.2 The request for clarification and the response shall be sought through EPADS v2.0 before **three days prior to the deadline for submission of bids.** No change in the prices or substance of the Bids shall be sought, offered, or permitted.

24.3 The alteration or modification in the BIDS which in any way affect the following parameters will be considered as a change in the substance of a Bids:

1. evaluation & qualification criteria;
2. required scope of work or specifications;
3. all securities requirements;
4. tax requirements;

5. terms and conditions of Bidding documents.

6. change in the ranking of the Bidder

24.4 From the time of Bids opening to the time of Contract award if any Bidder wishes to contact the Procuring Agency on any matter related to the Bids it should do so through **EPADS v2.0**.

25. Preliminary Examination of Bids

25.1 Prior to the detailed evaluation of Bids, the Procuring Agency will determine whether each Bid:

1. meets the eligibility criteria defined in **ITB 3**;

2. has been prepared as per the format and contents defined by the Procuring Agency in the Bidding documents;

3. is accompanied by the required securities; and

4. is substantially responsive to the requirements of the Bidding documents.

25.2 The Procuring Agency's determination of a Bid's responsiveness will be based on the contents of the Bid itself.

25.3 A substantially responsive Bid is one which conforms to all the terms, conditions, and specifications of the Bidding documents, without material deviation or reservation. A material deviation or reservation is one that: -

1. affects in any substantial way the scope, quality, or performance of the Goods;

2. limits in any substantial way, inconsistent with the Bidding documents, the Procuring Agency's rights or the Bidders obligations under the Contract; or

3. if rectified, would affect unfairly the competitive position of other Bidders presenting substantially responsive Bids.

25.3 If a Bids is not substantially responsive, it will be rejected by the Procuring Agency and may not subsequently be evaluated for complete technical responsiveness.

26. Examination of Terms and Conditions; Technical Evaluation

26.1 The Procuring Agency shall examine the Bids to confirm that all terms and conditions specified in the **GCC** and the **SCC** have been accepted by the Bidder without any material deviation or reservation.

26.2 The Procuring Agency shall evaluate the technical aspects of the Bids submitted, to confirm that all requirements specified in Schedule of Requirements and Technical Specifications of the Bidding documents have been met without material deviation or reservation.

26.3 If after the examination of the terms and conditions and the technical evaluation, the Procuring Agency determines that the Bid is not substantially responsive in accordance with **ITB 25.2,** it shall reject the Bid.

27. Correction of Errors

27.1 Bids determined to be substantially responsive will be checked for any arithmetic errors. Errors will be corrected as follows: -

1. if there is a discrepancy between unit prices and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected, unless in the opinion of the Procuring Agency there is an obvious misplacement of the decimal point in the unit price, in which the total price as quoted shall govern and the unit price shall be corrected;

2. if there is an error in a total corresponding to the addition or subtraction of sub-totals, the sub-totals shall prevail and the total shall be corrected; and

3. where there is a discrepancy between the amounts in figures and in words, the amount in words will govern.

4. Where there is discrepancy between grand total of price schedule and amount mentioned on the Form of Bids, the amount referred in Price Schedule shall be treated as correct subject to elimination of other errors.

27.2 The amount stated in the Bid will, be adjusted by the Procuring Agency in accordance with the above procedure for the correction of errors and, with the concurrence of the Bidder, shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount, its Bid will then be rejected, and the Bid Security may be forfeited or the Bids Securing Declaration may be executed.

28. Conversion to Single Currency

28.1 To facilitate evaluation and comparison, the Procuring Agency will convert all Bids prices expressed in the amounts in various currencies in which the Bids prices are payable. For the purposes of comparison of bids quoted in different currencies, the price shall be converted into a single currency specified in the bidding documents. The rate of exchange shall be the selling rate prevailing on the date of opening of financial bids specified in the bidding documents, in accordance with weighted average customer exchange rates list issued by the State Bank of Pakistan on that day.

29. Evaluation of Bids

29.1 The Bids, quotations, or proposals shall be evaluated by the respective evaluation committees as per evaluation criteria described in the Bidding Documents in accordance with Rule 29 and 30 of the Public Procurement Rules, 2004.

1. Least Cost Based Selection (LCBS)
After meeting the requirements of eligibility, qualification and substantial responsiveness, the bid in compliance with all the mandatory (technical) specifications/requirements and/or requisite quality threshold (if any), and having lowest evaluated cost (or financial proposal) shall be considered Successful Bid.

2. Quality and Cost Based Selection (QCBS)
In such combination, there shall be some specific weightage of both the technical features and financial aspects of the proposal. The financial marks shall be awarded on the basis of inverse proportion calculations. The successful bid shall be declared, on the basis of combined evaluation.

3. Quality Based Selection (QBS)
Atter meeting the requirements of eligibility, qualification and substantial responsiveness the bid in compliance with all the mandatory (technical) specifications/requirements and attaining highest marks in the Technical Evaluation considering all other qualitative and/or quantitative parameters (or point rated criteria) for technical proposal(s) such as working methodology, implementation plan, resource allocation, additional functionalities, risk management approach, knowledge transfer techniques, post implementation methodology etc. shall be treated as highest ranked bid. Later on, the financial proposal of highest ranked bidder shall be opened, however, in case of failure to proceed further with such a bidder, the procuring agency may resort to second

highest bidder and so on.

29.2 In case of tie of bids, the bidders shall be provided an opportunity to offer their best and final monetary offer through EPADS v2.0. However, in no case the rates shall be higher than the original financial bids.

30. Domestic Preference

30.1 The procuring agency shall evaluate and compare bids, allow for preference to domestic bidders, while competing with the international bidders in accordance with the policies of Federal Government.

The percentage of preference, to be accorded shall be clearly mentioned in the bidding documents under the bid evaluation criteria.

31. Determination of Successful Bid

31.1 Selection technique will be adopted for determining the Successful Bid in accordance with the criteria referred in the BDS or prescribed in the separate section titled as Evaluation Criteria.

31.2 In case where the Procuring Agency adopts the Cost Based Evaluation Technique and, the Bid with the lowest evaluated price from amongst those which are eligible, compliant and substantially responsive shall be the Successful Bid.

31.3 The Procuring Agency may adopt the Quality & Cost Based Selection Technique due to the following two reasons:

1. Where the Procuring Agency knows about the main features, usage and output of the products; however not clear about the complete features, technical specifications and functionalities of the goods to be procured and requires the bidders to submit their proposals defining those features, specifications and functionalities; or

2. Where the Procuring Agency, in addition to the mandatory requirements and mandatory technical specifications, requires parameters specified in Evaluation Criteria to be evaluated while determining the quality of the goods.

31.4 In such cases, the Procuring Agency may allocate certain weightage to these factors as a part of Evaluation Criteria, and may determine the ranking of the bidders on the basis of combined evaluation in accordance with provisions of Rule 2(1)(h) of the Public Procurement Rules, 2004.

32. Abnormally Low Financial Bids

32.1Where the Bid price is considered to be abnormally low, the Procuring Agency shall perform price analysis either during determination of Successful Bids or as a part of the post-qualification process.

32.2 The Procuring Agency may reject an Abnormally low financial bids.

32.3 In order to identify the Abnormally Low Bids (ALB) following approaches can be considered to minimize the scope of subjectivity:

1. Comparing the Bids price with the cost estimate;

2. Comparing the Bids price with the Bids offered by other Bidders submitting substantially responsive Bids; and

3. Comparing the Bids price with prices paid in similar contracts in the recent past either government- or development partner-funded.

32.4 The Procuring Agency will determine to its satisfaction whether the Bidder that is selected as having submitted the successful bid is qualified to perform the contract satisfactorily.

32.5 The determination will take into account the Bidder's financial, technical, and production capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, as well as such other information as the Procuring Agency deems necessary and appropriate. Factors not included in these Bidding documents shall not be used in the evaluation of the Bidders' qualifications.

32.6 Procuring Agency may seek "Certificate for Independent Price Determination" from the Bidder and the results of reference checks may be used in determining an award of contract.

Explanation: The Certificate shall be furnished by the Bidder. The Bidder shall certify that the price is determined keeping in view of all the essential aspects such as raw material, its processing, value addition, optimization of resources due to economy of scale, transportation, insurance and margin of profit etc.

32.7 An affirmative determination will be a prerequisite for award of the contract to the Bidder. A negative determination will result in rejection of the Bidder's Bids, in which event the Procuring Agency will proceed to the next ranked Bidder to make a similar determination of that Bidder's capabilities to

perform satisfactorily.

F. Award of Contract

33. Criteria of Award

33.1 The Procuring Agency will award the Contract to the Bidder whose Bids has been determined to be substantially responsive to the Bidding documents and who has been declared as Most Advantageous Bidder.

34. Negotiations

34.1 The procuring agency shall not engage in negotiations with respect to scope and price with the bidder except when the procuring agency conducts a procurement using direct **or negotiated** contracting or a request for proposals with evaluation based on quality alone.

34.2 The procuring agency may negotiate with the most advantageous bid with a view to streamline the work or task execution, at the time of contract finalization on methodology, work plan, staffing, finalizing payment arrangements, delivery arrangements, minor amendments to the special conditions of the contract.

35. Procuring Agency Right to reject all bids

35.1 The Procuring Agency reserves the right to reject all bids or proposals at any time prior to the issuance of the Letter of Award, without incurring any liability, in accordance with Rule 33 of the Public Procurement Rules, 2004.

36. Procuring Agency’s Right to Vary Quantities at the Time of Award

36.1 The Procuring Agency reserves the right at the time of contract award to increase or decrease the **quantity of** Goods originally specified in these Bidding documents provided this does not exceed **by** 15%, without any change in unit price or other terms and conditions of the Bids and Bidding documents.

37. Notification of Award

37.1 Prior to the award of contract, the procuring agency shall announce and publish the result of bid evaluation on **EPADS v2.0** in accordance with Rule 35

of the Public Procurement Rules, 2004.

37.2 The Bidder whose Bids has been accepted will be notified of the award by the Procuring Agency prior to expiration of the Bids/Bid Validity period. The Letter of Award will state the sum that the Procuring Agency will pay the successful Bidder in consideration for the delivery of Goods as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price).

37.3 The Letter of award will constitute the formation of the Contract, subject to the Bidder furnishing the Performance Guarantee and signing of the contract.

38. Signing of Contract

38.1 Promptly after issuance of Letter of award, Procuring Agency shall send the successful Bidder the draft Contract, incorporating all terms and conditions as agreed by the parties to the contract.

38.2 Immediately after the Redressal of grievance by the GRC (if any), mandatory standstill period in accordance with Rule 35 of the Public Procurement Rules, 2004 and **after fulfillment of all condition's precedent** of the Contract Form, the successful Bidder and the Procuring Agency shall sign the Contract.

39. Corrupt & Fraudulent Practices

39.1 Procuring Agencies (including beneficiaries of Government funded projects and procurement) as well as Bidders/Contractors under Government financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts, and will avoid to engage in any corrupt and fraudulent practices.

F. Grievance Redressal & Complaint Review Mechanism

40. Constitution of Grievance Redressal

40.1 The Grievance Redressal Committee shall address the grievance, if any submitted by any party, including the bidder, in accordance with Rule 48 of the Public Procurement Rules, 2004 to be read with Redressal of Grievances Regulations, 2021.

40.2 In case if any party or the bidder is not satisfied with the decision of the GRC or if it fails to decide within ten days, the bidder or the party may file an appeal before the Appellate Committee of the Authority in accordance with Rule 48 of the Public Procurement Rules, 2004 to be read with Redressal of Grievances Regulations, 2021.

G. Mechanism of Blacklisting

41. Mechanism of Blacklisting

41.1 The Procuring Agency shall initiate blacklisting proceedings against any bidder, supplier, or contractor in accordance with the Mechanism for Blacklisting Regulations, 2024, read with Rule 19 of the Public Procurement Rules, 2004.

41.2 The blacklisted/debarred bidder may file the review petition before the Authority in accordance with Rule 19 of the Public Procurement Rules, 2004 to be read with Procedure of filing and disposal of Review Petitions Regulations, 2021.

Bid Data Sheet

Bids Data Sheet (BDS)

The following specific data for the procurement of Goods to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

BDS Clause Number
ITB Number
Amendments of, and Supplements to, Clauses in the Instruction to Bidders

A. Introduction

BDS Clause Number 1
ITB Number 1.1

Name of Procuring Agency: **Chief Engr. Dev PMU SEPCO (SEPCO)**

The subject of procurement is: **Procurement of 10,916-Nos. of Asset Performance Management System (APMS) for Pole Mounted Distribution Transformers as per PPMC specification No. DS-01:2026 including Supply, Installation, Testing & Commissioning with allied accessories .**

Expected commencement date: **Tuesday, January 5, 2027**

BDS Clause Number 2
ITB Number 2.1

Financial year for the operations of the Procuring Agency: **2026-27**

Name and identification number of the Contract: **P138519**

BDS Clause Number 3
ITB Clause Number 3.1

JV/Consortium or Association Allowed: **Yes**
Number of JV/Consortium Members: **3**
see section of eligibility criteria.

B. Bidding Documents

BDS Clause Number 4
ITB Number 8.1

The Bidders may seek clarifications through **EPADS v2.0** : Clarification Date: Monday, November 2, 2026
Pre-Bid Meeting: Monday, October 19, 2026 11:30 AM
Venue: 2nd Floor, Al Sehra Building, Minara Road, near Session Court Sukkur, Sindh, Pakistan
Meeting Link: https://us06web.zoom.us/j/84456617771?pwd=pLBQGM5xc2hkpEh6vPwNzlCylKP8uB.1

C. Preparation of Bids

BDS Clause Number 5
ITB Number 10.1

The Language of all correspondences and documents related to the Bids shall be in: **English**

List of documents required along with the bid: No

BDS Clause Number 6
ITB Number 11.1
Items/Lots and their related documents:
See section items and Lots

BDS Clause Number 7
ITB Number 12.1

Items / Lots Specifications:

see section of items specifications.

BDS Clause Number 8
ITB Number 15.6

The price shall be **Fixed**.

BDS Clause Number 9
ITB Number 16.1

Currency of the Bids shall be : **PKR**

BDS Clause Number 10
ITB Number 17.1

The Bids/Bid Validity period shall be: **150 Days**

BDS Clause Number 11
ITB Number 18.1

The amount of Bid Security shall be as defined in Bid Security Section for items and lots given in **BDS 6**
The Bid Security shall be in the form of: **Pay Order, Banker's Cheque, Call at Deposit, Bank Guarantee**

D. Submission of Bids

BDS Clause Number 12
ITB Number 20.1

Bid shall be submitted online on EPADS v2.0 whereas hard copy of the bid security should be submitted to the following;

Room # 201 Al-Sehra Building, Minara Road, Near Session Court, Sukkur before bid submission deadline.

Bids that are not submitted on EPADS v2.0 shall be disqualified.

The deadline for Bids submission is: **Thursday, November 5, 2026 11:30 AM**

E. Opening and Evaluation of Bids

BDS Clause Number 13
ITB Number 23.1

The Bids opening shall take place on **EPADS v2.0**.

Day *:* ***Thursday***

Date: ***Thursday, November 5, 2026***

Time *:* ***12:00 PM***

BDS Clause Number 14
ITB Number 31.1

Selection technique adopted will be: **Least Cost Based Selection (LCBS)**
see Evaluation Criteria

F. Review of Procurement Decisions

BDS Clause Number 15
ITB Number 41.1

Grievence against this procurement shall be submitted online on EPADS v2.0.

Arbitrator shall be appointed by mutual consent of the both parties.

Eligibility Criteria

All Active Taxpayers shall be eligible to participate in the procurement process, unless expressly excluded or otherwise restricted under the Eligibility Criteria specified by the Procuring Agency.

Required Registration
FBR (NTN)
FBR (GSTN)
PEC

Eligibility Criteria	Document
The Bidder shall have satisfactorily and substantially completed, as contractor, JV partner, or subcontractor,at least one (1) contract involve, supply, installation, testing, commissioning implementation of APMS,and/or Advanced Metering Infrastructure (AMI) of similar nature including integration of centralized systemssuch as HES/MDC with MDM or equivalent platforms for data integration and real-time monitoring. withinthe last (10) years for each Lot, before Bid submission deadline.	Yes
The Foreign Bidders/ Proposers are entitled to participate in the Bidding process only in Joint Venture with Pakistani Contractors who are registered with Income Tax and Sales Tax Departments and are on Active Taxpayers List of the Federal Board of Revenue (FBR) and registered with Pakistan Engineering Council (PEC).	Yes

Evaluation Criteria

Eligibile bidder(s) with substantially responsive bid(s) offering **Least Cost Based Selection (LCBS)** shall be consider for the award of contract(s).

Least Cost Based Selection (LCBS)

PUBLIC PROCUREMENT REGULATORY AUTHORITY (PPRA) EPADS

Items/Lots

Lot Title : LOT-1 3639 APMS

Bid Security : 10000000 PKR

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty
Asset Performance Management System (Inclusive of all taxes / duties & 0.5% inspection charges)	Asset integrity management services	**Address:** SEPCO Stores Sindh (Province). **Schedule:** Days180 **Quantity:** 3639/Qty	3639 / Qty	Manufacturer Authorization form	5 Years
Installation, Testing & Commissioning of APMS and D-Fuse Fittings with 11KV Jumpering and allied accessories on Distribution Transformers	Asset integrity management services	**Address:** SEPCO Store Sindh (Province). **Schedule:** Days180 **Quantity:** 3639/Qty	3639 / Qty	--	--

Lot Title : LOT-2 3639 APMS

Bid Security : 10000000 PKR

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty
Asset Performance Management System (Inclusive of all taxes / duties & 0.5% inspection charges)	Asset integrity management services	**Address:** SEPCO Stores Sindh (Province). **Schedule:** 180 Days **Quantity:** 3639/Qty	3639 / Qty	Manufacturer Authorization form	5 Months
Installation, Testing & Commissioning of APMS and D-Fuse Fittings with 11KV Jumpering and allied accessories on Distribution Transformers	Asset integrity management services	**Address:** SEPCO Stores Sindh (Province). **Schedule:** Days180 **Quantity:** 3639/Qty	3639 / Qty	--	--

Lot Title : LOT-3 3638 APMS

Bid Security : 10000000 PKR

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty
Asset Performance Management System (Inclusive of all taxes / duties & 0.5% inspection charges)	Asset integrity management services	**Address:** SEPCO Stores Sindh (Province). **Schedule:** Days180 **Quantity:** 3638/Qty	3638 / Qty	Manufacturer Authorization form	5 Years

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty
Installation, Testing & Commissioning of APMS and D-Fuse Fittings with 11KV Jumpering and allied accessories on Distribution Transformers	Asset integrity management services	**Address:** SEPCO Stores Sindh (Province). **Schedule:** 180 Days **Quantity:** 3638/Qty	3638 / Qty	--	--

PUBLIC PROCUREMENT REGULATORY AUTHORITY (PPRA) EPADS

Related Services of Goods:

No

Items/Lot Specification

Lot Title : LOT-1 3639 APMS

Item: Asset Performance Management System (Inclusive of all taxes / duties & 0.5% inspection charges)

UNSPSC: Asset integrity management services

Specifications / Requirements:

Title	Description
Asset Performance Management System	3639

Item: Installation, Testing & Commissioning of APMS and D-Fuse Fittings with 11KV Jumpering and allied accessories on Distribution Transformers

UNSPSC: Asset integrity management services

Specifications / Requirements:

Title	Description
Asset Performance Management system	3639

Lot Title : LOT-2 3639 APMS

Item: Asset Performance Management System (Inclusive of all taxes / duties & 0.5% inspection charges)

UNSPSC: Asset integrity management services

Specifications / Requirements:

Title	Description
Asset Performance Management System	3639

Item: Installation, Testing & Commissioning of APMS and D-Fuse Fittings with 11KV Jumpering and allied accessories on Distribution Transformers

UNSPSC: Asset integrity management services

Specifications / Requirements:

Title	Description
Asset Performance Management System	3639

Lot Title : LOT-3 3638 APMS

Item: Asset Performance Management System (Inclusive of all taxes / duties & 0.5% inspection charges)

UNSPSC: Asset integrity management services

Specifications / Requirements:

Title	Description
Asset Performance Management System	3638

Item: Installation, Testing & Commissioning of APMS and D-Fuse Fittings with 11KV Jumpering and allied accessories on Distribution Transformers

UNSPSC: Asset integrity management services

Specifications / Requirements:

Title	Description
Asset Performance Management System	3638

Price Schedule

For Individual Items

#	Item Title	Quantity	Unit Price (PKR)	Total Price (PKR)	Delivery Location	Delivery Period / Year	Country of Origin
1							
2							

For Lots

#	Lot Title	Total Lot Price (PKR)	Country of Origin
1	[Lot 1 Title]		

PUBLIC PROCUREMENT REGULATORY AUTHORITY
(PPRA)
EPADS

General Conditions of Contract

A. General

1. Definitions

1.1 Unless the context otherwise requires, the following terms whenever used in this Contract shall have the same meaning and shall be interpreted as indicated

a. “Applicable Law” means the laws and any other instruments having the force of law in the Government’s Country, or in such other country as may be specified in the Special Conditions of the Contract (SC), as they may be issued and in force from time to time;

b. “Procuring Agency” means:-

a. any Ministry, Division, Department or any Office of the Government;

b. any authority, corporation, body or organization established by or under a Law or which is owned or controlled by the Government;.

c. “The Contract” means an agreement enforceable by law;

d. “The Contract Price” means the price payable to the Bidder under the Contract for the full and proper performance of its contractual obligations;

e. “Ancillary Services” means those services ancillary to the provision of Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training, and other such obligations of the Bidder covered under the Contract;

f. “GCC” means the General Conditions of Contract contained in this section;

g. “SCC” means the Special Conditions of Contract by which the GCC may be amended or supplemented;

h. **“**Day” means calendar day unless indicated otherwise.

i. “Effective Date” means the date on which this Contract comes into force and effect.

j. The Bidder” means the individual or corporate body whose Bids to provide the Goods has been accepted by the Procuring Agency;

k. “The Project Site,” where applicable, means the place or places named in Bids Data Sheet and technical Specifications;

l. “Government” means the Government of Pakistan;

m. “Subcontractor” means any entity to which the Bidder subcontracts any part of the Goods.

n. "Service" means any object of procurement other than goods or works;

o. “Party” means the Procuring Agency or the Bidder, as the case may be, and “Parties” means both of them;

p. “Foreign Currency” means any currency other than the currency of the country of the Procuring Agency;

q. “Completion Date” means the date of completion of the contract by the Bidder as certified by the Procuring Agency;

r. “In Writing” means communicated in written form with proof of receipt;

s. “Local Currency” means the currency of Pakistan;

2. Application and Interpretation

2.1 These General Conditions shall apply to the extent that they are not superseded by provisions of other parts of the Contract.

2.2 In interpreting these Conditions of Contract headings and marginal notes are used for convenience only and shall not affect their interpretations unless specifically stated; references to singular include the plural and vice versa; and masculine include the feminine. Words have their ordinary meaning under the language of the Contract unless specifically defined.

3. Applicable Law

3.1 The contract shall be governed and interpreted in accordance with the laws of Pakistan, unless otherwise specified in SCC.

4. Governing Language

4.1 The Contract as well as all correspondence and documents relating to the Contract exchanged between the Bidder and the Procuring Agency, shall be written in the **English language** unless otherwise stated in the **SCC**. Supporting documents and printed literature that are part of the Contract may be in another language provided these are accompanied by an accurate translation of the relevant passages in English, in which case, for purposes of interpretation of the Contract, this translation shall govern.

5. Notices

5.1 Any notice, request, or consent made pursuant to this Contract shall be in writing and shall be deemed to have been made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, telex, telegram, or facsimile to such Party at the address specified in the **SCC**.

6. Delivery/Location

6.1 The Goods shall be delivered to such locations as the Procuring Agency may approve and as specified in SCC.

7. Authorized Representatives / Authority of Member in charge

7.1 Any action required or permitted to be taken, and any document required or permitted to be executed, under this Contract by the Procuring Agency or the Bidder may be taken or executed by the officials specified in the **SCC**.

B. Commencement, Completion, Modification, and Termination of Contract

8. Effectiveness of Contract

8.1 This Contract shall come into effect on the date the Contract is signed by both parties and such other later date as may be stated in the SCC.

9. Commencement of Services

9.1 The Bidder shall confirm availability of Key Experts and begin carrying out the Services not later than the number of days after the Effective Date specified in the SCC.

10. Program

10.1 Before commencement of the Services, the Bidder shall submit to the Procuring Agency for approval a Program showing the general methods, arrangements, order and timing for all activities. The Services shall be carried out in accordance with the approved Program as updated.

11. Starting Date/Expiration Date

11.1 The Bidder shall start carrying out the Services Five (05) days after the date the Contract becomes effective, or at such other date as may be specified in the **SCC.**

11.2 Unless terminated earlier pursuant to Clause **GCC 15** hereof, this Contract shall expire at the end of such time period after the Effective Date as specified in the SCC.

12. Entire Agreement

12.1 This Contract contains all covenants, stipulations and provisions agreed by the Parties. No agent or representative of either Party has authority to make, and the Parties shall not be bound by or be liable for, any statement, representation, promise or agreement not set forth herein.

13. Modification

13.1 Any modification or variation of the terms and conditions of this Contract, including any modification or variation of the scope of the Services, may only be made by written agreement between the Parties. However, each Party shall give due consideration to any Bids for modification or variation made by the other Party.

13.2 In cases of any modifications or variations, the prior written consent of the Procuring Agency is required.

14. Force Majeure

14.1 Definition

For the purposes of this Contract, "Force Majeure" means an event which is beyond the reasonable control of a Party and which makes a Party's performance of its obligations under the Contract impossible or so impractical as to be considered impossible under the circumstances.

14.2 No Breach of Contract

The failure of a Party to fulfill any of its obligations under the contract shall not be considered to be a breach of, or default under, this Contract in so far as such inability arises from an event of Force Majeure, provided that the Party affected by such an event (a) has taken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Contract, and (b) has informed the other Party as soon as possible about the occurrence of such an event.

14.3 Extension of Time

Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result

of Force Majeure.

14.4 Payments

During the period of their inability to perform the Services as a result of an event of Force Majeure, the Bidder shall be entitled to continue to be paid under the terms of this Contract, as well as to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purposes of the Services and in reactivating the Service after the end of such period.

15. Termination

15.1 By the Procuring Agency

The Procuring Agency may terminate this Contract in case of the occurrence of any of the events specified in paragraphs (a) through (e) of this Clause. In such an occurrence the Procuring Agency shall give at least thirty (30) calendar days' written notice of termination to the Bidder in case of the events referred to in (a) through (d); at least sixty (60) calendar days' written notice in case of the event referred to in (e);

a. If the Bidder fails to remedy a failure in the performance of its obligations hereunder, as specified in a notice of suspension;

b. If the Bidder becomes (or, if the Bidder consists of more than one entity, if any of its members becomes) insolvent or bankrupt or enter into any agreements with their creditors for relief of debt or take advantage of any law for the benefit of debtors or go into liquidation or receivership whether compulsory or voluntary;

c. If the Bidder fails to comply with any final decision reached as a result of arbitration proceedings;

d. If, as the result of Force Majeure, the Bidder is unable to perform a material portion of the Services for a period of not less than sixty (60) calendar days;

e. If the Procuring Agency, in its sole discretion and for any reason whatsoever, decides to terminate this Contract;

15.2 By the Bidder

The Bidder may terminate this Contract, by not less than thirty (30) calendar days' written notice to the Procuring Agency, in case of the occurrence of any of the events specified in paragraphs (a) through (d) of this Clause.

a. If the Procuring Agency fails to pay any money due to the Bidder pursuant to this Contract and not subject to dispute within forty-five (45) calendar days after receiving written notice from the Bidder that such payment is overdue.

b. If, as the result of Force Majeure, the Bidder is unable to perform a material portion of the Services for a period of not less than sixty (60) calendar days.

c. If the Procuring Agency fails to comply with any final decision reached as a result of arbitration.

d. If the Procuring Agency is in material breach of its obligations pursuant to this Contract and has not remedied the same within forty-five (45) days (or such longer period as the Bidder may have subsequently approved in writing) following the receipt by the Procuring Agency of the Bidder's notice specifying such breach.

C. Obligations of the Bidder

16. General

16.1 Standard of Performance

1. The Bidder shall deliver the product and carry out the Services with all due diligence, efficiency and economy, in accordance with generally accepted professional standards and practices, and shall observe sound management practices, and employ appropriate technology and safe and effective equipment, machinery, materials and methods. The Bidder shall always act, in respect of any matter relating to this Contract or to the Services, as a faithful adviser to the Procuring Agency, and shall at all times support and safeguard the Procuring Agency's legitimate interests in any dealings with the third parties.

16.2 Law Applicable to Goods

The Bidder shall deliver the goods in accordance with the Contract and in accordance with the Law of Pakistan and shall take all practicable steps to ensure that any of its Experts and Sub-Bidders, comply with the Applicable Law.

17. Conflict of Interests

17.1 Bidder Not to Benefit from Commissions and Discounts.

The remuneration of the Bidder shall constitute the Bidder's sole remuneration in connection with this Contract or the Services, and the Bidder shall not accept for their own benefit any trade commission, discount, or similar payment in connection with activities pursuant to this Contract or to the Services or in the discharge of their obligations under the Contract, and the Bidder shall use their best efforts to ensure that the Personnel, any Subcontractors, and agents of either of them similarly shall not receive any such additional remuneration.

17.2 Bidder and Affiliates Not to be Otherwise Interested in Project

The Bidder agree that, during the term of this Contract and after its termination, the Bidder and its affiliates, as well as any Subcontractor and any of its affiliates, shall be disqualified from providing Goods for any project resulting from or closely related to the Services.

17.3 Prohibition of Conflicting Activities

Neither the Bidder nor its Subcontractors nor the Personnel shall engage, either directly or indirectly, in any of the following activities:

a. during the term of this Contract, any business or professional activities in the Government's country which would conflict with the activities assigned to them under this Contract;

b. during the term of this Contract, neither the Bidder nor their Subcontractors shall hire public employees in active duty or on any type of leave, to perform any activity under this Contract;

18. Confidentiality

18.1 Except with the prior written consent of the Procuring Agency, the Bidder and the Experts shall not at any time communicate to any person or entity any confidential information acquired in the course of the contract.

19. Insurance to be Taken Out by the Bidder

19.1 The Bidder(a) shall take out and maintain, and shall cause any Subcontractors to take out and maintain, at its (or the Subcontractors', as the case may be) own cost but on terms and conditions approved by the Procuring Agency, insurance against the risks, loss or damage, and for the coverage, as shall be specified in the SCC; and (b) at the Procuring Agency's request, shall provide evidence to the Procuring Agency showing that such insurance has been taken out and maintained and that the current premiums have been paid.

20. Bidder's Actions Requiring Procuring Agency's Prior Approval

20.1 The Bidder shall obtain the Procuring Agency's prior approval in writing before taking any of the following actions:

(a) appointing such members of the Personnel not provided by the Bidder;

(b) changing the Program of activities; and

(c) any other action that may be specified in the SCC.

21. Reporting Obligations

21.1 The Bidder shall submit to the Procuring Agency the reports and documents in the numbers, and within the periods as prescribed by the Procuring Agency.

22. Liquidated Damages

22.1 If the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Procuring Agency shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in **SCC** of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the performance security (or guarantee) specified in **SCC**. Once the said maximum is reached, the Procuring Agency may consider termination of the Contract pursuant to **GCC Clause 15.**

22.2 Correction for Over-payment

If the Intended Completion Date is extended after liquidated damages have been paid, the Procuring Agency shall correct any overpayment of liquidated damages by the Bidder by adjusting the next payment certificate. The Bidder shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in SCC.

22.3 Lack of performance penalty

If the Bidder has not corrected a Defect within the time specified in the Procuring Agency's notice, a penalty for Lack of performance will be paid by the Bidder. The amount to be paid will be calculated as a percentage of the cost of having the Defect corrected, assessed as specified in the SCC.

23. Performance Guarantee

23.1 Within Seven (07) days from the issuance of acceptance letter from the Procuring Agency, the successful Bidder shall furnish the Performance Guarantee in shape of ------- at the discretion of the PA in the amount **specified in SCC.** In case the amount of Bids security is equal or greater than

23.2 The proceeds of the Performance Guarantee shall be payable to the Procuring agency as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

23.3 The Performance Guarantee shall be denominated in the currency of the Contract, or in a freely convertible currency acceptable to the Procuring agency and shall be in the acceptable form as specified in SCC.

23.4 The Performance Guarantee will be discharged by the Procuring agency and returned to the Supplier not later than thirty (30) days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless otherwise **specified in SCC.**

24. Fraud and Corruption

24.1 The Procuring Agency requires the Supplier to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the Bidding process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.

25. Sustainable Procurement

25.1 The Bidder shall conform to the sustainable procurement contractual provisions, if and as specified in the SCC.

D. Bidder's Personnel

26. Description of Personnel

26.1 The titles, agreed job descriptions, minimum qualifications, and estimated periods of engagement in the carrying out of the Services of the Bidder's Key Personnel. The Key Personnel listed by title as well as by name are hereby approved by the Procuring Agency.

27. Removal and/or Replacement of Personnel

27.1 Except as the Procuring Agency may otherwise agree, no changes shall be made in the Key Personnel. If, for any reason beyond the reasonable control of the Bidder, it becomes necessary to replace any of the Key Personnel, the Bidder shall provide as a replacement a person of equivalent or better qualifications.

27.2 If the Procuring Agency finds that any of the Personnel have (i) committed serious misconduct or have been charged with having committed a criminal action, or (ii) have reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Bidder shall, at the Procuring Agency's written request specifying the grounds thereof, provide as a replacement a person with qualifications and experience acceptable to the Procuring Agency.

27.3 The Bidder shall have no claim for additional costs arising out of or incidental to any removal and/or replacement of Personnel.

E. Obligations of the Procuring Agency

28. Assistance and Exemptions

28.1 The Procuring Agency shall use its best efforts to ensure that the Government shall provide the Bidder such assistance and exemptions as specified in the SCC.

29. Change in the Applicable Law

29.1 If, after the date of this Contract, there is any change in the Applicable Law with respect to taxes and duties which increases or decreases the cost of the related Services rendered by the Bidder, then the remuneration and reimbursable expenses otherwise payable to the Bidder under this Contract shall be increased or decreased accordingly by agreement between the Parties, and corresponding adjustments shall be made to the amounts referred in the SCC.

30. Services and Facilities

30.1 The Procuring Agency shall make available to the Bidder and the Experts, for the purposes of the Services and free of any charge, the services, facilities and property described , at the times and in the manner specified in the SCC or terms of reference.

30.2 In case that such services, facilities and property shall not be made available to the Bidder, the Parties shall agree on (i) any time extension that it may be appropriate to grant to the Bidder for the performance of the Services, (ii) the manner in which the Bidder shall procure any such services, facilities and property from other sources, and (iii) the additional payments, if any, to be made to the Bidder as a result thereof.

F. Payments to the Bidder

31. Contract Price

31.1 The price payable shall be in Pakistani Rupees unless otherwise specified in the SCC. Prices charged by the Supplier for Goods delivered under the Contract shall not vary from the prices quoted by the Supplier in its Bid.

32. Terms and Conditions of Payment

32.1 Payments will be made to the Bidder according to the payment schedule stated in the SCC and as per actual invoice submitted by the Bidder.

32.2 Unless otherwise stated in the SCC, the advance payment shall be made against the provision by the Bidder of a bank guarantee for the same amount, and shall be valid for the period stated in the SCC. Any other payment shall be made after the conditions listed in the SCC for such payment have been met, and the Bidder have submitted an invoice to the Procuring Agency specifying the amount due.

33. Currency of Payment

33.1 Any payment under this Contract shall be made in the currency(ies) specified in the SCC.

G. Quality Control

34. Identifying Defects

34.1 The principle and modalities of Inspection of the Goods by the Procuring Agency shall be as indicated in the SCC. The Procuring Agency shall check the Bidder’s performance and notify him of any Defects that are found. Such checking shall not affect the Bidder’s responsibilities. The Procuring Agency may instruct the Bidder to search for a Defect and to uncover and test any service that the Procuring Agency considers may have a Defect. Defect Liability Period is as defined in the SCC.

35. Correction of Defects,and

Lack of Performance Penalty

35.1 The Procuring Agency shall give notice to the Bidder of any Defects before the end of the Contract. The Defects liability period shall be extended for as long as Defects remain to be corrected.

35.2 Every time notice a Defect is given, the Bidder shall correct the notified Defect within the length of time specified by the Procuring Agency's notice.

35.3 If the Bidder has not corrected a Defect within the time specified in the Procuring Agency's notice, the Procuring Agency will assess the cost of having the Defect corrected, the Bidder will pay this amount, and a Penalty for Lack of Performance.

36. Taxes and Duties

36.1 A Supplier shall be entirely responsible for all taxes, duties, fees, etc., incurred until delivery of the contracted Goods to the Procuring Agency.

H. Settlement of Disputes

37. Alternate Dispute Resolution

37.1 The disputes between the parties to the contract may be settled in accordance with Public Procurement Rules, 2004.

37.2 The procuring agency shall refer the matter to the Chief Justice Islamabad High Court or Managing Director PPRA or the Secretary Ministry of Law & Justice for appointment of Arbitrator.

37.3 The fee for the Arbitrator shall be specified in Pak Rupees as determined by the appointing authority which shall be borne and shared equally by the contracting parties.

Special Conditions of Contract

SECTION VIII. SPECIAL CONDITIONS OF CONTRACT

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the Conditions of Contract. The corresponding clause number of the GCC is indicated in parentheses.

Number of GC Clause

Amendments of, and Supplements to, Clauses in the General Conditions of Contract

Number of GC Clause 1

Definitions

The Procuring Agency is: Chief Engr. Dev PMU SEPCO (SEPCO), PMU Room # 201 Al-Sehra Building, Minara Road, Near Session Court, Sukkur

The Supplier is:

The title of the subject procurement is: Procurement of 10,916-Nos. of Asset Performance Management System (APMS) for Pole Mounted Distribution Transformers as per PPMC specification No. DS-01:2026 including Supply, Installation, Testing & Commissioning with allied accessories .

Number of GC Clause 3

Applicable/Governing Law:

The Contract shall be interpreted in accordance with the laws of Islamic Republic of Pakistan

Number of GC Clause 4

Language:

The language of the Contract, all correspondence and communications to be given, and all other documentation to be prepared and supplied under the Contract shall be in **English.**

Number of GC Clause 5

Notices:

The addresses for the notices are:

Procuring Agency:

Chief Engr. Dev PMU SEPCO (SEPCO), PMU
Room # 201 Al-Sehra Building, Minara Road, Near Session Court, Sukkur
+92-719-310055
sepcopmu@gmail.com

Contractor/ Bidder:

[Name, address and telephone number].

The Contractor/ Bidder’s Representative(s)

[Name, address, telephone number and e-mail address]

Number of GC Clause 7.1

The Authorized Representatives are:

For the Procuring Agency:

Chief Engr. Dev PMU SEPCO (SEPCO), PMU
Room # 201 Al-Sehra Building, Minara Road, Near Session Court, Sukkur
+92-719-310055
sepcopmu@gmail.com

For the Bidder:

Name: ……

Designation: ……..

Address: ……..

Number of GC Clause 8

Effectiveness of the contract

Number of GC Clause 9

Commencement of Contract:

Number of GC Clause 11.2

Expiration of Contract:

Number of GC Clause 15

Termination

In the event of termination of the contract due to any reason as already defined in the General Conditions of Contract, the Bidder shall be responsible for providing to the Authority the Goods till the time of alternate arrangements.

Number of GC Clause 17

Conflict of Interest:

The Procuring Agency reserves the right to determine on a case-by-case basis whether the Bidder should be disqualified from providing goods or services due to a conflict of a nature described in Clause GCC 17**.**

Number of GC Clause 22

Liquidated Damages

If the Bidder fails to provide services as required under the contract or in case of any data loss/data breach or any incident compromising the data security or other such failures related to any services, the Bidder shall pay to the Procuring Agency as Liquidated Damages at a rate of **0.01%** to **10.00%** of the Contract value, in accordance with the extent of performance failure & the cost of investigating such incidents as judged by the

Authority.

Number of GC Clause 23

Performance Guarantee:

The amount of performance guarantee shall be **10.00%** of the contract price in acceptable form of **Pay Order, Banker's Cheque, Call at Deposit, Bank Guarantee, Demand Draft**

Number of GC Clause 32

Payment terms:

Payment will be made to the Bidder against the procured Goods and services according to the actual invoice or running bills submitted by the Bidder against the services provided within the time given in the conditions of the contract.

Number of GC Clause 33

Currency of Payment:

All the payment to be released to the contractor/Bidder shall be in Pakistani Rupees.

Number of GC Clause 34

Identifying Defects:

The Authority reserves the right at any time to inspect the premises of the provider to inspect the goods and monitor the goods being provided.

Inspections & Tests Requirements

For being Brand New, bearing relevant reference numbers of the equipment (Certificate from supplier)

For Physical Fitness having No Damages (Certificate from supplier)

For the Country of Origin as quoted by the Supplier (Certificate from manufacturer)

For conformance to specifications and performance parameters, through Prior to delivery inspection (Inspection Report by Procurement Committee / Inspection Team)

For successful operation at site after complete installation, testing and commissioning of the equipment (Installation, Testing and Commissioning Report by Procurement Committee / Inspection Team)

Delivery & Documents

Copies of the Supplier’s invoice showing Goods’ description, quantity, unit price, and total amount;

Original and two copies of the usual transport document (for example, a negotiable bill of lading, a non-negotiable sea waybill, an inland waterway document, an air waybill, a railway consignment note, a road consignment note, or a multimodal transport document) which the buyer may require to take the goods;

Copies of the packing list identifying contents of each package;

Insurance Certificate;

Manufacturer's or Supplier's Valid Warranty Certificate;

Inspection Certificate issued by the Nominated Inspection Agency (if any), and the Supplier's Factory Inspection Report;

Certificate of Origin.

The above documents would be required even if the equipment has already been imported and is available with the supplier ex-stock

Number of GC Clause 37

Following is the guidance for Dispute Resolution

i. If any dispute of any kind whatsoever shall arise between the Authority and the Bidder in connection with or arising out of the Contract, including without prejudice to the generality of foregoing, any question regarding its existence, validity, termination and the execution of the Contract – whether during developing phase or after their completion and whether before or after the termination, abandonment or breach of the Contract – the parties shall seek to resolve any such dispute or difference by mutual diligent negotiations in good faith within 14 (fourteen) days following a notice sent by one Party to the other Party in this regard**.**

ii. At future of negotiation the dispute shall be resolved through mediation and mediator shall be appointed with the mutual consent of the both parties**.**

iii. At the event of failure of mediation to resolve the dispute relating to this contract such dispute shall finally be resolved through binding Arbitration by sole arbitrator in accordance with Arbitration Act 1940. The arbitrator shall be appointed by mutual consent of the both parties**.** The Arbitration shall take place in Islamabad, Pakistan and proceedings will be conducted in English language.

iv. The cost of the mediation and arbitration shall be shared by the parties in equal proportion however the both parties shall bear their own costs and lawyer's fees regarding their own participation in the mediation and arbitration. However, the Arbitrator may make an award of costs upon the conclusion of the arbitration making any party to the dispute liable to pay the costs of another party to the dispute**.**

v. Arbitration proceedings as mentioned in the above clause regarding resolution of disputes may be commenced prior to, during or after completion of the contract.

Notwithstanding any reference to the arbitration herein, the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree that the Authority shall pay the Bidder any monies due to the Bidder.

Rules of procedure for arbitration proceedings:

Any dispute between the Authority and a Bidder who is a national of the Islamic Republic of Pakistan arising in connection with the present Contract shall be referred to adjudication or arbitration in accordance with the laws of the Islamic Republic of Pakistan including Arbitration Act 1940, however above provision shall prevail in referring the case to the Arbitrator.

Place of Arbitration and Award:

The arbitration shall be conducted in English language and place of arbitration shall be at Islamabad. The award of the arbitrator shall be final and shall be binding on the parties.

PUBLIC PROCUREMENT REGULATORY AUTHORITY (PPRA) EPADS

Bid Securing Declaration

Form 9: Bid Securing Declaration

Date: *[insert date (as day, month and year)]*

Bid No.:***P138519***

To: **Chief Engr. Dev PMU SEPCO (SEPCO), PMU Room # 201 Al-Sehra Building, Minara Road, Near Session Court, Sukkur**

We, the undersigned, declare that:

We understand that, according to your conditions, Bids must be supported by a Bid Securing Declaration.

We accept that we will be blacklisted and henceforth cross debarred for participating in respective category of public procurement proceedings for a period of (not more than) six months, if fail to abide with a bid securing declaration, however without indulging in corrupt and fraudulent practices, if we are in breach of our obligation(s) under the Bid conditions, because we:

1. have withdrawn or modified our Bid during the period of Bid Validity specified in the Form of Bid;

2. Disagreement to arithmetical correction made to the Bid price; or

3. having been notified of the acceptance of our Bid by the Procuring Agency during the period of Bid Validity, (i) failure to sign the contract if required by Procuring Agency to do so or (ii) fail or refuse to furnish the Performance Security or to comply with any other condition precedent to signing the contract specified in the Bidding Documents.

We understand this Bid Securing Declaration shall expire if we are not the successful

Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) twenty-eight (28) days after the expiration of our Bid.

Contract Form

SECTION IX: CONTRACT FORMS

THIS AGREEMENT made the _____ day of _____ 20_____ between **Chief Engr. Dev PMU SEPCO (SEPCO), PMU Room # 201 Al-Sehra Building, Minara Road, Near Session Court, Sukkur**

(hereinafter called "the Procuring Agency") of the one part and *[name of Bidder]* of *[city and country of Bidder]* (hereinafter called "the Bidder") of the other part:

WHEREAS the Procuring Agency invited Bids for provision of goods, viz., **Procurement of 10,916-Nos. of Asset Performance Management System (APMS) for Pole Mounted Distribution Transformers as per PPMC specification No. DS-01:2026 including Supply, Installation, Testing & Commissioning with allied accessories . (*P138519*)** and has accepted a Bids by the Bidder for the provision of Goods in the sum of *[contract price in words and figures]* (hereinafter called "the Contract Price").

NOW THIS CONTRACT WITNESSETH AS FOLLOWS:

1. In this Contract words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.

2. The following documents shall be deemed to form and be read and construed as part of this Contract, In the event of any ambiguity or conflict between the Contract Documents listed below, the order of precedence shall be the order in which the Contract Documents are listed below:-

1. This form of Contract;
2. the Form of Bids and the Price Schedule submitted by the Bidder;
3. the Schedule of Requirements;
4. the Technical Specifications;
5. the Special Conditions of Contract;
6. the General Conditions of the Contract;
7. the Procuring Agency's Letter of Acceptance; and
8. [*add here: any other documents*]

3. In consideration of the payments to be made by the Procuring Agency to the Bidder as hereinafter mentioned, the Bidder hereby covenants with the Procuring Agency to provide the Goods related services and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The Procuring Agency hereby covenants to pay the Bidder in consideration of the provision of Goods and the remedying of defects therein, the Contract Price or such other sum as may become payable under the

provisions of the contract at the times and in the manner prescribed by the contract.

IN WITNESS whereof the parties hereto have caused this Contract to be executed in accordance with their respective laws the day and year first above written.

Signed, sealed, delivered by _____the _____ (for the Procuring Agency)

Witness to the signatures of the Procuring Agency:

……

Signed, sealed, delivered by _____the _____ (for the Procuring Agency)

Witness to the signatures of the Bidder: ……

Integrity Pact

Integrity Pact

DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC. PAYABLE BYTHE SUPPLIERS OF GOODS, SERVICES & WORKS IN CONTRACTS WORTH RS.10.00 MILLION OR MORE

Contract Number: Contract Value: Contract Title:

Dated:

[Name of Supplier] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Pakistan or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GoP) through any corrupt business practice.

Without limiting the generality of the foregoing [Name of Supplier] represents and warrants that it has fully declared the brokerage, commission, fee etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultations fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP, except that which has been expressly declared pursuant hereto.

[Name of Supplier] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with GoP and has not taken any action or will not take any action to circumvent the above declaration, representative or warranty.

[Name of Supplier] accepts full responsibility and strict liability for making and false declaration, not making full disclosure, misrepresenting fact or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other right and remedies available to GoP under any law, contract or other instrument, be voidable at the option of GoP.

Notwithstanding any rights and remedies exercised by GoP in this regard, [Name of Supplier] agrees to indemnify GoP for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to GoP in an amount equivalent to ten time the sum of any commission, gratification, bribe, finder's fee or kickback given by [Name of Supplier] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP.

Performance Guarantee Form

Performance Guarantee Form

To: **Chief Engr. Dev PMU SEPCO (SEPCO), PMU Room # 201 Al-Sehra Building, Minara Road, Near Session Court, Sukkur**

WHEREAS *[name of Bidder]* (hereinafter called "the Bidder") has undertaken, in pursuance of Contract No. *[reference number of the contract]* dated *[insert date]* for provision of Goods*(*hereinafter called "the Contract").

AND WHEREAS it has been stipulated by you in the said Contract that the Bidder shall furnish you with a Bank Guarantee by a reputable bank for the sum specified therein as security for compliance with the Bidder's performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Bidders guarantee:

THEREFORE, WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Bidder, up to a total of *[amount of the guarantee in words and figures]*, and we undertake to pay you, upon your first written demand declaring the Bidder to be in default under the Contract and without cavil or argument, any sum or sums within the limits of *[amount of guarantee]* as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the: *[insert date]*

Signature and seal of the Guarantors

_____

[name of bank or financial institution]

_____

[address]

_____

[date}

Annexure

Technical Specification Form

Technical Submission (Vendor)

Document Required

See Form Under Additional Forms and Documents: **Technical Specification Form** (page number: 73)

Price Schedule Lot 1

Financial Submission (Vendor)

Document Required

See Form Under Additional Forms and Documents: **Price Schedule Lot 1** (page number: 77)

Price Schedule Lot 2

Financial Submission (Vendor)

Document Required

See Form Under Additional Forms and Documents: **Price Schedule Lot 2** (page number: 80)

Price Schedule Lot 3

Financial Submission (Vendor)

Document Required

See Form Under Additional Forms and Documents: **Price Schedule Lot 3** (page number: 83)

Advance Payment

Advance Payment

Advance payment will not be applicable in this Contract.

Information (Read-Only)

See Form Under Additional Forms and Documents: **Advance Payment** (page number: 86)

Special Conditions Form

Technical Submission (Vendor)

Document Required

See Form Under Additional Forms and Documents: **Special Conditions Form** (page number: 87)

Part 1 APMS PPMC-DS-01- 2026 Specifications

Technical Submission (Vendor)

See Form Under Additional Forms and Documents: **Part 1 APMS PPMC-DS-01- 2026 Specifications** (page number: 94)

Part 2 APMS PPMC -DS-01-2026 Specifications

Technical Submission (Vendor)

See Form Under Additional Forms and Documents: **Part 2 APMS PPMC -DS-01-2026 Specifications** (page number: 123)

Domestic Preferrence SRO

Financial Submission (Vendor)

Document Required

See Form Under Additional Forms and Documents: **Domestic Preferrence SRO** (page number: 150)

Bid Security Form

Financial Submission (Vendor)

Document Required

See Form Under Additional Forms and Documents: **Bid Security Form** (page number: 153)

Procurement Forms

Past Construction Experiences

The Bidder shall have satisfactorily and substantially completed, as contractor, JV partner, or subcontractor, at least one (1) contract involve, supply, installation, testing, commissioning implementation of APMS, and/or Advanced Metering Infrastructure (AMI) of similar nature including integration of centralized systems such as HES/MDC with MDM or equivalent platforms for data integration and real-time monitoring. within the last ten (10) years for each Lot, preceding the Bid submission deadline.**(Separate contract required for each Lot)**
In this context, complete set of copies of the contract agreements/Educational/Purchase Order (s) along with field performance certificate(s) must be attached. Non-submission of said/above documents shall render the bid non-responsive.

See Form Under Additional Forms and Documents: **Past Construction Experiences** (page number: 154)

Financial Resources

See Form Under Additional Forms and Documents: **Financial Resources** (page number: 160)

Past Experience and Completed Contracts

See Form Under Additional Forms and Documents: **Past Experience and Completed Contracts** (page number: 161)

Historical Contract Non-Performance, and Pending Litigation and Litigation History

See Form Under Additional Forms and Documents: **Historical Contract Non-Performance, and Pending Litigation and Litigation History** (page number: 162)

Current Contracts and Their Progress

See Form Under Additional Forms and Documents: **Current Contracts and Their Progress** (page number: 164)

Financial Capacity and Net Worth Evaluation Form

See Form Under Additional Forms and Documents: **Financial Capacity and Net Worth Evaluation Form** (page number: 165)

Average Annual Turnover

Average Annual Turn Over of Last Three (3) years should be at least 500Million. Bidder shall attach the audited financial document of last (3) years.

See Form Under Additional Forms and Documents: **Average Annual Turnover** (page number: 167)

PUBLIC PROCUREMENT REGULATORY AUTHORITY
(PPRA)
EPADS

Additional Forms and Documents

Technical Specifications
SPECIFICATIONS- TECHNICAL PROVISIONS

1. GENERAL

1.1 All design, equipment, materials and workmanship shall comply with and be tested in accordance with requirements of the specifications. Equipment or parts which are not covered by the specifications shall comply with rules, codes and regulations of the international electro-technical commission or approved National Standards bodies.

1.2 The general inlet of these specifications is to require the supply of equipment and materials equal or superior to those actually described herein. Unless otherwise stated, reference to the brand or manufacture, if made is only for the sake of comparison as to type, design, character or quality of the equipment and material desired and shall not be interpreted as eliminating other equipment and material of equal performance, quality and durability.

1.3 The offered APMS data (through vendor's MDC driver software) must be compliant to the latest Universal Data Integration Layer (UDIL), developed by PITC for multivendor interoperability, published at PITC website.

1.4 The LOI will be issued to most advantageous bidder. The successful bidder has to submit PITC UDIL compliance request and requirements for Tier-1 Certification to PITC within 14 days of issuance of LOI and obtain UDIL compliance Tier-1 certificate from PITC within 14 days as per PITC's SOP for UDIL Compliance Testing (from the submission of compliance requirements for Tier-I (extendible if both parties agreed), on latest PITC version applicable at the time of issuance of LOI. The performance guarantee shall be submitted within 14 days of issuance of UDIL certificate from PITC for Tier-1, then P.O will be issued.

The UDIL Compliance testing will comprise of two phases /Tiers as under:

a) UDIL Compliance Testing Tier-1 Certificate:
In this phase, the MDCs will be tested for UDIL compliance based on the request proforma submitted by the vendors and the additional checklist issued by SEPCO, derived from the PITC standard and duly vetted by PITC.
After successful completion of UDIL Compliance testing Tier-1 certificate will be issued.

b) UDIL Compliance Testing Tier-2 Certificate:
The Tier-2 Certificate shall be issued by a committee headed by the Director (Commercial), SEPCO, with the concerned Regional Manager (M&T), Director (IT) serving as members. The certificate shall be issued, in consultation with PITC, after 80% of the APMS have been installed and two successful billing cycles have been completed by SEPCO using the AMI solution.

1.5 The communication module shall be 4G and must be downward compatible to 2G without changing the SIM for remote metering system (PTA Compliant).

1.6 The bidder must have valid prototype approval for the offered material with 4G module according to relevant DDS and IEC standards (all amended to date). The successful bidder shall submit 3 Nos samples for Prototype Approval on 4G communication Module in case valid Prototype Approval as per WAPDA/NTDC/PPMC purchase procedure does not exist for the offered model/type. All tests shall be carried on the submitted prototype APMSs to ensure compliance to WAPDA/NTDC/PPMC and IEC specs. APMSs shall be subjected to all tests including type, routine and sample tests. Once approved such prototype approval shall be valid as per WAPDA/NTDC/PPMC purchase procedure.

(Maximum three months shall be allowed to the successful bidder which may be extended with the approval of SEPCO)

1.7 The supplied APMS will expose data and services as per specifications laid down in UDIL only. The APMS will be created in respective vendors' driver software to expose data and services in compliance with UDIL document. All necessary features for billing, instantaneous data, etc should be compliant with latest UDIL.

1.8 The successful bidder will ensure the appropriate security scheme implemented up to MDC. The bidder will be required to provide documents mentioning the mechanism for security of data from APMS to MDC.

1.9 The successful bidder will be responsible for provision of functionality of software in the APMS, security of software programming and re-programming in the field and will provide necessary backup warranty and training to officers/officials of SEPCO as recommended in the relevant clauses of standards. The bidder will also provide documents mentioning the mechanism for implementing security of software programming. Bidder will ensure that date/time of APMS will be synchronize with that of MDC and MDC date/time will be synchronized with Network Time Protocol (NTP). PITC will provide NTP server for synchronization of date/time of APMS with MDC.

1.10 Successful bidder(s) is/are required to provide facility / gadget for data retrieval for downloading through APMS optical port in case of damage of APMS, LCD/ Display wash or any critical issue. In case of damage of APMS, the security of EEPROM must be ensured and data should be readable from EEPROM. In this regard the bidder shall provide read only software on CD / DVD along with essential accessories to SEPCO M&T offices. Each APMS should have unique password. The list of APMS(s) along with their password should be provided to M&T offices.

1.11 The successful bidder will provide PC application for APMS configuration and mapping along with training to personnel from SEPCO AMI cell and M&T for APMS configuration and testing prior to its installation in the field.

1.12 MDC must support SIM identification, installed in APMS which should be identifiable through UDIL Service.

1.13 Vendor will provision hardware to support his quoted No of APMS(s) for PITC vetting. PITC will provide the facility to host hardware as per PITC's prevailing deployment architecture and MDC should have the capability to retain minimum 90 days data in its database. Vendors may approach PITC to understand hardware and MDC deployment architecture before the pre-bid conference.

1.14 MDC must be capable to handle all number of awarded APMS(s) concurrently.

1.15 MDC should be able to support retrieval of scheduled APMS data as per programmed / configurable interval (e.g 05 Minutes) for APMS. APMS would be declared muted if the last successful read was before 03 hours. Number of such muted APMS shall not be more than 2% at any point up to the warranty period within the system. MDC should be able to retrieve missing data from APMS(s) after restoration without compromising system performance also issues regarding error in data or missing data shall be treated as APMS mute. SEPCO will provide Consumers wise details where APMS are to be installed subsequently the SIMs will be provided on the basis of bidder's field survey for best network availability (signal strength and stability of signal strength over 24 hours) on all APMS(s). Missing Read means Missing of schedules and on demand data. Error in data means incomplete/wrong data receiving at MDC. This will be checked through MDM as vendor's MDC will be available at MDM.

1.16 In case of number of muted APMS(s) exceeds more than 2% as pointed out by Incharge AMI Cell SEPCO/PITC, an investigation shall be conducted into the matter and reasons other than declared scheduled communication outage by the Network provider, transformer damages, scheduled load shedding, cable breakdowns and ERO etc., shall be on Bidder's liability. If it is observed that the muted APMS(s) ratio is more than 2%, the Supplier will be responsible to take remedial measures which includes but not limited to replacement of such APMS(s), or any other remedy proposed by

the SEPCO in case if the issue is not identified on account of SIM and TELCO. Such enquiries / investigations shall be conducted in liaison with PITC by Incharge AMI Cell SEPCO, DCM & XEN M&T of Concerned Circle & Vendor, headed by CICTO SEPCO. The outcome of the investigation proceedings shall be binding upon the Vendor/SEPCO for taking remedial action and will be taken in view for the issuance of Project Completion/Acceptance Certificate by the Committee.

1.17 The successful bidder is required to configure APMS(s) during production for primary & secondary IPs, ports & Wakeup SIM numbers (which will be provided by SEPCO/PITC).

1.18 On demand reading should be retrieved and the response time of On Demand reading should not be more than two minute or any other frequency set by SEPCO

1.19 In case of any missing scheduled activity, the APMS must communicate any pending readings to the MDC immediately after restoration of supply/ elimination of communication error/ due to any reason/etc.

1.20 The APMS(s) should communicate at Signal Strength of -95dBm to -l05dBm and vendors will get it tested also to the satisfaction of the SEPCO. If it is observed that the APMS modem signal strength is lower than the one mentioned above, the Supplier will be responsible to replace /repair the APMS under warranty. Retry Failure rate should not be more than 3 times. The Time out for each retry should not be more than 15 seconds.

1.21 The MDM interface of PITC shall be used. The bidder(s) provided MDC software will have perpetual license and will be bound to upgrade with the latest versions of UDIL.

Signature and seal of the Manufacturer/Bidd

PUBLIC PROCUREMENT REGULATORY AUTHORITY (PPRA) EPADS

PUBLIC PROCUREMENT REGULATORY AUTHORITY
(PPRA)
EPADS

LOT-I
Schedules of Rates and Prices
Schedule 1: Plant and Mandatory Spare Parts

Item	Description	Unit	Quantity	Rate per unit on FCS basis inclusive of all taxes / duties & 0.5% inspection charges(Rs.)	Total Price[a]	Applicable GST
1	2	3	4	5	5 = 4 x 5	6
1	APMS (Asset Performance Management System) for 200KVA Ratings along with allied material required for installation	Nos	**344**			
2	APMS (Asset Performance Management System) for 100KVA Ratings along with allied material required for installation	Nos	**393**			5
3	APMS (Asset Performance Management System) for 50KVA Ratings along with allied material required for installation	Nos	**654**			
4	APMS (Asset Performance Management System) for 25KVA Ratings along with allied material required for installation	Nos	**2248**			
5	300 mm2, S/C Al Cable, PVC / PVC (15 meters for each phase & Neutral) as per relevant DDS Specification	Meter	**20640**			
6	120 mm2, S/C Al Cable, PVC / PVC (15 meters for each phase & Neutral) as per relevant DDS Specification	Meter	**23580**			
7	70 mm2, S/C Al Cable, PVC / PVC (15 meters for each phase & Neutral) as per relevant DDS Specification	Meter	**39240**			
8	25 mm2, S/C Al Cable, PVC / PVC (15 meters for each phase & Neutral) as per relevant DDS Specification	Meter	**134880**			
9	PG connectors for 300 mm.sq, S/C Al.Cable as per Specification No P-25:67amended to-date, (in effect as at the date 30 days prior to bid submission).	Nos	**2752**			
10	PG connectors for 120 mm.sq, S/C Al.Cable as per Specification No P-25:67amended to-date, (in effect as at the date 30 days prior to bid submission).	Nos	**3144**			
11	PG connectors for 70 mm.sq, S/C Al.Cable as per Specification No P-25:67amended to-date, (in effect as at the date 30 days prior to bid submission).	Nos	**5232**			
12	PG connectors for 25 mm.sq, S/C Al.Cable as per Specification No P-25:67amended to-date, (in effect as at the date 30 days prior to bid submission).	Nos	**17984**			

13	Bimetallic Lugs for Single Core Aluminium Cable. for 300 mm.sq, Single Core Aluminium Cable. **2752**-Nos for 120 mm2, Single Core Aluminium Cable. 3144-Nos for 70 mm2, Single Core Aluminium Cable. 5232-Nos for 25 mm2, Single Core Aluminium Cable. 17984-Nos	Job	1			
14	D Fuse Fittings along with respective fuse size (As per PPMC/NTDC Approved Specification (Amended to-date)) (The quantity refers to complete D-Fuse fitting set containing three legs, including all associated components required for installation).	Sets	**3639**			
15	ACSR Dog Conductor for 11KV Jumpering (10m/transformer) and allied P.G Connector etc. As per PPMC/NTDC Approved Specification (Amended to-date)	Meter	**36390**			
16	PC Desktop (Tower) Complete Branded (HP/DELL or equivalent). Intel Core i5 14th Generation or higher with Minimum (16 GB DDR5 or higher RAM and 256 GB NVMe M.2 SSD + 1 TB Sata Hard Drive) along with LED.	Nos	**5**			

Schedule 2: Installation and Other Services

Item	Description	Quantity				Unit Price[a]				Total Price[a]			
						25kVA	50kVA	100KVA	200KVA	25kVA	50kVA	100KVA	200KVA
1	2	3				4	5	6	7	8 = 3 x 4	9 = 3 x 5	10 = 3 x 6	11 = 3 x 7
		25kVA	50kVA	100KVA	200KVA								
1	Installation, Testing & Commissioning of APMS and D-Fuse Fittings with 11KV Jumpering and allied accessories on Distribution Transformers	2248	654	393	344								

In LOCAL CURRENCY

GRAND SUMMERY

Schedule No.	Title	Total Amount	Total Amount (With All Taxes and Duties) (Price Quoted on EPADS 2.0 should Exactly Match with this Column)
		1	2
1	Plant and Mandatory Spare Parts Supplied from Within the Employer's Country		
2	Installation and Other Services		
GRAND TOTAL (Total Schedule 1+ Total Schedule 2)			

LOT-II
Schedules of Rates and Prices
Schedule 1: Plant and Mandatory Spare Parts

Item	Description	unit	Quantity	Rate per unit on FCS basis inclusive of all taxes / duties & 0.5% inspection charges (Rs.)	Total Price[a]	Applicable GST
1	2	3	4	5	5 = 4 x 5	6
1	APMS (Asset Performance Management System) for 200KVA Ratings along with allied material required for installation	Nos	**344**			
2	APMS (Asset Performance Management System) for 100KVA Ratings along with allied material required for installation	Nos	**393**			
3	APMS (Asset Performance Management System) for 50KVA Ratings along with allied material required for installation	Nos	**654**			
4	APMS (Asset Performance Management System) for 25KVA Ratings along with allied material required for installation	Nos	**2248**			
5	300 mm2, S/C Al Cable, PVC / PVC (15 meters for each phase & Neutral) as per relevant DDS Specification	Meter	**20640**			
6	120 mm2, S/C Al Cable, PVC / PVC (15 meters for each phase & Neutral) as per relevant DDS Specification	Meter	**23580**			
7	70 mm2, S/C Al Cable, PVC / PVC (15 meters for each phase & Neutral) as per relevant DDS Specification	Meter	**39240**			
8	25 mm2, S/C Al Cable, PVC / PVC (15 meters for each phase & Neutral) as per relevant DDS Specification	Meter	**134880**			
9	PG connectors for 300 mm.sq, S/C Al.Cable as per Specification No P-25:67amended to-date, (in effect as at the date 30 days prior to bid submission).	Nos	**2752**			
10	PG connectors for 120 mm.sq, S/C Al.Cable as per Specification No P-25:67amended to-date, (in effect as at the date 30 days prior to bid submission).	Nos	**3144**			
11	PG connectors for 70 mm.sq, S/C Al.Cable as per Specification No P-25:67amended to-date, (in effect as at the date 30 days prior to bid submission).	Nos	**5232**			
12	PG connectors for 25 mm.sq, S/C Al.Cable as per Specification No P-25:67amended to-date, (in effect as at the date 30 days prior to bid submission).	Nos	**17984**			

13	Bimetallic Lugs for Single Core Aluminium Cable. for 300 mm.sq, Single Core Aluminium Cable. 2752-Nos for 120 mm2, Single Core Aluminium Cable. 3144-Nos for 70 mm2, Single Core Aluminium Cable. 5232-Nos for 25 mm2, Single Core Aluminium Cable. 17984-Nos	Job	1			
14	D Fuse Fittings along with respective fuse size (As per PPMC/NTDC Approved Specification (Amended to-date)) (The quantity refers to complete D-Fuse fitting set containing three legs, including all associated components required for installation).	Sets	**3639**			
15	ACSR Dog Conductor for 11KV Jumpering (10m/transformer) and allied P.G Connector etc. As per PPMC/NTDC Approved Specification (Amended to-date)	Meter	**36390**			
16	PC Desktop (Tower) Complete Branded (HP/DELL or equivalent). Intel Core i5 14th Generation or higher with Minimum (16 GB DDR5 or higher RAM and 256 GB NVMe M.2 SSD + 1 TB Sata Hard Drive) along with LED.	Nos	**5**			

PUBLIC PROCUREMENT REGULATORY AUTHORITY (PPRA) EPADS

Schedule 2: Installation and Other Services

Item	Description	Quantity				Unit Price[a]				Total Price[a]			
						25kVA	50kVA	100KVA	200KVA	25kVA	50kVA	100KVA	200KVA
1	2	3				4	5	6	7	8 = 3 x 4	9 = 3 x 5	10 = 3 x 6	11 = 3 x 7
		25kVA	50kVA	100KVA	200KVA								
1	Installation, Testing & Commissioning of APMS and D-Fuse Fittings with 11KV Jumpering and allied accessories on Distribution Transformers	2248	654	393	344								

In LOCAL CURRENCY

GRAND SUMMERY

Schedule No.	Title	Total Amount	Total Amount (With All Taxes and Duties) (Price Quoted on EPADS 2.0 should Exactly Match with this Column)
		1	2
1	Plant and Mandatory Spare Parts Supplied from Within the Employer's Country		
2	Installation and Other Services		
GRAND TOTAL (Total Schedule 1+ Total Schedule 2)			

LOT-III

Schedules of Rates and Prices

Schedule 1: Plant and Mandatory Spare Parts

Item	Description	unit	Quantity	Rate per unit on FCS basis inclusive of all taxes / duties & 0.5% inspection charges (Rs.)	Total Price[a]	Applicable GST
1	2	3	4	5	5 = 4 x 5	6
1	APMS (Asset Performance Management System) for 200KVA Ratings along with allied material required for installation	Nos	**343**			
2	APMS (Asset Performance Management System) for 100KVA Ratings along with allied material required for installation	Nos	**392**			
3	APMS (Asset Performance Management System) for 50KVA Ratings along with allied material required for installation	Nos	**655**			
4	APMS (Asset Performance Management System) for 25KVA Ratings along with allied material required for installation	Nos	**2248**			
5	300 mm2, S/C Al Cable, PVC / PVC (15 meters for each phase & Neutral) as per relevant DDS Specification	Meter	**20580**			
6	120 mm2, S/C Al Cable, PVC / PVC (15 meters for each phase & Neutral) as per relevant DDS Specification	Meter	**23520**			
7	70 mm2, S/C Al Cable, PVC / PVC (15 meters for each phase & Neutral) as per relevant DDS Specification	Meter	**39300**			
8	25 mm2, S/C Al Cable, PVC / PVC (15 meters for each phase & Neutral) as per relevant DDS Specification	Meter	**134880**			
9	PG connectors for 300 mm.sq, S/C Al.Cable as per Specification No P-25:67amended to-date, (in effect as at the date 30 days prior to bid submission).	Nos	**2744**			
10	PG connectors for 120 mm.sq, S/C Al.Cable as per Specification No P-25:67amended to-date, (in effect as at the date 30 days prior to bid submission).	Nos	**3136**			
11	PG connectors for 70 mm.sq, S/C Al.Cable as per Specification No P-25:67amended to-date, (in effect as at the date 30 days prior to bid submission).	Nos	**5240**			
12	PG connectors for 25 mm.sq, S/C Al.Cable as per Specification No P-25:67amended to-date, (in effect as at the date 30 days prior to bid submission).	Nos	**17984**			

13	Bimetallic Lugs for Single Core Aluminium Cable. for 300 mm.sq, Single Core Aluminium Cable. 2744-Nos for 120 mm2, Single Core Aluminium Cable. 3136-Nos for 70 mm2, Single Core Aluminium Cable. 5240-Nos for 25 mm2, Single Core Aluminium Cable. 17984-Nos	Job	1			
9	D Fuse Fittings along with respective fuse size (As per PPMC/NTDC Approved Specification (Amended to-date)) (The quantity refers to complete D-Fuse fitting set containing three legs, including all associated components required for installation).	Sets	**3638**			
10	ACSR Dog Conductor for 11KV Jumpering (10m/transformer) and allied P.G Connector etc. As per PPMC/NTDC Approved Specification (Amended to-date)	Meter	**36380**			
11	PC Desktop (Tower) Complete Branded (HP/DELL or equivalent). Intel Core i5 14th Generation or higher with Minimum (16 GB DDR5 or higher RAM and 256 GB NVMe M.2 SSD + 1 TB Sata Hard Drive) along with LED.	Nos	**5**			

PUBLIC PROCUREMENT REGULATORY AUTHORITY (PPRA) EPADS

Schedule 2: Installation and Other Services

Item	Description	Quantity				Unit Price[a]				Total Price[a]			
						25kVA	50kVA	100KVA	200KVA	25kVA	50kVA	100KVA	200KVA
1	2	3				4	5	6	7	8 = 3 x 4	9 = 3 x 5	10 = 3 x 6	11 = 3 x 7
		25kVA	50kVA	100KVA	200KVA								
1	Installation, Testing & Commissioning of APMS and D-Fuse Fittings with 11KV Jumpering and allied accessories on Distribution Transformers	2248	655	392	343								

In LOCAL CURRENCY

GRAND SUMMERY

Schedule No.	Title	Total Amount	Total Amount (With All Taxes and Duties) (Price Quoted on EPADS 2.0 should Exactly Match with this Column)
		1	2
1	Plant and Mandatory Spare Parts Supplied from Within the Employer's Country		
2	Installation and Other Services		
GRAND TOTAL (Total Schedule 1+ Total Schedule 2)			

Advance Payment

Advance payment will be not provided to the bidder for this Contract.

SPECIAL CONDITIONS

- Bidder Shall Quote 100% quantities as required in BOQ.

- If the bidder does not possess the prototype approval for the offered material according to **PPMC-DS-01: 2026 (Amended to-date),** as per approved specification, the bidder shall be bound to obtain the prototype approval from PPMC Department before start of mass production within 30 days of issuance of PO/Contract Agreement. The period of 30 days may be extended by SEPCO for any required period subject to the solid grounds/justification from the bidder. All expenses of testing charges will have to be borne by the manufacturer /contractor. Any change suggested during prototype testing for compliance of specification shall have to be incorporated without any extra price or claim. If the prototype sample fails, the material shall be improved and re-offered for prototype testing to PPMC department. The time taken for improvement in samples and resubmission of drawings will not entitle the manufacturer / contractor to claim extension in delivery period on this account.

  APMS ordering code -3 (APMS-MC-S) is applicable.

  If prototype fails second time, the performance guarantee will be forfeited in favour of SEPCO besides other necessary actions as deemed necessary.

  The successful Bidder shall complete the Installation of APMS along with accessories within the stipulated period of 180 days from issuance of PO/Contract Agreement.

- Bidder shall be responsible to synchronize all installed APMS with PITC MDM. Any equipment (if required) will be the responsibility of the successful bidder.

- The MDC (driver software), having perpetual license, must be complaint with latest PITC UDIL version (published at PITC's website pitc.com.pk). The successful bidder will be responsible for integrating all of the APMS with PITC's MDM.

- Hardware for HES/MDC will be provided by the successful bidder, including driver software without any additional cost.

- SEPCO will Provide the required SIMs for Communication.

- SEPCO reserves the right to delete any category of APMS / Allied accessories and their installation at the time of issuance of LOA / Purchase Order/Contract Agreement.

- SEPCO reserves the right to increase / decrease the P.O/ Contract Agreement quantities upto 15% at the time of issuance of Letter of Acceptance (LOA) / Work Order.

- **Work Execution Plan**

  Within fifteen (15) days of issuance of Letter of Acceptance (LOA) and prior to

commencement of work, the successful bidder shall submit a detailed Work Execution Plan duly approved by its authorized representative. The Work Execution Plan shall include, but not be limited to: (i) Project implementation methodology; (ii) Detailed activity schedule with milestones; (iii) Resource deployment plan; (iv) Risk management and mitigation plan;
(v) Quality assurance and quality control procedures; (vi) Cybersecurity implementation approach; (vii) Testing and commissioning methodology; (viii) Training and knowledge transfer plan; (ix) Detailed organization chart; and (x) Curriculum Vitae (CVs), qualifications, certifications, roles and responsibilities of all Key Personnel proposed for the project**.**

For data transfers b/w meter to MDC, the DLMS/COSEM certificates will suffice. However, to ensure that MDC has not manipulated any primary or derived electrical quantities coming from meter while transferring them to UDIL schema, the successful bidder will provide the certificate as per below format:

"It is certified that primary and derived electrical quantities from MDC schema to UDIL schema will be without any treatment. If any discrepancy is identified, the bidder will be responsible leading to revalidation of UDIL certificate or cancellation of UDIL as per decision taken jointly by SEPCO & PITC".

During Testing, the successful bidder will have remote access to their MDC for fixing issues. However, once the UDIL complaint MDC is installed in production environment of PITC data center, the bidders will not have any remote access to their MDC. However, they can always visit PITC data center, with prior submission of Visit Request, mentioning the reason, and its subsequent approval. PITC team will supervise the activities performed by the vendor.

- ❖ The bidder shall be responsible for

- Conduct detailed site survey before installation.
- Verify transformer ratings and field conditions.
- Verify availability of mounting space and communication signals.
- Coordinate with concerned SEPCO field staff. However, SEPCO will facilitate for provision of any required information by the bidder for installation.

- ❖ The successful bidder has to submit Latest UDIL compliance requirements to PITC and obtain UDIL compliance certificate from PITC within 14 days from the issuance date of Letter of Acceptance.

Following SOP will be observed for UDIL Testing:

1. Vendor will submit UDIL Performa with sample meters and other prerequisites.

2. PITC will start UDIL testing and report issues (if any) to vendor via official correspondence, who will fix them & intimate PITC. This iteration will continue for 7 days (max).

   For the last 7 days PITC will perform end-to-end compliance/validation / stress testing & intimate the vendor about ultimate result (Pass or Fail).

- Performance security in shape of **Bank Guarantee / CDR** equal to 10% (Ten percent) of the total value of contract / P.O **(including GST & PST)** shall be furnished with the acceptance of LOI within 14 days from any scheduled bank of Pakistan in favour of **Chief Engineer Devlopment SEPCO**.

- **INSPECTION:**

  Inspection of the material will be carried out at your premises by the Chief Engineer (M.I) Lahore or his authorized representative along with SEPCO representatives. Notice in writing shall have to be given to the inspecting officer & copy to this office by you when the material against the order is ready for inspection. All reasonable facilities as provided in the specification or followed by the industry or trade in general shall have to be afforded to the inspecting officer by you at your expenses including travelling, boarding / lodging etc: for carrying out inspection.

  Delivery period is the essence of the purchase order and delivery must be completed not later than the dates specified. 1st day of inspection or 15th day of inspection call whichever is earlier, shall be reckoned as date of delivery of Store to SEPCO Consignee provided the goods accepted for supply have been delivered within 20 days of issue of Inspection Certificate subject to the condition that the supplier / manufacturer offers the material for Inspection at least 15-days prior to the due date and the offer is not rejected due to being a fake call or material not conforming to the specification.

- **PAYMENT CLAUSE:**

- **Schedule No.1 Procurement of Material**

  (This will be based on actual delivery of APMS/ Allied Material in Consignee Stores

  100% payment of delivered goods will be made on delivery of material for schedule 1.

- **Schedule No.2 Installation & Services**

  80% after complete installation and execution of work of schedule 2. verified by following SEPCO nominated officer (s) / Committee.

  1. CE CSD
  2. CICTO
  3. Concerned SE

  The payment will be made consignment wise. Each consignment will consist of 20% APMS installation. The concerned committee mentioned in bid document will verify the 20% APMS installation & commissioning. However, in each consignment 20% payment will be retained. which will be released after the committee report already mentioned above.

Remaining 20% payment will be released after Two (02) months successful operation verified by CICTO.

Payment Regarding Material (as per Schedule 1)

The Payment will be made directly by the Chief Financial Officer SEPCO Sukkur or through irrevocable inland letter of credit at sight from scheduled bank of Pakistan. All charges relating to L/C opening and negotiation together with subsequent amendments shall be borne by the contractor. The payment / negotiation of L/C will be made on presentation of following documents.

i) Invoice of supplied material in triplicate duly approved by Chief Engineer Development PMU and pre-audited by the office of Manager/Deputy Manager Finance PMU/CFO Office SEPCO.
ii) Delivery Challan and GRN duly stamped and signed by the Store Manager SEPCO Ltd. Concerned.
iii) Warranty certificate / non-payment certificate.
iv) Confirmation of Chief Engineer Development PMU Sukkur about acceptance of performance bond in case of first claim only.
v) Inspection certificate issued by Chief Engineer (M.I) PPMC or his authorized representative.
vi) The payment of the Sales tax shall be made on presentation of following documents:
   a. Sales tax invoice as per section-23 of Sales tax act 1990.
   b. Sales tax cum payment Challan for the concerned monthly duly paid into Government treasury.
   c. In case the manufacturers who pay lump sum Sales tax, they shall also submit an affidavit on non-judicial paper separately that paid Challan includes the above amount of Sales tax for supply of above mentioned invoices/items.

PARTIAL DELIVERIES AND PART PAYMENT ARE ALLOWED.

Payment Regarding Installation of APMS / Allied Accessories (As per Schedule 2)

The Payment will be made directly by the Chief Financial officer SEPCO Sukkur or through irrevocable inland letter of credit at sight from scheduled bank of Pakistan. All charges relating to L/C opening and negotiation together with subsequent amendments shall be borne by the contractor. The payment / negotiation of L/C will be made on presentation of following documents.

i) Invoice of supplied material in triplicate duly approved by Chief Engineer Development PMU SEPCO and pre-audited by the Manager/Deputy Manager Finance PMU/ Office of CFO SEPCO.
ii) Warranty certificate / non-payment certificate.
iii) Confirmation of Chief Engineer Development PMU SEPCO SEPCO Ltd. Sukkur about acceptance of performance bond in case of first claim only.
iv) For 80% payment, Verification / Completion Certificate Issued by SEPCO Committee & for remaining 20% payment, CICTO Verification report regarding TWO (02) months successful operation.
v) The payment of the Sales tax shall be made on presentation of following documents:

a. Sales tax invoice as per section-23 of Sales tax act 1990.
b. Sales tax cum payment Challan for the concerned monthly duly paid into Government treasury.
c. In case the manufacturers who pay lump sum Sales tax, they shall also submit an affidavit on non-judicial paper separately that paid Challan includes the above amount of Sales tax for supply of above mentioned invoices/items.

- **WARRANTY:**
  Bidder will furnish a warranty certificate, certifying that the goods supplied conform exactly to the specifications laid down in the purchase order and are brand new and that in the event of the material being found defective or not conforming to the specification/particular governing supply at the time of delivery and for a period of Five (05) years, bidder will be held responsible for losses & that the unacceptable goods shall be substituted with the accepted goods at your expenses after receipt at ex-works. The damaged APMS / Allied Material under warranty period will be repaired by the manufacturers free of cost within 60 days of receipt of irrespective of the condition under intimation to Chief Engineer PPMC. The same will be returned to concern Regional Stores SEPCO & accordingly will be installed by the manufacturer after repair within 30 days as it receipts, otherwise, cost of material will be recovered from your bills which will be released on healthy stores.
- The blacklisting of firms and contractors will be carried out as per Blacklisting Policy of SEPCO available at SEPCO website.
- The parties agree that this agreement and any subsequent agreement (s) shall be governed by, applied to, interpreted and construed in accordance with the laws of the Islamic Republic of Pakistan.
- In relation to any legal action or proceedings rising out of or in connection with this agreement, the parties irrevocably submit to the exclusive jurisdiction of the competent courts of Law at Sukkur, Pakistan.
- PPRA Rules (Amended to-date) will prevail during the whole procurement process.
- This Tender is governed by General Conditions of Contract for Purchase by WAPDA Dated 12.08.1984 amended to-date & latest Purchase Procedure, Registration Procedure, PEPCO Procurement Guidelines / instructions and PPRA Rules 2004 (Amended to-date).
- The quoted FCS price shall be firm and final valid for 150 days after opening date of tender and not be escalated / enhanced / adjusted for any reason what so ever.
- The prices include the present duties, taxes and 0.5 % inspection fee. In case however the present duties and taxes are increased or new taxes / duties are imposed on finished goods by the Govt. during the currency of contract, the same will be paid extra on production of documentary evidence. In case of decrease in duties/ taxes by Govt., the price will be decreased accordingly.
- The material supplied by the manufacturer should have the embossing of P.O. No. & name of manufacturer as per relevant specifications.

❖ The conditional bids / rates shall not be accepted.

Installation Requirements

Safety Requirements

Vendor shall ensure:

- Shutdown permits from SEPCO
- Use of insulated tools
- PPE for all workers
- Barricading of work area
- Compliance with electrical safety standards
- Safe working at height procedures

Any accident or damage during installation shall be responsibility of vendor.

Earthing

Earthing of APMS shall be carried out as per strictly in accordance with PPMC Specification No. PPMC-DS-01:2026

- Proper earthing shall be provided to APMS enclosure.
- Door-body earthing continuity shall be ensured.
- Sensor assembly grounding shall be provided through 6mm² copper wire.

Cabling

- All control cables shall be routed through PVC flexible conduits.
- Proper ferruling and tagging shall be provided.
- No loose wiring shall be acceptable.

Cable terminations shall be properly crimpe

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Power Planning & Monitoring Company

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No. **183-208** / TS / PPMC / 12

Dated: 27 / 04 / 2026

All Chief Executive Officers DISCOs
CEO K-Electric, Karachi
CEO Barqiat, AJK Electricity Department
CEO Water & Power Department, Gilgit Baltistan

Subject: **REVISED PPMC SPECIFICATION NO. PPMC-DS-01:2026 OF ASSET PERFORMANCE MANAGEMENT SYSTEM (APMS) FOR POLE MOUNTED DISTRIBUTION TRANSFORMERS**

Enclosed please find herewith a copy of revised PPMC Specification No. PPMC-DS-01:2026 of Asset Performance Management System (APMS) for pole mounted Distribution Transformers, duly approved by Managing Director PPMC for your information, record and implementation. The same shall be applicable with effect from the date of approval by Specification Review Committee, i.e., 23.04.2026.

Engr. Tufail Ahmed Shaikh
Chief (Technical Services)

Cc:

1. CEO Power Information Technology Company (PITC)
2. Mr. Talha Khalid, Chief (Policy & Strategic Planning) PPMC (Member SRC)
3. Mr. Naveed Qaiser, Chief Financial Officer PPMC (Member SRC)
4. Mr. Mubashar Jalal, Chief (Monitoring & Reporting) PPMC (Member SRC)
5. Chief Engineer (Material Inspection) PPMC, Lahore
6. All Members of Technical Working Group
7. All Chief / Directors Material Management / Supply Chain Management
8. All Energy meter manufacturers
9. All LT Circuit Breaker Suppliers / manufacturers
10. All Industrial Panel manufacturers
11. All LT CT manufacturers
12. SO to MD PPMC

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POWER PLANNING AND MONITORING COMPANY

SPECIFICATION (PPMC-DS-01:2026)

Asset Performance Management System (APMS) for Pole Mounted Distribution Transformers

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Document Change Record

NGC document change record

Version	Document No.	Dated	Effective date of Application	Remarks
1.0	DDS-76:2007	2007	2007	1st Release
1.1	Amendment-1	2010	2010	Amendment
2.0	DDS-76:2023	2023	2023	2nd Release
2.1	Amendment-1	2024	2024	Amendment

PPMC document change record

Version	Document No.	Dated	Effective Date of Application	Remarks
1.0	PPMC-DS-01	2026	23-04-2026	1st Release

PUBLIC PROCUREMENT REGULATORY AUTHORITY (PPRA) EPADS

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This specification has been prepared with due deliberations with technical working groups of DISCOs and Manufacturers.

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Members of Technical Working Group (TWG) from Power Sector

Signed to the extent of UDIL Compliance as National Interoperability Standard, only.

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Director General MIRAD HESCO

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FOREWORD

The Federal Cabinet, Government of Pakistan vide its decision dated 27.10.2021 ratified the decision of Cabinet Committee on Energy (CCoE) meeting held on 08.10.2021, as per which the development of uniform Design & Standards for distribution sector of Pakistan is one of the core functions of PPMC.

Subsequently, in pursuance of Federal Cabinet decision, the Ministry of Energy (Power Division) vide notification dated 06.02.2026 has transferred the functions relating to the design, standards and specifications of 11 kV and below from NGC to PPMC.

In pursuance of the Ministry of Energy (Power Division) Notification dated 06.02.2026, whereby the functions related to development of uniform design, standards and specifications for distribution sector of Pakistan have been entrusted to Power Planning and Monitoring Company (PPMC) as it was performing before 2011 under then PEPCO (now PPMC).

Subsequent to this transition, Lahore Electric Supply Company (LESCO) vide its letter No. 1729-36 dated 11.02.2026, carried out a proof of concept (PoC) of the Asset Performance Management System (APMS) with additional features of oil temperature and oil level monitoring on distribution transformers. The PoC was undertaken through educational purchase orders to evaluate field performance, operational effectiveness and integration aspects of the enhanced system. Furthermore, LESCO through DG (MIRAD) letter No. 2508-14 dated 14.04.2026, proposed amendments and highlighted key technical and operational considerations based on field experience, including system integration challenges, monitoring limitations and the need for improved control and protection coordination.

Accordingly, the agenda for revision of the APMS specification was placed before the 1st Specification Review Committee (SRC) meeting vide No. TS/PPMC/DS/02-001 dated 18.02.2026. During the meeting held on 19.02.2026, and in line with the approved Minutes of Meeting, the initiation of the revision of the Asset Performance Management System (APMS) specification was duly considered and formally approved by the competent forum, taking into account LESCO's requirements and the need to strengthen existing standards. Thereafter, the draft specification was extensively deliberated with Technical Working Groups (TWGs) comprising representatives from all Distribution Companies (DISCOs), PITC, and K-Electric, ensuring incorporation of collective field experience, operational requirements, and practical considerations across utilities. Also, in alignment with the Ministry of Energy (Power Division) letter No. 12(23)/2018-DISCO-I dated 24.06.2025 regarding adoption of e-SIM technology in smart energy meters, provision for both embedded SIM (eSIM) and conventional physical SIM-based communication modules have been incorporated. However, mechanism of adoption e-SIM needs to be developed and implemented.

Following detailed consultations and incorporation of stakeholder inputs, the specification was subsequently approved in the 3rd SRC meeting held on 22.04.2026 held vide No DS-SRC-02 dated 22-04-2026.

This specification, titled *"Asset Performance Management System (APMS) for Pole Mounted Distribution Transformers,"* has then been developed in continuation of the earlier specification DDS-76:2023 (amended to date), incorporating necessary improvements in light of field feedback and evolving sectoral needs.

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The present revision introduces enhanced functionalities, including optional oil temperature and oil level monitoring through dedicated sensor assemblies, improved control philosophy through coordinated operation of MCCB and magnetic contactor, and clearly defined requirements for installation, operation, and safety. A significant addition is the introduction of a structured ordering code framework, enabling DISCOs and K-Electric to select configurations in line with their specific operational requirements. This modular approach provides flexibility in procurement while maintaining standardization and interoperability across the power distribution network.

The revised specification has been formulated in response to the evolving needs of Pakistan's power distribution sector, with particular emphasis on improved monitoring, protection, control, and reduction of technical and commercial losses. In this context, APMS is envisioned as a critical tool for transformer-level energy audit, enabling enhanced visibility of system performance and facilitating a gradual transition from feeder-level to transformer-level load management. This targeted approach supports more efficient network operation, minimizes indiscriminate interventions, and helps safeguard compliant consumers.

While earlier specifications established a foundational framework, certain limitations were identified in terms of flexibility, feature integration, clarity of requirements, and alignment with current international practices. The present revision addresses these gaps through the introduction of structured ordering codes, enhanced monitoring capabilities and alignment with relevant IEC and international standards, while also accounting for local environmental and operational conditions.

The specification emphasizes standardization, safety, reliability, and lifecycle performance, while ensuring adaptability to future technological advancements and avoiding vendor-specific dependencies. However, the effective realization of APMS benefits is contingent upon proper and continuous monitoring by utilities. Timely analysis of system data and appropriate operational response are essential for achieving improvements in loss reduction, asset protection, and service delivery. It is imperative that all protection features integrated within the APMS remain enabled and fully functional at all times.

This document has been developed through extensive consultations with DISCOs, K-Electric, and industry stakeholders. Recognizing that field conditions and technologies continue to evolve, the specification is intended to remain a dynamic document. All utilities are strongly encouraged to provide feedback based on field performance, particularly regarding operational effectiveness, reliability, load management outcomes, and impact on losses.

PPMC adopts an inclusive approach towards standard development and welcomes input from all stakeholders, including utility personnel, manufacturers, and field engineers. Feedback and suggestions may be shared with the office of Design and Standards, PPMC, through the designated email address (feedback.pds@ppmc.gov.pk), with reference to relevant clauses and supporting data where available. This collaborative approach will ensure that the specification continues to evolve as a robust, practical, and forward-looking document aligned with international best practices.







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1. SCOPE

1.1 This specification covers Asset Performance Management System (APMS) for Pole Mounted Distribution Transformers

1.2 APMS shall provide following salient features and services for Distribution Transformers on their LT side after incorporating other components of Advance Metering Infrastructure (AMI) network:

a. Real time monitoring and Operation/Controlling
b. Preventive actions against damage of distribution transformers
c. Load disconnection during Fault/ Abnormal Conditions
d. Energy auditing
e. Scheduling of Load Management
f. Human/Equipment Safety

1.3 This specification covers APMS to be used on the LT side of following distribution transformers:

a. 25 kVA Pole Mounted Distribution Transformer
b. 50 kVA Pole Mounted Distribution Transformer
c. 100 kVA Pole Mounted Distribution Transformer
d. 200 kVA Pole Mounted Distribution Transformer
e. 250 kVA Pole Mounted Distribution Transformer
f. 400 kVA Pole Mounted Distribution Transformer
g. 500 kVA Pole Mounted Distribution Transformer
h. 630 kVA Pole Mounted Distribution Transformer

1.4 This specification introduces an optional Oil Temperature and Oil Level Monitoring feature for the Asset Performance Management System (APMS) installed on pole mounted distribution transformers; The feature shall be realized through integration of a dedicated Oil Temperature and Oil Level Sensor Assembly connected to the SMCD directly or through a suitable controller

1.5 This specification introduces:

a. Ordering code provisions,
b. Sensor installation requirements,
c. Controller technical requirements (if used)

1.6 This specification also introduces use of Magnetic Contactor with MCCB for switching operations only.

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2. APPLICABLE SPECIFICATIONS AND STANDARDS

2.1 The APMS shall be designed, manufactured, tested and supplied in accordance with (PPMC-PPMC-DS-01:2026 and latest IEC/International/National standards listed in **clause 2.3.**

2.2 In case the requirements laid down herein differ from those given in International/IEC Standards or other local specifications, the requirements listed herein shall prevail.

2.3 Following specifications and latest IEC/ International standards shall be applied:

DDS-50:2007 (amended to date)	3-Phase Multi-rate (TOD/TOU) Solid-State LT/HT Static Energy Meter
DDS-98:2011 (amended to date)	Specification for Advance Metering Infrastructure
DDS-110:2012 (amended to date)	Meter Data Collection (MDC) Server to be used in AMI
UDIL (latest version)	Universal Data Integration Layer-Multivendor compliant AMI in Pakistan
DDS-80:2007 (amended to date)	LT Current Transformer for metering
IEC 62052-11	Electricity Metering Equipment- General requirements
IEC 62053-21	Electricity Metering Equipment- Static Meters for AC Active Energy (classes 0.5, 1 and 2)
IEC 60947-2	Low voltage switchgear and control-gear – Part 2
IEC 61869-2	Instrument Transformers – Part 2: Additional requirements for current transformers
IEC 60076-22-1	Power transformer and reactor fittings – Protective devices
IEC 60529	Degrees of protection provided by enclosures (IP Code)
IEC 60068-2-2	Environmental testing – Dry heat test
IEC 61439-1	Low-voltage switchgear and control gear assemblies- General Rules
DDS-84:2020	Distribution transformers
IEC-60947-4-1	Low voltage switchgear: contactors and motor starters-electromechanical contactors and motor starters
ISO 2859-1	Sampling procedures for inspection by attributes
IEC 60751	Industrial platinum resistance thermometers and platinum temperature sensors
ISO/IEC 17025	International standard for testing and calibration laboratories

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3. ORDERING CODE

3.1 Following ordering codes are applicable for procurement of APMS.

Ordering Code	Description
APMS-CB-S-***	Standard APMS with motorized MCCB
APMS-CB-OTL-***	APMS with motorized MCCB and with oil Temperature and level monitoring
APMS-MC-S-***	Standard APMS with Magnetic Contactor and non-motorized MCCB
APMS-MC-OTL-***	APMS with Magnetic Contactor, non-motorized MCCB and with oil Temperature and level monitoring

*** 025, 050, 100, 200, 250, 400, 500 & 630 (025 depicts 25 kVA, 050 depicts 50 kVA, 100 depicts 100 kVA, 200 depicts 200 kVA, 250 depicts 250 kVA, 400 depicts 400 kVA, 500 depicts 500 kVA and 630 depicts 630 kVA)

4. DEFINITIONS

4.1 **Molded case circuit-breaker (MCCB):**

A mechanical switching device capable of making, carrying and breaking currents under normal circuit conditions and under pre-defined conditions, making, carrying for a given time, and breaking currents under abnormal conditions such as those of short circuits

4.2 **Rated voltage for MCCB:**

The rated voltage of a circuit breaker is the value of voltage which designates it and to which the operating conditions during making or breaking of current.

4.3 **Rated nominal current for MCCB:**

The rated nominal current of a circuit breaker is the value of current which the circuit breaker can carry under test conditions.

4.4 **Rated frequency for MCCB:**

The rated frequency of a circuit breaker is the service frequency for which the circuit breaker is designed.

4.5 **Ambient temperature:**

The average temperature of the air surrounding the complete APMS Unit.

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4.6 **Rated short time current of MCCB:**

The rated short time current of a circuit breaker is the value of prospective short circuit current which the circuit breaker shall be required to carry in the closed position for a specified time and under the test conditions specified.

4.7 **Breaking capacity of MCCB:**

A value of prospective breaking current that a switching device can break at a stated voltage under prescribed condition of use and behavior.

4.8 **Making capacity of MCCB:**

A value of prospective making current that a switching device can make at a stated voltage under prescribed condition of use and behavior.

4.9 **Short time withstand current:**

Current that a circuit or a switching device in the closed position can carry during a specified short time under prescribed conditions of use and behavior.

4.10 **Rated short-circuit breaking capacity for MCCB:**

The rated short-circuit breaking capacity (I_{cs}) for an MCCB, is the maximum prospective symmetrical fault current that the MCCB can safely interrupt under specified test conditions without sustaining damage.

4.11 **Rated short-circuit making capacity MCCB:**

The rated short-circuit making capacity (I_{cm}) for an MCCB, is the maximum prospective symmetrical fault current that the MCCB can withstand for a brief period without sustaining damage during the circuit closing operation.

4.12 **Short time delay:**

Any intentional delay in operation within the limits of the rated short time withstand current.

4.13 **Magnetic contactor:**

A Magnetic Contactor is an electrically controlled switch that uses an electromagnet to open and close a circuit.

4.14 **Static meter:**

A type of electronic energy meter that measures energy consumption using solid-state electronic components, without any moving parts.

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4.15 **APMS-CB-OTL:**

Configuration of APMS with MCCB incorporating an Oil Temperature and Oil Level Monitoring System consisting of a sensor assembly and controller (if used).

4.16 **APMS-MC-OTL:**

Configuration of APMS with Magnetic Contactor and MCCB incorporating an Oil Temperature and Oil Level Monitoring System consisting of a sensor assembly and controller (if used)

5. SERVICE CONDITIONS

5.1 System Conditions:

System Nominal Voltage	415 V
System Highest Voltage	10% of Nominal Voltage
Nominal Frequency	50 Hz

5.2 Climate Conditions:

Ambient Temperature	Maximum	55°C
	Maximum mean over any 24 Hours	40°C
	Mean in any year	30°C
	Minimum	-25°C
Relative Humidity	Up to 100%	
Altitude (above sea level)	Up to 3000 meters	

6. MAJOR COMPONENTS OF APMS

6.1 Asset Performance Management System (APMS) shall be comprised of following components

a. Smart Metering and Controlling Device (SMCD)
b. Current Transformers (CTs)
c. Molded Case Circuit Breaker (MCCB)
d. Magnetic Contactor (optional as per ordering code)
e. APMS Enclosure

7. SMART METERING AND CONTROLLING DEVICE (SMCD)

7.1 Smart Metering and Controlling Device (SMCD) shall be in accordance with Specifications DDS-50:2007, DDS-98:2011, DDS-110:2012 (all amended to-date).

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7.2 It shall measure, record and display MDI, kWh, kVARh, Power Factor and other specified quantities in compliance with the specifications given in Clause 7.1.

7.3 Metering Accuracy Class shall be 0.5S for kWh and 1.0 for kVARh.

7.4 In addition to above, it shall fulfill following specified requirements:

a. It shall have Communication Module with minimum 4G/GSM/GPRS technology incorporating a SIM card/e-SIM.

b. It shall be able to communicate metering and other data stored in its memory and receive commands/write operations from Head-End System / MDM in accordance with the specifications mentioned in Clause 2 and the requirements stated herein.

c. Auxiliary components/ports essentially required for its Communication with both Head-End System / MDM and MCCB or Magnetic Contactor (whichever is applicable) shall also be provided.

d. It shall have optical communication port which shall perform functions of data reading/writing and parameterization of data. It should be disabled by default however, it can be enabled remotely through HES/MDM as per requirement of concerned utility.

7.5 It should be equipped with a battery. The battery type shall be lithium thionyl chloride (LiSOCl2) having minimum capacity of 2000 mAh.

a. Battery manufacturing origins shall be:
   i. Japan (Toshiba, Maxell, Mitsubishi and Panasonic)
   ii. USA (Tadiran, Ultralife and Sonnenchein)
   iii. Germany (Geyer and Varta)
   iv. France (Saft)
   v. South Korea (Xeno)

b. Operational Life of battery shall be minimum five (05) years.

c. Without any Power, the backup battery shall maintain the time, calendar and multi-rate program for a continuous period of at least 5 years.

d. Low Battery indication shall be displayed when minimum 25% battery life is left.

e. Storage/Shelf life of battery shall be more than 15 years.

f. The manufacturing year of Battery should not be more than eighteen (18) Months at the time of offering APMS.

7.6 Super capacitor will be provided for Real-Time Clock (RTC) to maintain date and time for at least 07 days in absence of power.

7.7 In the absence of power, LCD display shall be 'On demand' through scroll buttons.

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7.8 It shall have provision for following abnormal conditions:

a. Over Voltage
b. Under Voltage
c. Phase Over Current
d. Overload Condition
e. Voltage Unbalance
f. Current Unbalance
g. High Apparent Power
h. High Oil Temperature
i. Low Oil Level
j. Sensor Fault

7.9 Write provision for two (02) setting levels i.e., Alarm and Tripping shall be available for conditions specified in Clause 7.8, Sr. No. (**a** to **d** and **h**). Write provision for one (01) setting level i.e., Alarm shall be available for Sr. No. (**e** to **g** and **i to j**).

7.10 Threshold values of Alarm and Tripping functions and corresponding time settings shall be user programmable locally through optical port or remotely through head-End system/MDM. Once programmed, these function values shall be stored in its memory.

7.11 It shall perform normal operations and tripping operations of MCCB on the basis of programmed threshold values. Events, i.e., Alarm and Tripping shall be communicated to Head-End System/MDM.

7.12 At least 20 events, Alarm and Tripping, for each abnormal condition given in clause 7.8 and normal switching of MCCB/ Magnetic Contactor with date and time stamp shall be provided before rollover.

7.13 It shall be DLMS/COSEM compliant.

7.14 PCB must have conformal coating.

7.15 SMCD manufacturers shall possess valid prototype approval after fulfilling the requirements of this specification and qualifying prototype testing from Design & Standards department, PPMC.

8. CURRENT TRANSFORMER (CT)

8.1 Current Transformers used in APMS shall have following technical parameters as per IEC 61869-2:

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Transformer Ratings	CT Ratio	Accuracy Class	VA Burden
25 kVA	50/5A	0.5	2.5 VA (min)
50 kVA	100/5A	0.5	2.5 VA (min)
100 kVA	200/5A	0.5	2.5 VA (min)
200 kVA	400/5A	0.5	2.5 VA (min)
250 kVA	400/5A	0.5	2.5 VA (min)
400 kVA	600/5A	0.5	2.5 VA (min)
500 kVA	800/5A	0.5	2.5 VA (min)
630 kVA	1000/5A	0.5	2.5 VA (min)

8.2 CT error limits shall be as under:

Ratio Error (± %) at Current (% of Rated)				Phase Displacement (± Minutes) at Current (% of Rated)			
5	20	100	120	5	20	100	120
1.5	0.75	0.5	0.5	90	45	30	30

8.3 The temperature rise test shall be performed at 120% of rated current as per IEC 61869-2 (latest available)

8.4 Dimensional requirements for the base plate are given in the drawings. Other CT dimensions should be so that they can be adequately fixed on bus bars.

8.5 Other than the requirements stated above, the technical parameters and testing criteria shall be in accordance with DDS-80:2007 (amended to date).

8.6 CT manufacturers shall possess valid prototype approval after fulfilling the requirements of this specification and qualifying for prototype testing from the office of Design & Standards (D&S) PPMC.

9. MOLDED CASE CIRCUIT BREAKER (MCCB)

FOR MOTORIZED MCCB WITH RESIDUAL CURRENT (ORDERING CODES APMS-CB)

9.1 MCCB shall provide protection for the following protection functions:

a. Adjustable Overload Protection with long inverse time delay trip and trip characteristic with inverse time curves.

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b. Adjustable Short Circuit Protection with definite trip time delay.
c. Adjustable Short Circuit with instantaneous trip
d. Adjustable Residual Current Protection.

9.2 MCCB shall be 3P+N type in compliance of latest IEC-60947-2 standard and the requirements given in this specification.

9.3 It can have thermal-magnetic mechanism or electronic/Microprocessor based mechanism.

9.4 It should be equipped with a motor-operated mechanism for switching purpose.

9.5 The motor-operated mechanism shall have quick make, quick break action. The charging time will not be counted in making time.

9.6 Two position indications ON-OFF shall be available on MCCB or its Motor Operator.

9.7 An "Auto/Manual" switch shall be provided on MCCB or its Motor Operator. When set to "manual" position it shall lock out the remote control.

9.8 Necessary auxiliary contacts/communication ports/control circuits etc. shall be used between MCCB and SMCD for communication between them.

9.9 The communication cables shall be carried through PVC spiral/flexible conduits. These shall have proper tagging and ferruling for easy traceability through cable ducts.

9.10 It shall have adjustable long time pick up current (overload/thermal) settings from at-least 0.7 to 1.0 times of MCCB current rating and also adjustable long-time delay settings.

9.11 It shall have adjustable short time pick up current (short circuit/ magnetic) settings of the current rating and definite time trip delay/setting. The magnetic pickup range is 5-10 x I_n.

9.12 It shall have adjustable Instantaneous pick-up current settings and MCCB shall trip instantaneously within 50msec.

9.13 The minimum pick up settings value of adjustable residual current shall be ≤30mA. Its operating characteristics shall be as per IEC 60947-2 (clause B.4.2.4.1).

9.14 MCCB technical parameters are given below: -

Rated Voltage:	415/430 V
Rated Frequency:	50 Hz
Rated Nominal Current:	
25 kVA APMS:	50-60 A
50 kVA APMS:	100 A
100 kVA APMS:	200 A
200/250 kVA APMS:	400 A
400/500 kVA APMS	800 A

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630 kVA APMS	1200 A
Rated Symmetrical Breaking Capacity:	25 kA (minimum)
Rated Making Capacity:	2x Rated Symmetrical Breaking Current (min)

Note: If higher rating is to be used considering the unavailability of said ratings, approval from Design and Standards (D&S) is to be sought.

9.15 Type test reports from independent ILAC accredited international labs or STL approved labs shall be provided. The type test report will be as per latest IEC standard IEC-60947-2 (latest) with additional characteristics given herein.

NON-MOTORIZED MCCB (ORDERING CODES APMS-MC)

9.16 MCCB shall provide protection for the following protection functions:

a. Overload Protection with long inverse time delay trip and trip characteristic with inverse time curves.
b. Short Circuit protection with instantaneous trip.

9.17 MCCB shall be 3P type in compliance with the latest IEC-60947-2 standard and the requirements given in this specification.

9.18 The MCCB shall be manually operated by quick make and quick break mechanism.

9.19 The MCCB shall be mechanically trip-free. ON-OFF breaker position shall be provided with breaker handle/ knob.

9.20 To minimize the effect of arcing, the breaker shall be fitted with arc quenching chamber.

9.21 MCCB technical parameters are given below: -

Rated Voltage:	415/430 V
Category	A
Rated Frequency:	50 Hz
Rated Nominal Current:	
25 kVA APMS:	50-60 A
50 kVA APMS:	100 A
100 kVA APMS:	200 A
200/250 kVA APMS:	400 A
400/500 kVA APMS	800 A
630 kVA APMS	1200 A
Rated Symmetrical Breaking Capacity:	25 kA (minimum)
Rated Making Capacity:	2x Rated Symmetrical Breaking Current (min)

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Note: If higher rating is to be used considering the unavailability of said ratings, approval from Design and Standards (D&S) is to be sought.

9.22 The breaker shall be equipped with adjustable magnetic/instantaneous /electronic (microprocess based) trip units/Fixed at $10I_n$ as mentioned in table below. The magnetic/instantaneous (I_i) or electronic settings shall be in steps or continuously be adjustable in range specified below

Rated Current (Amps)	Magnetic Trip Setting Range (Amps)
40	Fixed- 400A
60	Fixed- 600A
80	Fixed- 800A
160	Min 800-1600A
200	Min 1000-2000A
250	Min 1250-2500A
400	Min 2000-4000A
800	Min 4000-8000A
1200	Min 6000-12000A

9.23 The adjustable and instantaneous time lag release settings shall be completely independent of each other.

9.24 MCCB shall trip instantaneously within 50msec.

9.25 Type test reports from independent ILAC accredited international labs or STL approved labs shall be provided. The type test report will be as per latest IEC standard IEC-60947-2 (latest) with additional characteristics given herein.

10. MAGNETIC CONTACTOR

10.1 The Magnetic Contactor shall be used only with ordering codes APMS-MC along with non-motorized MCCB.

10.2 Magnetic Contactor shall be of industrial grade suitable for 415-430 V, 50 Hz system, 3P configuration and coil Voltage of 220-240V AC.

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10.3 The Magnetic Contactor shall be rated, Type-2 co-ordination and the AC-6a rating shall be demonstrated either by direct transformer switching test or by derivation from AC-3 rating in accordance with IEC 60947-4-1

10.4 Minimum durability should be mentioned in following quantities in type test reports,

a. Mechanical: minimum 1,000,000 operations.
b. Electrical durability at AC 6a duty: according to IEC standard.

10.5 The contactor shall comply with making and breaking performance requirements as per IEC 60947-4-1 for AC-6a duty.

a. The device shall be capable of safely making and breaking currents under:
   i. Normal operating conditions
   ii. Inductive load switching

b. The making and breaking capacities shall be verified through type tests in accordance with IEC provisions.

10.6 Other technical parameters shall match or exceed Transformer rating and be electrically interlocked with control logic to prevent chattering. Interlocking is required between control logic and switching devices to prevent unintended repeated operations (chattering). This applies to SMCD–contactor–MCCB interaction.

10.7 Contactor should not be used as a protective device. Short-circuit and Overload shall be provided by MCCB and operational based control and voltage based control shall be provided by contactor in ordering codes APMS-MC. It is recommended that LT line should be well protected where ordering codes APMS-MC are used and avoided where frequent faults occur on LT lines.

10.8 Contactor coil shall be protected by surge suppressor / RC snubber and contactor coil shall be controlled through an intermediate control interface (relay/driver circuit). Direct energization is avoided to protect SMCD output contacts.

10.9 Type test reports from independent ILAC accredited international labs or STL approved labs shall be provided. The type test report will be as per latest IEC standard IEC-60947-4-1 (latest) with additional characteristics given herein.

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10.10 Drawings shall be approved with consultation with DISCOs and OEMs while considering for induction into the system against respective ordering codes (APMS-MC)

11. APMS ENCLOSURE

11.1 Enclosure body and door shall be made from high grade steel sheet of 1.6 mm and 2.3 mm thickness respectively.

11.2 Copper Busbars shall have 98% IACS conductivity and tin plated with minimum thickness of 20 microns.

11.3 Busbars shall have rectangular cross-section with

a. 050mm² (min) area for 25 kVA
b. 100mm² (min) area for 50 kVA
c. 150mm² (min) area for 100 kVA
d. 300mm² (min) area for 200/250 kVA
e. 600mm² (min) area for 400/500 kVA (2x riveted busbars per phase may be used)
f. 800mm² (min) area for 630kVA (2x riveted busbars per phase may be used)

11.4 Busbars shall be covered with heat shrink LV grade insulation sleeves except the connection points.

11.5 Busbars shall be mounted on Bakelite/ polymer insulators.

11.6 Following clearances shall be maintained in air within the enclosure:

a. Phase to phase 50 mm
b. Phase to earth 25 mm

(where such clearances cannot be maintained like MCCB/Contactor terminals, insulated separators/sleeves shall be used)

11.7 Gland sizes are,

a. For 025 kVA APMS PG-16 (8 Nos)
b. For 050 kVA APMS PG-21 (8 Nos)
c. For 100 kVA APMS PG-30 (8 Nos)
d. For 200/250 kVA APMS PG-42 (8 Nos)
e. For 400/500 kVA APMS PG-42 (16 Nos)
f. For 630 kVA APMS PG-42 (16 Nos)

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11.8 Type tested Bimetallic Lugs (Not provided with APMS) shall be used for incoming and outgoing cable connections corresponding to the size/cross sectional area of the cables used by DISCOs,

11.9 Mounting of SMCD shall be made on two mounting brackets as per dimensions given in the attached drawings

11.10 Mounting of components i.e., MCCB, contactor (if used) and busbars shall be made on the back plate. No equipment shall be directly mounted on enclosure walls.

11.11 A window of 150x100mm shall be provided and placed on the front door for SMCD display reading. Transparent polycarbonate sheet of 5 mm thickness overlapped on the window by 15mm on all sides shall be fixed on the inner side. It shall be made dust/waterproof using Neoprene Rubber packing.

11.12 Interior and exterior of enclosure surface shall be painted with powder coating paint. Finished color shall be light grey (RAL 7032) and paint thickness shall be 0.100mm minimum at any point on surface. The paint shall be applied as,

a. The surfaces of the MS plate shall be thoroughly cleaned and sand blasted to prepare the metal surface for painting.
b. All the interior and exterior surfaces of the enclosure shall be thoroughly cleaned through the process of degreasing and phosphating to prepare the metal surface for painting. Good quality pretreatment is a mandatory requirement.
c. Oven baked powder coating paint having durable weather resistant properties suitable to be used in coastal area shall be applied.

11.13 Steel sheets and all structural joints shall be welded/bolted together so that entire enclosure is rigid and self-supporting.

11.14 Two MS bolted connectors shall be provided on the outside of enclosure for earthing purposes.

11.15 A flexible tinned copper strap of 6mmSq shall be used for electrical connectivity between door and body for earthing purposes.

11.16 Enclosure door shall have strong hinges, gutter arrangement and Neoprene rubber gasket. Louvers shall be provided on both sides of the APMS enclosure for cross ventilation as per attached drawings. Vermin proofing shall also be ensured.

11.17 Locking and sealing arrangement of enclosure shall be provided on the outside of door. The earthing terminal of hot dip galvanized MS material with zinc coating of minimum 30 microns.

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11.18 Color coding for phase/neutral wiring, CT output wiring, Busbar sleeves shall be red, yellow, blue and black.

11.19 Control and Power circuit diagrams shall be engraved and printed with black color on stainless steel/powder coated Al plate fixed inside the APMS door. All the components shall be shown through symbols in the diagram.

11.20 Following information shall be painted on the APMS enclosure:

a. "APMS for 25 kVA/ 50 kVA/ 100 kVA/ 200kVA/ 250 kVA/ 400 kVA/ 500 kVA/ 630 kVA Transformer" with black color paint on the front door
b. "Danger Symbol" with red color paint on both side walls.

11.21 Following information shall be engraved and printed with black color on a stainless-steel/powder coated Al nameplate and fixed on the front of APMS enclosure:

a. APMS Designed for 25 kVA/ 50 kVA/ 100 kVA/ 200kVA/ 250 kVA/ 400 kVA/ 500 kVA/ 630 kVA Distribution Transformer.
b. Serial No.
c. Rated Voltage (V)
d. Rated Current (A)
e. MCCB Rating (A)
f. Magnetic Contactor Rating (A) (if applicable)
g. CT Ratio
h. Year of Manufacturing
i. P.O No. & Date
j. Warranty Expiry Date
k. Name of Supplier/ Manufacturer
l. Name of DISCO
m. Manufacturer of OTL (for OTL ordering codes only)
n. Low Oil level and Normal Recovery Point (for OTL ordering codes only)
o. Ordering Code

11.22 Enclosure Tests

Following tests shall be carried out on the enclosure.

11.22.1 Visual Inspection

APMS enclosure shall be visually inspected for any defects mentioned below:

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Examination	Defects
Material	Enclosure components not made from specified material.
Finish	Nuts, bolts and washers not galvanized. Busbars not tin-plated. There shall be no dents/rust on the enclosure.
Construction & Dimensions	Enclosure design not in accordance with the drawings. Component missing, improper fittings or not fulfilling Dimensional requirements.
Markings	Markings/ name plate is incomplete or missing.

11.22.2 **Galvanizing Test of Nuts & Bolts and Earthing Terminal**

Nuts, bolts, DA bolts and washers shall be tested in accordance with WAPDA Specification P-82:81 (amended to-date)

11.22.3 **Bus bar Test**

Copper Bus bars shall have electrical conductivity of 98% IACS and Tin coating of 20microns.

11.22.4 **Bakelite/polymer Insulation Tests**

Bakelite/polymer insulator shall withstand 8kV (min) for one minute.

11.22.5 **Temperature rise test**

The temperature rise test shall be carried out on completely assembled APMS enclosure according to IEC 61439-1

11.22.6 **IP class test**

The verification of IP class (IPx5) shall be tested according to IEC 60529.

11.22.7 **Paint Thickness test**

Paint thickness shall be tested using paint thickness gauge and it shall not be less than 0.100mm minimum at any point on surface.

11.23 4x double arming bolts DA-14 (As per PD 56b) along with 2X powder coated channels (As per drawing) for mounting arrangement shall be provided along with the enclosure by APMS manufacturer.

12. APMS-OTL

12.1 In case of APMS-***-OTL, followings conditions are to be met by sensor and controller:

Parameter	Requirement
Operating Temperature Range of sensor	−20 °C to + 125 °C
Temperature Accuracy of sensor	Minimum ±2 °C (or class C or better)
Pressure Withstand of sensor	Minimum 6 PSI continuous (Part inside transformer). 15 PSI (30 minutes)
Sensor IP class	IP65
Controller enclosure IP Class (if used)	IP54

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Oil Compatibility	Parts inside transformer must be compatible with transformer mineral oil
Max power consumption of sensor & controller (if used)	≤ 5 W
Protection requirements (for controller)	Reverse polarity protection Overvoltage protection (120% of Un)
Protection breaker (for controller if used)	≤ 1 A
PCB requirement (controller)	Conformal coating
Environmental compliance	IEC 60068-2-2 (Dry Heat test)

12.2 The sensor assembly shall be installed through the transformer oil filling plug and shall fit the oil plug arrangement specified in DDS-84:2020 without modification to the transformer tank.

12.3 Sensor installation shall ensure oil sealing using oil resistant gasket compatible with transformer mineral oil

12.4 Manufacturer shall define:

a. Low Oil Level Alarm Point
b. Normal Oil Level Recovery Point

12.5 In case of sensor failure, wiring disconnection or controller malfunction, APMS shall generate a sensor fault event.

12.6 Temperature sensor accuracy shall be ±2 °C or as per class C or better.

12.7 Installation of the sensor shall not reduce BIL of transformers. Transformers shall remain compliant with IEC 60076-3.

12.8 The external sensor wiring (pilot wires) connecting the Oil Temperature and Oil Level Sensor Assembly to the APMS/SMCD shall be provided in the form of a robust flexible capillary-type conduit/tubing (5 meters). The capillary conduit shall be metallic, flexible and mechanically protected. It should come inside APMS enclosure from below through a suitable gland.

12.9 The sensor assembly/body should be grounded with transformer body (1.5-meter flexible copper wire of 6mmsq shall also be provided).

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13. FUNCTIONAL REQUIREMENTS OF APMS

13.1 This specification covers minimum level of functional requirements for design, materials, manufacturing, testing and performance of APMS for 25 kVA, 50 kVA, 100 kVA, 200 kVA, 250 kVA, 400 kVA, 500 kVA and 630 kVA rated Distribution transformers.

13.2 APMS shall have functional characteristics as mentioned in clause 13.3 to 13.11.

13.3 It shall communicate all metering data and events as per latest specifications and must be stored inside meter which will be communicated to HES/MDM upon connection as per requirement (As per clause 17.1).

13.4 It shall be able to record, report and perform following switching operations of MCCB or Magnetic Contactor (as per respective ordering code requirements) i.e., disconnection/reconnection:

a. Operation Remotely through Head-End / MDM
b. Operation through SMCD (Independent of Head-End System / MDM)
c. Operation through local electrical means (Push buttons)
d. Operation through local mechanical means (Toggle/Operating Handle) only for MCCB.

13.5 It shall record, report and perform specified functions against following abnormal conditions through Head-End / MDM for testing purposes, range of testing values are specified with each condition:

a. Over Voltage (up to 20%, higher than Transformer rated voltage)
b. Under Voltage (up to 20%, lower than Transformer rated voltage)
c. Phase Over Current (up to 20%, higher than per phase rated current)
d. Overload Condition (up to 20%, higher than Transformer rated load)
e. Voltage Unbalance (up to 20%, of Transformer rated voltage between phases)
f. Current Unbalance (up to 20%, of per phase rated current between phases)
g. High Apparent Power (up to 20%, higher than Transformer rated kVA rating)
h. High Temperature (100°C)
i. Low Oil Level (binary values)
j. Sensor fault (binary values)

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13.6 Write provision for two (02) setting levels i.e., Alarm and Tripping against conditions specified in Clause 13.5, Sr. No. (**a** to **d** & **h**) shall be available. For conditions specified in Clause 13.5, Sr. No. (**e** to **g** & **i to j**) write provision for one (01) setting level i.e., Alarm shall be available.

13.7 Threshold values of these Alarm and Tripping functions and their corresponding time settings shall be user programmable from Head-End system/MDM. Alarm and Tripping shall occur based on these threshold values. Default Values against different parameters mentioned in clause 7.8 shall be provided by the respective utility/DISCO at the time of placing purchase order.

13.8 Performing Load shedding according to preset time schedule shall be provided.

13.9 SMCD shall be programmed bi-directional by default (in white color).

13.10 Tripping events shall be recorded and reported for short circuit and Residual protection (for ordering codes APMS-CB).

13.11 The APMS with OTL feature shall:

a. Measure transformer oil temperature
b. Monitor transformer oil level
c. Generate alarms for sensor fault condition
d. Transmit parameters to backend system
e. Integrate with HES and MDM systems
f. All sensors shall have temperature accuracy certificate from ISO/IEC17025 Lab and functional test reports on oil level monitoring (OEM/APMS provider).

14. PROTOTYPE APPROVAL

14.1 Supplier/manufacturer shall submit one (01) complete APMS unit, technical data and three (03) sets of drawings for prototype approval in the office of Design and Standards, PPMC.

14.2 All the testing arrangements including boarding, lodging and daily allowance shall be borne by manufacturer.

14.3 All the type testing shall be carried out at an independent accredited laboratory under witnessing of D&S PPMC engineer(s).

14.4 Testing Lab instruments should be calibrated from ILAC/PNAC/STL accreditation bodies.

14.5 Manufacturers shall submit satisfactory field performance of APMS from end user for renewal of prototype (if product is provided to DISCOs). If no product is provided to DISCOs, prototype test compliance can be submitted.

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14.6 Following tests shall be performed during prototype testing on complete enclosure: -

a. Visual Examination & Verification of dimensions (as per specified drawings)
b. Verification of Components (as per specified drawings)
c. Power Frequency Test of 2.5 kV shall be applied between all four busbars and between ground for one (01) minute.
d. Enclosure Tests as per Clause 11.22.
e. Complete Functionality Tests of APMS as per Clause 13 (10 Nos. operations against each pre-defined operating condition, Normal and abnormal).

14.7 The firm shall possess testing setup for functionality tests of APMS including three phase Current Injection set with adjustable features. The routine tests can be performed In-House.

14.8 For APMS-OTL, manufacturer shall demonstrate compatibility with DDS-84:2020 (amended to date) oil plug arrangement, successful communication with MDC and compliance with all certification requirements.

14.9 Following prototype tests shall be carried out on APMS-OTL sensor and controller assembly only with condition given in clause 14.3.

Sr. No.	Test Name	Standard / Reference	Test Description	Acceptance Criteria
1	Temperature Measurement Accuracy Test	Comparison with calibrated standard	Sensor tested across full operating temperature range	Accuracy within ±2 °C
2	Oil Level Functional Test	Visual method	Verification of oil level alarm and recovery levels using a small sealed tank	Correct Low Oil Alarm and Normal Recovery Point as per datasheet
3	Pressure Withstand Test	Calibrated pressure Gauge	Sensor exposed to internal pressure conditions using a small sealed tank (simulation of transformer pressure conditions)	Withstand 15 PSI for 30 minutes then 6 PSI for 24hours without leakage
4	IP Class verification Test (Sensor)	IEC 60529	Verification of ingress protection of sensor	Minimum IP65
5	IP Class verification Test (Controller)	IEC 60529	Verification of controller enclosure's IP class	Minimum IP54
7	Environmental Temperature Test	IEC 60068 series	Operation under extreme temperature conditions (temperature range is for part inside transformer.	Reliable operation between −20 °C to +125 °C

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			Test to be conducted using a small sealed tank.	
8	Dry Heat Test	IEC 60068-2-2	Controller subjected to elevated temperature	No degradation in performance
9	Power Consumption Test	Power analyser	Measurement of OTL assembly power consumption	≤ 5 Watts

14.10 Compatibility certificate is required for sensor assembly with different transformer manufacturers stating that this does not reduce BIL.

14.11 Only PPMC approved sensor assemblies shall be used. (protocols attached in Annex-A).

14.12 Prototyped APMS-CB-OTL doesn't require re-prototyping for APMS-CB-S. However, APMS-CB-S cannot be used as APMS-CB-OTL unless prototyped so. Likewise, APMS-MC-OTL doesn't require re-prototyping for APMS-MC-S. However, APMS-MC-S cannot be used as APMS-MC-OTL unless prototyped so

14.13 For APMS-MC ordering codes, if manufacturer(s) offers their product, the drawings shall be approved as per components and dimensions shall be decided accordingly.

14.14 The validity of Prototype approval will be five (5) years unless there is any change in design or as per PPMC Prototype/Type test Policy.

14.15 The manufacturer must be ISO-9001 and ISO 14001 certified.

15. MASS PRODUCTION TESTS

Following routine and sample tests shall be performed on APMS

15.1 **Routine Tests**

The supplier/manufacturer of APMS shall perform following routine tests on each APMS at their premises and shall maintain its proper record to submit on demand: -

a. Visual Examination & Verification of dimensions (as per approved drawings)
b. Verification of Components (as per approved drawings)
c. Power Frequency Test
d. Complete Functionality Tests of APMS as per Clause 13.
e. For APMS-OTL, following tests are added,

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Sr. No.	Test Name	Test Description	Acceptance Criteria
1	Visual Inspection	Inspection of sensor, controller and enclosure	No physical defects
2	Wiring Inspection	Inspection of internal wiring arrangement	Proper dressing and routing in wiring ducts
3	Functional Test	Verification of sensor output and controller response	Correct readings and signal transmission
4	Alarm Generation Test	Verification of alarm signals	Correct alarm for low oil level and temperature
5	Fail-Safe Test	Simulation of sensor disconnection or failure	Distinct Sensor Fault Alarm generated
6	Communication Test	Verification of data transmission	Successful communication with APMS controller

15.2 **Sample Tests**

Following sample tests of APMS during mass production shall be carried out by Material Inspection, PPMC:-

a. Visual Examination & Verification of dimensions, components (as per approved drawings) and calibration certificates (equipment, sensor assemblies)
b. Power Frequency Test (2.5KV)
c. Conductivity test of busbars.
d. Wiring inspection.
e. Fail safe test.
f. Communication verification on MDC.
g. Paint thickness test (0.100mm minimum at any point on surface)
h. Galvanizing test
i. Tin plating test. (=>20 Microns)
j. Bakelite dielectric test. (8kV)
k. Alarm generation test

16. SAMPLING, ACCEPTANCE AND REJECTION

16.1 **General:**

16.1.1 All inspections shall be carried out under the supervision of the Purchaser/Inspection Authority (MI, PPMC) unless otherwise specified.

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16.1.2 Sample Quantities.

Offered Quantity	No of Samples
Up-to 25	3
Up-to 50	5
Up-to 90	8
Up-to 150	13
Up-to 280	20
Up-to 500	32
Up-to 1200	50
Up-to 3200	80
Up-to 10000	125
Up-to 35000	200

16.2 **Inspection & Acceptance Table:**

Sr. No.	Test Description	Remarks	Acceptance/rejection
1	Visual Examination & Verification of Dimensions	As per approved drawings	i. If more than one sample fails, then the lot shall be rejected. ii. If only one sample out of the selected samples fails, then re-sampling of double size shall be made. The failure shall be documented and with reasons and acknowledgement from all parties. iii. In case, if any other sample from re-sampling fails, whole LOT shall be rejected and it would be documented and acknowledged by all parties.
2	Power Frequency Test (2.5 kV)	No breakdown or flashover	
3	Complete Functionality Test of APMS along with alarm generation	Full operational verification	
4	Wiring Inspection	Ferruling, termination, routing	
5	Fail Safe Test	Mandatory zero failure	
6	Communication Verification on MDC	Data transmission & integration	
7	Paint Thickness Test	Corrosion protection	
8	Galvanizing Test (1 item from each sample)	Zinc coating compliance	
9	Tin Plating Test (≥20 µm) (1 item from each APMS)	Conductivity & corrosion	
10	Bakelite Dielectric Test (1 item from each APMS)	No breakdown / puncture	

Note: The rejected sample during first sampling shall be rectified before acceptance of LOT.

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17. INTEROPERABILITY

17.1 For the purpose of ensuring interoperability, the APMS shall be fully compliant with DLMS/COSEM. Furthermore, for deployments where metering data is managed through the Meter Data Management (MDM) system of Power Information Technology Company, the APMS, associated MDC and communication interfaces shall mandatorily comply with the requirements of the Universal Data Integration Layer (UDIL) latest version and shall be duly certified by PITC ensuring seamless integration, standardized data exchange and avoidance of vendor-specific dependencies.

18. PACKING

Each APMS Unit shall be supplied duly packed to withstand rigors of rail/road transportation. The Glands shall not be damaged. DA bolts, Chanels for mounting arrangements shall also be provided. Moreover, it shall be protected against entry of moisture, rainwater and dust by covering with suitable bubble wrap sheet.

19. WARRANTY

19.1 The complete APMS, including all associated components such as MCCB, SMCD, Magnetic Contactor, OTL sensor assembly, and enclosure (as applicable per the ordering code), shall be warranted for a period of five (05) years from the date of supply or completion of the specified duty cycles (for MCCB and Magnetic Contactor), whichever comes earlier. In the absence of recorded duty cycle data, the warranty period shall be considered five (05) years from the date of supply.

19.2 During the warranty period, the manufacturer/supplier shall be responsible for rectification or replacement of any defective components arising due to design, material or workmanship issues at no additional cost to the purchaser. The fault evaluation report shall jointly be made with representative of DISCO, MI and D&S to ascertain the root cause.

19.3 The warranty shall cover all electrical, mechanical and communication components including battery performance as per specified operational life.

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Annex – A

PPMC APPROVAL PROTOCOL FOR SENSOR ASSEMBLY

A- Type Approval (Mandatory Before OTL Prototype for OTL OEM)

Documents Required:

1. Design drawings
2. Mounting arrangement (DDS-84 compatibility)
3. Material specifications
4. Calibration procedure

Type Tests (Mandatory)

Test	Standard	Purpose
Accuracy test (±2°C) (Sensor & controller)	ISO/IEC 17025	Standard governing calibration of equipment against a traceable reference standard.
Pressure test (6 PSI / 15 PSI)	DDS-84:2020 (to date)	Tank conditions
Temperature endurance (-20 to 125°C)	IEC 60068-2-1 / 2-2	Environmental suitability (correct readings)
IP test (IP65)	IEC 60529	Dust + water protection
Vibration test	IEC 60068	Field robustness

Impulse test (with sensor installed) on at-least 2x Transformers (25kVA) of different manufacturers or as per D&S PPMC requirements	IEC 60076-3
Functional test (low level / high temp alarms)	Operational
Fitment verification	OEM certification

PPMC APPROVAL PROTOCOL FOR CONTROLLER (if used)

Test	Standard	Purpose
Power consumption	IEC 60076-22-1 <5Watts	Efficiency
Dry heat test	IEC 60068-2-2	Thermal endurance
IP test (IP54)	IEC 60529	Enclosure protection
EMC test	IEC 61000 series	Interference immunity

Note: All tests shall be performed at an independent Lab

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Annex-B

SCHEDULE OF TECHNICAL DATA

1. APMS:

Sr. No.	Description	Offered Value	Compliance	Remarks
1	Manufacturer Name			
2	Type / Model / Designation			
3	Applicable Standards (DDS / IEC)			
4	Rated Voltage (V)			
5	Rated Frequency (Hz)			
6	APMS Rating (25/50/100/200/400/630 kVA)			
7	Degree of Protection (Enclosure IP)			
8	Ambient Temperature Range			
9	Maximum Altitude			
10	Functional Compliance (as per Clause 13)			
11	Alarm & Tripping Logic Details			
12	Field Performance Evidence			
13	Compliance with PPMC-DS-01:2026			
14	Weight			

2. MCCB MOTORIZED WITH EARTH LEAKAGE PROTECTION.

Sr. No.	Description	Offered Value	Compliance	Remarks
1	Manufacturer Name			
2	Model / Frame Size			
3	Standard (IEC 60947-2) compliance			
4	Rated Voltage (V)			
5	Rated Current (In)			
6	Number of Poles (3P / 3P+N)			
7	Breaking Capacity (Icu, kA)			
8	Service Breaking Capacity (Ics, % of Icu)			
9	Making Capacity (Icm)			
10	Thermal Setting Range (Ir)			
11	Magnetic Setting Range (Im)			
12	Short Time Delay (if applicable)			
13	Residual Protection (Yes/No, value)			

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14	Type of Trip Unit (Thermal-Magnetic / Electronic)			
15	Motorized Operation (Yes/No)			
16	Auto/Manual Mode Availability			
17	Auxiliary Contacts / Communication Interface			
18	Mechanical Endurance			
19	Electrical Endurance			
20	Type Test Reports (ILAC Lab)			
21	Compliance with PPMC-DS-01:2026			
22	Weight			

3. MCCB NON-MOTORIZED.

Sr. No.	Description	Offered Value	Compliance	Remarks
1	Manufacturer Name			
2	Model / Frame Size			
3	Standard (IEC 60947-2) compliance			
4	Rated Voltage (V)			
5	Rated Current (In)			
6	Number of Poles (3P)			
7	Breaking Capacity (Icu, kA)			
8	Service Breaking Capacity (Ics, % of Icu)			
9	Making Capacity (Icm)			
10	Thermal Setting Range (Ir)			
11	Magnetic Setting Range (Im)			
14	Type of Trip Unit (Thermal-Magnetic / Electronic)			
18	Mechanical Endurance			
19	Electrical Endurance			
20	Type Test Reports (ILAC Lab)			
21	Compliance with PPMC-DS-01:2026			
22	Weight			

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4. MAGNETIC CONTACTOR

Sr. No.	Description	Offered Value	Compliance	Remarks
1	Manufacturer Name			
2	Model / Type			
3	Standard (IEC 60947-4-1)			
4	Rated Operational Voltage (V)			
5	Rated Frequency (Hz)			
6	Rated Current (AC 6a duty)			
7	Utilization Category (AC 6a)			
8	Coil Voltage (V)			
9	Mechanical Endurance (operations)			
10	Electrical Endurance (AC 6a duty)			
11	Making Capacity			
12	Breaking Capacity			
13	Surge Protection (RC / MOV)			
14	Electrical Interlocking with MCCB			
15	Coordination Type (Type 2)			
16	Type Test Reports (ILAC Lab)			
17	Compliance with PPMC-DS-01:2026			
18	Weight			

5. SMCD

Sr. No.	Description	Offered Value	Compliance	Remarks
1	Manufacturer Name			
2	Model / Type			
3	Standards (DDS-50, 98, 110 / IEC 62052/53) compliant			
4	Accuracy Class (kWh / kVARh)			
5	Communication Technology			
6	DLMS/COSEM Compliance (Yes/No)			
7	Optical Port Availability			
8	Auxiliary Ports (MCCB Interface)			
9	Battery Type & Capacity			
10	Battery Backup Duration			
11	RTC Backup (Supercapacitor)			
12	Event Logging Capacity			
13	Alarm & Trip Configurability			
14	Remote Operation Capability			
15	Firmware Upgrade Capability			

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16	PTA Compliance (for communication)			
17	Type Approval (PPMC)			
18	DLMS Certification Attached			
19	Weight			

6. OTL (OIL TEMPERATURE & LEVEL ASSEMBLY)

Sr. No.	Description	Offered Value	Compliance	Remarks
1	Manufacturer Name			
2	Model / Type			
3	Applicable Standards (IEC 60751, IEC 60068, IEC 60529)			
4	Temperature Measurement Range (°C)			
5	Temperature Accuracy (± °C)			
6	Drift over Time			
7	Oil Level Detection Method			
8	Pressure Withstand (PSI)			
9	Sensor IP Rating			
10	Controller IP Rating			
11	Operating Temperature Range			
12	Power Consumption			
13	Mounting Arrangement (DDS-84 compatible)			
14	Fail-Safe Feature (Yes/No)			
15	Calibration Certificate (ISO/IEC 17025 lab)			
16	Type Test Reports			
17	Transformer Compatibility Certificate			
18	PPMC Approval Status			
19	Weight			

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LIST OF DRAWINGS

Sr No.	Drawing No.	Drawing Title
01	APMS/PPMC/D&S/01	Enclosure Unit for 25/50/100 kVA
02	APMS/PPMC/D&S/02	Enclosure Unit for 200/250 kVA
03	APMS/PPMC/D&S/03	Enclosure Unit for 400/500,630 kVA
04	APMS/PPMC/D&S/04	Internal Components Arrangement
05	APMS/PPMC/D&S/05	Base Plate for 25/50/100 kVA
06	APMS/PPMC/D&S/06	Base Plate for 200/250 kVA
07	APMS/PPMC/D&S/07	Base Plate for 400/500,630 kVA
08	APMS/PPMC/D&S/08	Air Vent for 25/50/100 kVA
09	APMS/PPMC/D&S/09	Air Vent for 200/250,400/500,630 kVA
10	APMS/PPMC/D&S/10	Meter Support Channel
11	APMS/PPMC/D&S/11	Rating Plate
12	APMS/PPMC/D&S/12	Earthing Terminal
13	APMS/PPMC/D&S/13	Current Transformer
14	APMS/PPMC/D&S/14	Insulator
15	APMS/PPMC/D&S/15	Circuit Diagram with magnetic Contactor
16	APMS/PPMC/D&S/16	Circuit Diagram with magnetic Contactor
17	APMS/PPMC/D&S/17	Magnetic Contactor Arrangement
18	APMS/PPMC/D&S/18	Tolerance Sheet

Power Planning and Monitoring Company (PPMC)
DESIGN AND STANDARDS (D&S)

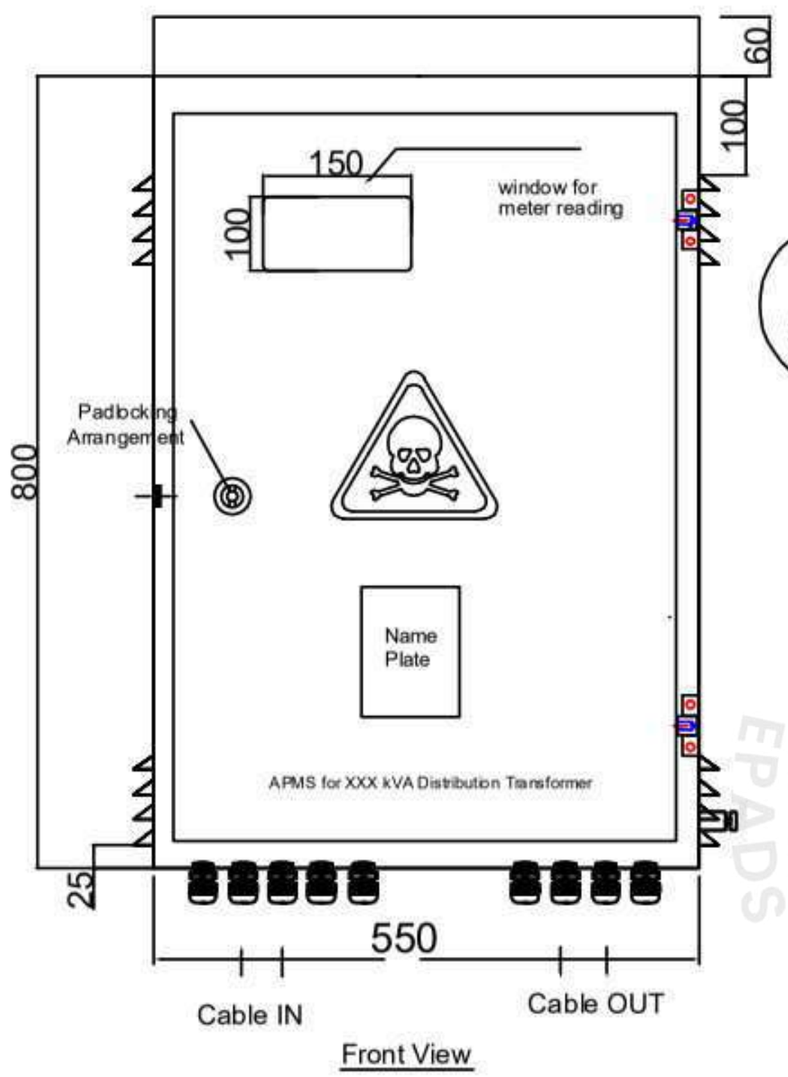
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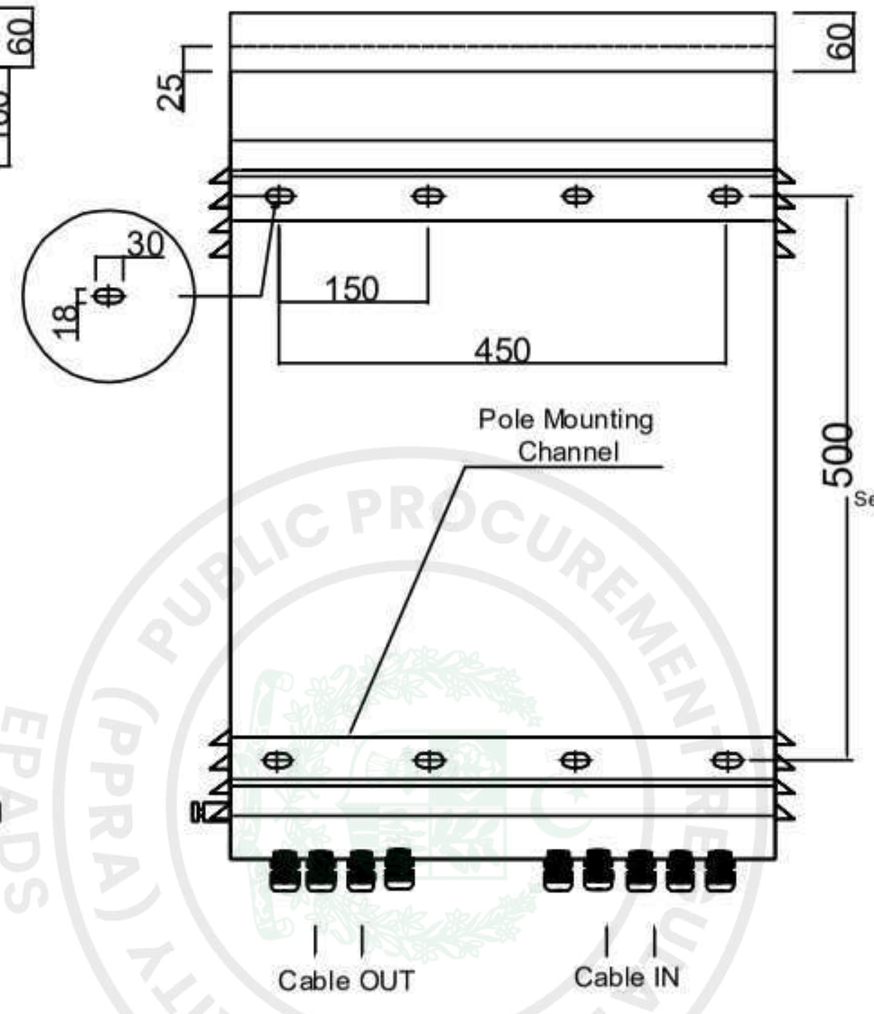
PPMC

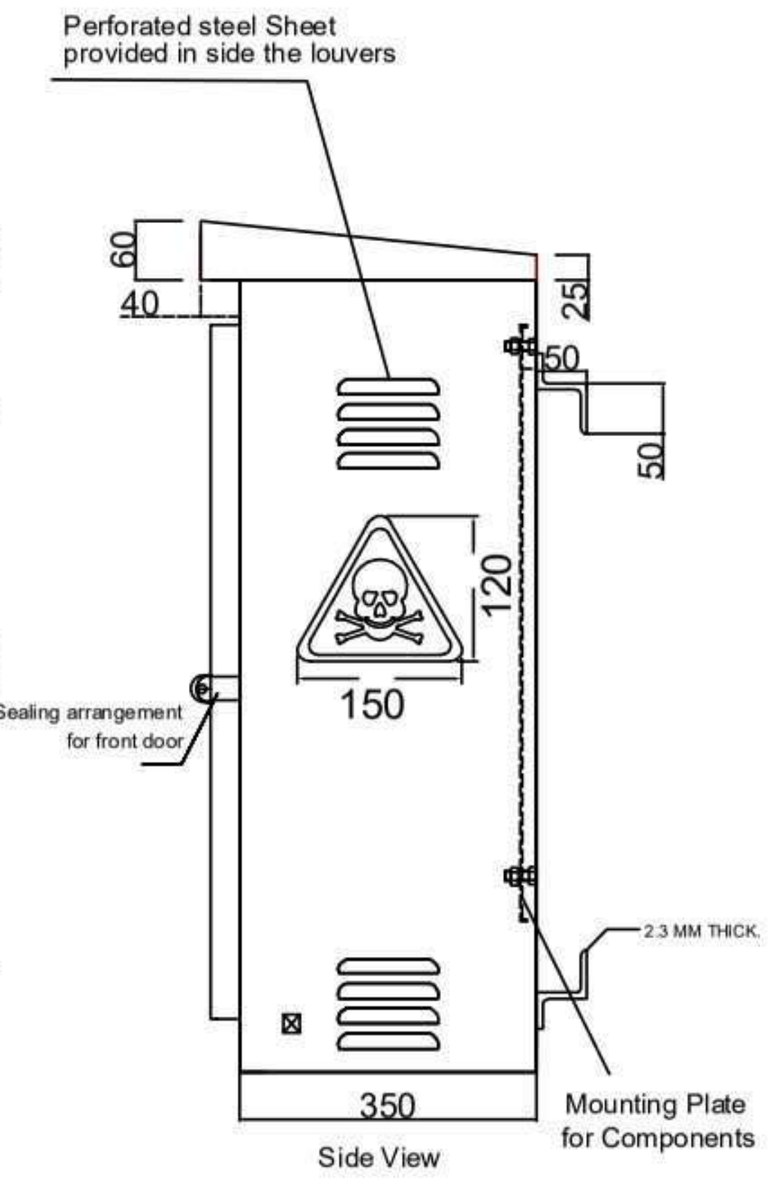
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Drawing No.	APMS/PPMC/D&S/ 00 OF 18

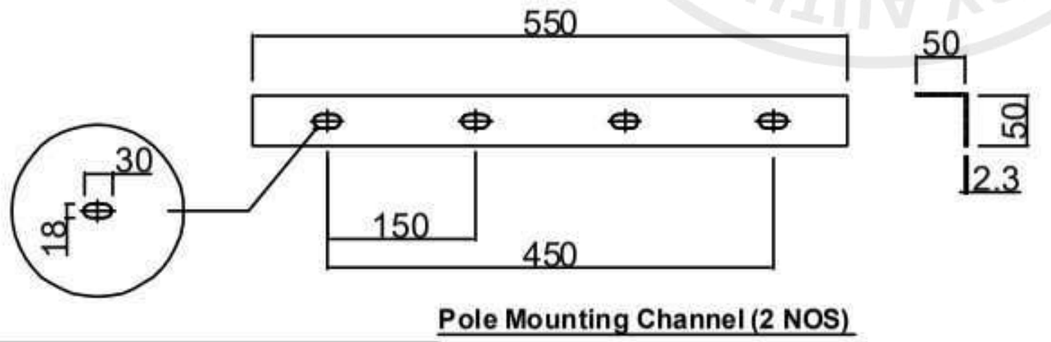
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Pole Mounting Channel (2 NOS)

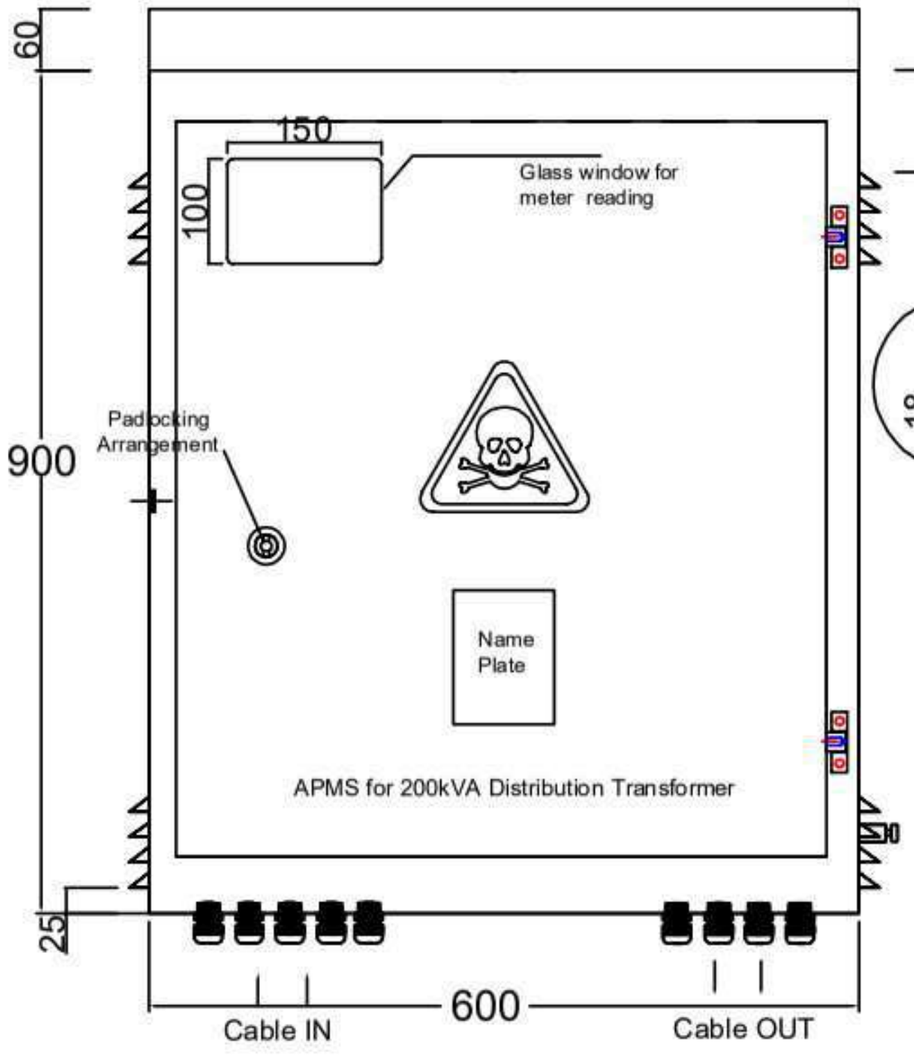
Note:
1. Tolerance: as per Dwg.No APMS/PPMC/D&S/18
2. All Dimension are in Millimeters.
3. Enclosure Sheet Thickness=1.6mm (Min)
4. Door Sheet Thickness =2.3mm (Min)
5. Color: RAL-7032 (Powder Coating)
6. Louvers May be Increased By Manufactures To Fullfill Temprature Rise Test Requriments.

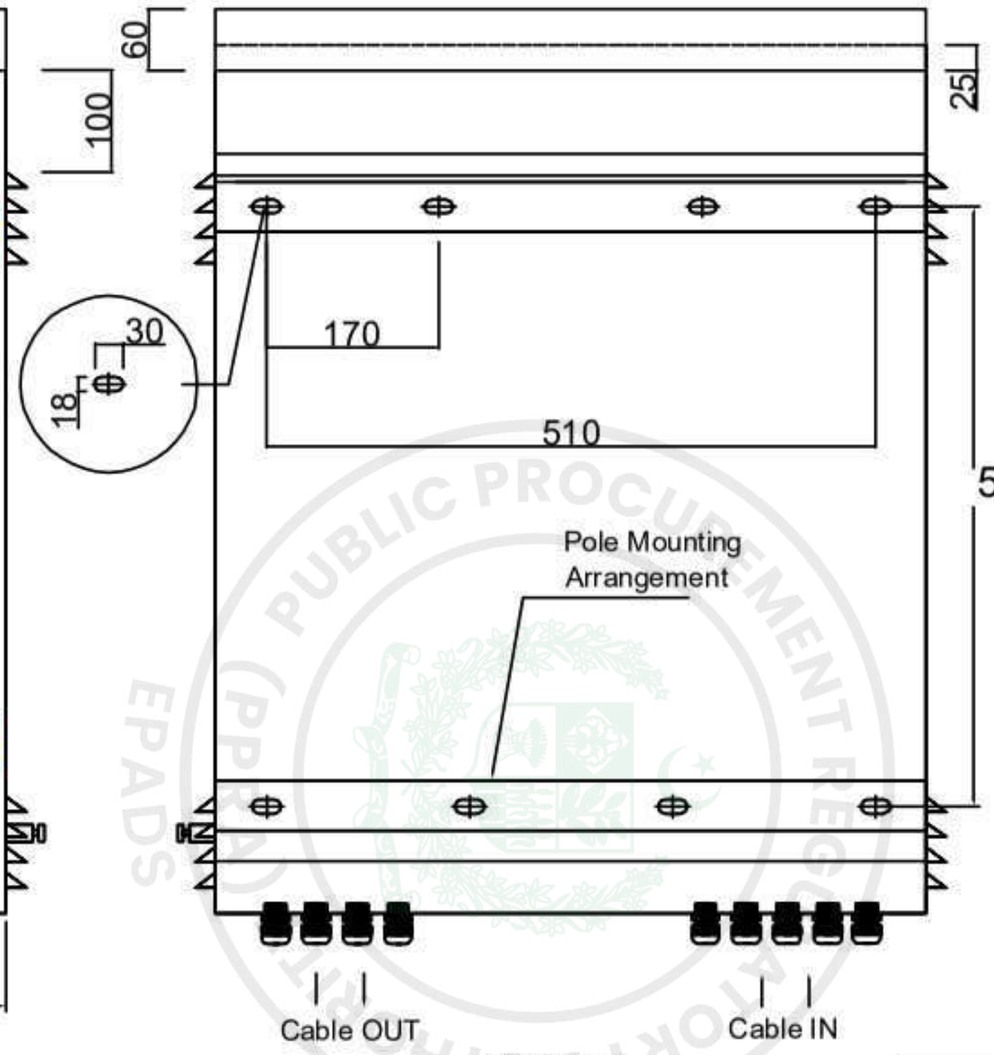
Power Planning and Monitoring Company (PPMC)
DESIGN AND STANDARDS (D&S)

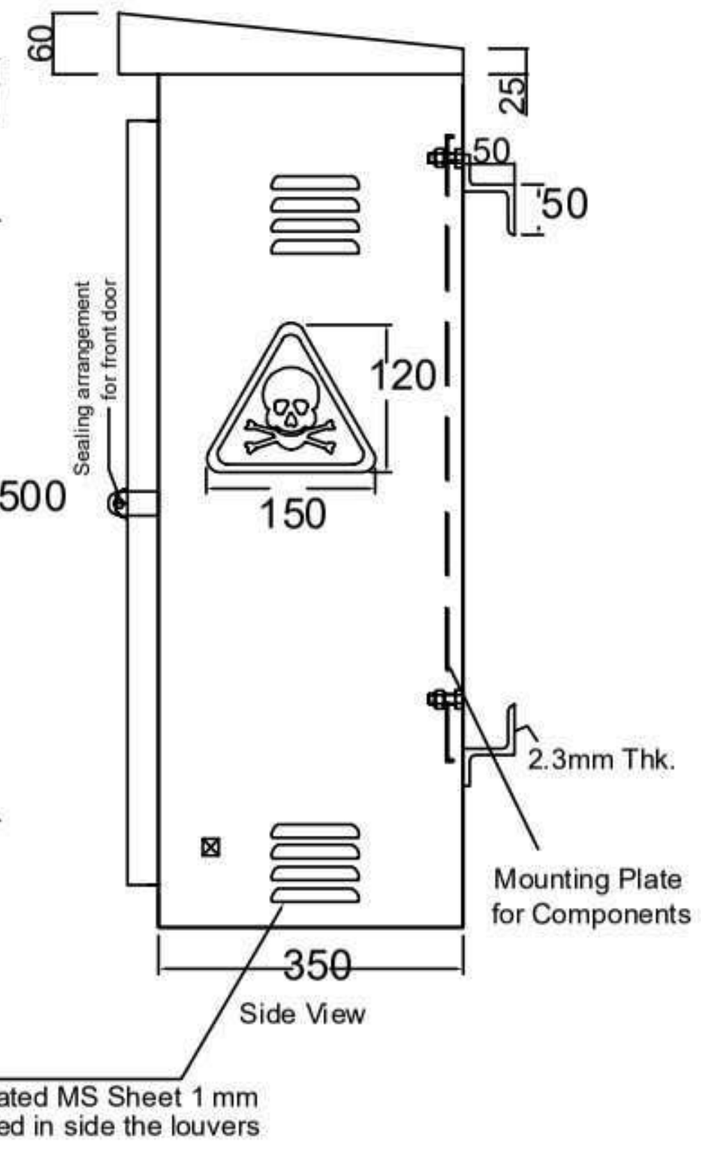
Drawn By:	Checked By:	Verified By:	Scale:	NTS	PPMC	Product :	Asset Performance Management System For 25kVA,50kVA,100kVA Transformer
ENGR.AAMIR HAMZA ASST.SPECIALIST (D&S)	ZARYAB HASSAN SPECIALIST (D&S)	SAKHAWAT ALI TEAM LEAD (D&S)	Revision Nos:	0/0		Drawing Title:	Enclosure Unit
			Date :	17/04/2026		Reference :	PPMC-DS-01
						Drawing No.	APMS/PPMC/D&S/01 OF 18

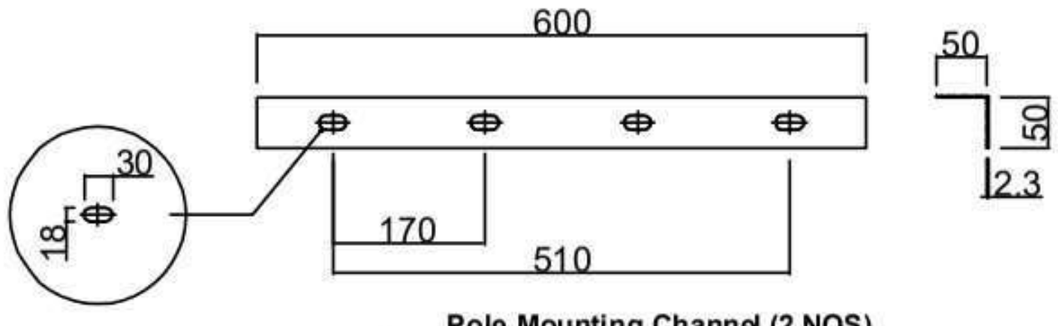
CamScanner

e-Pak Acquisition and Disposal System (EPADS) generated document | © 2026









Pole Mounting Channel (2 NOS)

Note:
1. Tolerance: as per Dwg.No APMS/PPMC/D&S/18
2. All Dimension are in Millimeters.
3. Enclosure Sheet Thickness=1.6mm (Min)
4. Door Sheet Thickness =2.3mm (Min)
5. Color: RAL-7032 (Powder Coating)
6. Louvers May be Increased By Manufactures To Fullfill Temprature Rise Test Requriments.

Power Planning and Monitoring Company (PPMC)
DESIGN AND STANDARDS (D&S)

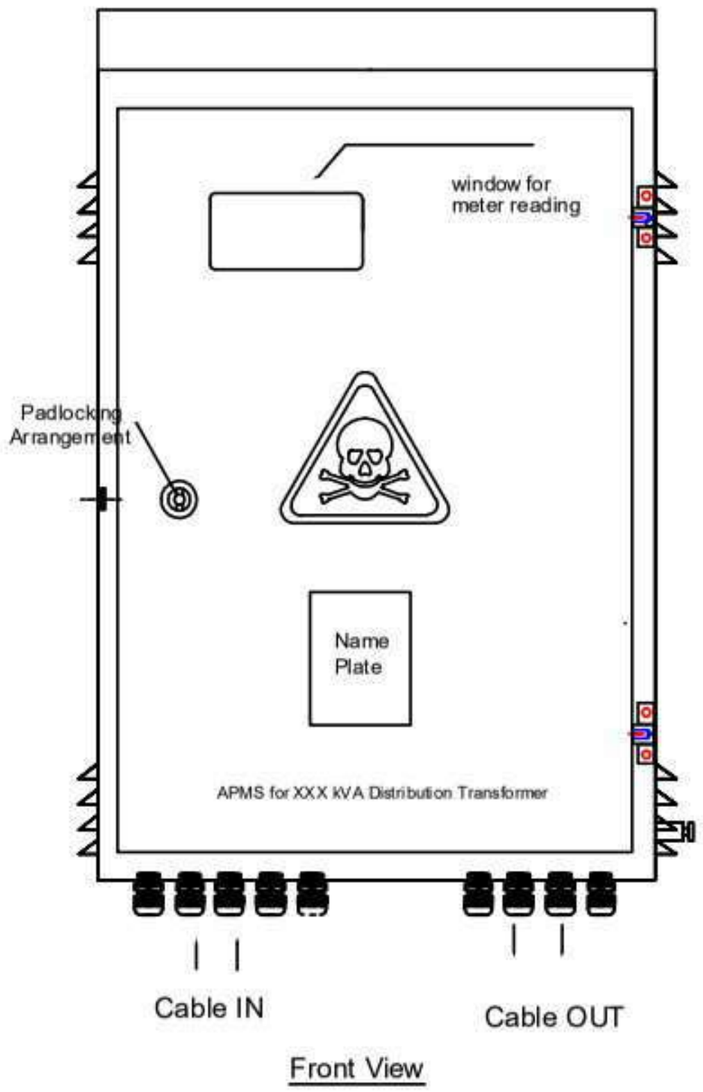
Drawn By:	Checked By:	Verified By:		
ENGR.AAMIR HAMZA ASST.SPECIALIST (D&S)	ZARYAB HASSAN SPECIALIST (D&S)	SAKHAWAT ALI TEAM LEAD (D&S)	Scale:	NTS
			Revision Nos:	0/0
			Date :	17/04/2026

PPMC

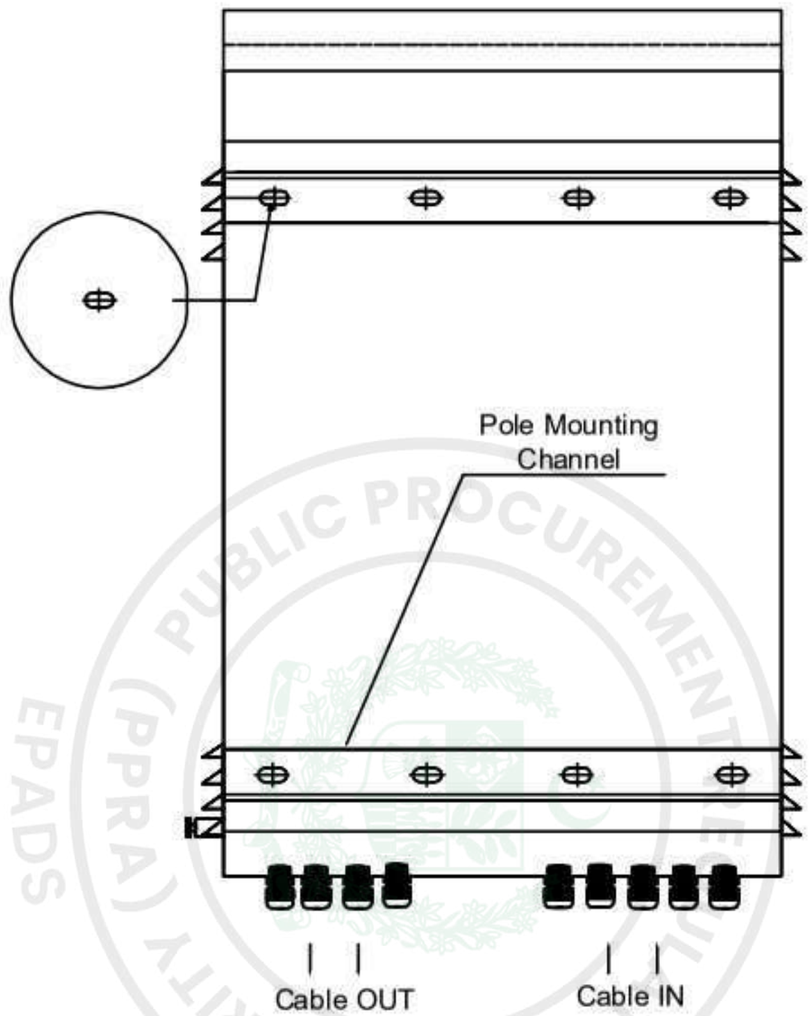
Product :	Asset Performance Management System For 200/250 kVA Transformer
Drawing Title:	Enclosure Unit
Reference :	PPMC-DS-01
Drawing No.	APMS/PPMC/D&S/ 02 OF 18

CamScanner

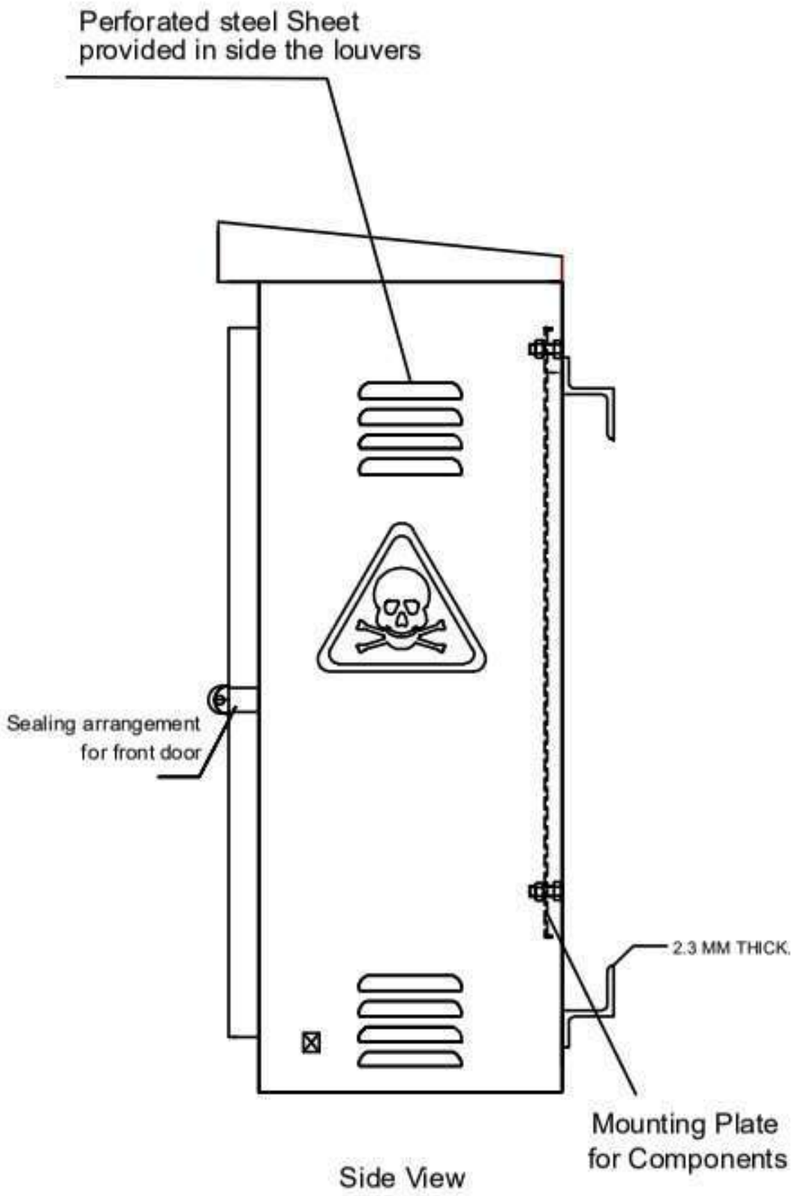
e-Pak Acquisition and Disposal System (EPADS) generated document | © 2026



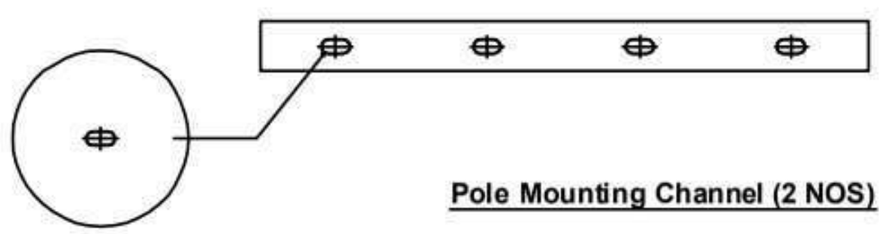
Front View



Back View



Side View



Pole Mounting Channel (2 NOS)

Note:
1.Tolerance: as per Dwg.No APMS/PPMC/D&S/18
2. This Indicative drawing is for reference only. Detailed dimensional arrangement shall be made as per the prototype.

Power Planning and Monitoring Company (PPMC)
DESIGN AND STANDARDS (D&S)

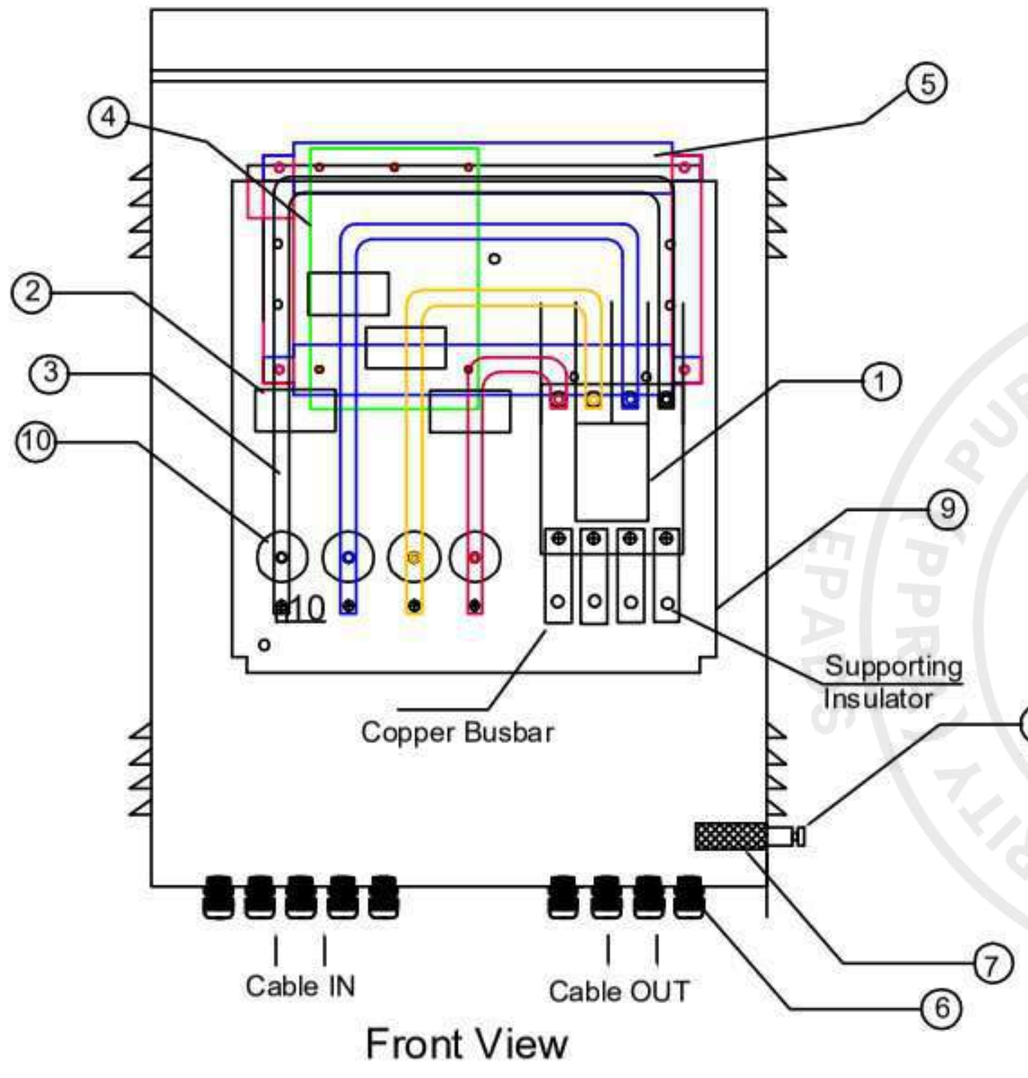
Drawn By:	Checked By:	Verified By:		
ENGR. AAMIR HAMZA ASST. SPECIALIST (D&S)	ZARYAB HASSAN SPECIALIST (D&S)	SAKHAWAT ALI TEAM LEAD (D&S)	Scale:	NTS
			Revision Nos:	0/0
			Date :	17/04/2026

PPMC

Product :	Asset Performance Management System For 400/500kVA, 630kVA Transformer
Drawing Title:	Enclosure Unit
Reference :	PPMC-DS-01
Drawing No.	APMS/PPMC/D&S/03 OF 18

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Front View

LEGEND

1- MCCB
2- LT CTs
3- Copper Bus Bars
4- Smart Metering and Control Device
5- Channel for Meter Support
6- Cable Glands
7- Copper braided wire for door earthing
8- Earthing Terminal
9- Mounting Plate for Components
10- Busbar Support Insulators

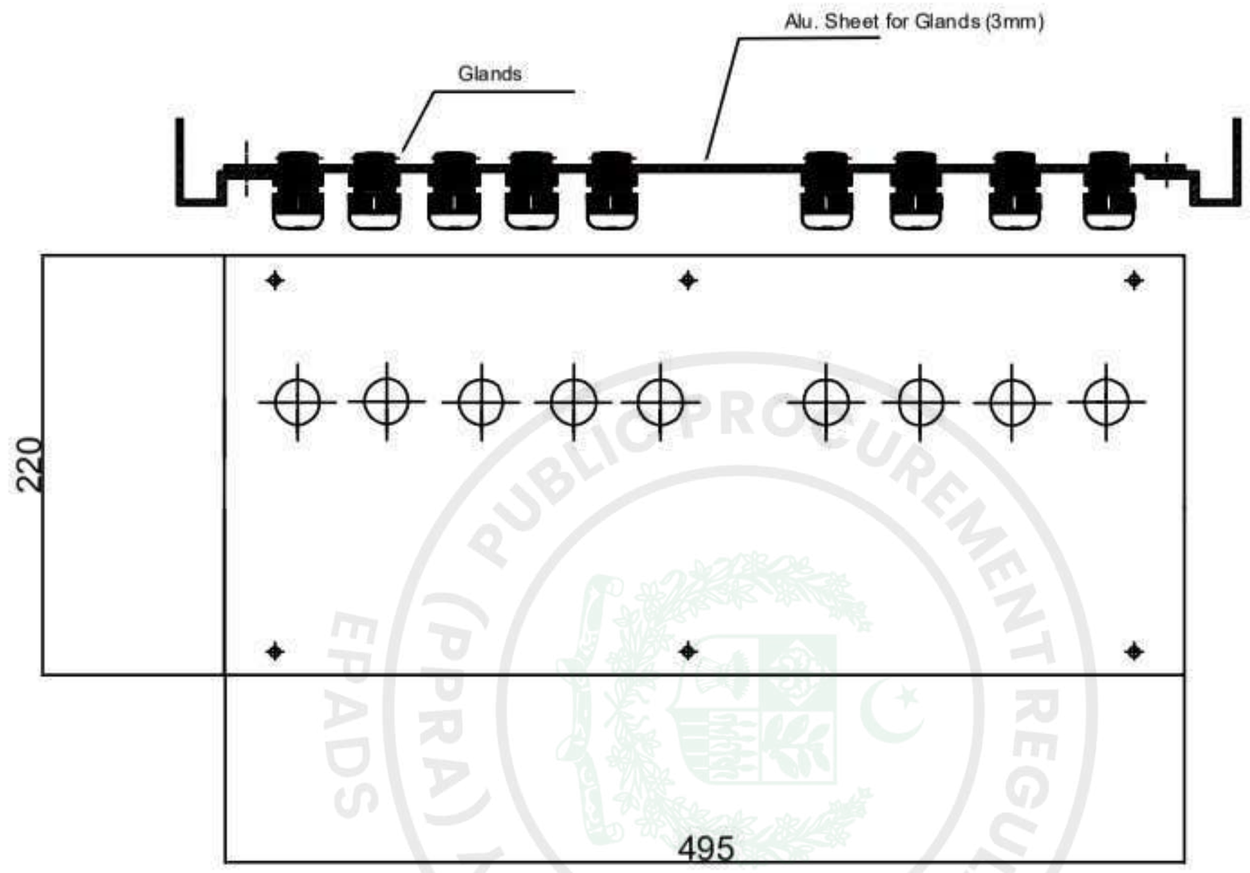
Note:
1.Tolerance: as per Dwg.No APMS/PPMC/D&S/18
2. Detailed dimension and Holes Position shall be as per approved Prototype

Power Planning and Monitoring Company (PPMC)
DESIGN AND STANDARDS (D&S)

Drawn By:	Checked By:	Verified By:	Scale:	NTS	PPMC	Product :	Asset Performance Management System For 25kVA,50kVA,100kVA,200/250kVA,400/500kVA and 630kVA Transformer
			Revision Nos:	0/0		Drawing Title:	Internal Components Arrangement
ENGR.AAMIR HAMZA ASST.SPECIALIST (D&S)	ZARYAB HASSAN SPECIALIST (D&S)	SAKHAWAT ALI TEAM LEAD (D&S)	Date :	17/04/2026		Reference :	PPMC-DS-01
						Drawing No.	APMS/PPMC/D&S/ 04 OF 18

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Note:
1. Tolerance: as per Dwg.No APMS/PPMC/D&S/18
2. All Dimension are in Millimeters.
3. Gland Material = PVC
4. Holes Positions Can Be Changed But Will Be Fixed Once Prototype is Approved.

Power Planning and Monitoring Company (PPMC)
DESIGN AND STANDARDS (D&S)

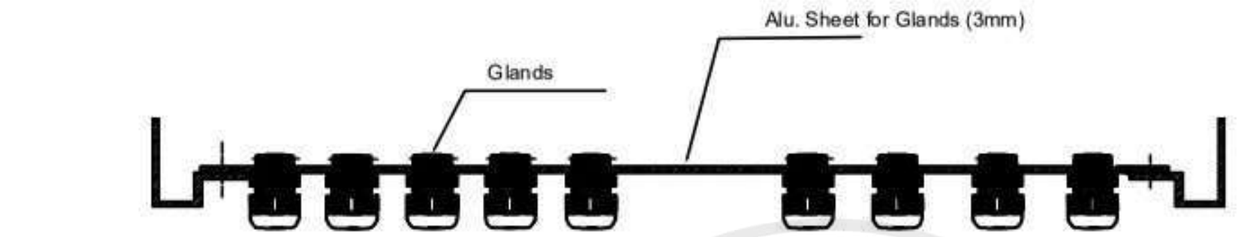
Drawn By:	Checked By:	Verified By:		
ENGR.AAMIR HAMZA ASST.SPECIALIST (D&S)	ZARYAB HASSAN SPECIALIST (D&S)	SAKHAWAT ALI TEAM LEAD (D&S)	Scale:	NTS
			Revision Nos:	0/0
			Date :	17/04/2026

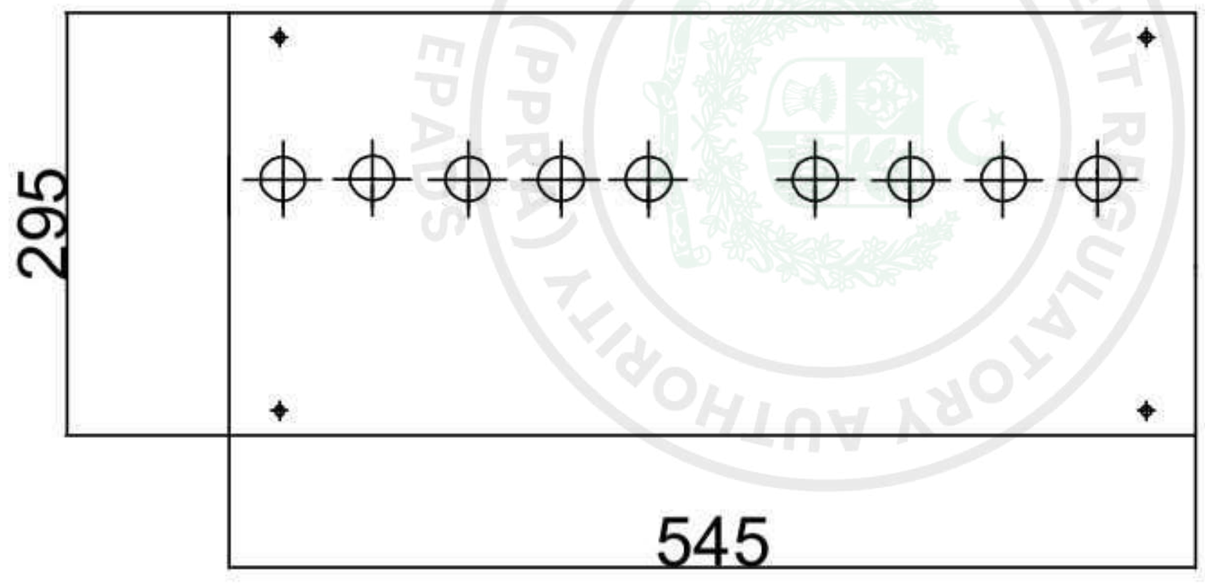
PPMC

Product :	Asset Performance Management System For 25kVA,50kVA,100kVA Transformer
Drawing Title:	Base Plate
Reference :	PPMC-DS-01
Drawing No.	APMS/PPMC/D&S/ 05 OF 18

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Note:
1.Tolerance: as per Dwg.No APMS/PPMC/D&S/18
2.All Dimension are in Millimeters.
3.Gland Material = PVC
4. Holes Position Can Be Changed But Will Be Fixed Once Prototype is Approved.

Power Planning and Monitoring Company (PPMC)
DESIGN AND STANDARDS (D&S)

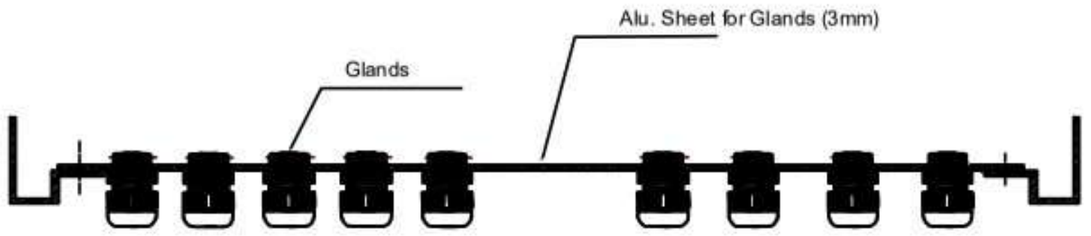
Drawn By:	Checked By:	Verified By:		
ENGR.AAMIR HAMZA ASST.SPECIALIST (D&S)	ZARYAB HASSAN SPECIALIST (D&S)	SAKHAWAT ALI TEAM LEAD (D&S)	Scale:	NTS
			Revision Nos:	0/0
			Date :	17/04/2026

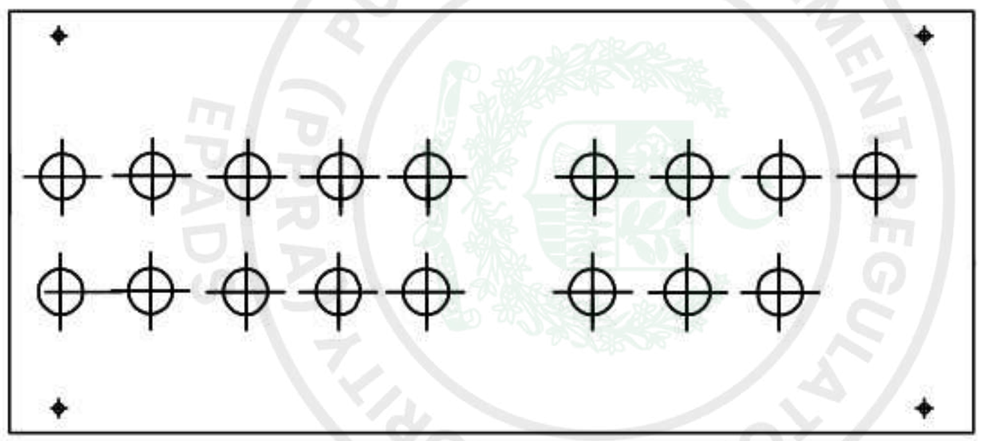
PPMC

Product :	Asset Performance Management System For 200/250kVA Transformer
Drawing Title:	Base Plate
Reference :	PPMC-DS-01
Drawing No.	APMS/PPMC/D&S/06 OF 18

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Note:
1. Tolerance: as per Dwg.No APMS/PPMC/D&S/18
2. All Dimension are in Millimeters.
3. Gland Material = PVC
4. Detailed dimension and Holes Position shall be as per approved Prototype

Power Planning and Monitoring Company (PPMC)
DESIGN AND STANDARDS (D&S)

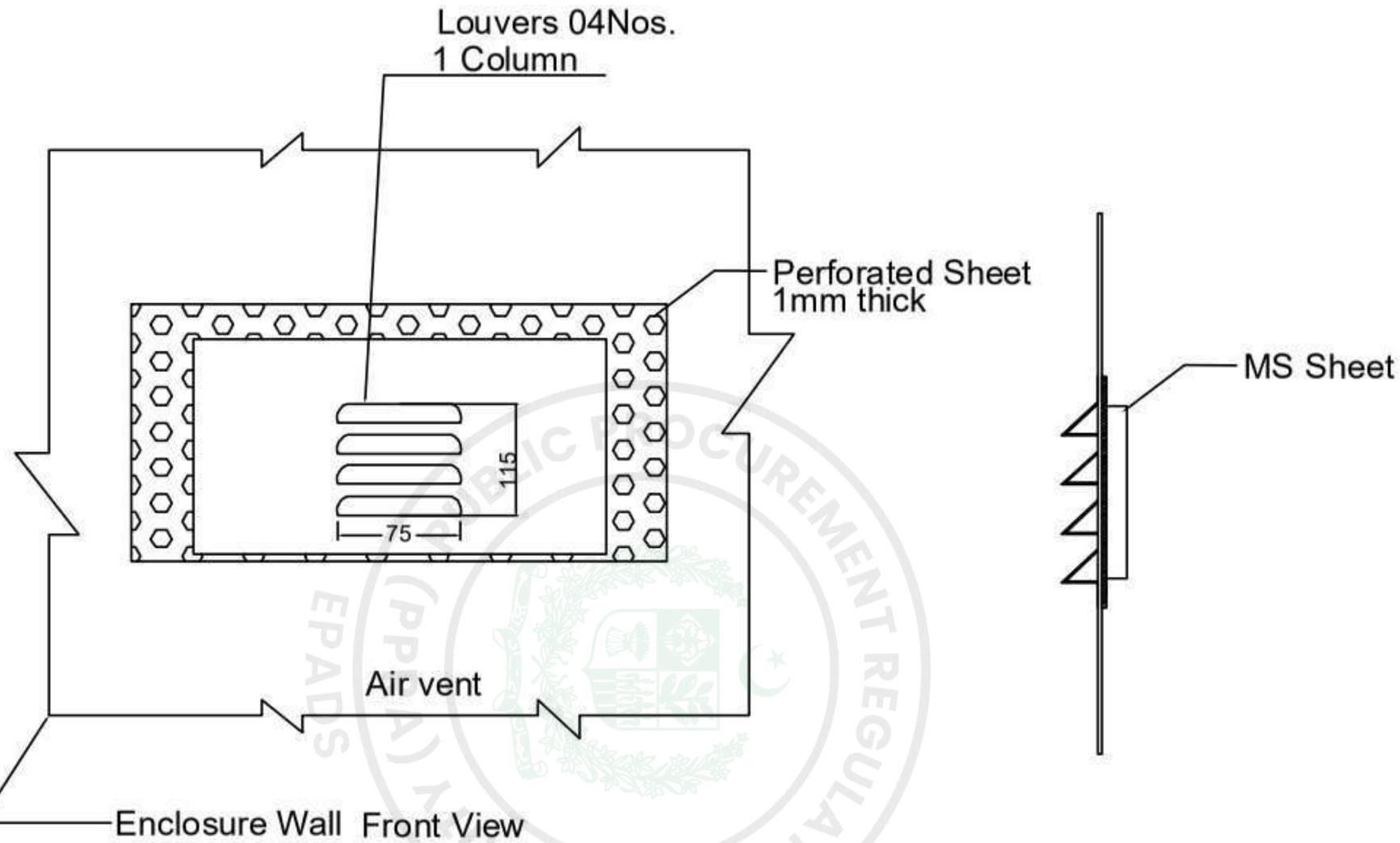
Drawn By:	Checked By:	Verified By:		
ENGR.AAMIR HAMZA ASST.SPECIALIST (D&S)	ZARYAB HASSAN SPECIALIST (D&S)	SAKHAWAT ALI TEAM LEAD (D&S)	Scale:	NTS
			Revision Nos:	0/0
			Date :	17/04/2026

PPMC

Product :	Asset Performance Management System For 400/500kVA,630kVA Transformer
Drawing Title:	Base Plate
Reference :	PPMC-DS-01
Drawing No.	APMS/PPMC/D&S/ 07OF 18

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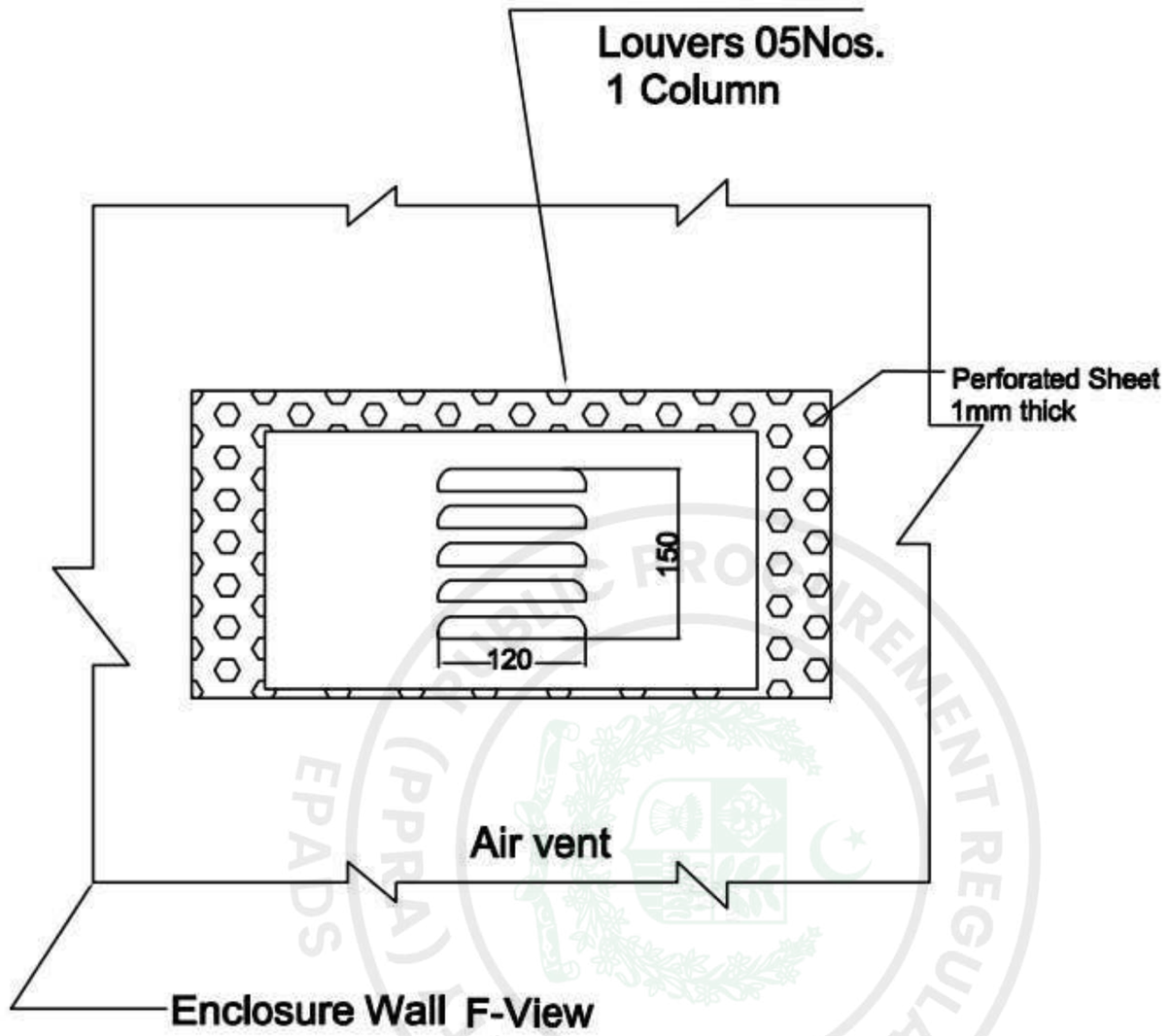
Note:
1.Tolerance: as per Dwg.No APMS/PPMC/D&S/18
2.All Dimension are in Millimeters.
3.Number of Louvers may be increased to comply with temperature rise test. However, it shall be fixed during prototype approval

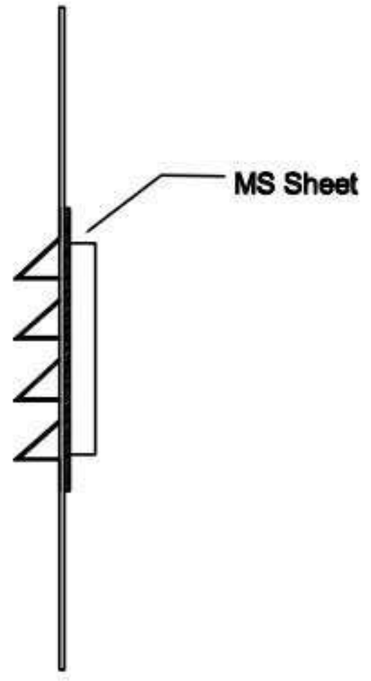
Power Planning and Monitoring Company (PPMC)
DESIGN AND STANDARDS (D&S)

Drawn By:	Checked By:	Verified By:	Scale:	NTS	PPMC	Product :	Asset Performance Management System For 25kVA,50kVA,100kVA Transformer
ENGR.AAMIR HAMZA ASST.SPECIALIST (D&S)	ZARYAB HASSAN SPECIALIST (D&S)	SAKHAWAT ALI TEAM LEAD (D&S)	Revision Nos:	0/0		Drawing Title:	Air Vent
			Date :	17/04/2026		Reference :	PPMC-DS-01
						Drawing No.	APMS/PPMC/D&S/ 08 OF 18

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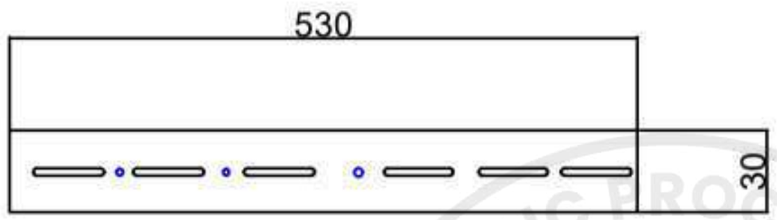
Note:
1.Tolerance: as per Dwg.No APMS/PPMC/D&S/18
2.All Dimension are in Millimeters.
3.Number of Louvers may be increased to comply with temperature rise test. However, it shall be fixed during prototype approval

Power Planning and Monitoring Company (PPMC)
DESIGN AND STANDARDS (D&S)

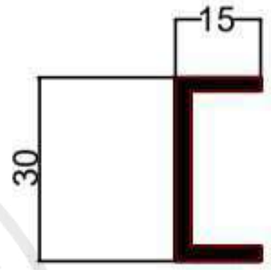
Drawn By:	Checked By:	Verified By:	Scale:	NTS	PPMC	Product :	Asset Performance Management System For 200/250kVA,400/500kVA,630kVA Transformer
ENGR.AAMIR HAMZA ASST.SPECIALIST (D&S)	ZARYAB HASSAN SPECIALIST (D&S)	SAKHAWAT ALI TEAM LEAD (D&S)	Revision Nos:	0/0		Drawing Title:	Air Vent
			Date :	17/04/2026		Reference :	PPMC-DS-01
						Drawing No.	APMS/PPMC/D&S/ 09 OF 18

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Channel for Meter Support.



Sectional View

Note:
1.Tolerance: as per Dwg.No APMS/PPMC/D&S/18
2.All Dimension are in Millimeters.
3. Holes shall be made as per Requirement

Power Planning and Monitoring Company (PPMC)
DESIGN AND STANDARDS (D&S)

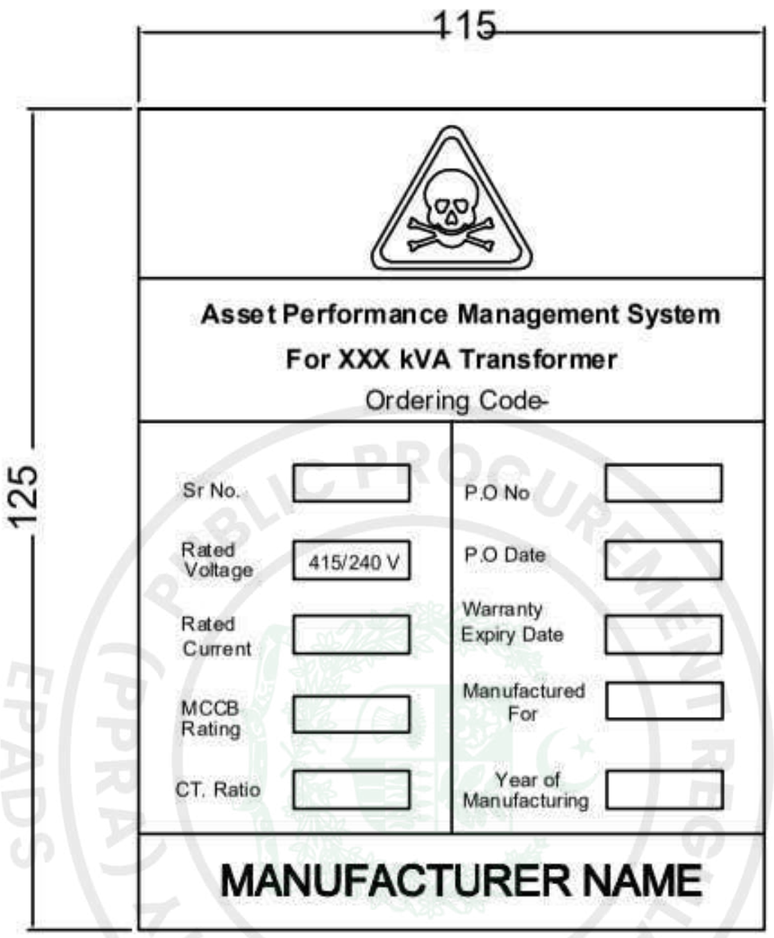
Drawn By:	Checked By:	Verified By:		
ENGR.AAMIR HAMZA ASST. SPECIALIST (D&S)	ZARYAB HASSAN SPECIALIST (D&S)	SAKHAWAT ALI TEAM LEAD (D&S)	Scale:	NTS
			Revision Nos:	0/0
			Date :	17/04/2026

PPMC

Product :	Asset Performance Management System For 25kVA,50kVA,100kVA,200/250kVA,400/500kVA and 630kVA Transformer
Drawing Title:	Meter Support Channel
Reference :	PPMC-DS-01
Drawing No.	APMS/PPMC/D&S/ 10 OF 18

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Note:

Following Information Will Be In-Corporated In The Name Plate if There is Any Additional Requirement By The Customer (height maybe increased to 135 mm if needed :

1. Magnetic contactor Rating (A)
2. Manufacturer of OTL (for OTL ordering codes only)
3. Low Oil level and Normal Recovery Point (for OTL ordering codes only)

Note:

1. Tolerance: as per Dwg.No APMS/PPMC/D&S/18
2. All Dimension are in Millimeters.
3. Material: Non Magnetic SS-316 Sheet/ Aluminium Powder Coated Plate
4. Thickness 0.5mm

Power Planning and Monitoring Company (PPMC)
DESIGN AND STANDARDS (D&S)

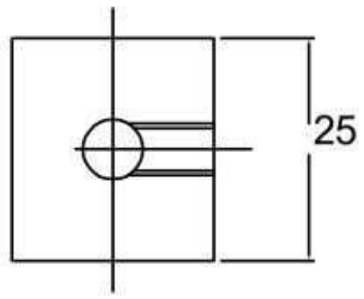
Drawn By:	Checked By:	Verified By:		
ENGR.AAMIR HAMZA ASST.SPECIALIST (D&S)	ZARYAB HASSAN SPECIALIST (D&S)	SAKHAWAT ALI TEAM LEAD (D&S)	Scale:	NTS
			Revision Nos:	0/0
			Date :	17/04/2026

PPMC

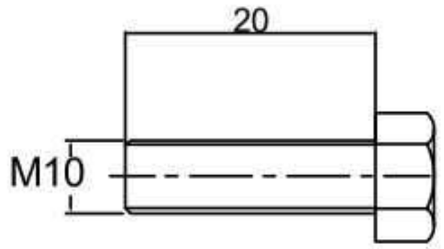
Product :	Asset Performance Management System For 25kVA, 50kVA, 100kVA, 200/250kVA, 400/500kVA and 630kVA Transformer
Drawing Title:	Rating Plate
Reference :	PPMC-DS-01
Drawing No.	APMS/PPMC/D&S/11 OF 18

CamScanner

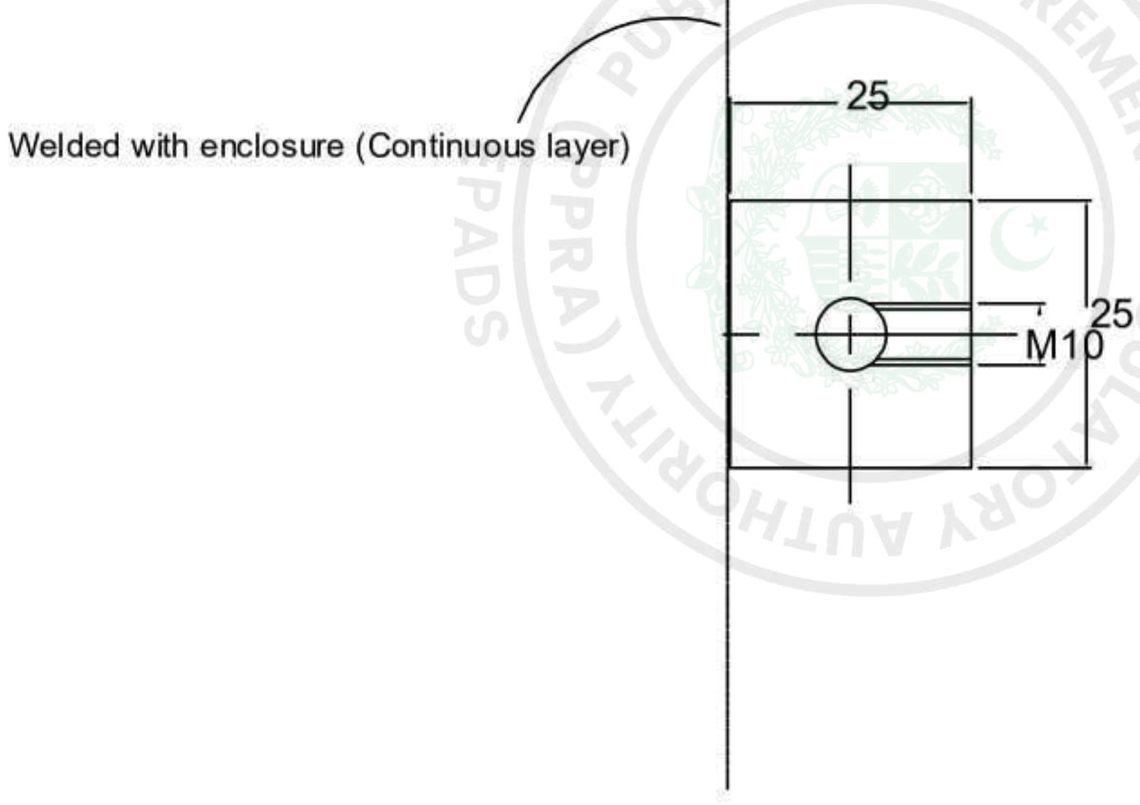
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Material: MS Galvanized



Material: MS
Finish: Galvanized



Note:
1.Tolerance: as per Dwg.No APMS/PPMC/D&S/18
2.All Dimension are in Millimeters.

Power Planning and Monitoring Company (PPMC)
DESIGN AND STANDARDS (D&S)

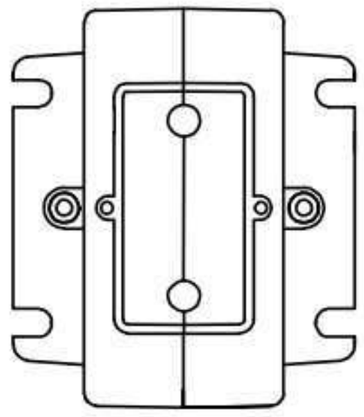
Drawn By:	Checked By:	Verified By:		
ENGR.AAMIR HAMZA ASST.SPECIALIST (D&S)	ZARYAB HASSAN SPECIALIST (D&S)	SAKHAWAT ALI TEAM LEAD (D&S)	Scale:	NTS
			Revision Nos:	0/0
			Date :	17/04/2026

PPMC

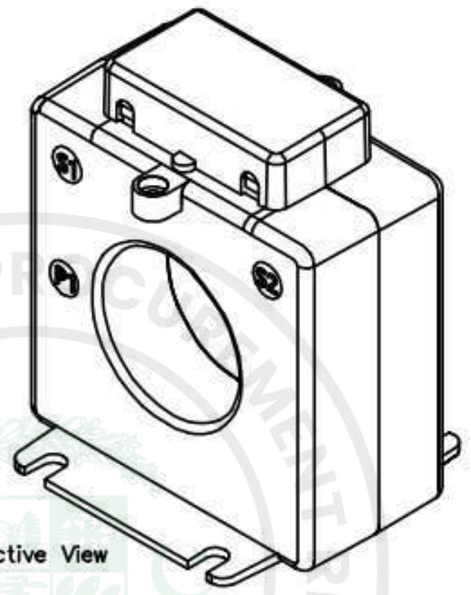
Product :	Asset Performance Management System For 25kVA,50kVA,100kVA,200/250kVA,400/500kVA and 630kVA Transformer
Drawing Title:	Earthing Terminal
Reference :	PPMC-DS-01
Drawing No.	APMS/PPMC/D&S/ 12 OF 18

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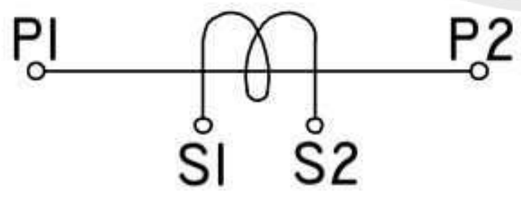


Top View



Perspective View

Terminal Markings



NOTE:

1. TERMINAL MARKINGS
   a. Primary P1,P2
   b. Secondary S1,S2
2. Dimensions shall be fixed according to the approved Prototype

Power Planning and Monitoring Company (PPMC)
DESIGN AND STANDARDS (D&S)

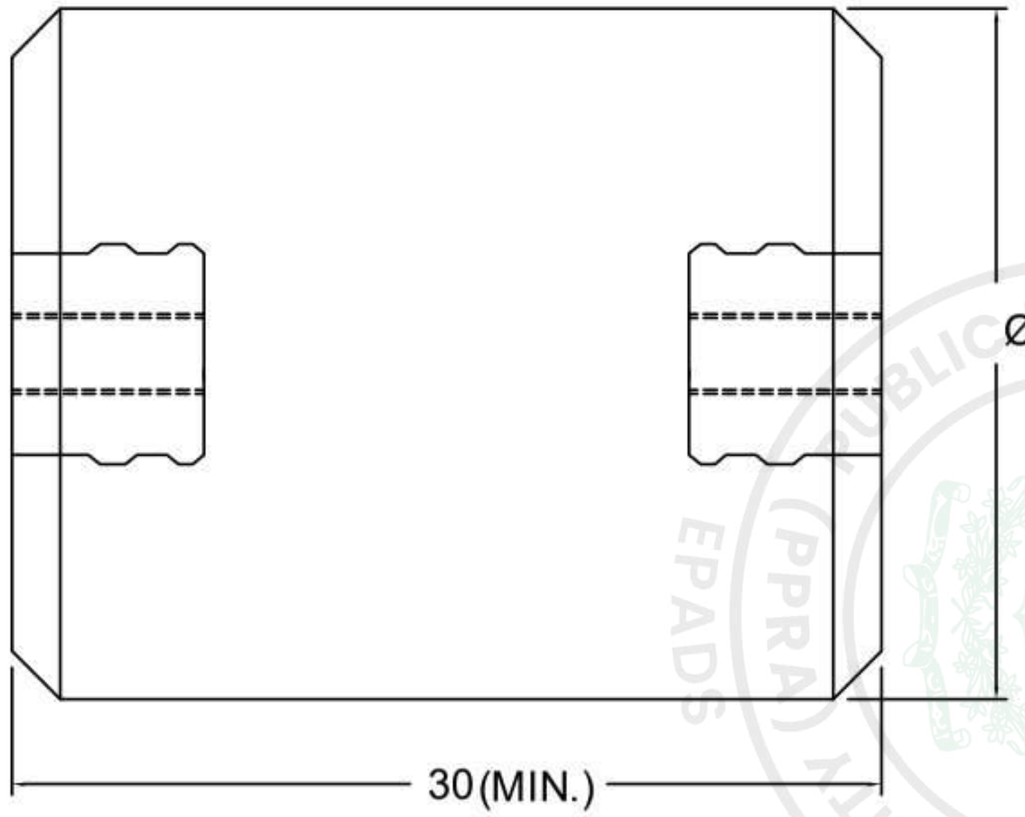
Drawn By:	Checked By:	Verified By:		
ENGR.AAMIR HAMZA ASST.SPECIALIST (D&S)	ZARYAB HASSAN SPECIALIST (D&S)	SAKHAWAT ALI TEAM LEAD (D&S)	Scale:	NTS
			Revision Nos:	0/0
			Date :	17/04/2026

PPMC

Product :	Asset Performance Management System For 25kVA,50kVA,100kVA,200/250kVA,400/500kVA and 630kVA Transformer
Drawing Title:	Current Transormer
Reference :	PPMC-DS-01
Drawing No.	APMS/PPMC/D&S/13 OF 18

CamScanner

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Material: Bakelite/Polymer

Note:
1. Tolerance: as per Dwg.No APMS/PPMC/D&S/18
2. All Dimension are in Millimeters.
3. Spacers maybe used by manufacture for Adjustment Purpose

Power Planning and Monitoring Company (PPMC)
DESIGN AND STANDARDS (D&S)

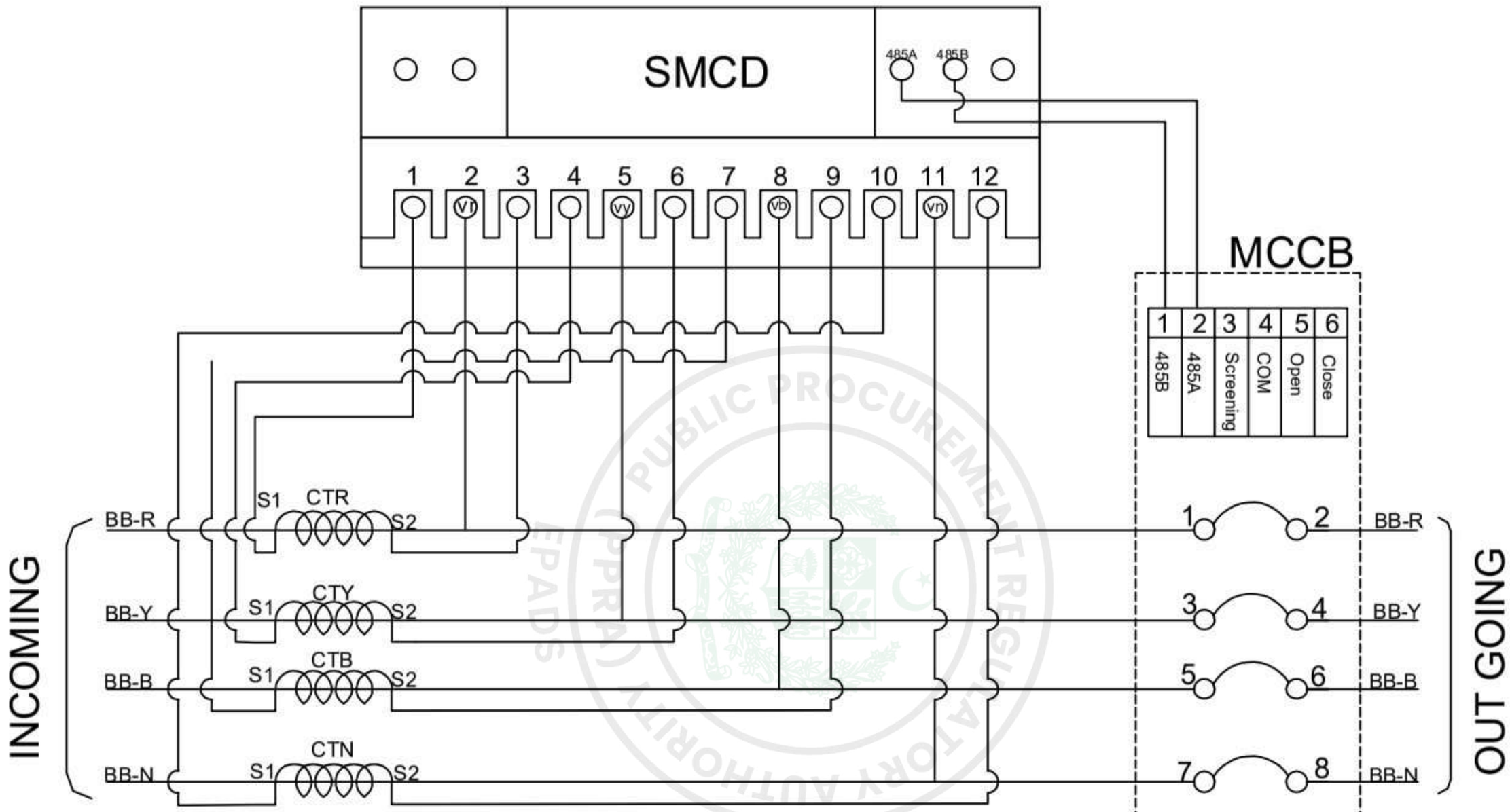
Drawn By:	Checked By:	Verified By:		
ENGR.AAMIR HAMZA ASST.SPECIALIST (D&S)	ZARYAB HASSAN SPECIALIST (D&S)	SAKHAWAT ALI TEAM LEAD (D&S)	Scale:	NTS
			Revision Nos:	0/0
			Date :	17/04/2026

PPMC

Product :	Asset Performance Management System For 25kVA,50kVA,100kVA,200/250kVA,400/500kVA and 630kVA Transformer
Drawing Title:	Insulator
Reference :	PPMC-DS-01
Drawing No.	APMS/PPMC/D&S/ 14 OF 18

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Note:

Terminals are shown for Visualization purpose Only

Legends

01	BB-R	Busbar For Red Phase
02	BB-Y	Busbar For Yellow Phase
03	BB-B	Busbar For Blue Phase
04	BB-N	Busbar For Neutral(Black)
05	MCCB	Molded Case Circuit Breaker

01	CTR	CT For Red Phase
02	CTY	CT For Yellow Phase
03	CTB	CT For Blue Phase
04	CTN	CT For Neutral(Black)
05	SMCD	Smart Metering and Controlling Device

Power Planning and Monitoring Company (PPMC)
DESIGN AND STANDARDS (D&S)

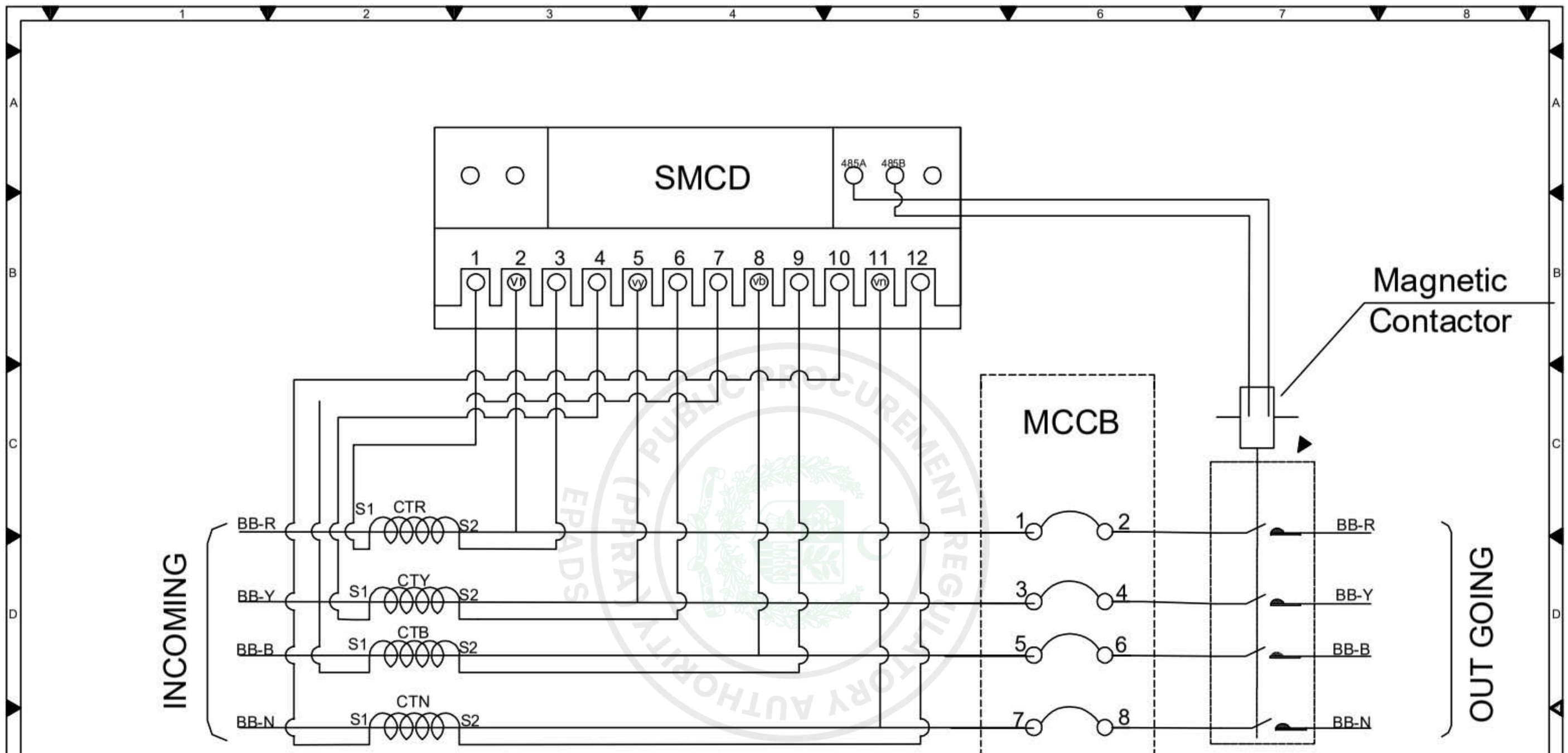
Drawn By:	Checked By:	Verified By:		
ENGR.AAMIR HAMZA ASST.SPECIALIST (D&S)	ZARYAB HASSAN SPECIALIST (D&S)	SAKHAWAT ALI TEAM LEAD (D&S)	Scale:	NTS
			Revision Nos:	0/0
			Date :	17/04/2026

PPMC

Product :	Asset Performance Management System For 25kVA,50kVA,100kVA,200/250kVA,400/500kVA and 630kVA Transformer
Drawing Title:	Circuit Diagram with Magnetic Contactor
Reference :	PPMC-DS-01
Drawing No.	APMS/PPMC/D&S/ 15 OF 18

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Legends

01	BB-R	Busbar For Red Phase
02	BB-Y	Busbar For Yellow Phase
03	BB-B	Busbar For Blue Phase
04	BB-N	Busbar For Neutral(Black)
05	MCCB	Molded Case Circuit Breaker

01	CTR	CT For Red Phase
02	CTY	CT For Yellow Phase
03	CTB	CT For Blue Phase
04	CTN	CT For Neutral(Black)
05	SMCD	Smart Metering and Controlling Device

Note:

Terminals are shown for Visualization purpose Only

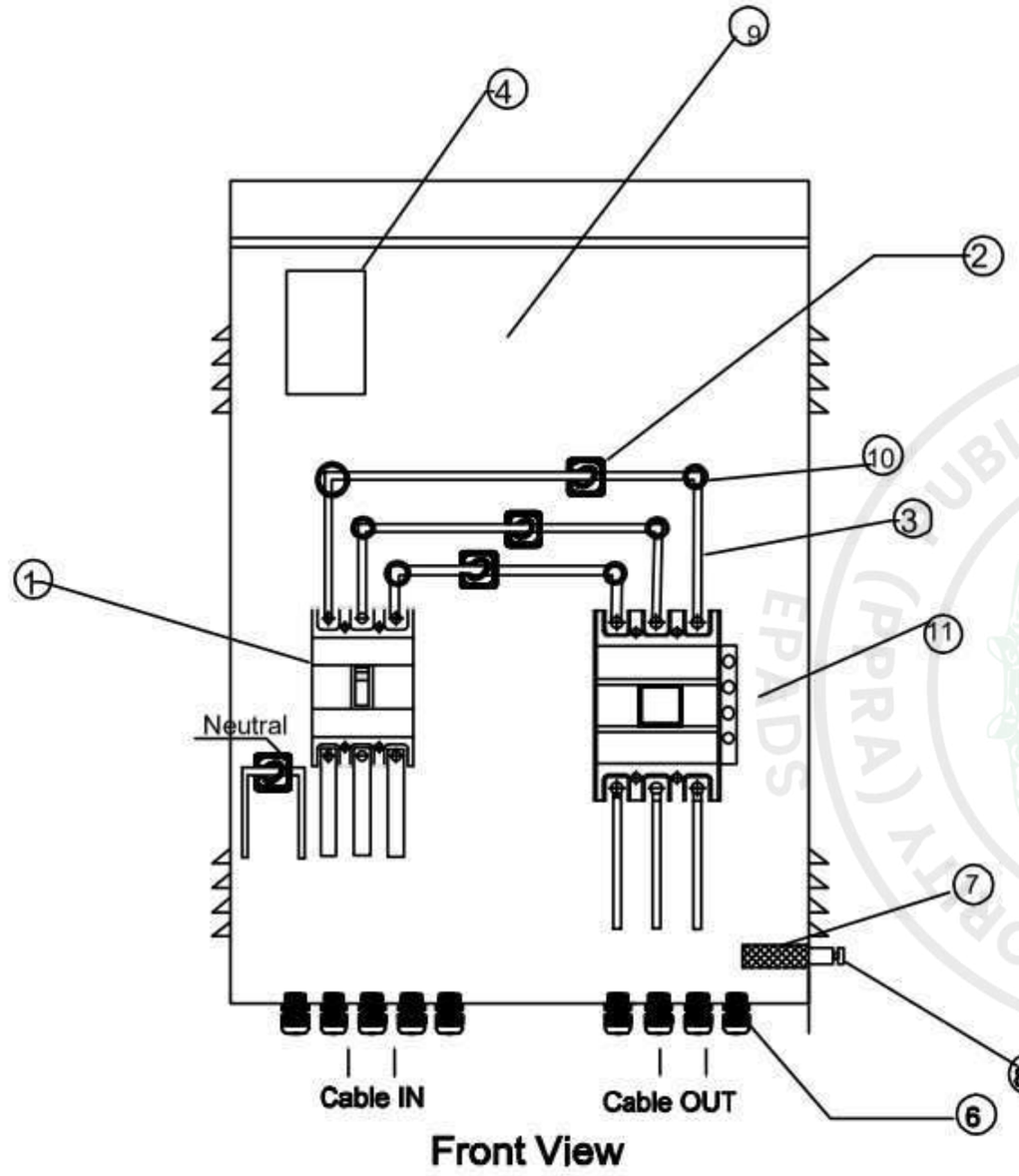
Power Planning and Monitoring Company (PPMC)
DESIGN AND STANDARDS (D&S)

Drawn By:	Checked By:	Verified By:		
ENGR.AAMIR HAMZA ASST.SPECIALIST (D&S)	ZARYAB HASSAN SPECIALIST (D&S)	SAKHAWAT ALI TEAM LEAD (D&S)	Scale:	NTS
			Revision Nos:	0/0
			Date :	17/04/2026

PPMC

Product :	Asset Performance Management System For 25kVA, 50kVA, 100kVA, 200/250kVA, 400/500kVA and 630kVA Transformer
Drawing Title:	Circuit Diagram with Magnetic Contactor
Reference :	PPMC-DS-01
Drawing No.	APMS/PPMC/D&S/ 16 OF 18

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Front View

LEGEND

1- MCCB
2- LT CTs
3- Copper Bus Bars
4- Smart Metering and Control Device
5- Channel for Meter Support
6- Cable Glands
7- Copper braided wire for door earthing
8- Earthing Terminal
9- Mounting Plate for Components
10- Busbar Support Insulators
11-Magenetic Contractor

Note:
1.Tolerance: as per Dwg.No APMS/PPMC/D&S/18

4. Detailed dimension and Holes Position shall be as per approved Prototype

Power Planning and Monitoring Company (PPMC)
DESIGN AND STANDARDS (D&S)

Drawn By:	Checked By:	Verified By:	Scale:	NTS
ENGR.AAMIR HAMZA ASST.SPECIALIST (D&S)	ZARYAB HASSAN SPECIALIST (D&S)	SAKHAWAT ALI TEAM LEAD (D&S)	Revision Nos:	0/0
			Date :	17/04/2026

PPMC

Product :	Asset Performance Management System For 25kVA,50kVA,100kVA,200/250kVA,400/500kVA 630kVATransformer
Drawing Title:	MAGNETIC CONTRACTOR ARRANGEMENT
Reference :	PPMC-DS-01
Drawing No.	APMS/PPMC/D&S/ 17 OF 18

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Tolerance Sheet

Tolerance in Dimensions

DIMENSION RANGE	TOLERANCE
1.0mm To 10mm	±10.0%
11mm To 55mm	±5.0%
56mm To 75mm	±3.0%
76mm & Above	±2.0%

Power Planning and Monitoring Company (PPMC)
DESIGN AND STANDARDS (D&S)

Drawn By:	Checked By:	Verified By:		
ENGR. AAMIR HAMZA ASST.SPECIALIST (D&S)	ZARYAB HASSAN SPECIALIST (D&S)	SAKHAWAT ALI TEAM LEAD (D&S)	Scale:	NTS
			Revision Nos:	0/0
			Date :	17/04/2026

PPMC

Product :	Asset Performance Management System For 25kVA,50kVA,100kVA,200/250kVA,400/500kVA and 630kVA Transformer
Drawing Title:	Tolerance Sheet
Reference :	PPMC-DS-01
Drawing No.	APMS/PPMC/D&S/18 OF 18

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GOVERNMENT OF PAKISTAN
MINISTRY OF COMMERCE

ORDER

Islamabad, the 3rd December, 2001

S.R.O.827(I)/2001.- In exercise of the powers conferred by sub-section (1) of section 3 of the Imports and Exports (Control) Act, 1950 (XXXIX of 1950), the Federal Government is pleased to make the following Order, namely:-

1. Short title and commencement.- (1) This Order may be called the Import of Engineering Goods (Control) Order, 2001.

(2) It shall come into force at once.

2. Definitions.- In this Order, unless there is anything repugnant in the subject or context.-

(a) "engineering goods" means goods specified in the Customs General Order 07 of 1998 issued and amendments thereof by the Central Board of Revenue;

(b) Omitted

(c) "public sector agencies" include all the statutory or autonomous corporations and other agencies or bodies under the administrative control of the Federal Government and the Provincial Governments including private or public companies with the government share holding.

3. Price preference to be accorded. – Only in cases of procurement by the government and in case of procurement by other public sector agencies, bidders tendering for engineering goods produced in Pakistan shall be accorded a price preference in rupees up to a specific percentage (in proportion to the value addition) of the lowest quoted landed cost of an item of foreign origin with similar specifications as mentioned in the tenders:

(1) Provided that –

(a) the saving in foreign exchange is not less than the amount of price preference : and

(b) it is ensured that in each case of such preference, the total import requirements for producing the supplies tendered for locally manufactured items has been duly indicated by the bidders.

(2) Price preference shall be allowed as under:-

(a) having minimum of twenty per cent value addition through indigenous manufacturing price preference shall be fifteen per cent;

(b) having over twenty per cent and up to thirty per cent value addition through indigenous manufacturing, price preference shall be twenty per cent; and

(c) having over thirty percent value addition through indigenous manufacturing, price preference shall be twenty five per cent.

4. Public sector agencies to procure their requirements from within the country, etc.- (1) The public sector agencies shall -

(a) procure their requirements of engineering goods from within the country and omit such items from the list of barter, credit and loans;

(b) while preparing any scheme or project, make adequate provision of rupee component in their annual procurement budgets for facilitating the local purchases and for this purpose explore all sources of local financing;

(c) encourage local industry by providing educational and development contracts where applicable, for an amount equivalent to ten percent of their annual procurement budget, share the initial development charges, on one-time basis, on mutually agreed terms; and

(d) submit repots on six monthly basis to the Ministry of Commerce with copies to the Engineering Development Board. The Engineering Development Board will monitor, on a regular basis, the implementation of this Order towards achieving import substitution, and indigenization about the cases of price preference allowed to bidders in cases of government procurement only and provide full justification about the cases where local purchases are not made and preference is given to imports. The report shall outline the future plan for import substitution in that area.

(2) The raw materials and component requirements of the local engineering industry shall be met from the credits referred to in clause (a) of sub-paragraph (1)

"4A. Floating of International Tenders. – (1) In case of international tenders (if floated), public sector enterprises and corporate entities will ask for FOR prices for proper comparisons with the locally manufactured products.

(2) In case of those international tenders, where the price is quoted on FOB basis the landed cost factor would be determined by a committee with members from Planning Commission (Financial Analyst), representative from Finance Division and nominee of finance section of the public sector enterprise or corporate entity buying the goods"

5. Compliance of directives or decisions.- Public sector agencies shall comply with all the directives of the Chief Executive of the Islamic Republic of Pakistan, decisions of the ECC of the Cabinet and government policy decisions on promotion of indigenization and import substitution.

6. Special provisions.---(1) Notwithstanding any provisions to the contrary in any of the existing rules and orders, the requirements as to inviting of tenders and quotations and making of enquiries, etc., shall be waived in cases where purchases by the government

controlled units or public sector agencies are made from government controlled manufacturing units or public sector agencies.

(2) The public sector agencies shall incorporate condition in tender documents for all major industrial and infrastructure projects that import of turnkey plants or award of turnkey contracts to foreign manufactures or contractors for such projects shall not be allowed, and instead local manufactures or contractors shall be encouraged to undertake EPC (Engineering, Procurement and Construction) contract. However, in cases where local capacity and expertise is not available to this extent, the foreign manufacturers or contractors shall be considered but required to associate fully the recognized local design, engineering and manufacturing organization on the concept of sub-EPC contractor. The public sector agency shall patronize the public sector manufacturers as consortium partners to foreign companies to ensure that dependence on imported plant and machinery reduces progressively from year to year. The local content in large projects shall be determined, on case to case basis, by the Engineering Development Board (EDB) on the pattern of industry-specific deletion programme.

(3) In case of participation of public sector manufacturers, the requirements of furnishing earnest money or tender guarantee, security deposit, etc, shall be waived and instead, a letter to the effect from the parent Ministry confirming its pubic sector entity shall serve the purpose. Performance bond or bank guarantee shall be provided by the manufacturer or, as the case may be the contractor.

(4) Decision for award of contract shall be made on the basis of competitive prices and technical suitability and preference shall be given to the manufacturers or contractors having obtained certification of quality and standards such as ISO 9000, ASME, API etc. EDB will help and facilitate and local industry in achieving quality standards and timely completion of large projects.

(5) In case there is only one recognized manufacturer in the public sector of the required item or competent of engineering goods, it shall be mandatory on the public sector agencies to award contract to the local manufacturer on negotiation basis. In case the terms of contract are not mutually agreeable between the buyer and seller, a decision shall be taken by the National Council for the Engineering and Industrial Coordination (NCE&IC).

7. Repeal.- The Import of Engineering Goods (Control) Order, 1998, is hereby repealed.

[F. No.1 (10)/2001-WTO]

KISHWAR KHAN
Deputy Chief (WTO)

As amended
S.R.O.660(I)/2002, - dated 28.09.2002

Form: Bid Security Form

(Bidders is required to fill, sign, stamp and upload this form in vendor response otherwise bidder may be disqualified.)

To: Chief Engineer Development PMU
SEPCO, Lahore.

Whereas _____ [name of the Bidder] (hereinafter called "the Bidder") has submitted its Bid dated [date of submission of Bid] for the delivery of [name and/or description of the goods] (hereinafter called "the Bid").

KNOW ALL PEOPLE by these presents that WE_____ [name of Financial Institution] of_____ [name of country], having our registered office at _____[address of Financial Institution] (hereinafter called "the Bank"), are bound unto Chief Engineer Development PMU SEPCO (hereinafter called "the Procuring Agency") in the sum of_____ [amount] for which payment well and truly to be made to the said Procuring Agency, the Bank binds it-self, its successors, and assigns by these presents.

Sealed with the Common Seal of the said Bank this _____day of 20_____.

THE CONDITIONS of this obligation are:

1. If the Bid

   (a) have withdrawn or modified our Bid during the period of Bid Validity specified in the Form of Bid;

   (b) Disagreement to arithmetical correction made to the Bid price; or

   (c) having been notified of the acceptance of our Bid by the Procuring Agency during the period of Bid Validity, (i) failure to sign the contract if required by Procuring Agency to do so or (ii) fail or refuse to furnish the Performance Security or to comply with any other condition precedent to signing the contract specified in the Bidding Documents.

2. We undertake to pay to the Procuring Agency up to the above amount upon receipt of its first written demand, without the Procuring Agency having to substantiate its demand, provided that in its demand the Procuring Agency states the amount claimed by it is due to it, owing to the occurrence of one or both of the conditions, specifying the occurred condition or conditions.

This guarantee shall remain in force up to and including Twenty Eight (28)days after the period of Bid Validity, and any demand in respect thereof should reach the Bank not later than the above date.

Name:…… in the capacity of …… signed

[Signature of the Bank]

_____

Dated on …… day of …… 20 ……

CONSTRUCTION EXPERIENCE

Form EXP - 4.1
General Construction Experience

Bidder's Name: _____
Date: _____
JV Member's Name_____
Bid Reference No. (if any) and title: _____
Page _____of _____pages

Starting Year	Ending Year	Contract Identification	Role of Bidder
		Contract name: _____ Brief Description of the Works performed by the Bidder: _____ Amount of contract: _____ Name of EMPLOYER: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Bidder: _____ Amount of contract: _____ Name of EMPLOYER: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Bidder: _____ Amount of contract: _____ Name of EMPLOYER: _____ Address: _____	

Form EXP - 4.2(a)

Specific Construction and Contract Management Experience

Bidder's Name: _____
Date: _____
JV Member's Name_____
Bid Reference No. (if any) and title: _____
Page _____of _____pages

Similar Contract No.	**Information**			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor ☐	Member in JV ☐	Management Contractor ☐	Sub-contractor ☐
Total Contract Amount			PKR equivalent	
If member in a JV or sub-contractor, specify participation in total Contract amount				
EMPLOYER's Name:				
Address: Telephone/fax number E-mail:				

Form EXP - 4.2(a) (cont.)
Specific Construction and Contract Management Experience (cont.)

Similar Contract No.	Information
Description of the similarity in accordance with Sub-Factor 4.2(a) of Section III:	
1. Amount	
2. Physical size of required works items	
3. Complexity	
4. Methods/Technology	
5. Construction rate for key activities	
6. Other Characteristics	

PUBLIC PROCUREMENT REGULATORY AUTHORITY (PPRA) EPADS

Form EXP - 4.2(b)
Construction Experience in Key Activities

Bidder's Name: _____
Date: _____
Bidder's JV Member Name: _____
Sub-contractor's Name (if any): _____
Bid Reference No. (if any) and title: _____

Page _____of _____pages

All Sub-contractors for key activities must complete the information and Qualification Criteria and Requirements, Sub-Factor 4.2.

1. Key Activity No One: _____

	Information			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor ☐	Member in JV ☐	Management Contractor ☐	Sub-contractor ☐
Total Contract Amount			PKR equivalent	
Quantity (Volume, number or rate of production, as applicable) performed under the contract per year or part of the year	Total quantity in the contract (i)	Percentage participation (ii)		Actual Quantity Performed (i) x (ii)
Year 1				
Year 2				
Year 3				
Year 4				
EMPLOYER's Name:				
Address: Telephone/fax number				

	Information
E-mail:	

2. Activity No. Two

3. ……

	Information
Description of the key activities in accordance with Section III:	

Form EXP - 4.2 (c)
Specific Experience in Managing ES aspects

[The following table shall be filled in for contracts performed by the Bidder, and each member of a Joint Venture]

Bidder's Name: *[insert full name]*
Date: *[insert day, month, year]*
Joint Venture Member Name: *[insertfull name]*
Bid Reference No. (if any) and title: *[insert ICB/NCB number and title]*
Page *[insert page number]* of *[insert total number]* pages

1. Key Requirement no 1 in accordance with 4.2 (c): _____

Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor ☐	Member in JV ☐	Management Contractor ☐	Subcontractor ☐
Total Contract Amount			PKR	
Details of relevant experience				

2. Key Requirement no 2 in accordance with 4.2 (c): _____

3. Key Requirement no 3 in accordance with 4.2 (c): _____

4. [PA define key requirements]

Financial Resources

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total construction cash flow demands of the subject contract or contracts as specified in Eligibility and Qualification Criteria.

No.	**Source of financing**	**Amount (Eq. PKR)**
1		
2		
3		

PUBLIC PROCUREMENT REGULATORY AUTHORITY (PPRA) EPADS

Past Experience / Contracts

Contracts over *[insert amount]* during the last three years:				
Procuring Agency	Value	Year	Goods/Services Supplied	Country of Destination

PUBLIC PROCUREMENT REGULATORY AUTHORITY (PPRA) EPADS

Historical Contract Non-Performance, and Pending Litigation and Litigation History

[The following table shall be filled in for the Applicant and for each member of a Joint Venture]

Applicant's Name: *[insert full name]*
Date: *[insert day, month, year]*
Joint Venture Member Name: *[insert full name]*
IFP No. and title: *[insert IFP number and title]*
Page *[insert page number]* of *[insert total number]* pages

☐ Not debarred due to deviation from commitment of Bid Securing Declaration-☐ Not debarred due to non-performance			
Year	**Non-performed portion of contract**	**Contract Identification**	**Total Contract Amount (current value, currency, exchange rate and PKR equivalent)**
[insert year]	*[insert amount and percentage]*	Contract Identification: *[indicate complete contract name/ number, and any other identification]* Name of Procuring Agency: *[insert full name]* Address of Procuring Agency: *[insert street/city/country]* Reason(s) for nonperformance: *[indicate main reason(s)]*	*[insert amount]*
Pending Litigation, in accordance with Section III, Qualification Criteria and Requirements			
☐ Pending litigation in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.3 as indicated below.			

Year of dispute	**Amount in dispute (currency)**	**Contract Identification**	**Total Contract Amount (currency), ~~US$~~ PKR Equivalent (exchange rate)**

[insert year]	*[insert amount]*	Contract Identification: [indicate complete contract name, number, and any other identification] Name of Procuring Agency: *[insert full name]* Address of Procuring Agency: *[insert street/city/country]* Matter in dispute: *[indicate main issues in dispute]* Party who initiated the dispute: *[indicate "Procuring Agency" or "Supplier"]* Status of dispute: *[Indicate if it is being treated by the Adjudicator, under Arbitration or being dealt with by the Judiciary]*	*[insert amount]*

☐ No consistent history of court/arbitral award decisions in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.4.

☐ Consistent history of court/arbitral award decisions in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.4 as indicated below.

Year of award	**Outcome as percentage of Net Worth**	**Contract Identification**	**Total Contract Amount (currency), PKR Equivalent (exchange rate)**
[insert year]	*[insert percentage]*	Contract Identification: [indicate complete contract name, number, and any other identification] Name of Procuring Agency: *[insert full name]* Address of Procuring Agency: *[insert street/city/country]* Matter in dispute: *[indicate main issues in dispute]* Party who initiated the dispute: *[indicate "Procuring Agency" or "Supplier"]* Court/ arbitral award decision: *[Indicate if the award decision was against the Applicant or any member of a joint venture.]y]*	*[insert amount]*

Current Contract Commitments / Works in Progress

Bidders and each member to a JV should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

Current Contract Commitments					
No.	Name of Contract	**Employer's Contact Address, Tel, Fax**	**Value of Outstanding Work [Current Eq. PKR]**	**Estimated Completion Date**	**Average Monthly Invoicing Over Last Six Months [Eq. PKR/month)]**
1					
2					
3					
4					
5					

Financial Situation and Performance

[The following table shall be filled in for the Applicant and for each member of a Joint Venture]

Applicant's Name: *[insert full name]*
Date: *[insert day, month, year]*
Joint Venture Member Name: *[insert full name]*
IFP No. and title: *[insert IFP number and title]*
Page *[insert page number]* of *[insert total number]* pages

1. Financial data

Type of Financial information in (currency)	**Historic information for previous _[insert number] years, [insert in words] (amount in currency, currency, exchange rate*, PKR equivalent)**				
	Year 1	Year 2	Year 3		
Statement of Financial Position (Information from Balance Sheet)					
Total Assets (TA)					
Total Liabilities (TL)					
Total Equity/Net Worth (NW)					
Current Assets (CA)					
Current Liabilities (CL)					
Working Capital (WC)					
Information from Income Statement					
Total Revenue (TR)					
Profits Before Taxes (PBT)					
Cash Flow Information					
Cash Flow from Operating Activities					

* Refer ITA 14 for the exchange rate

3. Financial documents

The Applicant and in case of JV, members of JV shall provide copies of financial statements for *[number]* years pursuant Section III, Qualifications Criteria and Requirements. The financial statements shall:

(a) reflect the financial situation of the Applicant or in case of JV member, and not an affiliated entity (such as parent company or group member).

(b) be independently audited or certified in accordance with local legislation.

(c) be complete, including all notes to the financial statements.

(d) correspond to accounting periods already completed and audited.

☐ Attached are copies of financial statements[1] for the *[number]* years required above; and complying with the requirements.

[1] If the most recent set of financial statements is for a period earlier than 12 months from the date of Application, the reason for this should be justified.

Average Annual Turnover (Annual Sales Value)

[The following table shall be filled in for the Applicant and for each member of a Joint Venture]

Applicant's Name: *[insert full name]*
Date: *[insert day, month, year]*
Joint Venture Member Name: *[insert full name]*
IFP No. and title: *[insert IFP number and title]*
Page *[insert page number]* of *[insert total number]* pages

Annual Turnover Data			
Year	**Amount** **Currency**	**Exchange rate*** **(If applicable)**	**PKR equivalent**
[indicate calendar year]	*[insert amount and indicate currency]*		
		Average Annual Turnover **	

* Refer ITA for date and source of exchange rate.

** Total PKR equivalent for all years divided by the total number of years. See Section III, Qualification Criteria and Requirements, ITA.