

Title: **TECHNICAL EVALUATION
CRITERIA FOR SUBSTATION
METERING PANELS AND
MODULES**

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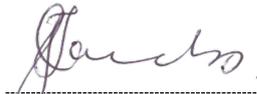


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1. Introduction

This document provides an overview of Eskom's technical requirements for an enquiry for the supply of substation metering panels and modules. This document provides an overview of the requirements for the different metering substation panels and modules and acts as an index and supplement to the detailed specifications which are provided per substation panel and metering module product type.

This document defines the technical evaluation criteria that will be used in the enquiry for metering panels and modules.

2. Supporting clauses

2.1 Scope

2.1.1 Purpose

This document provides information relating to an enquiry for the technical evaluation, acceptance and supply of substation metering panels and modules for use in Eskom.

The enquiry includes the following meter panels and module types:

Table 1: Substation metering panels and module types

Item	Module type description	SAP number
1	<p>SWING FRAME CABINET (FRONT ENTRY)</p> <p>2400(H) X 800(W) X 600(D) complete with</p> <ul style="list-style-type: none"> • Earthing • Trunking • DIN Rail • Pre punched chassis plate 	0579565
2	<p>SWING FRAME CABINET (BACK ENTRY)</p> <p>2400(H) X 600(W) X 600(D) complete with</p> <ul style="list-style-type: none"> • Earthing • Trunking • DIN Rail • Pre punched chassis plate 	0579563
3	<p>METER CABINET – SLIMLINE WALL MOUNT</p> <p>1400 (H) X 700(W) X 350(D) complete with</p> <ul style="list-style-type: none"> • Earthing • Trunking • DIN Rail • Pre punched chassis plate 	0574602

Item	Module type description	SAP number
4	<p>METER MODULE – <u>OLD</u> SURFACE MOUNT 4-WAY complete with:</p> <ul style="list-style-type: none"> • Front plate including - <ul style="list-style-type: none"> • PK2 - 4-way test blocks • Terminals • Trunking • Wiring • Horizontal Back plate including - <ul style="list-style-type: none"> • MCBs 5 or 6A, 5 kA AC • MCBs 5 or 6A, 5 kA DC • Terminals • Trunking • Wiring 	0175685
5	<p>METER MODULE – SURFACE MOUNT 4-WAY complete with:</p> <ul style="list-style-type: none"> • Front plate including - <ul style="list-style-type: none"> • PK2 - 4-way test blocks • Terminals • Trunking • Wiring • Horizontal Back plate including - <ul style="list-style-type: none"> • MCBs 5 or 6A, 5 kA AC • MCBs 5 or 6A, 5 kA DC • Terminals • Trunking • Wiring 	0569918
6	<p>METER MODULE – 19” RACK MOUNT 4-WAY complete with:</p> <ul style="list-style-type: none"> • Front plate including - <ul style="list-style-type: none"> • 19” rack for the fitment of two meters • Essalec connector blocks • PK2 - 4-way test blocks • Terminals • Trunking • Wiring • Back plate including - <ul style="list-style-type: none"> • MCBs 5 or 6A, 5 kA AC • MCBs 5 or 6A, 5 kA DC • Terminals • Trunking • Wiring 	0569920

Item	Module type description	SAP number
7	<p>METER MODULE – SURFACE MOUNT 6-WAY complete with:</p> <ul style="list-style-type: none"> • Front plate including - <ul style="list-style-type: none"> • PK2 - 4- & 6-way test blocks • Terminals • Trunking • Wiring • Horizontal Back plate including - <ul style="list-style-type: none"> • MCBs 5 or 6A, 5 kA AC • MCBs 5 or 6A, 5 kA DC • Terminals • Trunking • Wiring 	<p>0569919</p>
8	<p>METER MODULE – 19” RACK MOUNT 6-WAY complete with:</p> <ul style="list-style-type: none"> • Front plate including - <ul style="list-style-type: none"> • 19” rack for the fitment of two meters • Essallec connector blocks • PK2 - 4- & 6-way test blocks • Terminals • Trunking • Wiring • Back plate including - <ul style="list-style-type: none"> • MCBs 5 or 6A, 5 kA AC • MCBs 5 or 6A, 5 kA DC • Terminals • Trunking • Wiring 	<p>0569921</p>
9	<p>VOLTAGE SELECTION MODULE A complete with:</p> <ul style="list-style-type: none"> • MCBs 5 or 6A, 5 kA AC • MCBs 5 or 6A, 5 kA DC • Phase failure relays • 3-way latching relay • Terminals • Trunking • Wiring 	<p>0175686</p>
10	<p>VOLTAGE SELECTION MODULE B complete with:</p> <ul style="list-style-type: none"> • MCBs 5 or 6A, 5 kA • Chop-over relays • Terminals • Trunking • Wiring 	<p>0175687</p>

Item	Module type description	SAP number
11	VOLTAGE SELECTION MODULE C complete with: <ul style="list-style-type: none"> • MCBs 5 or 6A, 5 kA AC • MCBs 5 or 6A, 5 kA DC • 3-way Latching relays • Terminals • Trunking • Wiring 	0230643
12	VOLTAGE SELECTION MODULE D complete with: <ul style="list-style-type: none"> • MCBs 5 or 6A, 5 kA AC • MCBs 5 or 6A, 5 kA DC • Voltage failure relays • 3-way Latching relays • Terminals • Trunking • Wiring 	0175688
13	INTERPOSING MODULE A complete with: <ul style="list-style-type: none"> • MCBs 5 or 6A, 5 kA DC • Repeat relays 110V u.c. / 24V DC: • Terminals • Trunking • Wiring 	0175671
14	INTERPOSING MODULE B complete with: <ul style="list-style-type: none"> • MCBs 5 or 6A, 5 kA DC • Repeat relays 110V u.c. / 24V DC: • Terminals • Trunking • Wiring 	0183992
15	QUALITY OF SUPPLY MODULE complete with: <ul style="list-style-type: none"> • MCBs 2A, 5 kA AC • MCBs 5 or 6A, 5 kA DC • MCBs 2A, 2.5kA • Terminals • Trunking • Wiring 	0230644
16	MODEM MODULE WITH TRUNKING <ul style="list-style-type: none"> • MCBs 5 or 6A, 5kA DC • Trunking 	0230645
17	PLATE BLANKING 3U	401952
18	PLATE BLANKING 5U	401956
19	PLATE BLANKING 7U	401958

Manufacturers shall tender for all of the metering module types. Manufacturers tendering only for certain of the items will be excluded from the evaluation.

2.1.2 Applicability

This document shall apply throughout Eskom Holdings Limited Distribution Division.

2.2 Normative/informative references

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

2.2.1 Normative

- [1] ISO 9001 Quality Management Systems.
- [2] 240-60725641: Specification for standard (19 inch) equipment cabinets
- [3] 0 52-30614 Metering equipment cabinet back entry substation cabinet
- [4] D-DT-5400 2400(H) X 800(W) X 600(D) swing frame cabinet
- [5] 240-65292589: Standard for substation meter panels: HV/MV indoor
- [6] D-DT-5801 Manufacturing drawings for a wall mount metering substation panel
- [7] D-DT-5804 Manufacturing drawings for metering substation panels and modules
- [8] Technical requirements, questionnaires and deviation schedules (Microsoft Excel files):

Technical requirements for substation metering panels and modules.

2.2.2 Informative

None

2.3 Definitions

2.3.1 General

N/A

2.3.2 Disclosure classification

Controlled disclosure: controlled disclosure to external parties (either enforced by law, or discretionary).

2.4 Abbreviations

N/A

2.5 Roles and responsibilities

This document defines the technical evaluation criteria that will be used by the Eskom technical evaluation team for the evaluation of metering substation panels and modules.

2.6 Process for monitoring

None

2.7 Related/supporting documents

None

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3. Project Timeframes and Deliverables

The technical evaluation will be conducted over two phases as follows:

Phase 1: Mandatory requirements and Product A&B Schedules and Risk and Support

- Duration: 1 month

a) Mandatory

Manufacturers shall be evaluated on the tender returnables for Mandatory requirements as listed in the Excel sheets. Only manufacturers which have passed the mandatory requirements will be evaluated further.

b) Technical schedule A&B & Risk and Support

Manufacturers shall be evaluated on the tender returnables (Technical schedules and Risk and Support). Manufacturers which have passed the technical and quality evaluations will be required to provide prototypes and these will be evaluated during phase 2.

Phase 2: Prototype Evaluation

- Duration: 2 months

Only manufacturers that meet the criteria set aside for Phase 1 will move onto Phase 2 of the technical evaluation.

Manufacturers shall be advised of their qualification for the evaluation where after they will prepare the samples. The samples must be ready for inspection six weeks after notification. The exact date of the evaluation will be decided between Eskom and the manufacturer.

The evaluations shall be conducted at the manufacturer's premises.

Successful tenderers shall be required to provide samples of the following items:

1. Item 5 - METER MODULE – SURFACE MOUNT 4-WAY
2. Item 8 - METER MODULE – 19" RACK MOUNT 6-WAY
3. Item 12 - VOLTAGE SELECTION MODULE D
4. Item 1 – SWING FRAME CABINET (FRONT ENTRY):

The panels and modules shall be evaluated to design specification requirements. The Risk and Support information provided in the tender questionnaire shall also be verified.

4. Tender Returnables (Technical)

Tenderers shall supply the following information:

- 1) Completed general questionnaire as listed in the Excel files for each item
- 2) Completed Mandatory requirements
- 3) Completed technical schedules for all items tendered as listed in the Excel files for each item
- 4) Completed risk and support questionnaire as listed in the Excel files for each item

5. Tender Evaluation (Technical)

The technical tender evaluation will comprise of a detailed technical evaluation whereby the Product A&B schedules and the Risk and Support questionnaires are evaluated and lastly a prototype evaluation.

The overall technical scoring shall be made up of scoring in the various sub-categories during the different phases of the technical evaluation as follows:

Table 2: Technical scoring breakdown

Technical Criteria	Weightings
Phase 1: Product A&B Schedules, Risk and Support	50
Phase 2: Panel and metering module evaluation	50
Total	100

5.1 Phase 1 Evaluation

Phase 1 shall be made up of scoring in two sub-categories and shall be adjudicated a score out of 100 as follows:

Table 3: Phase 1 scoring breakdown

Phase 1 - Technical sub-category	Weightings
Product A&B Schedules	60
Risk and Support	40
Total	100
Minimum threshold for qualification	85

Only manufacturers that meet the minimum threshold of 85% for phase 1 will move onto phase 2 of the technical evaluation. Tenders that do not meet the minimum threshold shall be immediately excluded from further evaluation.

5.1.1 Phase 1 – Technical Sub-Category: Technical requirements - Product A&B Schedules

The Technical requirements (A&B Schedules) use a default weight of 1 for each scored item. Critical items are assigned higher weights. For example, a weight of 10 indicates that the item will count the same as ten items with weight 1. Each item will be assigned a score by the Eskom evaluation team based upon the tendered response and cross-checked with the supporting documents provided and the prototypes in phase 2 of the evaluation.

Table 4: Scoring of items in Technical requirements - Schedules A&B

Criteria	Score
<p>Fully compliant - (Indicated as Y in A&B Schedules)</p> <p>Note: Responses which provided all the required technical information will be scored as fully compliant.</p>	3
<p>Partially compliant - (Indicated as P in A&B Schedules)</p> <p>Note: Responses which provided some of the required technical information, but not all of the required information will be scored as partially compliant.</p>	1
<p>Non-compliant - (Indicated as N in A&B Schedules)</p> <p>Note: Responses which did not meet the technical requirements or where no information was provided will be scored as non-compliant.</p>	0

The score for each item will be multiplied by its weight to obtain the total score. All scores for the Technical requirements - A&B Schedule will be tallied and shall be calculated based on the maximum possible score. This will be recorded as the percentage score.

5.1.2 Phase 1 – Technical Sub-Category: Risk and Support

The Eskom technical team will evaluate the risk and support capability of the manufacturer based on the Risk and Support Questionnaire in the Excel files and deviations schedules. The evaluation of the risk and support of the manufacturer shall be adjudicated a score out of 100 made up of two areas as follows:

Product Risk (60): A score derived for the product risk based on the following areas and weighted as follows:

- Installed base / time that the product has been installed (weight 25)
- Deviations from standards (weight 25)
- Ability to deliver (weight 25)
- Historical performance (weight 25)

Support (40): A score derived for support based on the following areas and weighted as follows:

- Local expertise (weight 40)
- Maintenance support (weight 40)
- Spares holding (weight 20)

5.2 Phase 2 Evaluation

Phase 2 shall be made up of scoring the prototypes against the design requirements and shall be adjudicated a score out of 100 with a minimum threshold for qualification of 85.

The detailed scoring methodologies in each sub-category are defined in the following sections:

5.2.1 Phase 2 – Technical Sub-Category 2: Substation panel and metering modules Evaluation

Prototypes shall be functionally evaluated and tested against the requirements of the respective specifications by the Eskom technical team and allocated a score based on the criteria listed below. The scoring principles applied to the Technical Schedules A&B shall apply as per the following table.

Table 5: Scoring of items in the prototype evaluation

Criteria	Score
<p>Fully compliant - (Indicated as Y in A&B Schedules)</p> <p>Note: Responses which provided all the required technical information will be scored as fully compliant.</p>	3
<p>Partially compliant - (Indicated as P in A&B Schedules)</p> <p>Note: Responses which provided some of the required technical information, but not all of the required information will be scored as partially compliant.</p>	1
<p>Non-compliant - (Indicated as N in A&B Schedules)</p> <p>Note: Responses which did not meet the technical requirements or where no information was provided will be scored as non-compliant.</p>	0

6. Authorization

This document has been seen and accepted by:

Name and surname	Designation
Thomas Jacobs	Senior Manager (Acting): Technology and Engineering
Deon van Rooi	Middle manager: PTM&C

7. Revisions

Date	Rev.	Compiler	Remarks
Nov 2025	5	HPD Groenewald	Removed all references to suppliers – only manufacturers allowed to tender.
Aug 2025	4	HPD Groenewald	Document updated with latest requirements
Nov 2020	3	HPD Groenewald	Document updated with latest requirements
July 2015	2	HPD Groenewald	Document required for the issue of enquiry

8. Development team

The following people were involved in the development of this document:

- Henri Groenewald

9. Acknowledgements

None