

 Eskom	Report	Technology
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Title: TECHNICAL EVALUATION  
CRITERIA FOR MINITURE  
CIRCUIT BREAKERS AND  
MOULDED CASE CIRCUIT  
BREAKERS

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## Content

	Page
1. Introduction .....	3
2. Supporting clauses .....	3
2.1 Scope .....	3
2.1.1 Purpose .....	3
2.1.2 Applicability .....	3
2.2 Normative/informative references .....	3
2.2.1 National document(s) .....	3
2.2.2 Eskom document(s) .....	3
2.2.3 Informative .....	4
2.3 Definitions .....	4
2.3.1 General .....	4
2.3.2 Disclosure classification .....	4
2.4 Abbreviations .....	4
2.5 Roles and responsibilities .....	4
2.6 Process for monitoring .....	4
2.7 Related/supporting documents .....	4
3. Requirements .....	4
3.1 Documentation Evaluation .....	5
3.2 Evaluation at factory .....	5
3.3 Technical Evaluation Gate Keepers for MCBs and MCCBs: Mandatory Technical Evaluation Requirements .....	6
3.3.1 Level 2 score .....	8
3.4 Conclusion .....	9
4. Authorization .....	9
5. Revisions .....	9
6. Development team .....	9
7. Acknowledgements .....	9

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## 1. Introduction

This document has been developed to set the standard technical evaluation criteria to be used when evaluating the tender submissions. This covers the technical evaluation on the MCBs and MCCBs to be used for Eskom. It has clauses developed to address various aspects required to perform the technical evaluation. This is developed based on the Eskom standard or Buyer's guide.

This document contains both the evaluation criteria used for the documentation and samples supplied. The document also contains technical schedules to be completed and submitted.

## 2. Supporting clauses

### 2.1 Scope

The document covers the criteria for the evaluation of the MCBs and MCCBs Eskom Holdings SOC (Ltd).

#### 2.1.1 Purpose

The document addresses the standard documented technical evaluation criteria to be used when evaluating the tender submissions for the MCBs and MCCBs in line with the Eskom Holdings SOC (Ltd) requirements and it is applicable to all the technical evaluations for the related tender submissions.

#### 2.1.2 Applicability

This document shall apply for Eskom Holdings Limited, Distribution division wherein Eskom has a controlling interest.

## 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 National document(s)

- [1] SANS 556-1: Low voltage switchgear
- [2] VC 8036: Compulsory specification for circuit breakers

### 2.2.2 Eskom document(s)

- [3] D-DT 3083: CB, MINI 50A 230V 5kA POLE TOP BOX D3083.
- [4] D-DT 3034: CB 40A 230V 5kA 1P D3034

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### 2.2.3 Informative

- [5] 32-9: Definition of Eskom documents.
- [6] 32-644: Eskom documentation management standard.
- [7] 474-65: Operating manual of the Steering Committee of Technologies (SCOT).

## 2.3 Definitions

### 2.3.1 General

Definition	Description
Eskom Evaluating Representative(s)	The person(s) appointed by Eskom to perform the evaluation of tender submission(s) in line with the Eskom requirements.

### 2.3.2 Disclosure classification

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

## 2.4 Abbreviations

Abbreviation	Description
MCB	Miniature Circuit Breaker
MCCB	Moulded Case Circuit Breaker
LV	Low Voltage

## 2.5 Roles and responsibilities

All Eskom employees and/or appointed bodies involved in the procurement of MCBs and MCCBs shall ensure that the project deliverable meets the requirements of these technical evaluation criteria. Any deviation from these requirements shall constitute non-conformance, unless it was in advance agreed to by a delegated Specialist and is based on sound engineering judgement.

All suppliers of the MCBs and MCCBs to Eskom must be conversant with the requirements of this standard, and shall comply with the requirements. No deviations will be accepted and suppliers shall ensure that they obtain clarity where required and obtain all supporting information or documents necessary to comply with this document.

## 2.6 Process for monitoring

Acceptance shall be based on fully compliant submission of documents.

## 2.7 Related/supporting documents

Refer to clause/ section 2.2.

## 3. Requirements

This document contains the technical evaluation criteria of MCBs and MCCBs. The evaluation is for the submitted documentation. Samples maybe requested for inspection before tender award.

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### 3.1 Documentation Evaluation

The documentation evaluation exercise is performed by the Eskom evaluating representatives. This initial part of the evaluation starts when submissions are opened and assessed for the first time. The submitted documents will be evaluated against the evaluation criteria as stated in clause 3.3 below.

During the documentation evaluation; fully compliant in accordance with D-DT 3083 and D-DT 3034 will be required. Failure to submit and comply with the tests requirements specified in these documents will lead to immediate disqualification.

The documentation evaluations are meant for establishing if all the key tender deliverables are met. The documentation evaluation will consist of two sections: mandatory technical evaluation requirements deliverables (Level 1: mandatory gate-keeper), and scoring phase (level 2: submission requirements). The Level 1 mandatory gate-keeper constitute a total of 80% of the total technical evaluation score, while the level 2 submission requirements constitute 20% of the technical evaluation score.

The tender submission must meet all the level 1 gate-keeper (mandatory technical evaluation requirements). Failure to meet all the mandatory requirements will result to a score of 0% of the 80% (listed above); thus a tenderer can only obtain 0% or 80%, and nothing in between for level 1 mandatory gate-keeper requirements.

Technical evaluation score = 80% (level 1 mandatory gate-keeper requirements) + 20% (level 2 submission requirement).

Once a tenderer gets a "No" at Level 1 it becomes an automatically disqualification and when it is all "Yes" then a full 80% is achieved and then proceed to a Level 2 scoring.

Supplier may tender for both Pole top box MCBs and Underground breakers (MCBs and MCCBs) or either. The evaluation will be done on the items tendered or offered.

**Note:** Only a 100% compliant score achieved at level 1 mandatory gate-keeper requirements equates to full compliance. Any score below 100% of level 1 mandatory gatekeeper requirements will result to immediate disqualification.

### 3.2 Evaluation at factory

There will be no factory evaluation for this tender. Inspection of items shall be made in the warehouses of successful tenderers

**3.3 Technical Evaluation Gate Keepers for MCBs and MCCBs: Mandatory Technical Evaluation Requirements**

Pole top box MCBs		
Level 1 Gatekeeper		
TASK / MEASURE		
Criteria	Standard/clause	Acceptance: Yes/ No
Is a full list as well as complete English copies of type test reports as per the specification requirements submitted?	N/A	
Are completed technical schedules submitted in the provided excel format?	Technical Schedules provided	
Proof of compliance with VC 8036 (a copy of the type test certificates from an independent accredited test authority are required	N/A	
Tripping curves in electronic format – Microsoft Excel. The upper and lower limits of the breaker's tripping characteristic are to be provided. Note that since the compulsory specification, VC 8036, references SANS 60947-2, the MCB should conform to the SANS 60947-2 gates. This means that the conventional non-tripping current should be 1.05 times the rated current of the MCB and the conventional tripping current of the MCB should be 1.3 times the rated current of the MCB. The conventional tripping time is one hour for the 50A and 63A MCBs and two hours for the 120/ 125 A MCB.	N/A	
A statement that the circuit breaker supplied complies with each requirement stipulated in the buyer's guide drawing referenced (D-DT-3083). There shall be a separate clause in the statement of compliance for each stipulation in the buyer's guide drawing. The statement of compliance shall be on the supplier's letterhead and shall be signed.	D-DT 3083	
As an alternative to the instantaneous trip requirements in the buyer's guide the supplier may choose to provide test results that prove that the breakers supplied will discriminate with a 20A standard curve circuit breaker for a prospective fault current of up to 1000 A	D-DT 3083	
Copy of SABS permit to apply SABS mark or a copy of RCC.	N/A	

**Note: Any one "NO" on the above scores the supplier will be disqualified.**

Underground MCBs and MCCBs (D-DT 3034)		
Level 1 Gatekeeper		
TASK / MEASURE		
Criteria	Standard/clause	Acceptance: Yes/ No
Is a full list as well as complete English copies of type test reports as per the specification requirements submitted?	N/A	
Are completed technical schedules submitted in the provided excel format?	Technical Schedules provided	
Proof of compliance with VC 8036 (a copy of the type test certificates from an independent accredited test authority are required (MCBs D-DT 3034)	N/A	
As an alternative to the instantaneous trip requirements in the buyer's guide the supplier may choose to provide test results that prove that the breakers supplied will discriminate with a 20A standard curve circuit breaker for a prospective fault current of up to 1000 A (40A MCB)	D-DT 3083	
Proof of compliance with SANS 556-1 or SANS 60947-6	D-DT 3034	
Tripping curves in electronic format provided (where applicable).	D-DT 3034	
Copy of SABS permit to apply SABS mark or a copy of RCC.	N/A	

Note: Any one "NO" on the above scores the supplier will be disqualified

3.3.1 Level 2 score

MCBs and MCCBs			
Level 2 scoring/rating - (only submission that passes Level 1 gatekeepers)			
testing and type testing Weight: 10			
Criteria	Clause	Weight	Score
Were tests performed in the last 10 years? Test reports submitted	SANS docs	5	
Are all tests reports/certificate or requested documents submitted?	Technical Criteria	5	
<ul style="list-style-type: none"> <li>For Type testing performed within the last 10 Years supplier gets 100% and loses 20 % for each additional year.</li> </ul>		<b>Total</b>	<b>/8</b>
Technical schedules Weight: 5 Total			
Criteria	Clause	Weight	Score
Correctness of completion i.e. no "TBA", "Comply", "Noted", "supplied later" ("Noted" acceptable only when Eskom informs), completed technical schedule	Technical schedules provided		
<ul style="list-style-type: none"> <li>Penalty is applicable for each deviation from meeting Eskom specification and deviations.</li> </ul>		<b>Total</b>	<b>/5</b>
Packaging Weight: 5			
Criteria	Clause	Weight	Score
Is packaging explain thoroughly by the tenderer	N/A	5	
No information given score will be zero.		<b>Total</b>	<b>/5</b>

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### 3.4 Conclusion

This report is effective to specify the technical evaluation criteria for MCBs and MCCBs in Eskom. Suppliers are to complete technical schedule aligned supplied as part of the tender returnable.

The technical evaluation criteria for this project are specified in clause 3.3 of this document.

### 4. Authorization

This document has been seen and accepted by:

Name and surname	Designation
Bheki Ntshangase	Senior Manager HV Plant COE
Jutas Maudu	Senior Engineer

### 5. Revisions

Date	Rev.	Compiler	Remarks
March 2017	1	Jutas Maudu	New document.

### 6. Development team

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

- Jutas Maudu: Senior Engineer HV Plant, Group Technology
- Saini Sande: SI

### 7. Acknowledgements

None