

ANNEXURE A

PRODUCT TECHNICAL SPECIFICATION

SPECIFICATIONS

No	Requirement	Detailed description
1.	The equipment must be designed for local conditions and safe, in accordance with requirements, of OHS.	The UPS must comply with the following specific features: • The unit must be rated at 60kVA output power. • Voltage must be rated at 400V (-25%, +20% range) three phase and a frequency of 50Hz (±5%). • Power factor must be at least 90% or more • Total harmonic distortion (THD) less than 3% • Must have more than 90% efficiency. • The output voltage regulation must be less than 3% • Must be capable to take load up to 150% for up to 1 minute duration. • Must have zero (0 ms) transfer time, i.e. instantaneous switching. • Must be fitted with an isolation transformer. • Must be suitable for all types of loads. • Be fitted with a maintenance by-pass switch. • Must be designed to be environmentally friendly by incorporating energy efficiency measures. • Must be compact for economic space use
2.	Batteries	• Preferably Li batteries, or maintenance free lead-acid type • Battery output voltage 380 – 400V • Sized to provide 60kVA power or match the size of the UPS • Have a back-up capability of 20 – 30 minutes
3.	Color of the unit	Preferably black or grey scratch resistant coating for harsh environments.
4.	Environment	• To be designed to operate between temperatures of 0 – 40 degrees and be able to handle

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No	Requirement	Detailed description
		environments with temperature between -25 and 75 degrees. • Be able to handle up to 90% relative humidity.
5.	Communication	• Fitted with RS232 or RS485 ports • Be enabled for remote/electronic monitoring (e.g. via an App.)
	Safety	• Must comply with IEC/EN 62040-1/2 safety standards. • Have a minimum IP rating of 20 to ensure it is touch proof.

INSTALLATION

1. The supplier will install and commission the equipment in line with requirements from the SABS
2. SABS Facilities will make provision for space and mounting where required
3. Batteries need to be kept in an airconditioned room, which will be provided for by SABS Facilities

COMMISSIONING

1. The supplier is responsible for full commissioning of the unit

Note: During commissioning the supplier shall demonstrate all material, design, product, or service functionality. This will be compared to the requirements described in this product specification. Compliance will be confirmed by both SABS and the supplier signing off against each requirement.

MANDATORY REQUIREMENTS

1EP and a **qualified electrician** as an installer.

TRAINING

Specify the training requirements. (To include number of employees and what training modules i.e. operation of equipment, maintenance, etc.)

Training/demonstration to be arranged for Facilities electricians to equip them with ability to conduct condition monitoring.

DOCUMENTATION

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| 1. Instruction manual for the entire unit, electrical compliance certificate, software and safety data sheet for batteries. |
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Note: SABS will evaluate each document. SABS can decide at its own discretion if any document is not sufficient. In such a case the supplier will be responsible to update the document to SABS satisfaction.

SERVICES TO BE SUPPLIED BY SABS

The supplier is responsible for notifying SABS of any service that might be required for the installation, commissioning, and operation of the equipment. This notification must be submitted together with the original quotation.

The SABS Facilities will make provision for a dedicated supply breaker at the feeding distribution board to enable connection of the UPS.

CONDITIONS

- Equipment is to be stored inside an airconditioned environment.

SELECTION CRITERIA

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| <ul style="list-style-type: none">• Pricing and the acceptable quality and design criteria• Proven track record of similar projects• After-sales service support |
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Note: General selection criteria

SABS will select the system most suited to the needs and conditions of SABS Facilities.

All requirements of this document must be met as a minimum requirement.

Proposals will further be rated based on:

- Additional features that will ease operating the unit.
- Mechanical soundness of full system.
- Quality level of components
- Environmental friendliness (energy performance)
- Compactness of the unit
- Perceived overall design of the system.

