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# ZIMBABWE ELECTRICITY TRANSMISSION & DISTRIBUTION COMPANY

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### *NORTHERN REGION*

ZETDC NORTHERN REGION SPECIFICATION

SPECIFICATION FOR

**IP 65 LED FLOODED OUTDOOR LIGHTS**

**FEB 2019**

**Table of Contents**

1. SCOPE 3

2. DETERMINATION OF RESPONSIVENESS 3

3. PARTICULARS OF THE ELECTRICAL SYSTEM 4

**4. PARTICULARS OF THE ENVIRONMENT** **4**

Ambient Temperature **5**

Altitude **5**

Humidity **5**

5. LANGUAGE, UNITS AND STANDARDS 5

6. DEFINITIONS 5

7. DESIGN 6

8 TECHNICAL GUARANTEE SCHEDULE 7

**ZETDC NORTHERN REGION SPECIFICATION**

**IP 65 LED OUTDOOR FLOOD LIGHTS**

**1 SCOPE**

This specification covers the supply and delivery of **IP 65 Led outdoor flood lights**. For the purposes of this specification**, Led outdoor flood lights** are lights used for security and general lighting in industrial applications.

The Supplier shall state name, place and country of manufacture of each **Led outdoor flood light** supplied. The Supplier shall state whether or not the **Led outdoor flood lights** are produced under license, in which case licence holders name shall be stated.

Tenders shall include a complete statement of compliance with this specification and the Technical Guarantee Schedule shall be completed. For every clause in this specification the Tenderer shall state compliance or non-compliance and shall elaborate where appropriate.

Spares as recommended by the manufacturer should be included in the scope of supply.

**2. DETERMINATION OF RESPONSIVENESS**

Prior to the detailed evaluation of Tenders, ZETDC will determine whether each Tender is substantially responsive to the requirements of the Tender Document.

For the purpose of this clause, a substantially responsive Tender is one which will conform to all the terms, conditions and specifications of the Tender Document without material deviations or reservations. A material deviation or reservation is one which affects in a substantial way the price, scope, quality, completion, timing or administration of the works undertaken by the Tenderer under the Contract, or which limits in a substantial way, inconsistent with the Tender Document, the Zimbabwe Electricity Transmission and Distribution Company’s rights or the Tenderer’s obligations under the Contract and the rectification of which would affect unfairly the competitive position of other Tenders who have presented substantially responsive Tenders at reasonable price.

A Tender determined to be substantially non-responsive will be rejected by the Authority and may not subsequently be made responsive by the Tenderer by correction of the non-conformity.

The Zimbabwe Electricity Supply Authority may accept any non-material deviation or reservation provided that the acceptance thereof does not prejudice or affect the relative ranking order of any tender in the evaluation of Tenders.

**3. PARTICULARS OF THE ELECTRICAL SYSTEM**

Notwithstanding the system in which the **Led outdoor flood lights** will operate

Three phase overhead-line construction and underground system. The maximum earth fault factor on the network is 1.5.

1. Operated at 50 Hz, with approximately sinusoidal wave form.
2. The highest system voltage does not normally exceed the nominal system voltage by more than 10%. The nominal system voltages are 11 and 33kv.
3. The system frequency variation does not exceed plus or minus 2.5% from 50 Hz.

**4. PARTICULARS OF THE ENVIRONMENT**

The **Led outdoor flood lights** will operate within the tropics and will be subjected to sudden ambient air temperature changes of the order of 10 °C per hour, occurring at the onset of rain, but the barometric pressure at any given place does not vary by more than approximately 10mm Mercury. Frequent and severe lightning storms occur during summer months, with isoceraunic levels varying between 50 and 100 thunderstorm days per annum.

The **Led outdoor flood light** shall be capable of operating under the following environmental conditions.

a) **Ambient temperatures:**

(i) Maximum: 40 °C

(ii) Minimum: minus 10 °C

(iii) Maximum daily average: 35 °C

b) **Altitude:**

Maximum altitude of 1 500 metres above sea level. The design shall allow for reduced cooling effect due to high altitude.

c) **Humidity:**

Humidity of 13mg per cubic metre absolute and 65% relative before storms with vapour pressure of 17mmHg.

*It is the supplier’s responsibility to make himself familiar with any other climatic and physical conditions pertaining in Zimbabwe and to supply earth sets which meet all such conditions.*

**5. LANGUAGE, UNITS AND STANDARDS**

All tenders, correspondence, description upon drawings, illustrations or instructions shall be in unambiguous English Language. SI Units of measurements shall be used throughout.

Except where modified by ZETDC's specification, IEC 60529 (or equivalent) shall apply throughout. In the case of conflict between the above stated standards and this specification, the ruling of this specification shall prevail.

**6. DEFINITIONS**

Throughout this document, the following terms shall be used in the manner defined below:

***May -*** indicates the existence of an option

***Shall -*** indicates that a statement is mandatory

***Should* -** indicates a recommendation

**7. DESIGN FEATURES**

**7.1 Details**

* They should be rated 100w Led light
* Ingress Protection (IP rated) IP 65
* Weatherproof
* Minimum working time of 20 000 hours.
* Operating power factor of between 0.90 – 0.98
* Colour temperature should be pure white.
* Item type should be floodlights.
* Input Voltage of 85- 265v AC, 50Hz
* Beam angle of 120 degrees.
* Minimum warranty period of 1 year.
* Metal bracket for easy installation.

**7.8 Warranty**

A minimum one-year warranty shall be provided on all manufacturers’ equipment.

**8 TECHNICAL GUARANTEE SCHEDULE**

**LED FLOOD LIGHTS**

Please complete this schedule by ticking where requirement is met or stating the actual tendered LED FLOOD LIGHTS specification in the column labelled Actual

|  |  |  |  |
| --- | --- | --- | --- |
| **Particulars** | **Unit** | **Requirement** | **Actual** |
| Power | Watts | 100 watts |  |
| IP rating | - | IP 65 |  |
| Color Temperature |  | Pure white light |  |
| Beam angle | deg | 120deg |  |
| Mounting Bracket | - | Provided |  |
| Number of Lights |  | 100 |  |
| lumens | lms | 10000 or above |  |