**Terms of Reference**

The goods to be purchased include 110 units of batteries and 1 unit of rectifier the technical parameters of which must meet the specification presented below:

**Technical Specification for batteries:**

**Quantity: 110 PCS - (2 VDC/530Ah)**

There will be set of battery cells:

|  |  |
| --- | --- |
| **First Cell Number** | 108 (220 VDC) (+for reserve 2 pcs) |
| **Din Type** | **530 GEL Battery** |
| **Electrolyte:** | immobilized in gel structure |
| **Nominal Voltage** | 2V |

**Batteries must be from EU**

**Technical Specification for Rectifier: Rectifier (for battery 530 Ah**

**Application and configuration: Rectifier system must be with internal current measurement and counter-cell**

**It must be having, undevoltage, overvoltage and lose of phase protection in 380 VAC**

|  |  |  |
| --- | --- | --- |
| 1. Electrical characteristic | | |
| Supply voltage | V | 3X380+10%,-15% |
| Rated Frequency | Hz | 50±10% |
| Rated Output voltage, Unom | V | 220 |
| Output voltage tolerance | % | +/-0.6 |
| Voltage ripple | % | +/-0.5 |
| Range of thermal correction | oC | -10 to+45 |
| Rated output current (In) | A | 300 |
| Output current stability | % | +/-1 |
| Output current ripple | % | +/-0.5 |
| Battery charging profile |  | IU acc.to DIN 41773 |
| Float charge voltage | V/cell | 2-2.25 |
| Boost charge | V/cell | 2-2.35 |
| Efficiency | % | >92 |
| 2. Case | | |
| Protection class | IP | 20 |
| Dimension HxWxD | mm | 2000x600x600 |
| Mounting |  | Standing |
| Cable grooming |  | Below |
| Color | RAL | 7035 |
| 3. ambient temperature | | |
| Ambient temperature | oC | 0 - +40 |
| Storage temperature | oC | -15 - +65 |
| Humidity | % | Max.85% |
| Interface |  | RS-485 |
| Protocol |  | MODBUS |
| Microprocessor sequencer |  | SAN 4-15, SAN-5, SAN-6 |

**The rectifier will work for the battery:**

Battery Type: Gel (2 VDC/530 Ah)

The goods to be purchased must be provided in Zhinvali HPP.

The installation of the purchased products will be carried out by the purchaser, however, the bidder has the right to submit a proposal along with the installation work.

The purchased goods shall have **two years** warranty.

In case the purchased goods will be installed by the purchaser, the supplier shall attend the installation process based on the prior notice received from the purchaser, as well as carry out detailed instructions in order to observe the correct operating rules.