

## **NOTICE INVITING BUDGETORY OFFERS**

Name of Work	<b>NAME OF WORK :</b> “ Supply, Installation, testing & commissioning of 1 KVA & 2 KVA online UPS for CCTV cameras and other connected devices at various locations in the operational area of the Port.”
Date of submission of budgetary quotation	On or Before <b>09.05.2023 at 11:00 Hrs.</b>
Address for communication:	Executive Engineer (E-HL), Mechanical Engineering Department, Mormugao Port Authority, Electrical Section, 1st Floor, Admin. Building, Headland sada, Vasco-de-Gama Goa - 403804
Contact Details	Phone : (0832) 2594241, 2594215 Email : <a href="mailto:xene.mgpt@gmail.com">xene.mgpt@gmail.com</a>
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**EXECUTIVE ENGINEER (E-HL)  
MORMUGAO PORT AUTHORITY**

**MORMUGAO PORT AUTHORITY**

**ENGINEERING MECHANICAL DEPARTMENT**

CME/XEN(E-HL)/M-22/

04.2023

**Sub:** “Supply, Installation, testing & commissioning of 2 KVA & 1 KVA online UPS for CCTV cameras and other connected devices at various locations in the operational area of the Port.”

**Ref:** Budgetary Quotation No. CME/XEN(E-HL)/M-22/2023/W1

Mormugao Port Authority intends to carry out the work of “Supply, Installation, testing & commissioning of 1 KVA & 2 KVA online UPS for CCTV cameras and other connected devices at various locations in the operational area of the Port.”. As such, kindly furnish the budgetary quotation for the same (Scope of work enclosed as Schedule - 'A' and Price Schedule enclosed as Schedule - 'A1').

Your budgetary quotation should reach to this office on or before 09.05.2023.

Thanking you,

Yours sincerely,

**EXECUTIVE ENGINEER (E-HL)**

### **Technical specification**

#### **1.0. General :**

Mormugao Port Authority intends to take up the work of installing new 1 KVA & 2 KVA online UPS for CCTV cameras and other connected devices at various locations in the operational Areas of the Mormugao Port Authority, Goa.

#### **2.0. SCOPE OF WORK:**

The work involves supply, installation, testing and commissioning of 2 KVA & 1 KVA online UPS along with outdoor enclosures. The entire system will be under guarantee period for a period of 01 years after handing over the system to Port.

- i) Supply, Installation, testing, commissioning and handing over of 5 Nos. 2 KVA online UPS.
- ii) Supply, Installation, testing, commissioning and handing over of 15 Nos. 1 KVA online UPS.
- iii) Supply, installation, testing and commissioning of Outdoor Stainless Steel Enclosure panel for UPS
- iv) Supply, Installation, and handing over of 3 nos. of 6U network rack.

The bidder shall inspect the site if necessary and assess the work involved in detail. The bidder shall take into account any accessories, modifications or any other works not specifically indicated in the tender but otherwise essential for overall completion of the work before submitting his offer and the same shall be deemed to have been included in the scope of supply.

#### **2.2 STANDARDS and CODES**

The design, manufacturing, supply, installation, testing and Commissioning of the outdoor panel and accessories covered in this specifications shall comply with relevant IS standards with latest amendments.

The online UPS shall comply with BUREAU OF INDIAN STANDARDS (BIS) and shall be UL/CE and FCC Certified

## 2.3 Detailed Technical Specifications:-

### 2.3.1 Supply of 1 KVA & 2 KVA Online UPS

The supply of 1KVA & 2 KVA online UPS includes all materials required for the installation and commissioning at port area to provide stable power supply. The 1KVA & 2 KVA online UPS shall comply with following specifications.

CAPACITY	1KVA/900W	2KVA/1800W
<b>INPUT</b>		
VOLTAGE	110V AC+/-5% -300V AC +/-5%	
FREQUENCY	40Hz -70Hz	
PHASE	Single phase with ground	
<b>OUTPUT</b>		
VOLTAGE	200/208/220/230/240VAC	
AC VOLTAGE REG.	+/-1%	
FREQUENCY	50Hz+/-0.25Hz or 60Hz +/-0.3Hz	
CURRENT CREST RATIO	3:1	
HARMONIC DISTORTION	≤2% THD(Linear Load): 4%THD(Non-Linear Load)	
OVERLOAD CAPABILITY	105%-110%: UPS shuts down after 10 minutes at battery mode or transfer to bypass when the utility is normal 110%-130%:UPS shuts down after 1 minute at battery mode or transfer to bypass when the utility is normal >130%: UPS shuts down after 3 seconds at battery mode or transfer to bypass when the utility is normal	
<b>TRANSFER TIME</b>		
AC MODE TO BATTERY	Zero	
INVERTER TO BYEPASS	<4ms(typical 2.5ms)	
<b>WAVE FORM</b>	Pure sine wave	
<b>EFFICIENCY</b>	85%-92%	
<b>BATTERY</b>		
DC VOLTAGE	36V DC/IB(3X7AH inside)	72V DC/IB(6X7AH inside)

TYPE & NUMBERS	SMF
CHARGE CURRENT	1.5A-9.5A
CHARGING CURRENT	2.0A/4.0A/6.0A/8.0A(Maximum) selectable via LCD setting
<b>ENVIRONMENT</b>	
OPERATING HUMIDITY	20-95% rh@0-40Degree Centigrade(Non Condensing)
NOISE LEVEL	Less than 50DbA @1meter
<b>INDICATION</b>	LCD
<b>MANAGEMENT</b>	
SMART RS-232 OR USB	Supports Windows 2000/2003/XP/Vista/2008/7/8, Linux, Unix, MAC
OPTIONAL SNMP	Power Management from SNMP Manager and web Browser

### 2.3.2 a) Supply of Outdoor Stainless Steel Enclosure panel

Design, Manufacture, Supply, Installation, testing and commissioning of enclosure panel Outdoor Pedestal type with top Canopy. It shall be IP 65 compliant, dust, damp, vermin and weather proof fabricated from SS-316 grade Sheet of 2 mm thick and shall be fabricated with SS-316 angle & flat of suitable size as directed. It shall be provided with double shutter/door, handle with lock & key system (pad lock – 5 levers with keys). The drawing of the Panels shall be got approved from Engineer-in-Charge prior to manufacture. The enclosure shall be of dimensions (Minimum (500mmX400mmx300mm) for installation of proposed 1KVA UPS for easy maintenance and shall be provided with following Items.

- i) 2 Pole MCB, 20A x 415 Volt, 25 KA, 50 Hz - 1No.(As Incomer)
- ii) 15A Switch and Socket box - 1 set.
- iii) Panel shall be provided with proper ventilation louvers so as to dissipate the heat generated from the UPS.

All these components shall be mounted in the enclosure by means of suitable cadmium passivated hardware. The enclosure shall be complete in all respects with cable glands, lugs for incoming and outgoing cables including interconnection with PVC insulated cable single core, standard copper conductor of 650/1100V grade.

The incoming cable shall be terminated on MCB and the outgoing supply from the MCB shall be connected to 15A switch and Socket box so as to connect proposed

1KVA UPS input power supply. From 1 KVA UPS the outgoing shall be connected to the CCTV power cable.

The enclosure panel shall be provided with 2 Nos. SS terminals for earthing.

The relevant test certificate in support of SS Grade 316 shall be supplied along with drawing for approval of MPA.

**b) Erection of Outdoor Stainless Steel Enclosure Panel**

Erection, testing and commissioning of supplied enclosure panel on cement concrete platform duly plastered with tapped collar of suitable size having height of 600 mm. above ground and shall be grouted below ground level by providing reinforced foundation of suitable design.

Civil work with all construction material for making foundation suitable for erection of Panel – including cost of necessary excavation in hard/soft soil up to a depth of 40CM from existing ground level, compacting, ramming, making soil bed hard followed by providing and laying of ready mix RCC of ratio 1:2:4 grade M20 with embedded bolts anchored at bottom as suitable for withstanding dead load of Panel as well as dynamic load due to winds. The foundation shall include the cost of suitable reinforcement by steel bars as required, curing, plastering and finishing floor level in good manner as directed by Engineer-in-Charge, including cost of carting away of surplus excavated material/debris etc. The foundation shall be made as per relevant IS1904.

The Contractor shall submit the design for making foundation for approval, before executing the work.

**c) Testing and Commissioning of Outdoor Stainless Steel Enclosure Panel**

After installation of enclosure panel, all connections shall be completed and terminated with complete accessories viz. cable, SS nuts, bolts and washers (cable required will be supplied by the Port), checked to ensure safety. Any arrangement required for laying of cable in the existing RCC structure/set up such as related to excavating trench / concrete cutting, etc shall be carried out by the contractor.

The work shall be carried out by the contractor with all materials and labours, as directed by Engineer-in-Charge (EIC).

The installation shall be guaranteed for 12 months from the date of acceptance and free maintenance shall be done during the guarantee period.

**2.3.3 Supply and installation of 6U wall mounted network rack**

Supply and installation of 6U wall mounted network rack, complete with power strip, one fan, front glass door & rear perforated MS body, removable sides and

cable openings with lock and key arrangement. The rack Dimensions shall be Minimum (355x600x440 mm) (H x W x D).

#### **2.3.4 Miscellaneous Items**

Misc items, like saddles, fitting materials, , screws, nuts, fasteners, jointers, sealants, accessories, etc as required to run the system included in quote.

#### **2.4 SYSTEM OVERVIEW/ GENERAL FEATURES:**

- a) The online UPS shall be capable to function smoothly on all 365 days during under & over severe voltage fluctuations and frequent power outages.
- b) CCTV cameras and other equipment's should work on its UPS Power back up mode automatically in case of Power failure.
- c) All equipment's should be heavy duty and meant for Port's intended applications.
- d) All required equipment's mentioned/not-mentioned but required for smooth running of system is to be in the scope of the Contractor.

#### **2.5 INSTALLATION & COMMISSIONING**

- a) The Contractor shall carry out the work as per the specified BoQ.
- b) The Contractor shall commence and complete the work within 30 days from date of issue of LOA to the satisfaction of the Chief Mechanical Engineer or his representative. Necessary scaffolding and safety measures for entire erection shall be done & ensured by the contractor.
- c) The work should be carried out with utmost safety precaution and with minimum possible disruption of existing camera feeds.
- d) The installation of the various equipment's shall be carried out as per the site condition and as directed by the EIC. The Contractor shall carry out the works strictly in co-ordination with the on-going AMC Contractor and as per the time slots/days allotted & agreed by the AMC Contractor.
- e) Technical brochures/ data sheets of online UPS should be submitted with the tender specifically for models the tenderer intends to supply.  
**Note:** Change in the location of UPS will be at the discretion of the Engineer.
- f) Power and water will be provided by the Port on free of cost.

#### **2.6 TESTS**

Necessary tests certificates as per relevant CE or UL certificate of the equipment's etc shall be submitted in technical bid for models quoted for online UPS, to the satisfaction of the Chief Mechanical Engineer or his representative.

## **2.7 GUARANTEE**

The items which are supplied & installed shall be guaranteed for 12 months from the date of acceptance and free maintenance shall be done during the guarantee period.

## **2.8 MAINTENANCE DURING GUARANTEE PERIOD.**

1. The Contractor shall provide one-year guarantee for the equipment's installed. The maintenance during guarantee period shall include replacement of all defective components of the system including the UPS and other accessories.
2. During the one year guarantee period, the Port shall not bear any charges incurred by the contractor for deputing the skilled manpower or material to carry out any form of repairs.
3. The Contractor shall arrange his own tools and tackles including ladder & logistics for carrying out the works during the installation and guarantee period.
4. During guarantee period if any of the equipment supplied by the Contractor are found defective /Damaged, same has to be replaced by the Contractor at their cost. Therefore Bidders shall assess the environmental conditions, weather etc in respect to the supply of quality of equipment's and workman ship so as to ensure continual stability in running of system successfully.

## **2.4. PENALTY CLAUSE**

The fault should be attended within 24 hrs from receipt of complaint from Port, failing which an amount of Rs. 500/- per day will be deducted from security deposit or any other monies available with Port as penalty until the fault is restored & system is recommissioned.

## **2.5. Other Conditions:**

- 1) The Contractor is required to offer rates as per Port's format "Schedule-A1"
- 2) Technical and Commercial condition shall be clearly furnished in the quotation. The offer shall indicate the make and model of the equipment and shall accompany with the relevant technical leaflet.
- 3) The rate should be quoted as per unit.
- 4) The rate quoted should be maintained till the completion of supply and no upward price revision will be agreed to.
- 5) GATE PASS: Necessary Entry Permits shall be obtained by the Contractor at their own cost with the school Authorities.



- 6) The Contractor must comply with the Safety aspects as governed by the relevant edition of Indian Electricity Rules and Industrial Safety, the contractor shall be responsible for overall safety.
- 7) The Tenderer shall inspect the site and assess the requirement before furnishing their offered.

Schedule - 'A1'

**PRICE SCHEDULE (BILL OF QUANTITIES)**

Sr No	Description	HSN/ SAC Code	Unit	Qty	Rate (Rs)	Amount (Rs)
1	Supply, Installation, Testing & Commissioning of 1 KVA online UPS as per technical specification at Schedule-'A'					
a)	Supply of 1 KVA online UPS		Nos.	15		
b)	Installation, Testing & commissioning		Nos.	15		
2	Supply, Installation, Testing & Commissioning of 2 KVA online UPS as per technical specification at Schedule-'A'					
a)	Supply of 2 KVA online UPS		Nos.	5		
b)	Installation, Testing & commissioning		Nos.	5		
3	Supply& installation of 6U rack as per technical specification at Schedule-'A'					
a)	Supply of 6U rack		Nos.	3		
b)	Installation of 6U rack		Nos.	3		
4.	Design, Supply, Installation, Testing and Commissioning of enclosure panel for Outdoor type, dust, and vermin weather proof fabricated from SS316 grade sheet of 2mm thick, suitable angled and flat etc. and as per Technical Specification at Schedule-'A'					

a)	Supply of enclosure panel		No	10		
b)	Pedestal for Erection of Panel as detailed in the scope of work as per technical specification at schedule – 'A'.		LS	10		
c)	Installation, testing and commissioning		Nos.	10		
	TOTAL AMOUNT(in Fig.) (Exclusive of GST)					

Total (In Words)

Rupees \_\_\_\_\_ only.

**Date:**

**Signature:**

**Place:**

**Name:**

**Address:**

**Office Seal of firm**

**Note:** The rates quoted shall be inclusive of transportation, lodging and boarding, out-of-pocket expenses (OPE) on conveyance, communication expenses, 3rd party expenses and subsistence expenses on site but exclusive of GST. Applicable GST shall be paid extra as applicable.