

## QUOTATION NOTICE

Sealed quotations are invited from the eligible firms for the supply and Installation of **Automatic Weather Station** in the Department of Environmental Sciences, University of Kerala, Kariavattom Campus, Thiruvananthapuram.

### Tender specification

#### **AUTOMATIC WEATHER STATION**

##### **1. DATALOGGER**

- Minimum Scan Rate of 10Hz
- Analog Inputs : 6 , Pulse Inputs : 2 , SDI Inputs : 2
- Switched Excitation Voltage Channels : 2
- Communication Ports : RS232 , USB
- Input Voltage Range : -100 mV to +2500 mV
- Analog / Digital Bits : 24 Bit
- Analog Resolution : 0.23 Micro Voltage
- Idle Current Drain, Average 1.5 mA (@ 12 Vdc)
- Active Current Drain, Average 5 mA (@ 12 Vdc for 1 Hz )
- Inbuilt Data storage for Two years with 1 Minute duration
- Temperature Range : -40 to 70°C
- Power Requirements : 10 to 18 Vdc
- Real-Time Clock Accuracy : ±1 min. per month
- Inbuilt Charge Regulator For Charging the battery from Solar Panel

##### **2. AIR TEMPERATURE & RELATIVE HUMIDITY SENSOR**

###### **Air Temperature Sensor**

- Range: -40°C to + 70°C
- Accuracy: +/- 0.4°C or better
- Resolution : 0.001°C
- Housing Classification IP67
- Output: Compatible with data logger

###### **Relative Humidity Sensor**

- Range: 0 to 100% RH
- Output Compatible with data logger
- Accuracy: +/- 3% or better
- Housing Classification IP67
- Operating Temp Range: -40°C to +60°C

A naturally aspirated radiation shield should be provided with the sensor.

##### **3. RAINFALL SENSOR**

- Sensor type : Tipping bucket/ magnetic reed switch
- Material : Anodized aluminium
- Temperature: 0° to +50°C
- Rainfall per tip: 0.254 mm
- Volume per Tip : 4.73 ml/tip

#### **4. WIND SPEED & DIRECTION SENSOR**

##### **Wind Speed Sensor**

- Type: Cup Anemometer
- Range: 0 to 50 m/s
- Accuracy:  $\pm 0.5$  m/s
- Threshold: 0.5 m/s
- Output: Compatible with data logger

##### **Wind Direction Sensor**

- Type: Potentiometer Balanced vane
- Range Mechanical:  $360^\circ$  Electrical:  $352^\circ$  ( $8^\circ$  open)
- Accuracy:  $\pm 5^\circ$
- Output: Compatible with data logger

#### **5. ENCLOSURE**

- Weather-Resistant 10 x 12 inch Enclosure. Includes suitable for data logger with a power supply and one or more peripherals.
- Color White (reflects solar radiation, reducing temperature gradients inside the enclosure without using a separate radiation shield)

#### **6. POWERSUPPLY**

- SMF Battery 12V, 7 AH and Solar Panel of 20 Watts

#### **7. MOUNTING STAND**

- 1.5 Meter Mounting Stand for fixing all the above instruments in outdoor

#### **Warranty: Minimum one year**

#### **Terms and Conditions**

1. All the specifications mentioned above with regard to the datalogger, sensors and supplementary components should be strictly adhered to.
2. The rate quoted should be inclusive of Tax, transportation, installation charges and any other charges.
3. Complaints with the items supplied should be rectified /replaced to the satisfaction of the University by the suppliers at their own cost.
4. Payment will be made only after the supply and installation of the items at location anywhere within Thiruvananthapuram District. The data streaming and quality will be monitored for a period of one month before the payment is made.
5. The undersigned reserves the right to reject /accept any quotation without assigning any reason.

The sealed quotations should reach The Professor and Head, Department of Environmental Sciences, University of Kerala, Kariavattom Campus P.O. Thiruvananthapuram-695 581, Kerala on or before 27.10.2023 at 3.00 pm.

Sd/-  
Head of the Department