**Sensors and their specifications**

1. PH Sensor

2. Turbidity Sensor

3. TSS Sensor - Total Suspended Solids

4. TDS Sensor - Total Dissolved Solids

5. COD Sensor - Chemical Oxygen Demand

6. BOD Sensor - Biochemical Oxygen Demand

7. Coliform Sensor

8. Flow Meter

9. Water Level Sensor

10. RS-485 Ethernet Edge Device

11. Power Source

All sensors must have 12v power supply and RS485 Modbus output. The vendors must give the complete datasheet of the sensors. The datasheet must have the complete details of data for communication. And also, about what data is to send, how the data is received and how the data is converted to readable values. Details of the frequency of communication also needed.

The first 7 sensors come under STP sensors. Need only single set of STP sensor. Need 8 water level sensor. 2 Ultrasonic sensor and 6 wired rod type water level sensors. The number of flow meter sensors will depend on the pipe diagram which has to be given by MKC team.

For flowmeter sensors the diameter of the sensor depends on the diameter of the pipes. Already MKC have 3 different diameter pipes. Flowmeters of 3 different diameters are needed.

There will be 2 type of water level sensors. Wired water level sensor and Ultrasonic water level sensor. Dam and 3 overhead tanks are using wired water level sensor as its depth is of maximum 5m. The well is using Ultrasonic water level sensor as its depth is above 12m.

The RS-485 Ethernet Edge Device are of mainly 5 types.

1. GW1101 (1 RS-485 to Ethernet Gateway)
2. GW1102 (2 RS-485 to Ethernet Gateway)
3. GW1104 (4 RS-485 to Ethernet Gateway)
4. GW1108 (8 RS-485 to Ethernet Gateway)
5. GW1116 (16 RS-485 to Ethernet Gateway)

The STP plant need GW1108 RS-485 Ethernet Gateway as there will be more than 5 sensors attached to the gateway. The overhead tank will also need GW1108 RS-485 Ethernet Gateway. Depending upon the number of RS-485 inputs the type of RS-485 Ethernet Edge Device will also vary.

**Vendor Details**

The vendors providing RS-485 Ethernet Edge Device is

MOOTEK TECHNOLOGIES

New No.:10|Old No.:14|-2nd Floor

Aranganathan Subway Road| KAVERI NAGAR

SAIDAPET | CHENNAI 600015|

Mob:+91-7092520520|Skype: mootek Nathiya

The vendors providing STP sensors is

Fluidings

Benson Thomas

FLUIDINGS

www.fluidings.com

Maharashtra

8928335585.

The vendors providing flowmeter sensor is

Flowtech Instruments

Deepak Chaudhary

9725944834

Email : sales@flowtech-instruments.com

Website : www.flowtech-instruments.com

Mobile Number: 08469769988 / 9428876496 / 8160255957

The vendors providing water level wired rod sensor is

<https://www.seeedstudio.com/Liquid-Level-Sensor-RS485-p-5005.html>

Shenzhen Headquarters

ADD.: 9F, Building G3, TCL International E City, Zhongshanyuan Road, Nanshan, Shenzhen, China

TEL.: 0755-86095676

The vendor providing water level ultrasonic sensor is

<https://www.alibaba.com/product-detail/HCCK-rs485-price-ultrasonic-fuel-meter_1600153742692.html?mark=google_shopping&seo=1>

 MKC can also get the sensors from others vendors too. If MKC is trying to get the sensors we need to have the specified specification details for each sensor.