ਪੰਜਾਬ ਜਲ ਨਿਯੰਤਰਣ ਤੇ ਵਿਕਾਸ ਅਥਾਰਟੀ
ਐਸ.ਸੀ.ਓ. ਨੰ: 149-152, ਤੀਸਰੀ ਮੰਜਿਲ,
ਸੈਕਟਰ 17-ਸੀ, ਚੰਡੀਗੜ੍ਹ।
Web Site: www.pwrda.org

Punjab Water Regulation & Development Authority.
S.C.O 149-152, 3rd Floor, Sector 17-C, Chandigarh.
email- secretary.pwrda@punjab.gov.in

PUBLIC NOTICE

In pursuance of provisions of Punjab Groundwater Extraction and Conservation Directions, 2023, the Punjab Water Regulation and Development Authority has approved the specifications for Digital Water Level Recorder to be installed by Water Users. These specifications are placed at Annexure A.

2.   A Unit having permission to extract groundwater exceeding 15000 cubic metres per month shall monitor the groundwater level digitally through a piezometer. The piezometer with telemetry shall be installed within a period of three months from the date of permission.

Executive Engineer, PWRDA

No.72245/PWRDA-SECY0MISC/9/2021-O/o SECY-PWRDA/1/44114 Dated: 02.02.2023

SN	FEATURES	SPECIFICATIONS
DWLR -WATER LEVEL SENSOR (Pressure sensor)		
1	Sensor Type	Submersible pressure transducer with Non-Vented Pressure sensor, with Barometric pressure Correction for Individual Sensor
2	Ingress Protection	IP68
3	Accuracy	+- 0.2% FSO (Full scale output)
4	Resolution	3 mm
5	Reproducibility	0.1% Full scale or better
6	Output	Compatible with data logger
7	Protection	IP68 with Impact resistance
8	Outer Diameter of Sensor	Less than 80 mm
DATA LOGGER		
1	Atmospheric Pressure Correction	Automatic
2	Input	Pressure sensor
3	Data Logger Output	Only compensated water levels to be transmitted
4	Resolution of Measurement	16-bit ADC with +/- 1 LSB error
5	Measuring interval and modes	Capable of recording & storing one minute interval reading to one reading every 24 hours
6	Recording Capacity	Capable to store data of at least one year
7	Memory Type	Non-Volatile flash memory that can store one year of data (with 15minute logging interval) & expandable up to minimum 1 GB using USB/SD Card
8	Power Supply	Uninterrupted power supply backed with suitable batteries.
9	Built-in clock	Accurate to +/- 1 minute/year and time synchronization with IST
10	Protection	IP65 with Impact resistance
11	Ports for telemetry	Port for communication with GSM and GPRS connectivity

12	Operating System	Windows based for system configuration, transfer and analysis of data to computer.

COMMUNICATION INTERFACE

1	Computer Interface	Logger should be capable of connection with a computer through USB 2.0/3.0
2	File Format	Data download in standard CSV format

GSM & GPRS TRANSMITTER

1	Transmission System	GSM /GPRS/edge-based data transmission system
2	Frequency range	900 MHz: 824-960 MHz/1800MHz:1710-1880 MHz 4G and better
3	Performance	Data Reception availability of 95% or better
4	Communication Direction	Utilize GPRS network for two-way connection with connection with FTP, TCP/IP (INTERNET) connection and SMS server
5	Transmission trigger	Data collection to be triggered by interrogation from PWRDA or by event-based transmission triggered by remote site
6	Communication Protocol Accessories	Data transmission to execute HTTP Post or FTP, SMS to transmit data to PWRDA

DATA TRANSMISSION (TELEMETRY)

The transmission system should be tightly integrated with the DWLR System , along with compact remote/field mounted systems consisting of sensor, data logger, modem and antenna.

(i) The system should be watertight (IP68 for sensor & IP65 for data logger or equivalent) and impact resistant;

(ii) System must be power-supplied by appropriate batteries capable of one transmission per day and 4 measurements per day and must be placed in a water resistant (IP65 or equivalent) enclosure.

(iii) The connectors should be water-tight (IP68 or equivalent).

(iv) An alarm notification must be sent by the system via SMS to PWRDA defined phone numbers through suitable means of communication for PWRDA defined parameters.

(v) Standard USB / RS232 communication interface should be available for set up and configuration and must be easily accessible.

(xi) Provision to be made along with suitable software to allow data download from DWLR data logger to a Laptop/hand held devices at site. The downloaded data shall be in standard CSV format .

ADC- Analogue to digital converter
LSB- Least significant bit
FSO - Full scale output3