Techtrol Automatic Water Level Recording System 'AWLR'

AWLR is an automated, real time water level monitoring & recording system. The system is used for water level monitoring in borewells/rivers/canals/dams and deep storage tanks upto 100mtrs depth.

Salient Features

- Choice of Hydrostatic or Ultrasonic or Radar transmitter
- Easy to handle & install
- User friendly program with password protection
- Datalogging with USB port for data storage
- Option of remote monitoring through wireless transmitter

System Configurations & Working

The system consists of a level transmitter, datalogger and wireless transmitter (optional)

1) Level transmitter can be hydrostatic (submersible) or ultrasonic or radar transmitters type. The transmitter measures water level and generates 4-20mA o/p, which is wired to a control panel consisting of datalogger.

▶ Hydrostatic transmitter - measures water level based on hydrostatic pressure of water column and generates corresponding 4-20mA output. It is top mounted and probe is submerged into the liquid.

▶ Ultrasonic transmitter - is non-contact type transmitter, based on time of fight of ultrasonic signal.

▶ Radar transmitter - is non-contact type transmitter, based on time of fight of radar signal.

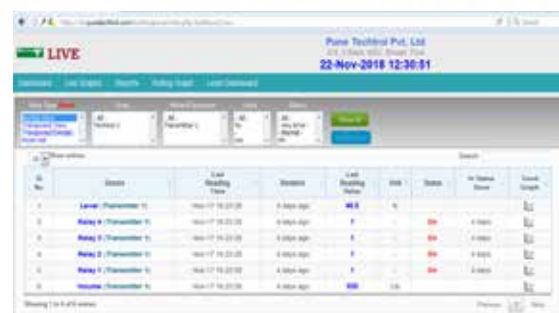Hydrostatic (Submersible)

Radar

Ultrasonic

Datalogger Panel

Techtrol

2) Data - logger is a micro-controller based data acquisition system, which receives output of 4-20mA from the level transmitters. It has provision to receive inputs from 1, 2, 4 or 8 transmitters. It displays water level digitally and records the real time data at regular intervals, adjustable from 1 to 99 minute as programmed by user. It has an USB port for external memory chip and stores data specific to date & time. Its output may be wired to PC, to generate report on daily, weekly or monthly basis for further analysis and control. Datalogger can be provided for local or remote monitoring.

3) Wireless transmitter is provided for transmission of data and can be optionally integrated with **GSM module or GPRS gateway**. With **GSM module**, the water level can be displayed on remote indicator or through SMS on Cellphone. Sending interval of SMS is programmable. With **GPRS gateway**, water level is recorded at set interval of time in cloud memory. Readout from cloud database is in the form of water level, bar graph, pie chart and trends can be viewed on laptop/PC or on your smartphone to take corrective measures. Data can be downloaded in .xls, or .csv format on PC
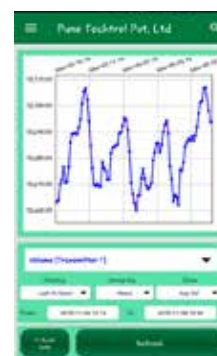
IIOT GPRS Gateway

Readout on PC thru Cloud database

Level Trends on Mobile App

Schematic outline of functioning of AWLR system

Radar

GSM/GPRS X'mitter

Cloud Database

SMS Alerts

Datalogger

GSM/GPRS Receiver

Web Browser PC

Ultrasonic

Cell Phone

Laptop

Hydrostatic

Indicator/Datalogger

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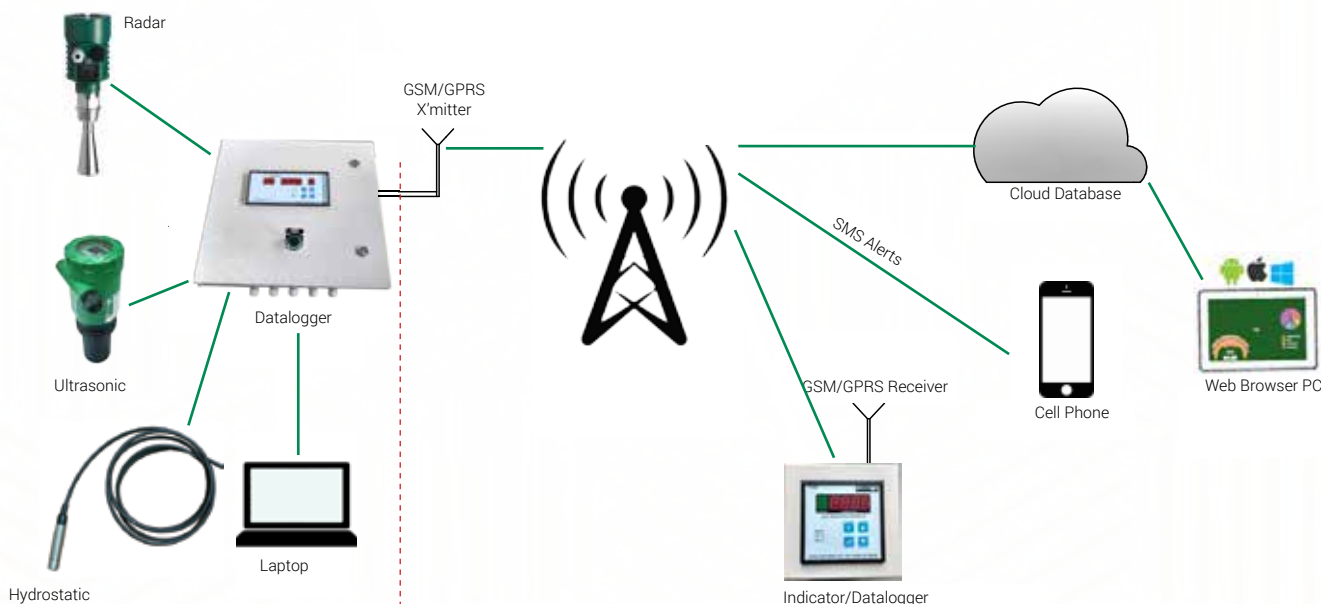
Specifications

Level Transmitters

1) Hydrostatic (Submersible)

Measuring Range	: upto 100 mtrs
Supply	: 24 VDC
Output	: 4-20 mA (2 wire)
Accuracy	: ± 0.5% FS
Probe MOC	: SS316
Diaphragm MOC	: SS316L
Probe Protection	: IP68
Max. Temperature	: 70°C
Cable Type	: PE insulated multi-strand copper wires with PP vent tube with overall PU sheath

2) Ultrasonic Transmitter

Measuring Range	: upto 12 mtrs
Supply	: 24 VDC
Output	: 4-20 mA (2 wire)
Accuracy	: ± 0.5 %
Transducer MOC	: GI Nylon 66
Enclosure	: ABS x IP65
Max. Temp	: 70°C

3) Radar Transmitter

Measuring Range	: upto 35 mtrs
Supply	: 24 VDC
Output	: 4-20 mA (2 wire)
Accuracy	: ± 3mm
Antenna	: SS316 Horn
Enclosure	: ABS x IP67
Max. Temp	: 150°C

Datalogger

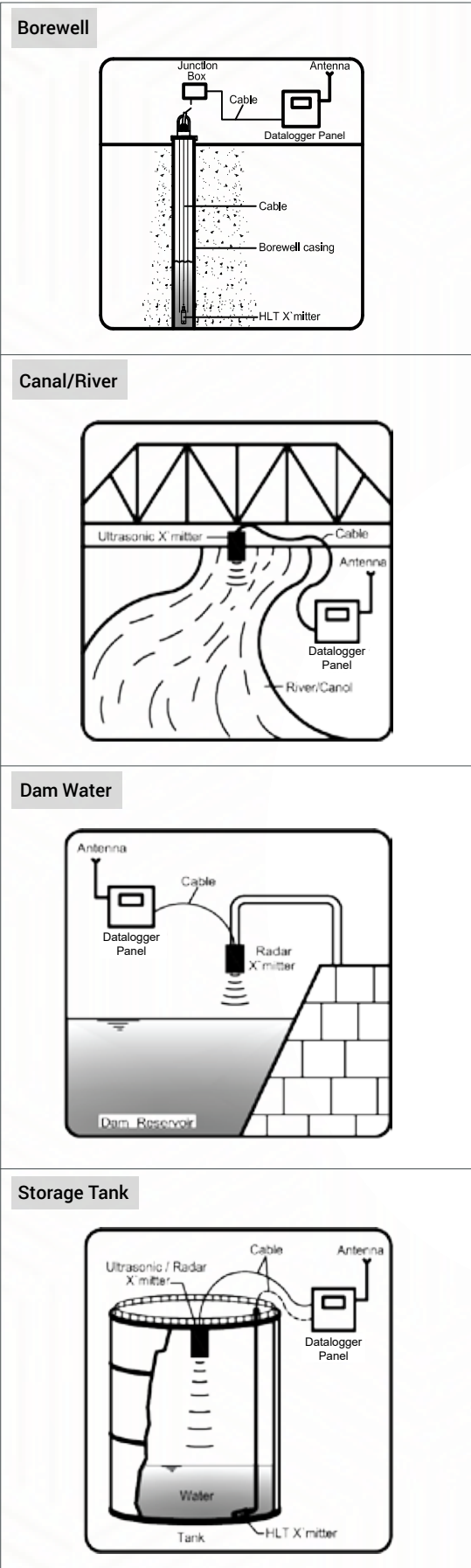|	
No. of Channels	: 1, 2, 4 or 8
Input	: 4-20mA (from transmitter)
Accuracy	: +/- 0.25% FS
Programming	: Through 4 keys
Digital Display	: 4 digits, 0.5", seven segment
Level Indication	: in meters or percentage
Power Supply	: 230 VAC
Battery Backup	: Built-in
Communication	: RS 485 (2 wire)
Log Interval	: 1 to 99 minutes
PC software	: Designed for Dot Net and run on Win Xp
USB Interface	: For external memory chip

Wireless System :

Quad-band 850/900/1800/1900MHz

▶ GSM X'mitter for SMS on cellphone

▶ GSM X'mitter for Remote Indicator

▶ GSM X'mitter for SMS cellphone + Remote Indicator

▶ GPRS Gateway for Readout on PC/Smartphone

▶ GSM + GPRS for SMS + Readout on PC/ Smartphone

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Level Monitoring Applications

Borewell

Canal/River

Dam Water

Storage Tank

Model Identification

AWLR – ☐ ☐ ☐ ☐

Transmitter Type

Hydrostatic (submersible)	S
Ultrasonic	U
Radar	R
Others	O

No. of Transmitters

One	1
Two	2
Four	4
Eight	8

Datalogger and Indicator

Without	W
Local	L
Remote	R
Local + Remote	C
Others	O

Wireless Transmitter

GSM Module for SMS on Cellphone	1
GSM Module for Remote Indication	2
GSM Module for Remote Indication + SMS on Cellphone	3
GPRS Gateway for Readout on PC / Smartphone	4
GSM + GPRS for SMS + Readout on PC/Smartphone	5
Others	O

Ordering Information

Model No x Measuring Range x Temperature x Pressure (Specify if any additional customized logic is required)

All dimensions in mm except specified

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