

# Digital Water Level Recorder – Radar Type

## Model: DWLR-R

“Virtual” make Digital Water Level Recorder (Radar type) reflect state of the art in micro controller based instrumentation design. The Radar Level sensor can be attached with this data logger for the collection of real time data automatically. It comes with facility to transport Data from Data Logger to a P.C. through various modes (As per Customer requirement). 16x2 LCD alphanumeric display and 4x2 membrane keypad is provided at front panel of data logger for programming data logger and monitoring sensor reading at site without the help of computer. Comes with different ranges for Liquid: 15, 35, 70 meters. Data file is saved in Microsoft’s Excel. This instrument is used for continuous level measurement of liquids or bulk solids. Typical applications are the measurement of liquids in storage tanks or open basins. The sensor is also suitable for the detection of bulk solids in small vessels or open containers. The non-contact measuring principle is independent of product features and allows a setup without medium.

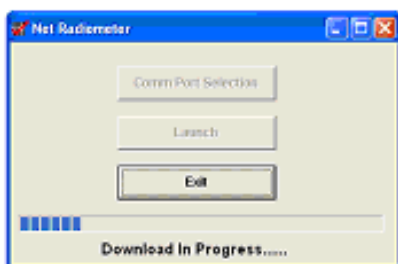


### Features & Specifications:

- Sensor Type: Radar type Water level Sensor.
  - Parameter Monitored: Date, Time, Instantaneous Water Level, Maximum Water Level (Log Rate), Minimum Water Level (Log Rate) Water Temperature (Optional), Battery Voltage.
  - Display: LCD (16 X 2) to display the instrument status.
  - Membrane Keyboard: for on-site programming without help of computer.
  - PC Software: “Virtualware” software for Data download.
  - Configuration Modes: Linear Mode
  - Real Time Clock: Internal with accuracy of +/- 2 minutes /year & leap year compensation
  - Logging Interval: 1 min to 24 hrs with facility to program log Start time within next 24 hours
  - Memory: more than 16000 data points (*extendable to more at extra cost*).
  - Settling time < 15 minutes after submersion
  - Battery Life: More than 1.5 Years
  - Battery : 12V SMF Battery with integral solar charging kit to keep the batteries charged.
  - Battery Monitoring: Recording
  - Operating Humidity 0 to 100%, Operating Temp: - 20 to 70 °C
  - Data Output Format MS- Excel
- Comes with weatherproof enclosure, Suitable for mounting in a variety of locations.



### Application Software (Virtualware)



	A	B	C	D	E	F	G	H	I	J
2	Site ID	Date & Time	Temp	Max Temp	Min Temp	Rhr	Max Rhr	Min Rhr	Wind Speed	Avg Wind Speed
4		(dd/mm/yyyy - hh:mm)	(°C)	(°C)	(°C)	(%)	(%)	(%)	(m/s)	(m/s)
6	A	25/04/2014 - 00:00:00	23.3	23.48	23.28	61.15	59.48	0	0	
7	A	25/04/2014 - 00:15:00	23.4	23.42	23.27	57.91	54.15	0	0	
8	A	25/04/2014 - 00:30:00	23.4	23.55	23.32	57.17	54.79	54.29	0	0
9	A	25/04/2014 - 00:45:00	23.2	23.42	23.1	56.76	59	55.79	0	0
10	A	25/04/2014 - 01:00:00	22.8	23.3	22.79	66.18	66.21	56.68	0	0
11	A	25/04/2014 - 01:15:00	21.82	22.8	21.8	71.83	71.79	66.01	0	0.1
12	A	25/04/2014 - 01:30:00	21.01	22.02	21.79	67.83	71.97	67.09	0	0
13	A	25/04/2014 - 01:45:00	21.48	22.05	21.47	71.84	71.84	66.67	0	0
14	A	25/04/2014 - 02:00:00	20.53	21.47	20.53	75.18	75.2	71.8	0	0
15	A	25/04/2014 - 02:15:00	19.56	20.53	19.55	79.11	79.37	74.96	0	0
16	A	25/04/2014 - 02:30:00	20.02	20.02	19.45	74.96	74.96	74.96	0	0
17	A	25/04/2014 - 02:45:00	19.82	20.2	19.82	76.85	76.88	74.9	0	0
18	A	25/04/2014 - 03:00:00	19.09	19.82	19.08	80.34	80.47	76.86	0	0
19	A	25/04/2014 - 03:15:00	19.26	19.3	19.08	78.02	80.58	77.68	0	0
20	A	25/04/2014 - 03:30:00	19.24	19.27	19.1	75.67	78.51	75.11	0	0
21	A	25/04/2014 - 03:45:00	19.76	19.93	19.21	75.18	76.81	74.43	0	0
22	A	25/04/2014 - 04:00:00	18.41	19.8	18.41	81.21	81.21	74	0	0
23	A	25/04/2014 - 04:15:00	18.8	18.8	18.1	78.29	82.24	78.06	0	0
24	A	25/04/2014 - 04:30:00	19.14	19.18	18.7	76.3	78.52	75.54	0	0
25	A	25/04/2014 - 04:45:00	18.08	19.16	18.08	79.72	80.38	79.91	0	0
26	A	25/04/2014 - 05:00:00	17.88	18.1	17.84	79.36	81.38	79.36	0	0

Virtualware is a user-friendly, Menu Driven, Windows based software allows you to view & save collected data from data logger to computer/laptop. Data file is saved in Microsoft’s Excel format.

## Data Retrieval options

The standard system Comes with data retrieval option through Data Shuttle. User can choose other options also (*at extra cost*).

### 1. Data Shuttle:

The data shuttle is a pocket-sized device that can be used to download & transport the data from Data Logger to a computer (USB Port), allowing the instrument to stay in place for continuous monitoring/recording. The shuttle connects to a PC and is used with the "Virtualware" to download data.



### 2. Ethernet:

Through Ethernet LAN to Computer (wired). You can enter IP Address of your computer and connect to the Water Level Recorder allowing the instrument to stay in place for continuous monitoring/recording & data can be monitored through computer connected to AWS. Used with the "Virtualware" software to download data. *Comes with 25meter CAT5 Cable (more at extra cost). Layout of LAN wire from data logger to Computer is in Purchaser Scope*

### 3. RS-485 MODBUS Communication

MODBUS communication is a messaging structure used to establish master-slave/client-server communication between intelligent devices. It is a de facto standard, truly open and the most widely used network protocol. The MODBUS protocol provides an industry standard method that MODBUS devices use for data communication. *Comes with 25meter Cable (more at extra cost). Layout of cable from data logger to Computer is in Purchaser Scope*

### 4. GPRS Enabled Web-based Telemetry

For Wireless data transfer from "Virtual" make Data Logger to your Web-Server. *An arrangement of One Post-paid GPRS-Active GSM SIM Cards is in your work of scope. There should be Network Coverage Availability at the installation site*

**For Data Access Free Web-space will be provided for 1year & will be chargeable afterwards.**

### Specifications of GSM/GPRS Terminal

The Virtual iM2M terminal (GSM/GPRS Modem IPR paid with valid IMEI) is a general purpose intelligent device for various remote monitoring applications. This device can be used for different applications and the embedded software loaded to this device determines the usage of the device.

### Features of embedded Software

- a) A GSM/GPRS enabled SIM is supposed to be installed in the Terminal. Based on the Operator, the GPRS settings have to be configured in the terminal.
- b) Once a proper SIM card is inserted and the terminal is switched ON, it will register to the GSM/GPRS network using public APN.
- c) The terminal will continuously monitor RS-232 port for messages received from the device connected.
- d) When modem receives a valid command in the RS-232 port it will take appropriate action based on the commands. (Send SMS/Send Email/Send HTTP/Provide Network Status).
- e) Whenever the modem receives any SMS, it will be pushed through RS-232 port.
- f) Stores Failed GPRS packets in non-volatile memory until system re-stores proper GPRS connection to server (zero data loss).

[Link for Demonstration of web-based application](#)

URL: <http://www.ehydromet.in/>

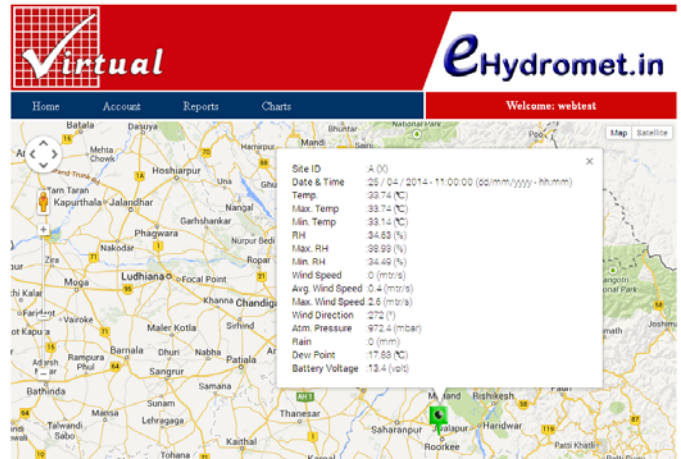
User ID: webtest

Password: webtest




click **Login**

Mouse over to the green labeled station to get last logged parameter

Summarized reports can be generated



### Sensors Specifications

Sensor	Measuring range Accuracy	Process fitting	Process temperature	Process pressure
	up to 15 m, +/- 2 mm	Thread G1½, mounting strap, Compression flanges from DN 80, 3"	-40 ... +80 °C	-1 ... +2 bar (-100 ... +200 kPa)
	up to 35 m, +/- 2 mm	Thread G1½, 1½ NPT, mounting strap, compression flanges from DN 80,3"	-40 ... +80 °C	-1 ... +3 bar (-100 ... +300 kPa)
	up to 70 m, +/- 2 mm	Thread from G1½, 1½ NPT, flanges from DN 50, 2"	-200 ... +450 °C	-1 ... +160 bar (-100 ... +16000 kPa)

### Ordering Guide

SN	Description	Model No.
1	DWLR with Data Shuttle option	DWLR-R-D-XX
2	DWLR with Ethernet option	DWLR-R-E-XX
3	DWLR with RS-485 MODBUS option	DWLR-R-MOD-XX
4	DWLR with GPRS enabled WEB-Based Telemetry option	DWLR-R-GPRS-XX

**\* XX represents range of Sensor (15, 35 or 70)**

Please mention Measuring Range information along with your enquiry / Purchase order



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**\*\* Drawing / specifications are subjected to change at any time without prior notice as per manufacturing suitability.**



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