



ENCARDIO RITE

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USERS' MANUAL

WATER LEVEL INDICATOR

MODEL EPP-10/6



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1 INTRODUCTION

Monitoring of ground water table has assumed great significance in view of depleting ground water reserves. The basic measurement of ground water level can be done by Open Standpipe or constructing observation wells.

Encardio-rite model EPP-10/6 water level indicator is designed to measure elevation of ground water in bore holes, casagrande piezometers, stand pipes and wells. It is accurate, robust, light weight and convenient to use.

This users' manual covers description of the water level sounder, procedure for measuring water level, cleaning indicator and replacing battery.

1.1 Conventions used in this manual

WARNING! Warning messages calls attention to a procedure or practice, that if not properly followed could possibly cause personal injury.

CAUTION: Caution messages calls attention to a procedure or practice, that if not properly followed may result in loss of data or damage to equipment.

NOTE: Note contains important information and is set off from regular text to draw the users' attention.

This users' manual is intended to provide you with sufficient information for making optimum use of water level sounder in your applications.

1.2 How to use this manual

The manual is divided into a number of sections. Each section contains a specific type of information. The list given below tells you where to look for in this manual if you need some specific information.

For measuring water level See § 2.3 'Measurement of water level'.

For cleaning indicator See § 2.4 'Cleaning indicator'.

For changing battery of water level indicator See § 2.5 'Replacing battery'.

2 DESCRIPTION

Model EPP-10/6 water level sounder comprises of a probe, graduated cable and cable reel. The Encardio-rite model EPP-10/6 water level sounder is designed to measure the elevation of the ground water in bore holes, stand pipes and wells. The water level sounder is required to be lowered from the surface with the help of the connecting cable for taking observations.

The model EPP-10/6 comprises of a specified length of flat cable made of high tensile virtually non-expandable, non-stretchable polyethylene coated flat tape having markings at an interval of every 1 cm, connected at one end to a weighted probe of stainless steel. The probe is of stainless steel construction with a diameter of 12.7 mm. The 3 mm long tapered tip of the probe is insulated from the main housing by a 15 mm long white nylon spacer.

The unit is battery operated complete with an on-off switch, buzzer, red LED for power on and signal, flat cable connected to a probe, winding reel and carrying handle. The probe gives sound and green light signal when water in the borehole/well makes a contact with the tip. The moisture resistant electronics and standard 9 V PP-3 size battery are housed in a hub on the cable reel. The hub can be easily accessed to replace the battery without disassembling the entire cable reel. The cable reel is rugged, light weight and easy to carry.

2.1 Cable description

The cable of model EPP-10/6 water level sounder is made of high tensile virtually non-expandable, non-stretch, PE insulated flat steel tape 10 mm wide x 2 mm thick. The length of the cable is commensurate with the depth up to which the observation is required to be made. The tape has integral twin wires for current transmission. The two conductor cable serves to lower the probe and also to connect the probe to the output circuit board.

The permanent markings on tape is available in meter with a resolution of 1 mm or feet with a resolution of 0.1".

Model EPP-10/6 water level sounder is available with following tape lengths:

Length 'L' (m) 30, 50, 100, 150, 200, 300

Resolution 1 mm standard

Length 'L' (ft) 50, 100, 150, 300, 500

Resolution 0.1" standard

2.2 Measurement of water level

- 1 Unlock the top cap and Remove the PVC pipe cap.
- 2 Switch on the indicator.
- 3 Lower probe into well. When probe tip and housing touches water, the probe will give a sound alarm and green light signal.
- 4 Hold flat cable against the reference and read depth from the cable marking.

NOTE: Top of the well is usually taken as the reference.

- 5 Remove probe carefully from the well winding the flat cable on the cable reel.
- 6 Replace PVC pipe cap and place the top cap.

2.3 Cleaning indicator

- 1 Wash probe and cable with a laboratory-grade detergent. Rinse with clean/distilled water.

NOTE: The probe has a diameter of 12.7 mm. The 3 mm long tapered tip of the probe is insulated from the main housing by a 15 mm long white nylon spacer. The probe will give sound and light signal when the water in the borehole/well makes simultaneous contact with the tip as well as the lower end of the housing. In case of any deposit on the nylon spacer, carefully remove it as it may be conductive and impair performance.

- 2 Remove oily deposits with dishwashing detergent, after testing its effect on a short length of cable. Do not leave the cable immersed in detergent for a long time. Rinse in clean/distilled water.
- 3 Wipe the reel with a damp cloth taking care that water does not enter the hub.

2.4 Replacing battery

The indicator uses a 9 V PP3-size battery. Battery must be replaced if indicator fails to buzz or show green light signal when probe tip and housing contact water. To replace battery:

- 1 Release the cable locking assembly.
- 2 Remove the SS screw on the hub to gain access to battery holder.
- 3 Remove battery terminal from the 9 V PP3 size battery. Replace battery with new one and connect battery terminal.
- 4 Secure the hub with SS screw.
- 5 Secure the cable locking assembly

3 WARRANTY

The Company warrants its products against defective workmanship or material for a period of 12 months from date of receipt or 13 months from date of dispatch from the factory, whichever is earlier. The warranty is however void in case the product shows evidence of being tampered with or shows evidence of damage due to excessive heat, moisture, corrosion, vibration or improper use, application, specifications or other operating conditions not in control of Encardio-Rite. The warranty is limited to free repair/replacement of the product/parts with manufacturing defects only and does not cover products/parts worn out due to normal wear and tear or damaged due to mishandling or improper installation. This includes fuses and batteries.

If any of the products does not function or functions improperly, it should be returned freight prepaid to the factory for our evaluation. In case it is found defective, it will be replaced/repaired free of cost.

A range of technical/scientific instruments are manufactured by Encardio-rite, the improper use of which is potentially dangerous. Only qualified personnel should install or use the instruments. Installation personnel must have a background of good installation practices as intricacies involved in installation are such that even if a single essential but apparently minor requirement is ignored or overlooked, the most reliable of instruments will be rendered useless.

The warranty is limited to as stated herein. Encardio-rite is not responsible for any consequential damages experienced by the user. There are no other warranties, expressed or implied, including but not limited to the implied warranties of merchantability and of fitness for a particular purpose. Encardio-rite is not responsible for any direct, indirect, incidental, special or consequential damage or loss caused to other equipment or people that the purchaser may experience as a result of installation or use of the product. The buyer's sole remedy for any breach of this agreement or any warranty by Encardio-rite shall not exceed the purchase price paid by the purchaser to Encardio-rite. Under no circumstances will Encardio-rite reimburse the claimant for loss incurred in removing and/or reinstalling equipment.

A lot of effort has been made and precaution for accuracy taken in preparing instruction manuals and software. However best of instruction manuals and software cannot provide for each and every condition in field that may affect performance of the product. Encardio-rite neither assumes responsibility for any omissions or errors that may appear nor assumes liability for any damage or loss that results from use of Encardio-rite products in accordance with the information contained in the manuals or software.

Products described in Encardio-rite's catalogues are subject to modification and improvement as dictated by subsequent developments. Encardio-rite reserves the right to modify, change or improve products, to discontinue them or to add new ones without notice.