



Installing the Visual Monitoring System™ Intended for Installation by Qualified Personnel

Part # VMS1000

Battery Watering Technologies

This Package Contains:

- 1 - VMS1000
- 1 - Grommet
- 2 - Self Tapping Screws
- 3 - Cable Ties
- 1 - Packet Dielectric Grease/Corrosion Preventer

Tools required for installation:

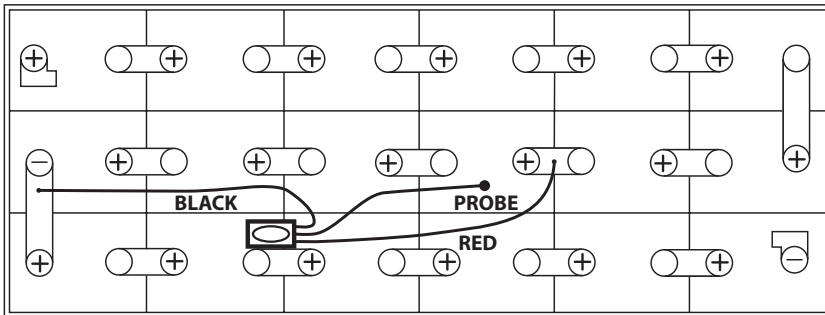
- Drill
- Phillips screwdriver bit
- 1/2" (12 mm) drill bit for probe
- Insulated wire cutters



- Always wear personal protective equipment (goggles, gloves, etc.)
- Be sure the battery is disconnected from the charger to ensure the cells are not gassing before proceeding.
- Not recommended for use with battery additives.
- Read instructions in entirety before beginning the installation.

STEP 1: PLAN

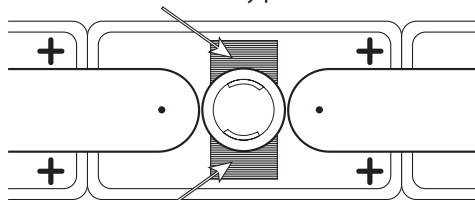
The electrolyte probe must be at least 4 cells to the positive side of the negative (black) wire connection. Take this into consideration when planning your installation. The sensor needs 8 volts to function properly.



Example of 18 Cell Installation

STEP 2: DRILL

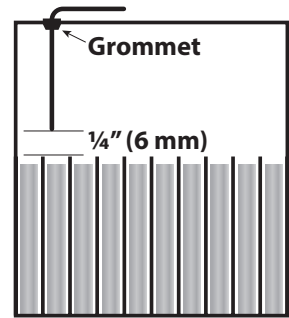
Choose a cell where the level probe will be inserted. (Reminder: you must have at least 4 cells to the positive from the black (negative) wire.) Drill a 1/2" hole in the cell cover where the probe will be installed. The hole should be drilled between the vent opening and the edge of the cell to avoid cell internals. Do not drill into the battery plates.



Example of Drill Zone

STEP 3: TRIM PROBE

Cut the probe to length. When fully inserted, the tip of the probe should be approximately 1/4" above the plates or moss shield. Insert the grommet into the hole and then insert the probe through the hole in the grommet.



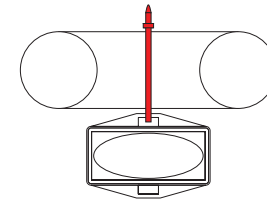
STEP 4: CONNECT RED AND BLACK WIRES

Count 4 cells from the probe in the current flow direction of the main negative post, including the cell the probe is installed in. On the NEGATIVE side of the fourth cell post connect the BLACK wire with a self-tapping screw. On the POSITIVE side of the probe so that the VMS is seeing 8 volts nominal, connect the RED wire to the post with a self-tapping screw. After the screws are inserted, apply the dielectric grease to the connections to prevent corrosion.

Note: If the light is blinking purple, the VMS is not wired to the correct number of cells. Review installation.

STEP 5: SECURE HOUSING

Secure the sensor light housing using cable ties supplied. Make sure wires are secured so they cannot be snagged or pulled.



Tie down example for electronic housing

LED COLOR CODES

- Solid Yellow LED* - Battery is in use or being charged
- Blinking Green LED* - Battery is charged but not cooled / Electrolyte level is OK
- Blinking Red LED* - Battery is charged but not cooled / Electrolyte level is LOW
- Solid Green LED* - Battery is charged and cooled for at least four (4) hours / Electrolyte level is OK
- Solid Red LED* - Battery is charged and cooled for at least four (4) hours / Electrolyte level is LOW
- Blinking Purple LED* - Not wired to the correct number of cells / Review installation

CYCLE COUNTER:

To find out the number of charge cycles, simply disconnect the (RED-POWER) wire for five (5) SECONDS and then reconnect. The LED will start blinking showing various colors indicating the number of charge cycles as follows:

- Green:** 1000s
 - Red:** 100s
 - Yellow:** 10s
 - Blue:** 1's
- Then OFF for three seconds

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