

Smart Tower Monitor

User Manual

Application version 1.0.1



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Control Narrative

Your **Smart Tower** unit is a **monitor**. It measures the level in your water tower and reports it, along with the health of its own solar power system, to the cloud. It has **no outputs and no control logic of any kind** — it does not start or stop pumps, open or close valves, or act on the level in any way. Nothing at this site can be commanded from it.

The unit is a SmartController with a single Universal IO module, powered by a solar panel, a charge controller and a battery, so it can sit at the tower without utility power. Tower level comes from a 4–20 mA level transmitter wired to the IO module; the unit also reads the voltage coming in from the solar panel and the voltage at the battery.

The controller reads all three values continuously and sends them to the cloud **once a minute**. The level and the voltages are shown on the controller's own display as well, so a technician standing at the cabinet sees the same numbers the dashboard shows.

Other stations control off this tower level. The cloud relays the level this unit reports to the pump stations that fill the tower, so those stations depend on this unit staying online and reporting a valid level. If this unit goes quiet, a pump station receiving its level will stop pumping rather than fill blind — that protection lives in the pump station, not here.

There are no operator settings on this unit. There is nothing to put in Hand, nothing to reset, and no setpoint to adjust. The only field-dependent number is the level transmitter's calibration, which is set when the unit is built and configured for your tower — if the reported level does not match the tower, that is a calibration or wiring matter for service, not something to change at the keypad.

No alarms are configured on this unit as shipped. It reports its readings; any alarming on the tower level (high level, low level, loss of signal) is set up on the cloud dashboard for your system rather than defined in the unit itself. Ask D6 Labs support if you want alerts added.

Modes

This unit has no operator-selectable modes. It monitors and reports continuously from the moment it is powered up, and there is nothing to switch between — everything below is either a reading or, where noted, a value you may reset.

Setpoints

There are no setpoints to enter. This unit performs no control, so it has no thresholds of its own; the alarm limits that decide when you are notified live on the cloud dashboard, not in the unit, and are set for your site when it is commissioned.

Readings, Alarms and Status

Channel	Meaning	What to do
Level	The water level in the tower, as a percentage of full, from the level transmitter. This is the number relayed to any pump station that fills this tower.	Normal operating value. If it disagrees with the sight gauge or with a manual reading, contact support — the transmitter scaling is set at build time and is not an operator adjustment.
Solar Voltage In	The voltage the solar panel is delivering to the charge controller. In sun, a 12 V system typically reads about 17–21 V.	A panel reading near zero in good daylight points to a shaded, dirty, disconnected or failed panel. Have it checked before the battery runs down.
Battery Voltage	The voltage at the backup battery that runs the unit overnight and through cloudy weather. A healthy 12 V battery typically reads about 12.5–14.5 V.	A battery that keeps drifting lower day over day, or that no longer recovers during the day, needs the charging system checked or the battery replaced. If the battery dies the unit goes dark and stops reporting the tower level.

Support: if a reading looks wrong, or the unit stops appearing on the dashboard, note what the controller display shows and contact D6 Labs support. Because pump stations may be controlling off this level, treat a silent tower monitor as urgent.

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