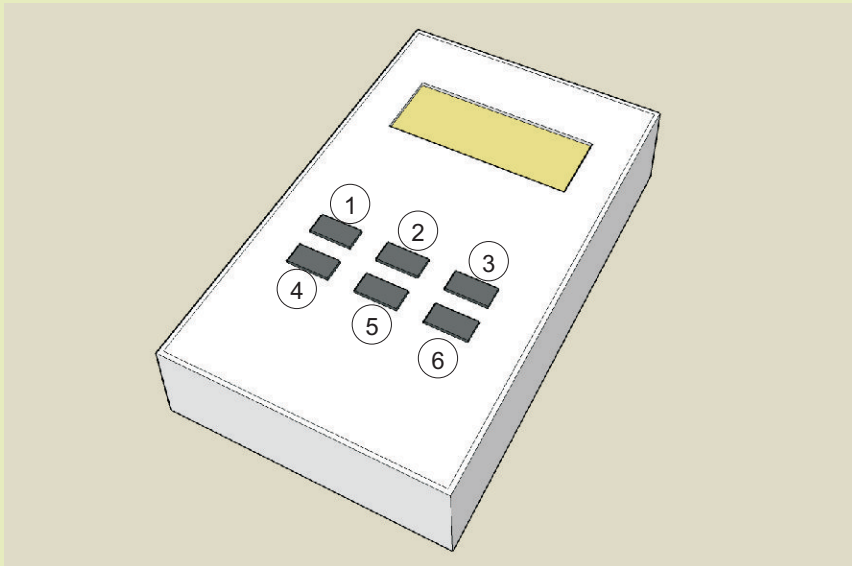


Overview



The SWS-TDB6 is a wireless battery-operated (reduced function device, powered by 2 AA lithium batteries) zone temperature sensor with LCD display and 6 button keypad.

The sensor transmits zone temperature values periodically to the gateway. The report interval is user configurable.

Buttons 2 and 5 are used to change the temperature set point (up and down). Set Point values are sent periodically to the gateway.

If button 3 is pushed, an override command is issued to the gateway and the LCD display will indicate override mode by displaying “oo”.

Button 6 is only used on the SWS-DTRHB6 (wireless zone temperature and relative humidity sensor) to switch the display from temperature to humidity.

Buttons 1 and 4 have general purpose functions (e.g. fan mode) and will send a status value to the gateway when pressed.

Pressing the “Bind” button on the back of the sensor and buttons 3 and 6 simultaneously will switch the sensor to “Site Survey Mode” and the display will show the link quality. For a reliable connection the value should be 30 or higher.

Reduced function devices (like the SWS-TDB6) require that a full function device is present and has been discovered already by the gateway.

Data Access

Unit	MAC Address	Type	Version	Status	Name	Set Name
8	00063F0000000020	WT11SH1	0009	0000 (OK)	Room Sensor	

Registers	Value	Set	Format	Remark
800	0000 (OK)		Unsigned Hex	Status (OK or NoLink or LowBattery)
801	3260		Signed Decimal	Power Voltage (mV)
802	8		Signed Decimal	Report Interval (Seconds)
803	75		Signed Decimal	Temperature (°F)
804	42		Signed Decimal	Humidity (%)
805	72		Signed Decimal	Temperature Setpoint (°F)
806	33		Signed Decimal	Humidity Setpoint (%)
807	0000		Unsigned Hex	Override, Top Left, Bottom Left
808	0000		Unsigned Hex	Heat/Cool, High/Low
809	0		Signed Decimal	0 = Fahrenheit/1 = Celsius
882 to 885	00063F0000000020		Unsigned Hex	MAC Address
886	0043		Unsigned Hex	Type (0043)
887	0009		Unsigned Hex	Firmware Version
888 to 899	Room Sensor		Text	Device Name

After the sensor has been discovered by the gateway (see: Quick Start Guide) it will be automatically mapped to series of Modbus holding registers (also known as 4x registers). Clicking on the sensor's MAC address (in MODBUS Network) will display all available registers.

Example (see screen capture above, register addresses depend on discovery sequence):

Register 800: Sensor status (0=OK, 1=low battery, 2=NoLink)

Register 801: Battery voltage in mV (3.36 V)

Register 802: Sensor report interval in seconds; longer intervals result in longer battery life

Register 803: Zone temperature in F or C (configurable through register 809)

Register 804: Reserved for relative humidity

Register 805: Zone temperature set point in F or C (depending on register 809)

Register 806: Reserved for relative humidity set point

Register 807: Contains the button status for buttons 1, 3 and 4. Pressing button 1 will increment the register value by 8 decimal up to 56 and then start over again. Pressing button 4 will increment the register by 1 up to 7 and start over again. Pressing button 3 (override) will add 64dec (set register bit 7 to one) to the register value when pressed.

Register 808: Controls the display of “Heat”/“Cool” and “Low”/“High”. Register bit1 controls “Low”, bit2 controls “High”, bit3 controls “Cool”, bit4 controls “Heat”

Register 809: Controls temperature units (0=Fahrenheit, 1=Celsius)

Registers 882 to 885: Contain the sensor's MAC address (matches bar code label on sensor)

Register 886: Contains device type

Register 887: Contains the sensor's firmware version

Registers 887 to 899: contain the sensor's user assigned name.