

# AVIDSmartSensors™ - Counter Temperature



## Main Features

- § 32-Bit unique ID with 24-bit Digital Counter, 13-bit Temperature, digital input status
- § Switch for installation and service mode indication
- § Broad operating temperature range
- § Up to 600-foot range
- § Transmission rates from 10 to 17 seconds random
- § Up to 100 transmitters can coexist
- § Battery lasts from 5 to 10 years
- § Very small (1.3" X 2.1" X .6") ABS Enclosure
- § Complies with part 15 of the FCC rules
- § Water resistant coating on PCB
- § CRC-16 checked Status, ID, temperature and counter data
- § Internal Loop antenna

AVIDSmartSensors Magnetic Switch wireless transmitter is a battery operated digital counter sensor with a microprocessor controlled 418 MHz. FCC certified radio transmitter. The Magnetic Switch has an on board time of day clock that allows it to spend most of the time in a low power quiescent state. At predetermined time intervals the clock will wake up the onboard microprocessor. Unique serial number information is read from a Dallas Semiconductor 1-wire digital device, counter data is read from a 24-bit internal counter register. This information is combined with a CRC-16 error check and transmitted in a very short data packet that results in a transmitter on time of only 15 milliseconds. This architecture allows the Magnetic Switch to consume very little energy and a battery life of 5 to 10 year results.

The AVIDSmartSensors Magnetic Switch electronics are coated with a conformal material that provides a moisture barrier against condensation. Submersion in water is not recommended. A pushbutton switch in the ABS cover allows the user to activate the service mode. The service switch has two functions:

1. The AVIDSmartSensors Magnetic Switch is shipped with the transmitter turned off, anytime the AVIDSmartSensors Magnetic Switch is to be shipped the transmitter should be turned off or placed in a shielded container to prevent interference. Start the AVIDSmartSensors Magnetic Switch by removing the paper strip from the battery and pressing the service switch (you will feel the button click) the AVIDSmartSensors Magnetic Switch is started.
2. The service switch is used as an aid to installation, when the service switch is pushed a data transmission occurs immediately and a special mark is introduced in the ID field of the transmitted data packet to indicate which sensor is in service or installation.

Parameter	Units
Transmission Rate	10-17 Seconds Random
Shelf Life with Battery Installed	5 Years in quiescent mode (10 years with optional battery)
Dimensions (enclosure)	1.5 W X 2.1 H X .6 D (inches)
Weight	1.5 oz.
Operating Temperature	-40° to 85° C
Input	Switch closure 3.3 volts pulsed
Humidity	0% to 90% Non-Condensing
Battery Life with Transmission	5-10 Years with TX Period of 10-17 Seconds
Battery	3.6 volt Lithium