



Wireless Sensing System Application/Design Questionnaire

Application Questions:

- 1) What do you want to monitor with the wireless sensors? To properly specify the correct components we need a great deal of information regarding how you expect your system to function, accuracy requirements, and whether or not there are any critical areas or special environmental concerns that must be addressed. Failure to consider all of the possible ramifications may affect the overall functionality and reliability of the entire system?
 - A) What building management system are you going to be sending the wireless output signal to?
 - B) Do you want the wireless monitoring system to tie directly into your Building Management Systems Network? If so, would you prefer to use a Modbus RTU, BACnet, or Lonworks protocol?
 - C) How many analog and digital inputs are available on your building management system?
 - D) Are you going to be sending all of the wireless sensor signals to a single building management system (Zone) or multiple building management systems (Zones)?
 - E) What type of sensor output signal will your building management system accept? Digital Input? 0-5 VDC? 0-10 VDC? 4-20 mA?
 - F) Is this a critical control application? Will a 1 minute data transmission interval be sufficient?
 - G) If monitoring room sensors, how many room sensors do you need to monitor? Do you need to do an Average, Highest or Lowest of multiple temperature sensing points, or difference of two sensing points?
 - H) What is the operating temperature and humidity range of the ambient air where the wireless sensors and modules will be located? What is the operating temperature of the air or other media that the temperature or humidity sensors will be monitoring?
 - I) Are any of the Wireless sensors, Input or Output or receiver modules going to be mounted outdoors?
 - J) How far are you going to have to transmit your wireless signals?
 - K) Do you already have an existing RH or Temperature sensor that you would need to convert to a wireless output?
 - L) Are you looking for a standalone type two position controller with a dry contact SPDT relay output that is capable of handling more than 1A of current?
 - M) If using a digital output from your sensor or controller, is it a Dry Contact Closure or Solid State Relay, MosFET, or Triac that is being input to the wireless input concentrator or receiver module?
 - N) Do you prefer 24 VAC or 24 VDC power for use with the Input Concentrators, Wireless Repeaters and Receiver modules?
 - O) Are the wireless sensors, input, output, and receiver modules going to be used in an environment in which you would expect things to be relocated or moved around often?

Building Design Questions:

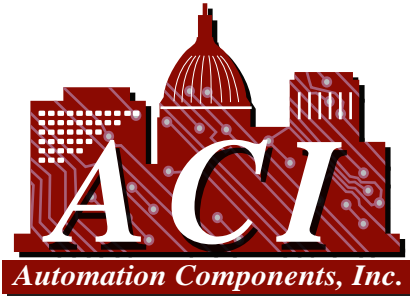
- 1) What type of materials are the exterior walls made of if transmitting the signal from or to the outdoors or building to building? (i.e. Brick, Steel Post and Girders with steel siding, Concrete, Brick, Cement Block, etc.)
- 2) What materials are used to build the interior walls such as wood or metal studs, drywall, steel, concrete, marble, or granite?
- 3) What type of materials are the floors made of such as wood, carpet, concrete with metal rebar, tile, etc.?
- 4) Do you have any internal building structures or features that may further limit the transmission signal of your wireless devices within your building such as an elevator, bank vault, walk in freezer or refrigerator, aquarium, metal or steel filing cabinets or other water features such as a waterfall, tank, vats, or trees in an indoor atrium or entrance way?
- 5) If using the sensors in a multiple story building, on what floors will the wireless sensors be located on? What floors will your master controller or wireless output modules be located on?
- 6) Do you have any large equipment located in the space that may block the transmission of the radio waves throughout the building? (i.e. CNC machines, Factory Automation Equipment, etc.). Large metal enclosures and equipment will reduce the overall transmission distance and pattern.
- 7) How high are your ceilings in the spaces to be monitored?
- 8) Do you have locations in which you could locate the necessary repeaters, input, output, or master control modules?
- 9) Where are the wireless sensors or input concentrators mounted relative to the Wireless master or network receivers (controllers)?
- 10) Are the sensors going to be mounted to coolers or freezers that are going to be moving around from one place to another? If so, how far do they move? Same Floor? Multiple Floors?
- 11) What are the building dimensions, Length, Width and Height that the sensors are going to be mounted in or on top of?
- 12) Are you going to be transmitting the signal from inside one building to the inside of another building? What is the overall distance between the buildings?
- 13) Are there any large trees located right outside of the building that may limit the transmission distance of your wireless signals?



Currently, ACI offers a flat fee of \$25 for a system set up. This can save you time and money during your installation of these devices. Please contact ACI for further details.

Need further assistance? Please contact us at:

1-888-967-5224



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