

# Installation Guidance

Setra Hardware

## Wiring Selection Guidance

Sensor Type	Circuit	Specifications
<b>Pressure Indicator</b> ( <a href="#">LITE</a> )	3 wire	18-22 AWG Stranded Unshielded Twisted Pair
<b>Temp/Humidity Sensors</b> ( <a href="#">SRH200</a> )	4 wire	18-22 AWG Stranded Shielded Twisted Pair
<b>Particle Counters</b> ( <a href="#">SPCs</a> )	Depending on communication protocol Modbus TCP: CAT5/6 Modbus RTU: 5 wire	18-22 AWG Stranded Shielded Twisted Pair
<a href="#">264/267</a>	3 wire	18-22 AWG Stranded Shielded Twisted Pair
<b>Room Monitors</b> ( <a href="#">FLEX</a> , <a href="#">SRCM</a> )	Depending on communication protocol <ul style="list-style-type: none"> <li>• BACnet IP: 2 wire and CAT5</li> <li>• BACnet MS/TP: 4 wire</li> </ul>	16-24 AWG Stranded Unshielded Twisted Pair
<b>Network Hardware:</b> <a href="#">EDGE</a> , <a href="#">BASControl</a> , <a href="#">Network Switch</a> , <a href="#">BASrouter</a>	EDGE, BASControl, Network Switch: 2 wire and CAT5/6 BASrouter: 4 wire	18-22 AWG Stranded Shielded Twisted Pair

## Hardware Placement Guidance

Sensor Type	Placement
<b>Pressure Indicator</b> ( <a href="#">LITE</a> )	<ul style="list-style-type: none"> <li>• Pressure pickup plates should be out of the direct path of any sources of air turbulence, and not in the immediate vicinity of heat or cold-generating equipment</li> <li>• Pressure pickup plates should be placed fairly central to the room, avoiding immediate placement near doorways (don't want momentary fluctuations in pressure to significantly impact readings)</li> <li>• Pressure pickup plates should be either ceiling mounted or near-ceiling wall-mount (above 6')</li> </ul>
<b>Temp/Humidity Sensors</b> ( <a href="#">SRH200</a> , <a href="#">SRF600s</a> )	<ul style="list-style-type: none"> <li>• Temp/humidity sensors should be mounted with the same turbulence and thermal considerations as above</li> <li>• Temp/humidity sensors should be mounted at just below 'eye level', or roughly between 5' – 5' 9" from the floor</li> <li>• These devices are designed to be wall mounted. They need to be mounted in a benign location which best represents room conditions.</li> </ul>

	<ul style="list-style-type: none"> <li>Do not mount it so it becomes blocked off.</li> </ul>
<b>Particle Counters (SPCs)</b>	<ul style="list-style-type: none"> <li>Particle counters should be mounted with the same turbulence and thermal considerations as above</li> <li>Particle counters should be placed near the highest-use processing area(s) mounted at a height that mirrors the height where the most critical processes are happening</li> <li>All of the above should be free of obstructions (no equipment blocking any orifices/vents/etc.)</li> <li>General rule: place nearest to the questionable area.</li> </ul>
<a href="#">264/267</a>	<ul style="list-style-type: none"> <li>Ideally mounted above the space (though not necessarily), just above the ceiling tiles for easy access.</li> </ul>
<b>RPS/Snubbers</b>	<ul style="list-style-type: none"> <li>These devices are designed to be wall or ceiling mounted. They need to be mounted in a benign location which best represents room pressure.</li> <li>Do not mount on the ceiling next to an exhaust duct</li> <li>Do not mount on the wall next to the door</li> <li>Do not mount on the wall with a fan blowing toward it.</li> <li>Do not mount it so it becomes blocked off.</li> <li>The snubbers need to be mounted away from any fans, exhausts, doors, and anything that could affect their readings. Something to be mindful of.</li> </ul>
<b>Room Monitors (FLEX, SRCM)</b>	<ul style="list-style-type: none"> <li>Mount on wall at eye level so that information can be easily read and touch screen easily accessible.</li> </ul>

## Plumbing

For best results and shortest response times, 3/16" I.D. tubing is suggested for tubing lengths up to 100 feet long, 1/4" I.D. for tubing lengths up to 300 feet, and 3/8" I.D. for tubing lengths up to 900 feet.

## Power Requirements

Sensor Type	Voltage
<b>Pressure Indicator (LITE)</b>	24 VAC/VDC
<b>Temp/Humidity Sensors (SRH200)</b>	For 4-20mA: $10\text{ V} + R_L \times 20\text{ mA} < U_v < 30\text{ VDC}$ For 0-10V: 15-30 VDC or 24 VAC
<b>Particle Counters (SPCs)</b>	Power adapter provided or can be purchased as optional accessory.
<a href="#">264/267</a>	9-30 VDC
<b>Room Monitors (FLEX, SRCM)</b>	24 VAC/VDC
<b>Network Hardware: EDGE, BASControl, Network Switch, BASrouter</b>	24 VAC/VDC

## Electrical Data Output

For the FLEX, you only want to bring in VDC output for sensors.

Resistor	Converted Output
<b>250 OHM</b>	1-5 vdc

<b>500 OHM</b>	2-10 vdc

Below is an example of a mA output sensor wired to a FLEX that is being converted to VDC output using a 250 Ohm resistor.

