



# Air Temperature and Relative Humidity

Typically capacitive RH chips and PRTs






*Rugged, Reliable, and Ready for any Application*



Air temperature and relative humidity probes typically consist of two separate sensors packaged in the same housing. Often relative humidity is measured with a capacitive RH chip, while air temperature is measured by a PRT. The HMP155A, HC253, or CS215 is recommended

in humid areas or applications in which accurate measurements of RH (especially above the 90% RH level) are important. Solar radiation shields are required for most applications, where the probes are exposed to sunlight.

## MAJOR SPECIFICATIONS

	Sensor	Measurement Range	Accuracy	Field Replacable Chip or Recalibrate
<p><b>CS215</b>   SDI-12 Output</p> <p>Competitively priced, general purpose temperature and RH sensor</p> 	Sensirion SHT75	<p>Relative Humidity 0 to 100% RH</p> <p>Temperature -40° to +70°C</p>	<p>Relative Humidity (at 25°C) ±2% to ±4%, depending on RH</p> <p>Temperature ±0.3°C at 25°C; ±0.4°C (+5° to +40°C); ±0.9°C (-40° to +70°C)</p>	field replaceable chip
<p><b>HMP60</b>   Accurate, Rugged</p> <p>Ideal for long-term, unattended applications</p> 	<p>Relative Humidity Vaisala's INTERCAP capacitive chip</p> <p>Temperature PT100 RTD</p>	<p>Relative Humidity 0 to 100% RH</p> <p>Temperature -40° to +60°C</p>	<p>Relative Humidity ±3% to ±7% depending on RH and temperature</p> <p>Temperature ±0.6°C</p>	field replaceable chip (RH only)
<p><b>HC253</b>   Accurate and Rugged</p> <p>Superior performance and reliability</p> 	<p>Relative Humidity ROTRONIC® Hygromer IN-1</p> <p>Temperature PT100 RTD</p>	<p>Relative Humidity 0 to 100% RH</p> <p>Temperature -40° to +60°C</p>	<p>Relative Humidity ±0.8% RH with standard configuration settings</p> <p>Temperature ±0.1°C with standard configuration settings</p>	recalibrate
<p><b>HMP155A</b>   Accurate, Wide Temperature Range</p> <p>Higher end sensor where higher accuracy is required</p> 	<p>Relative Humidity HUMICAP® 180R</p> <p>Temperature PT100 RTD</p>	<p>Relative Humidity 0.8 to 100% RH</p> <p>Temperature -80° to +60°C</p>	<p>Relative Humidity ±1% to ±1.7% depending on RH</p> <p>Temperature ±(0.055 - 0.0057 x temperature)°C</p>	recalibrate
<p><b>083E</b></p> <p>Commonly used with the WMS100 for wind-farm power performance measurements</p> 	<p>Relative Humidity Thin film polymer capacitor</p> <p>Temperature Thermistor (precision multi-element)</p>	<p>Relative Humidity 0 to 100% RH</p> <p>Temperature -50° to +50°C</p>	<p>Relative Humidity ±2.0%</p> <p>Temperature ±0.10°C (0.18°C)</p>	recalibrate

