

CS215

Temperature and Relative Humidity Probe

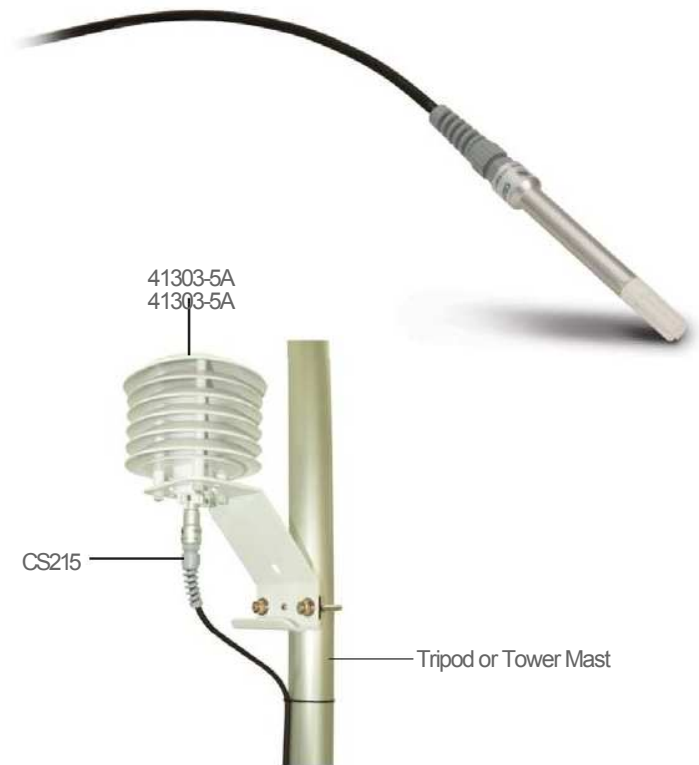


The CS215 uses the Sensirion SHT75, a combined relative humidity and temperature element, to provide accurate, stable measurements. The probe outputs an SDI-12 signal that our dataloggers can directly measure. Please note that our CR7 and CR9000X dataloggers are not SDI-12 compatible.

The Sensirion SHT75 element is field-replaceable, eliminating the downtime typically required for the recalibration process.

Sensor Mounts

When exposed to sunlight, the CS215 must be housed in a 41303-5A radiation shield. To attach the 41303-5A to a CM202, CM204, or CM206 crossarm, place the 41303-5A's U-bolt in the bottom holes. To attach the radiation shield directly to a tripod mast, tower mast, or tower leg, place the U-bolt in the side holes.



Ordering Information

Air Temperature and Relative Humidity Probe

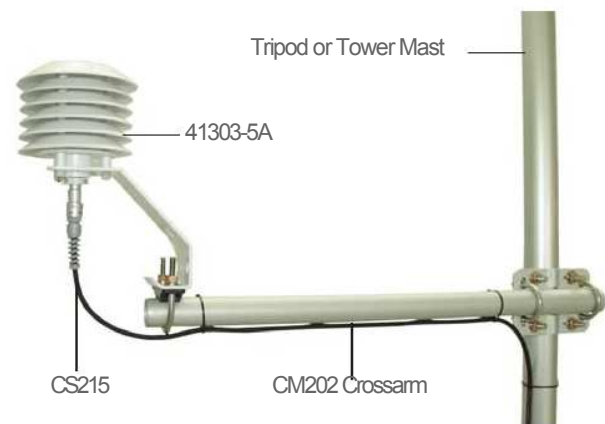
CS215-L CSL Temperature/RH Probe with user-specified cable length. Enter cable length, in feet, after the -L. Must choose a cable termination option (see below).

Cable Termination Options (choose one)

- PT** Cable terminates in stripped and tinned leads for direct connection to a datalogger's terminals.
- PW** Cable terminates in connector for attachment to a prewired enclosure.

Radiation Shield

41303-5A 6-Plate Gill Radiation Shield to house the CS215.



Recommended Cable Lengths

2-m Height		Atop a tripod or tower via a 2-ft crossarm such as the CM202								
Mast/Leg	CM202	CM6	CM106	CM10	CM110	CM115	CM120	UT10	UT20	UT30
9 ft	11 ft	11 ft	14 ft	14 ft	14 ft	19 ft	24 ft	14 ft	24 ft	37 ft

Note: Add two feet to the cable length if mounting the enclosure to the leg base of a CM106, CM110, CM115, or CM120 tripod.

Specifications

Sensing Element:	Sensirion SHT75
<i>Relative Humidity</i>	
Measurement Range	0 to 100% RH
Accuracy (at 25°C):	±2% (10% to 90% RH), ±4% (0 to 100% RH)
Short Term Hysteresis:	<1% RH
Temperature Dependence:	better than ±2% over -20° to 60°C)
<i>Long-Term</i>	
Stability (Typical):	±1.0% per year
Response Time w/Filter:	<20 s (63% response time in still air)
Calibration Traceability:	NIST and NPL standards
<i>Temperature Measurement</i>	
Measurement Range:	-40° to +70°C
Accuracy:	±0.3°C at 25°C; ±0.4°C over +5° to +40°C; ±0.9°C over -40° to +70°C
Response Time w/Filter:	<120 s (63% response time in air moving at 1 m s ⁻¹)
<i>Sensor Output</i>	
Communication Standard:	SDI-12 V1.3 (responds to a subset of commands)
Output Resolution:	0.03% RH; 0.01°C

Electrical

Supply Voltage:	6 to 16 Vdc
Current Drain (typical)	
Quiescent:	120 µA
During Measurement:	1.7 mA (takes 0.7 seconds)
EMC Compliance:	Tested and conforms to IEC61326:2002

Physical

Operating Temp. Range:	-40° to +70°C
Weight w/10 ft cable:	150 g (5.3 oz)
Cable Type:	Low-temperature cable with Santoprene outer jacket
Housing Material:	Anodized aluminium
Housing Classification:	IP65 (NEMA 4)
Sensor Protection:	Sintered high density polyethylene filter cap, average pore size 10 µm
Dimensions	
Diameter at sensor tip:	1.2 cm (0.5 in.)
Diameter at cable end:	1.8 cm (0.7 in.)
Length including strain relief:	18.0 cm (7.1 in.)