Humidity Sensors

Overview:
Humidity sensors are common at many of our sites with a few different types in service; the Vaisala HMP analogue sensors and the Campbell Scientific SDI-12 sensor. There is a general shift towards the Campbell Scientific sensor as and when sensors need replacing. All sensors measure Air Temperature and Relative Humidity.

Check data:
A minimum of 6 monthly validations of the sensors are required whereby a portable temperature/humidity probe is used next to the installed sensor to compare any differences.

Installation of Humidity Sensors:
The sensor should be installed in a position that minimises radiated heat from other objects such as containers and pavement. Generally the sensor is installed above a grass area at about shoulder height on a bracket that separates it from surrounding structures. This allows for easy access for validation purposes.
All temperature/humidity sensors need to be installed with an appropriate radiation shield such as that shown in *Figure 1*.

Figure 1: Campbell Scientific sensor installed inside an appropriate radiation shield.

Wiring Instructions:

Vaisala HMP35A

Wire Colour	Logger	Notes
Blue	12V	
Red	SE1	1H on CR10 Wiring Panel
White	SE6	3L on CR10 Wiring Panel
Yellow	C2	
Green	AG	
Black	E1	

Vaisala HMP45A

Wire Colour	Logger	Notes
Blue	12V	
Yellow	SE1	1H on CR10 Wiring Panel
Brown	SE2	1L on CR10 Wiring Panel
Purple	G	
Grey	G	
Red	E3	
G/W/B		Not used

Vaisala HMP 50Y

Wire Colour	Logger	Notes
Brown	12V	
White	SE6	Humidity
Blue	G	
Black	SE1	Temperature

Campbell Scientific CS215

Wire Colour	Logger	Notes
Green	Signal	(SDI12)
Red	12V	
B/W/Clear	G	

Humidity Sensors

Vaisala HMP155		
Wire Colour	Logger	Notes
White	SE1	Temperature
Brown	AG	
Green	AG	
Yellow	SE2	Humidity
Grey	AG	
Pink	AG	
Blue	12V	
Red	G	
Black	G	Shield

Logger:

Logger Code for Campbell Scientific CS215:
Destination: Temp_Humidity()
SDIPort: 3(Control I/O C3)
SDIAddress: 0 (default)
SDICommand:"M!"
Multiplier: 1.0
Offset: 0