

Sensor	Model	Serial #	Manuf.	Calibrate	New	Dates in Use	Date Calib.	AT Mult.	AT Offset	RH Mult.	RH Offset
Temp. and Rel. Humidity	HMP45C	U2520001	Campbell Sc.	Annually	8/1999	8/11/99 – 12/31/99	new 8/99	0.1	-40	0.1	0
Temp. and Rel. Humidity	HMP35C	R2620008	Campbell Sc.	Annually	6/1997	7/97 - 8/11/99	new 6/97	1	0	0.1	0
HMP45C Multipliers:											
Air Temp in Celsius						Air Temp in Fahrenheit					
Multiplier: 0.1 (from manual)						Multiplier: 0.18 (from manual)					
Offset: -40 (from manual)						Offset: -40 (from manual)					
Relative Humidity											
Multiplier: 0.1 (from manual)											
Offset: 0 (from manual)											
HMP35C Multipliers:											
Air Temp in Celsius						Air Temp in Fahrenheit					
Multiplier: 1.0 (from manual)						Multiplier: 1.8 (from manual)					
Offset: 0 (from manual)						Offset: 32 (from manual)					
Relative Humidity											
Multiplier: 0.1 (from manual)											
Offset: 0 (from manual)											

Sensor	Model	Serial #	Manuf.	Calibrate	New	Dates in Use	Date Calib.	Calib. Const.	Multiplier
Li-Cor Quantum Sensor	LI-190SB	Q26604	Li-Cor	2years	1994	4/99 – 12/31/99 7/97 - 4/99	4/16/1999 new 7/97	6.5 ???	1.27 ???
Multiplier for Total fluxes equation: $(1 / C) \times t$									
Where C = calibration constant x 0.604 (0.604 accounts for the 604 ohm shunt resistor)									
Where t = datalogger program execution interval in seconds (we have a 5 second interval)									
Current Multiplier:									
$(1 / 4.66 \times 0.604) \times 5 = (1 / 2.81464) \times 5 = 0.3553 \times 5 = 1.78$									
The dates in use, calibration constants, and multipliers in use before 3/2001 are poorly documented and in question.									

Sensor	Model	Serial #	Manuf.	Calibrate	New	Dates in Use	Date Calib.	Multiplier	Offset
Barometric Pressure	CS105	U1120009	Campbell Sc.	Annually	1999	8/11/99 – 12/31/99	new 1999	0.184	600
Barometric Pressure	CS105		Campbell Sc.	Annually	6/1997	7/97 - 8/11/99		0.184	600

CS105 Multipliers:

Barometric Pressure in millibars
Multiplier: 0.184 (from manual)
Offset: 600 (from manual)

To find inches of Hg
Multiply by 0.02953

Sensor	Model	Serial #	Manuf.	Calibrate	New	Dates in Use	Date Calib.	WS Multiplier	WS Offset	WD Mult.	WD Offset
Wind Sentry	03001-5	8702	Campbell Sc.	Annually		7/97 –12/31/99	3/11/1997	0.75	0.2	0.142	0

Wind Sentry Multipliers:

Wind Speed in Meters/Second
Multiplier = 0.750 (from manual)
Offset = 0.2 (from manual)

Wind Speed in Miles/Hour
Multiplier = 1.677 (from manual)
Offset = 0.4 (from manual)

Wind Direction
Multiplier = 0.142 (from manual)
Offset = 0 (from manual)

Sensor	Model	Serial #	Manuf.	Calibrate	New	Dates in Use	Date Calib.	Calib. Const. = volts/watts meter-2	Calib. Const. mv/cal cm-2 min-1	Multiplier
Eppley B&W Pyranometer	8-48	28078	Eppley	Annually	???	8/11/99 – 12/31/99	3/19/1997	0.00001035	7.22	0.1385
						???	???	0.00001028	7.17	0.13947

Multiplier for Eppley Pyranometer:
Where C = Calibration Constant in volts/watts meter-2
And 1 cal cm-2 min-1 = 697.3 watts meter-2

$$1/((C \times 697.3) \times 1000)$$

$$10.97 \times 10^{-6} \text{ volts/watts meter-2} \times 697.3 \text{ watts meter-2} = 0.007649 \text{ volts/cal cm-2 min-1}$$

$$0.007649 \text{ volts/cal cm-2 min-1} \times 1000 = 7.65 \text{ millivolts/cal cm-2 min-1}$$

$$1 / 7.65 = 0.13072$$

Sensor	Model	Serial #	Manuf.	Calibrate	New	Dates in Use	Date Calib.	Multiplier
Tipping Bucket Rain Gauge	2500	1425C	Sierra Misco	(Field Calib.) Ann.	6/1997	7/97 – 12/31/99		0.254
	Multiplier for output in mm: 0.254 (from the manual)							
	Multiplier for output in inches: 0.001 (from the manual)							

Equipment	Model	Serial #	Manuf.	Calibrate	New	Dates in Use
Internal Humidity Sensor	???	???	???		???	???
Datalogger	CR10X	???	Campbell Sc.		8/11/1999	8/11/1999 – 12/31/99
	CR10X	???	???		7/1997	7/1997 – 8/11/1999
Battery Power Supply	???	???	???		???	???
16x18 WP Enclosure	???	???	???		???	???