

Identification of the Station

Name	Crucero SOLSYS2	Station Code	Solys2
Region	Antofagasta	Proprietary	CNE/GTZ
Province	Tocopilla	Installer	CENMA
Commune	María Elena	Operator	CENMA
UTM E	441.659 [m]	Datum	WGS 84
UTM N	7.536.680 [m]	Time Zone	19 K
Altitude	1.183 [m asl]	Commissioning	11 de julio de 2012

Station Configuration

Measured Variables	Height Measurement	Units
Temperature	2.0 [m agl]	[C]
Wind Velocity 1	6.2 [m agl]	[m/s]
Wind Velocity 2	12 [m agl]	[m/s]
Wind Direction	11.65 [m agl]	[Degrees]
Relative humidity	2.0 [m agl]	[%]
Direct Normal Irradiance (DNI)	1.78 [m agl]	[w/m ²]
Difuse Irradiance	1.91 [m agl]	[w/m ²]
Global Horizontal Irradiance (GHI)	1.91 [m agl]	[w/m ²]

Photographs and Schematic Location



Installed Equipment				
Equipment	Manufacturer	Model	Serial N°	Characteristics
Wind speed	Theodor Friedrichs	4035.0000	1162	Range: 0 – 70 [m/s] Threshold: 0.3 [m/s] Output: 0 – 700 [Hz] Operating Temperature: –25 to 80 [°C]
			1172	
Wind Direction	Theodor Friedrichs	4123.0000	N/O	Measuring Range: 360 [°] Damping Ratio@3 [m/s] and initial deflection: < 0.3 Power supply: 10 to 30 [VDC], < 5 [mA]@12 [V] Output: Digital, serial 8 bit Gray Code Operating Temperature: –25 to 80 [°C]
Temperature	Theodor Friedrichs	3031.0050	1122	Pt 100, DIN 60751 B, 1/3 tolerance Measuring Resistance Pt 100 4 line Range: –40 – 60 [°C] Output: 0 – 1 [V] Response Time: T63, Typical 4 [s] T90, approx. 8 [s]
Relative Humidity	Theodor Friedrichs	3031.0050	1122	Capacitive Element Range: 0 – 100 [%] Output: 0-1 [V] Response Time: T63, Typical 10 [s] T90, approx. 20 [s]
Pyranometer I (GHI)	Kipp & Zonen	CMP11	120900	10.81 [μV/W/m ²]
Pyranometer II (Difuse)	Kipp & Zonen	CMP11	120901	9.63 [μV/W/m ²]
Pyrheliometer (DNI)	Kipp & Zonen	CHP1	110770	7.93 [μV/W/m ²]
Datalogger	Theodor Friedrichs	Combilog 1022	N/O	
Solar Panels	TÜVRheinland	KD135SX-1PU	116NFR0187	Irradiance and cell temperature: 1.000[W/m ²] @25 [°C], 1,5 [A] (800 [W/m ²]@45[°C], 1.5[A]) P _{max} :135 [W] (97 [W]) V _{pmax} : 17.7 [V] (16.0 [V]) I _{pmax} : 763 [A] (6.1 [A]) V _{oc} : 22.1[V] I _{sc} : 8.37 [A]
			116MFR0183	
			116NFR0243	
			116NFR0186	
Shading drive arm	Theodor Friedrichs	6000.0012	1012	N/A
Tracking System	Kipp & Zonen	Solys 2	100225	Supply Voltage: 18 to 30 [VDC], 90 to 264 [VAC] Power: 25 [W] Operating Temperature: –40 to 50 [°C] Location, time/date, information and setup: Automatic by integrated GPS Communication: Ethernet and web interface Pointing accuracy: < 0.1 [°]
Ventilation System for Pyranometer	Kipp & Zonen	CVF3	111166	Ventilator fan power: 5 [W] continuously Heat Power: 5 to 10 [W] Operating Temperature: –40 to 70 [°C] Power required: 12 [VDC]; 1.3 A (with 10 [W] heater)
			111129	

N/O: Not observed, N/A: Not applicable