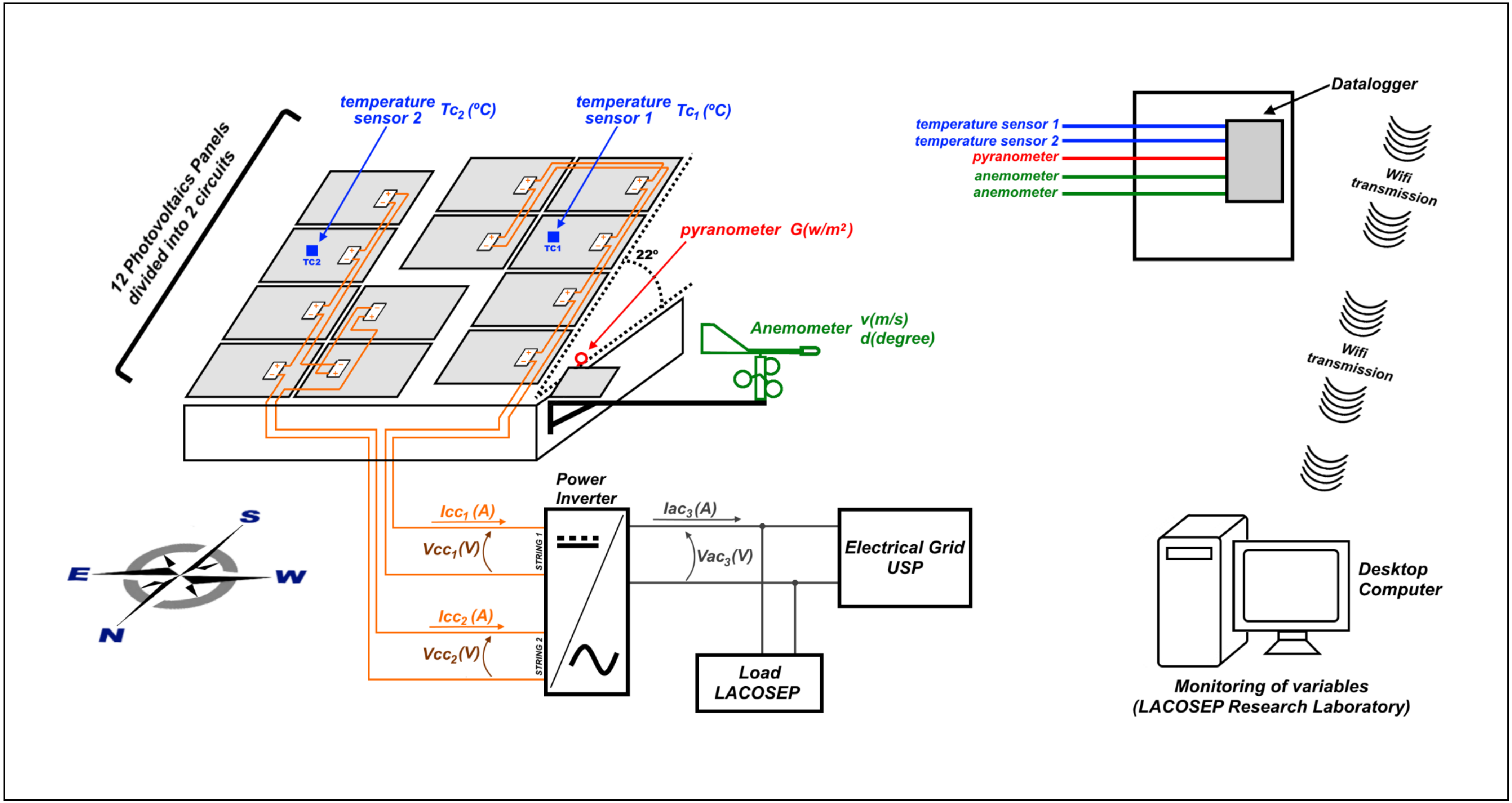

Schematic Photovoltaic Power and Meteorological Monitoring System USP

Legend:

t = time (s (second); m (minutes) or h (hour))

Tc_1 = Photovoltaic electric temperature of circuit 1 (ºC)

Tc_2 = Photovoltaic electric temperature of circuit 2 (ºC)

v = Wind speed (m/s)

d = Wind direction (degree)

G = Solar radiation (W/m^2)

Icc_1 = DC Current circuit 1 (A)

Icc_2 = DC Current circuit 2 (A)

Vcc_1 = DC Voltage of circuit 1 (V)

Vcc_2 = DC Voltage of circuit 2 (V)

*Pcc_1 = (Vcc_1 * Icc_1) DC Electric Power of circuit 1 (W)*

*Pcc_2 = (Vcc_2 * Icc_2) DC Electric Power of circuit 2 (W)*

Iac_3 = AC Current of Power inverter (A)

Vac_3 = AC Voltage of Power inverter (V)

E_{c1} = Power Energy of circuit 1 (Wh)

E_{c2} = Power Energy of circuit 2 (Wh)

E_{ct} = (E_{c1} + E_{c2}) Total Power Energy (Wh)

T = Ambient temperatury (ºC)

RH = Relative Humidity (%)

INMET = National Institute of Meteorology (http://www.inmet.gov.br/)

Observation: The power factor of the power Inverter is $\cos\Phi = 1$, therefore the AC output power of the inverter is Pac3= Iac3x Vac3 $\cos\Phi$

Metereological Measurements of Photovoltaic System of LACOSEP (Sao Paulo University/Sao Carlos Campus)

t(s)	Tc_1 (ºC)	Tc_2 (ºC)	*v* (m/s)	*d (degree)*	*G* (W/m^2)	Icc_1 (A)	Icc_2 (A)	Vcc_1 (V)	Vcc_2 (V)	Pcc_1 (W) $= Vcc_1 * Icc_1$	Pcc_2 (W) $= Vcc_2 * Icc_2$	Iac_3 (A)	Vac_3 (V)	E_{c1} (Wh)	E_{c2} (Wh)	E_{ct} (Wh) $= (E_{c1} + E_{c2})$

Remote data of Measurements of INMET (Data of Sao Carlos City /SP)

t(h)	*T (ºC)*	*RH*