ENTE PROVINCIA DEI FRATI MINORI DI S. MARIA DELLE GRAZIE
CONVENTO FRANSCESCANO OFM SS. ANNUNZIATA
SAN GIORGIO DEL SANNIO

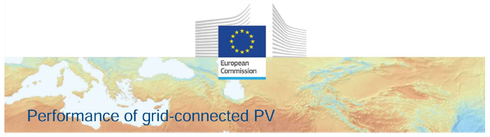
LAVORI DI RISTRUTTURAZIONE E RIQUALIFICAZIONE DELL'AREA "CAMPO DEI MONACI" IN SAN GIORGIO DEL SANNIO ALLA VIA SANT'ANTONIO

PROGETTO ESECUTIVO

8.4

IMPIANTO ELETTRICO
PLANIMETRIA COPERTURA FOTOVOLTAICO - SCHEMA UNIFILARE

Visto: il committente	Il Progettista: Ing. LOMBARDI RAFFAELE
ENTE PROVINCIA FRATI MINORI - Viale San Lorenzo, 8 - 82100 BENEVENTO - C.F.: 80000510620 - Santa Maria delle Grazie	ORDINE DEGLI INGEGNERI DELLA PROVINCIA DI BENEVENTO - LOMBARDI RAFFAELE
Rev.: 01	Data: Marzo 2023



PVGIS-5 estimates of solar electricity generation:

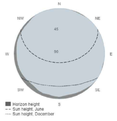
Provided inputs:

Latitude/Longitude:	41.062, 14.852
Horizon:	Calculated
Database used:	PVGIS-SARAH
PV technology:	Crystalline silicon
PV installed:	1 kWp
System loss:	14 %

Simulation outputs

Slope angle:	20 °
Azimuth angle:	30 °
Yearly PV energy production:	1302.27 kWh
Yearly in-plane irradiation:	1662.67 kWh/m²
Year-to-year variability:	47.90 kWh
Changes in output due to:	
Angle of incidence:	-3.08 %
Spectral effects:	0.85 %
Temperature and low irradiance:	-6.92 %
Total loss:	-21.68 %

Outline of horizon at chosen location:



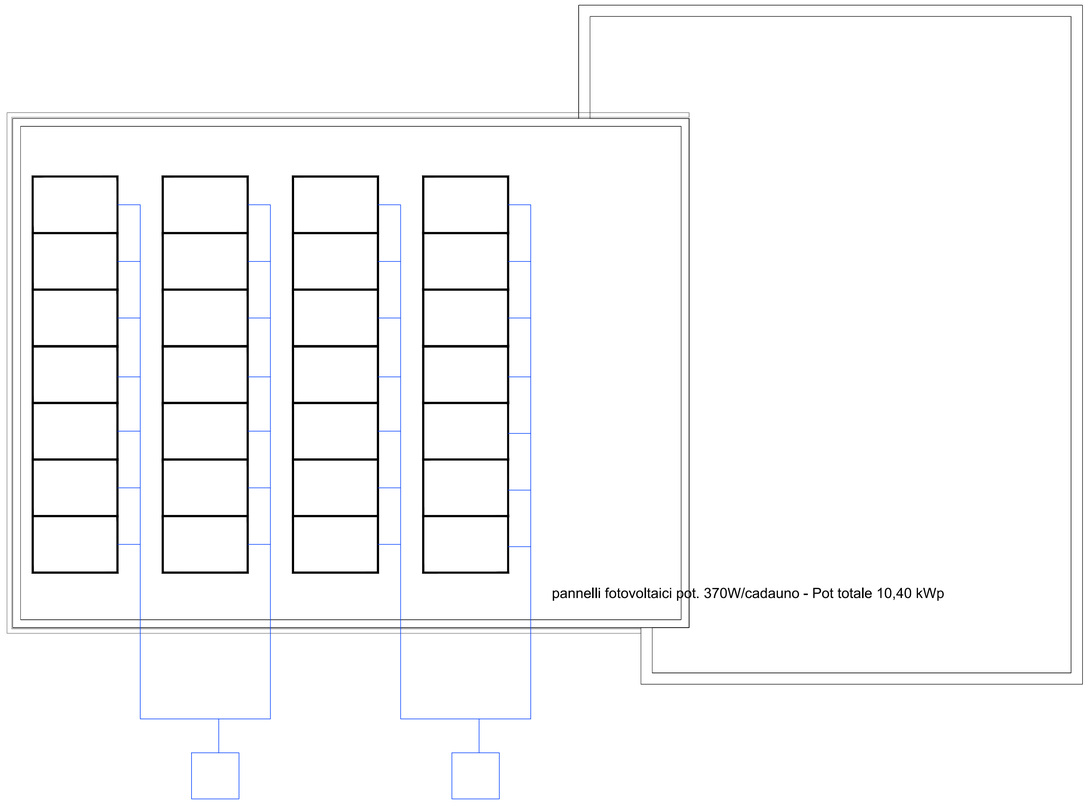
Monthly energy output from fix-angle PV system:

Monthly in-plane irradiation for fixed-angle:

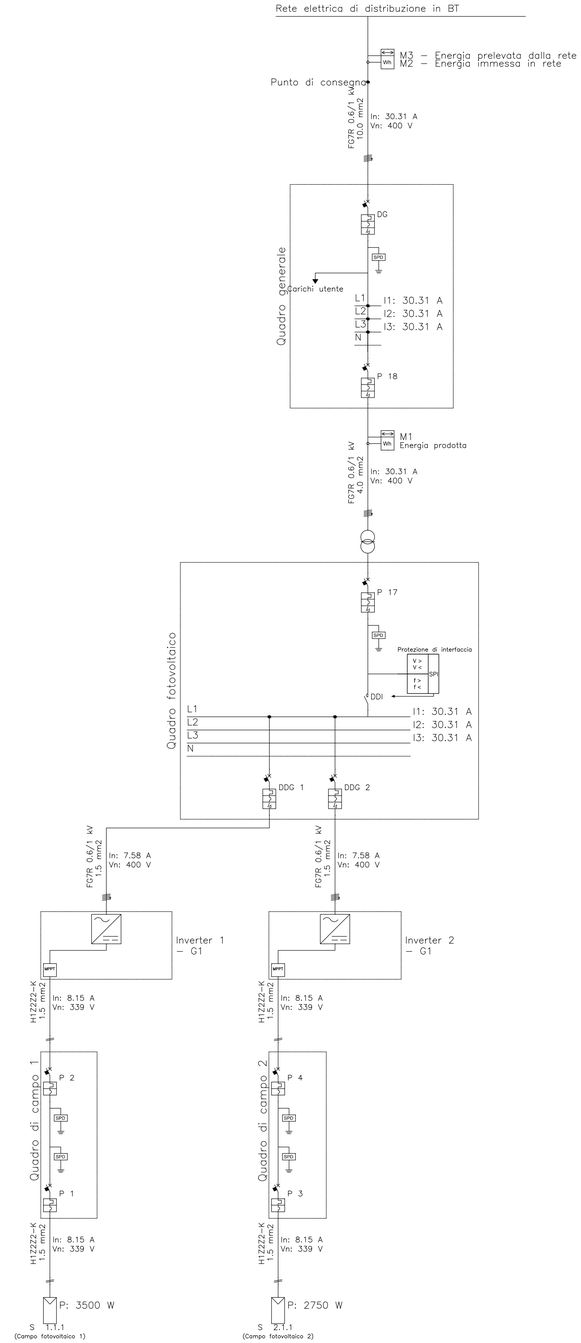
Monthly PV energy and solar irradiation

Month	E_m	H(i)_m	SD_m
January	57.4	69.5	7.9
February	62.9	76.0	11.0
March	96.8	118.6	14.2
April	122.5	154.0	9.5
May	147.3	188.2	13.6
June	153.2	201.2	12.8
July	170.1	226.2	10.7
August	158.8	210.3	10.5
September	115.7	149.5	11.4
October	94.2	118.4	12.2
November	65.5	80.4	11.1
December	57.9	70.4	13.4

E_m: Average monthly electricity production from the given system [kWh].
H(i)_m: Average monthly sum of global irradiation per square meter received by the modules of the given system [kWh/m²].
SD_m: Standard deviation of the monthly electricity production due to year-to-year variation [kWh].



Legenda dei simboli

	Inverter
	Stringa
	Contatore
	Interruttore magnetotermico
	SPD
MPPT	MPPT
	Interruttore magnetotermico differenziale
	Contattore
	Sistema di protezione di interfaccia
	Trasformatore di isolamento

DG: Dispositivo Generale
DDI: Dispositivo di interfaccia
DDG: Dispositivo del Generatore