CABLING CALCULATION: "Cerignola"

MODULE DATA SHEET		
MODULE TYPE	REC Solar / RECS455PE BLK	
Peak Power (Pm)	(Wp)	575.00
Open Circuit Voltage (Voc)	(V)	53.20
Optimum Operating Voltage (Vmp)	(V)	44.67
Corrente (Imp)	(A)	12.88
Temperature Co-efficients Voltage (β)	-0.280 V%/°C	
Temperature Co-efficients Current(α)	0.048 A%/°C	

GP - Inverter Electrical Characteristics		
Characteristics at STC	Ue OUT	1161.42 V
	Vs OUT	1383.20 V
	Is	128.80 A

Voltage drop from Strings to QPS	
Modules for each strings	26.00
Line per QP	10
Strings per QP	10.00
Medium Lenght	0.45 m
Medium Resistence	0.17119 Ω
Section Line	10 mmq
Voltage Drop at STC	**0.19 %**
Voltage Drop at 65°C	**0.17 %**
Voltage Drop at -10°C	**0.17 %**

CHARACTERISTICS FOR ONE STRING		
Modules for each 1	N°	26.00
Voltage	Vmpp	1161.42
Current	A	12.88
Peak Power (Pm)	kWp	14.95

FINAL DATA		
String to Inv	N°	372
Power of all Strings	(Peak)	4664.40 kWp
Total Modules	N°	8112

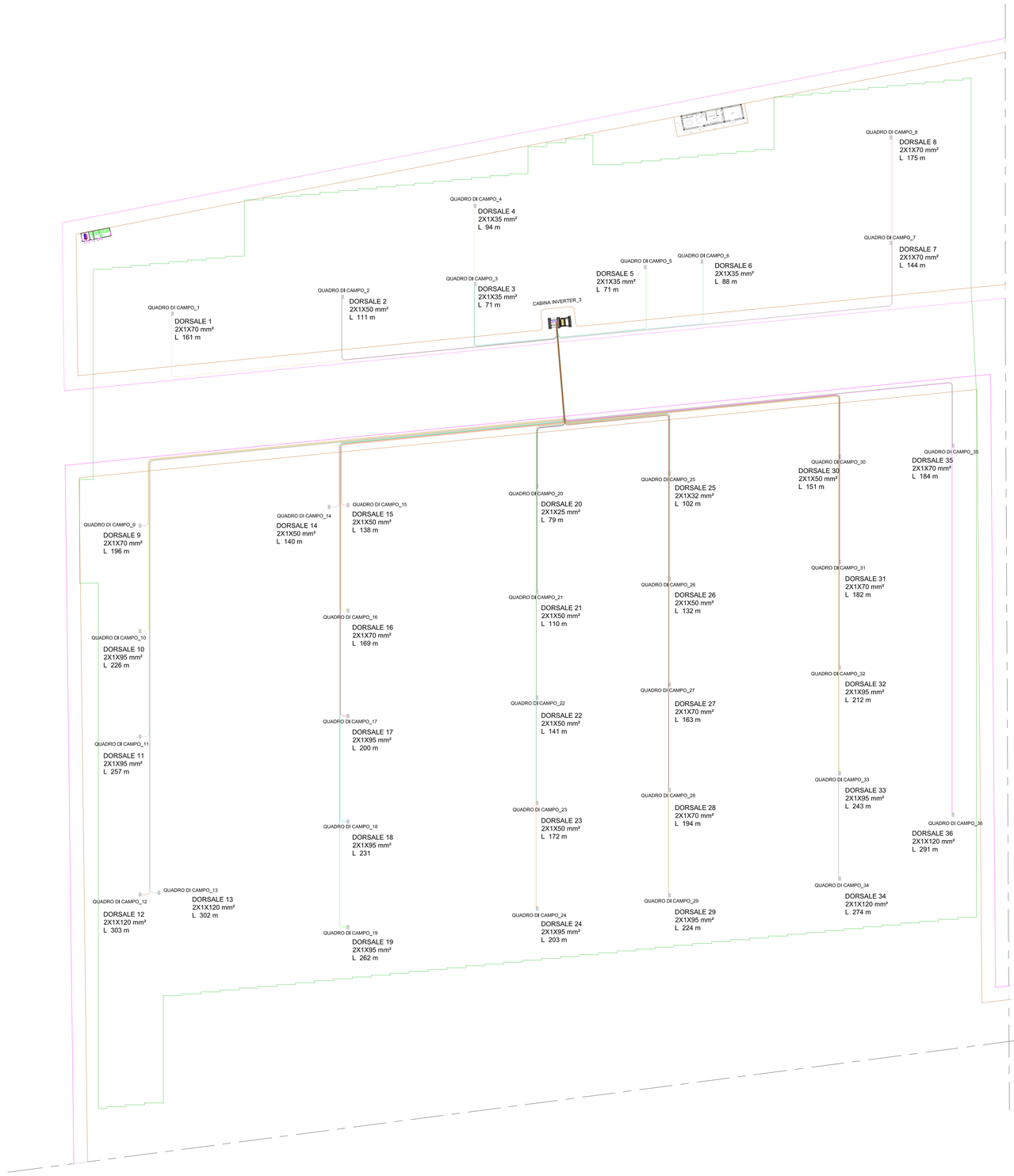
*QPS = Smart String Box

VALUES VERIFICATION FOR ONE QPS TO INVERTER		SMA - Sunny Central 4000/EV	
Estimation of the minimum voltage Vmpp. For a temperature of the modules that are 55°C	1291.50V	MIN MPPT VOLTAGE	849 V
Estimation of the maximum current Impp. For a temperature of the modules that are 65°C.	131.27 A		
Estimation of the maximum mppt voltage Voc. For a temperature of the modules that are STC	1161.42V	MAX MPPT VOLTAGE	1325 Vdc
Estimation of the minimum current Impp. For a temperature of the modules that are -10°C	126.64 A		
Estimation of the maximum voltage Voc. For a temperature of the modules that are -10°C	1247.65V	MAXIMUM VOLTAGE	1500 Vdc

CALCULATION OF THE VOLTAGE DROP ON THE CABLES STC

CODE	N° OF STRINGS TO QPS	AREAS	MAXIMUM LENGHT	LINE SECTION	VOLTAGE DROP FROM QP TO INVERTER	TOTAL VOLTAGE DROP	NUMBER OF AREAS IN THE PV PLANT
	n.		m	mm²	%	%	
SC-01	9	A.01	161.00	70	0.82	1.00	1
SC-02	9	A.02	111.00	50	0.79	1.00	2
SC-03	9	A.03	71.00	35	0.72	0.90	3
SC-04	9	A.04	94.00	35	0.95	1.10	4
SC-05	9	A.05	88.00	35	0.72	0.90	5
SC-06	9	A.06	88.00	35	0.72	0.90	6
SC-07	9	A.07	144.00	70	0.73	0.90	7
SC-08	9	A.08	175.00	70	0.89	1.10	8
SC-09	7	A.09	196.00	70	0.77	1.00	9
SC-10	9	A.10	226.00	95	0.84	1.00	10
SC-11	9	A.11	257.00	95	0.96	1.20	11
SC-12	9	A.12	303.00	120	0.89	1.10	12
SC-13	9	A.13	302.00	120	0.89	1.10	13
SC-14	7	A.14	140.00	50	0.77	1.00	14
SC-15	7	A.15	138.00	50	0.76	1.00	15
SC-16	9	A.16	169.00	70	0.86	1.10	16
SC-17	9	A.17	200.00	95	0.75	0.90	17
SC-18	9	A.18	231.00	95	0.86	1.10	18
SC-19	9	A.19	262.00	95	0.98	1.20	19
SC-20	7	A.20	79.00	25	0.87	1.10	20
SC-21	9	A.21	110.00	50	0.78	1.00	21
SC-22	9	A.22	141.00	50	1.00	1.20	22
SC-23	9	A.23	172.00	50	0.87	1.10	23
SC-24	9	A.24	203.00	95	0.76	1.00	24
SC-25	9	A.25	102.00	32	0.89	1.10	25
SC-26	9	A.26	132.00	50	0.94	1.10	24
SC-27	9	A.27	163.00	70	0.83	1.00	24
SC-28	9	A.28	194.00	70	0.98	1.20	25
SC-29	9	A.29	224.00	95	0.84	1.00	26
SC-30	7	A.30	151.00	50	0.83	1.00	27
SC-31	9	A.31	182.00	70	0.92	1.10	28
SC-32	9	A.32	212.00	95	0.79	1.00	29
SC-33	9	A.33	243.00	95	0.91	1.10	30
SC-34	9	A.34	274.00	120	0.81	1.00	31
SC-35	9	A.35	184.00	70	0.93	1.10	32
SC-36	9	A.36	291.00	120	0.86	1.10	33

MEDIUM VALOR	**1.880 %**
MINIMUM VALOR	**0.900 %**
MAXIMUM VALOR	**1.200 %**



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EN.IT KNOW HOW, KNOW ENERGY

CERIGNOLA | REGIONE PUGLIA | PROVINCIA DI FOGGIA

IMPIANTO AGRIVOLTAICO E RELATIVE OPERE ED INFRASTRUTTURE CONNESSE DELLA POTENZA ELETTRICA DI 140,66 MW (ex 120MW) SITO NEL COMUNE DI CERIGNOLA

PROGETTO DEFINITIVO

Layout Campo "B"- Sottocampo 3
Dimensionamento delle dorsali-Tabella calcolo dorsali

Proponente:

CERIGNOLA SOLAR 2 S.R.L.
Via Antonio Locatelli n.I
37122 Verona
P.IVA 04741630232
cerignolasolar2@pec.it

Progettazione:

WH Group s.r.l.
Via A. Locatelli n. I - 37122 Verona (VR)
P.IVA 12336131003
ingegneria@enitgroup.eu

Spazio riservato agli Enti:

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Rev.	Data	Descrizione	Redatto	Approvato
00	08/03/2022	V.I.A. Ministeriale	**A. Tartaglia**	**S.M. Caputo**

4.2.9_4.22