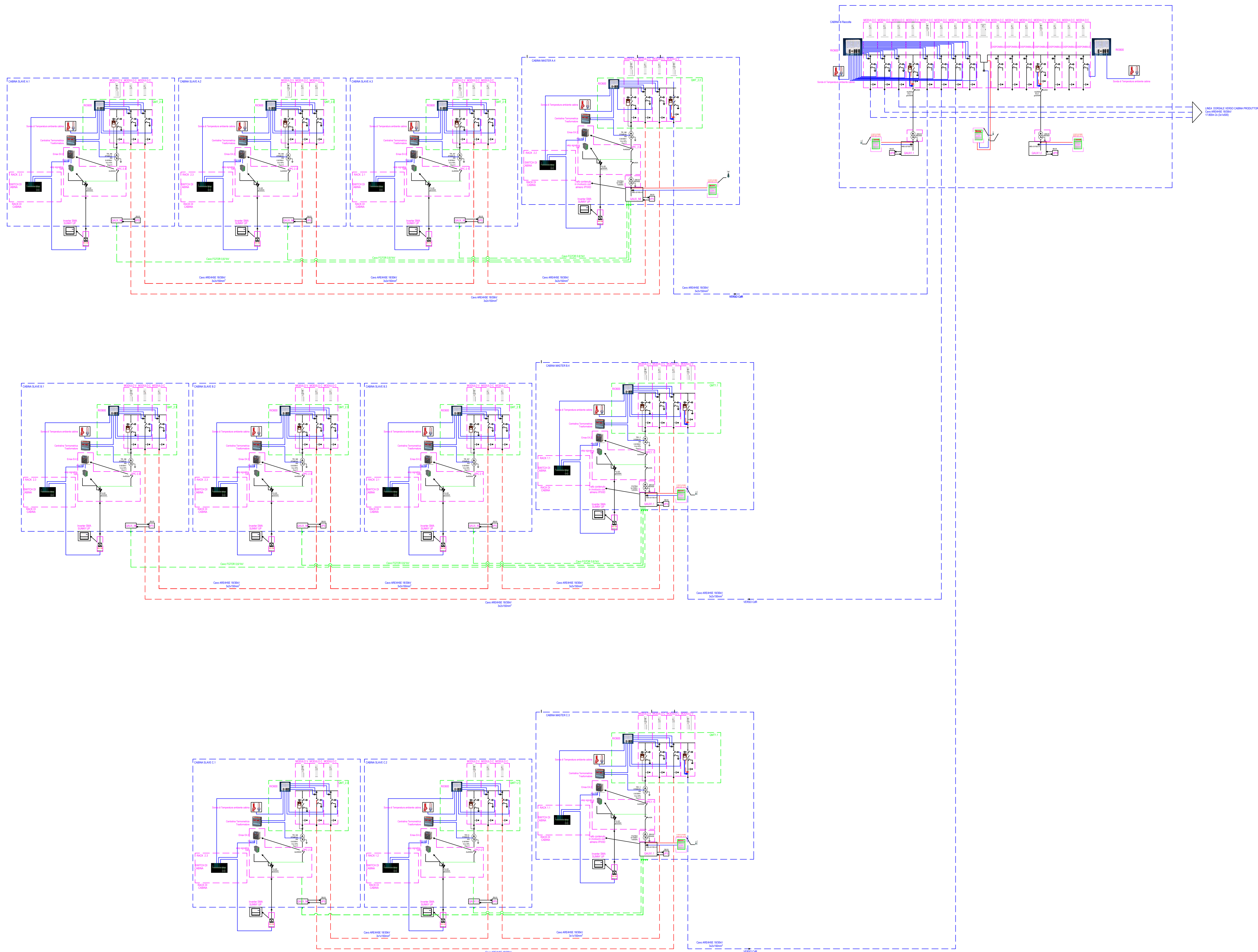


SCHEMA ELETTRICO CABINE MT E CABINA DI RACCOLTA



Inverter DC/AC 2660kVA

Technical Data	Sunny Central 2660 UP	Sunny Central 2800 LP
DC side		
MPP voltage range V _m (at 25°C / at 50°C)	880 to 1325 V / 1100 V	921 to 1325 V / 1100 V
Min. DC voltage V _{min} (Start voltage V _{start})	849 V / 1030 V	891 V / 1071 V
Max. DC voltage V _{max}	1500 V	1500 V
Max. DC current I _{max}	4750 A	4750 A
Max. short-circuit current I _{sc}	6400 A	6400 A
Number of DC inputs	24 double pole fused	24 double pole fused
Number of DC inputs w/ optional DC battery coupling	18 double pole fused (36 single pole fused) for PV and 6 double	18 double pole fused (36 single pole fused) for PV and 6 double
Max. number of DC cables per DC input (for each polarity)	2 x 800 kcmil, 2 x 400 mm ²	2 x 800 kcmil, 2 x 400 mm ²
Integrated zone monitoring	Yes	Yes
Available PV fuse sizes (per input)	200 A, 250 A, 315 A, 350 A, 400 A, 450 A, 500 A	200 A, 250 A, 315 A, 350 A, 400 A, 450 A, 500 A
AC side		
Normal AC power at cos φ=1 (at 25°C / at 50°C)	2660 kVA / 2260 kVA	2800 kVA / 2380 kVA
Normal AC power at cos φ=0.8 (at 25°C / at 50°C)	2128 kW / 1808 kW	2240 kW / 1904 kW
Normal AC current I _n (at 25°C / at 50°C)	2560 A / 2176 A	2560 A / 2176 A
Max. total harmonic distortion	< 3% at nominal power	< 3% at nominal power
Normal AC voltage / normal AC voltage range	600 V / 480 V to 720 V	630 V / 504 V to 756 V
AC power frequency / range	50 Hz / 47 Hz to 53 Hz	50 Hz / 47 Hz to 53 Hz
Min. short-circuit ratio at the AC terminals	> 2	> 2
Power factor at rated power / displacement power factor adjustable	1 / 0.8 overexcited to 0.8 underexcited	1 / 0.8 overexcited to 0.8 underexcited
Efficiency		
Max. efficiency / European efficiency / GEC efficiency	98.7% / 98.6% / 98.5%	98.7% / 98.6% / 98.5%
Protective Devices		
Input-side disconnection point	DC load break switch	DC load break switch
Output-side disconnection point	AC circuit breaker	AC circuit breaker
DC overvoltage protection	Surge arrester, type I & II	Surge arrester, type I & II
AC overvoltage protection (optional)	Surge arrester, class I	Surge arrester, class I
Lightning protection (according to IEC 62305-1)	Lightning Protection Level II	Lightning Protection Level II
Ground-fault monitoring / remote ground-fault monitoring	Yes	Yes
Insulation monitoring	Yes	Yes
Degree of protection: electronics / air duct / connection area (as per IEC 60529)	IP54 / IP54 / IP54	IP54 / IP54 / IP54
General Data		
Dimensions (W/H/D)	2815 / 2318 / 1588 mm (110.8 / 91.3 / 62.5 inch)	2815 / 2318 / 1588 mm (110.8 / 91.3 / 62.5 inch)
Weight	< 8100 W / < 1800 W / < 2000 W	< 8100 W / < 1800 W / < 2000 W
Self-consumption (max. / partial load / average)	< 370 W	< 370 W
Self-consumption (standby)	< 370 W	< 370 W
Internal auxiliary power supply	Integrated 8 kVA transformer	Integrated 8 kVA transformer
Operating temperature range	-25°C to 80°C / -13°F to 140°F	-25°C to 80°C / -13°F to 140°F
Temperature range (storage)	-40°C to 70°C / -40°F to 158°F	-40°C to 70°C / -40°F to 158°F
Temperature range (standby)	-40°C to 60°C / -40°F to 140°F	-40°C to 60°C / -40°F to 140°F
Temperature range (operation)	-25°C to 80°C / -13°F to 140°F	-25°C to 80°C / -13°F to 140°F
Max. permissible value for relative humidity (condensing / non-condensing)	95% to 100% (2 monthly/year) / 0% to 95%	95% to 100% (2 monthly/year) / 0% to 95%
Maximum operating altitude above MSL: 1000 m / 2000 m / 3000 m	Yes	Yes
Fresh air consumption	6500 m ³ /h	6500 m ³ /h
Features		
DC connection	Terminal lug on each input (w/ shunt fuse)	Terminal lug on each input (w/ shunt fuse)
AC connection	With busbar system (three busbars, one per line conductor)	With busbar system (three busbars, one per line conductor)
Communication	Ethernet, Modbus Master, Modbus Slave	Ethernet, Modbus Master, Modbus Slave
Enclosure / roof color	RAL 9016 / RAL 7004	RAL 9016 / RAL 7004
Supply transformer for external loads	< 2.5 kVA	< 2.5 kVA
Standards and directives complied with	CE, IEC / EN 62109-1, IEC / EN 62109-2, AR-N4110, ENEC 547, IEC 55011, FCC Part 15 Class A	CE, IEC / EN 62109-1, IEC / EN 62109-2, AR-N4110, ENEC 547, IEC 55011, FCC Part 15 Class A
EMC standards	Quality standards and directives complied with	Quality standards and directives complied with
Standard features - Optional - not available - preliminary	Yes	Yes
Type designation	SC 2660 LP	SC 2800 LP

Inverter DC/AC 4000kVA

Technical Data	SC 4000 LP	SC 4200 LP
Input (DC)		
MPP voltage range V _m (at 25°C / at 50°C)	880 to 1325 V / 1100 V	921 to 1325 V / 1100 V
Min. DC voltage V _{min} (Start voltage V _{start})	849 V / 1030 V	891 V / 1071 V
Max. DC voltage V _{max}	1500 V	1500 V
Max. DC current I _{max}	4750 A	4750 A
Max. short-circuit current I _{sc}	6400 A	6400 A
Number of DC inputs	24 double pole fused (32 single pole fused)	24 double pole fused (32 single pole fused)
Max. number of DC cables per DC input (for each polarity)	2 x 800 kcmil, 2 x 400 mm ²	2 x 800 kcmil, 2 x 400 mm ²
Integrated zone monitoring	Yes	Yes
Available DC fuse sizes (per input)	200 A, 250 A, 315 A, 350 A, 400 A, 450 A, 500 A	200 A, 250 A, 315 A, 350 A, 400 A, 450 A, 500 A
Output (AC)		
Normal AC power at cos φ=1 (at 25°C / at 50°C)	4000 kVA / 3400 kVA	4200 kVA / 3570 kVA
Normal AC power at cos φ=0.8 (at 25°C / at 50°C)	3200 kW / 2720 kW	3360 kW / 2856 kW
Normal AC current I _n (at 25°C / at 50°C)	3650 A / 3273 A	3650 A / 3273 A
Max. total harmonic distortion	< 3% at nominal power	< 3% at nominal power
Normal AC voltage / normal AC voltage range	600 V / 480 V to 720 V	630 V / 504 V to 756 V
AC power frequency / range	50 Hz / 47 Hz to 53 Hz	50 Hz / 47 Hz to 53 Hz
Min. short-circuit ratio at the AC terminals	> 2	> 2
Power factor at rated power / displacement power factor adjustable	1 / 0.8 overexcited to 0.8 underexcited	1 / 0.8 overexcited to 0.8 underexcited
Efficiency		
Max. efficiency / European efficiency / GEC efficiency	98.7% / 98.6% / 98.5%	98.7% / 98.6% / 98.5%
Protective Devices		
Input-side disconnection point	DC load break switch	DC load break switch
Output-side disconnection point	AC circuit breaker	AC circuit breaker
DC overvoltage protection	Surge arrester, type I	Surge arrester, type I
AC overvoltage protection (optional)	Surge arrester, class I	Surge arrester, class I
Lightning protection (according to IEC 62305-1)	Lightning Protection Level II	Lightning Protection Level II
Ground-fault monitoring / remote ground-fault monitoring	Yes	Yes
Insulation monitoring	Yes	Yes
Degree of protection: electronics / air duct / connection area (as per IEC 60529)	IP54 / IP54 / IP54	IP54 / IP54 / IP54
General Data		
Dimensions (W/H/D)	2780 / 2318 / 1588 mm (109.4 / 91.3 / 62.5 inch)	2780 / 2318 / 1588 mm (109.4 / 91.3 / 62.5 inch)
Weight	< 8100 W / < 1800 W / < 2000 W	< 8100 W / < 1800 W / < 2000 W
Self-consumption (max. / partial load / average)	< 370 W	< 370 W
Self-consumption (standby)	< 370 W	< 370 W
Internal auxiliary power supply	Integrated 8 kVA transformer	Integrated 8 kVA transformer
Operating temperature range	-25°C to 80°C / -13°F to 140°F	-25°C to 80°C / -13°F to 140°F
Temperature range (storage)	-40°C to 70°C / -40°F to 158°F	-40°C to 70°C / -40°F to 158°F
Temperature range (standby)	-40°C to 60°C / -40°F to 140°F	-40°C to 60°C / -40°F to 140°F
Temperature range (operation)	-25°C to 80°C / -13°F to 140°F	-25°C to 80°C / -13°F to 140°F
Max. permissible value for relative humidity (condensing / non-condensing)	95% to 100% (2 monthly/year) / 0% to 95%	95% to 100% (2 monthly/year) / 0% to 95%
Maximum operating altitude above MSL: 1000 m / 2000 m / 3000 m	Yes	Yes
Fresh air consumption	6500 m ³ /h	6500 m ³ /h
Features		
DC connection	Terminal lug on each input (w/ shunt fuse)	Terminal lug on each input (w/ shunt fuse)
AC connection	With busbar system (three busbars, one per line conductor)	With busbar system (three busbars, one per line conductor)
Communication	Ethernet, Modbus Master, Modbus Slave	Ethernet, Modbus Master, Modbus Slave
Enclosure / roof color	RAL 9016 / RAL 7004	RAL 9016 / RAL 7004
Supply transformer for external loads	< 2.5 kVA	< 2.5 kVA
Standards and directives complied with	CE, IEC / EN 62109-1, IEC / EN 62109-2, AR-N4110, ENEC 547, IEC 55011, FCC Part 15 Class A	CE, IEC / EN 62109-1, IEC / EN 62109-2, AR-N4110, ENEC 547, IEC 55011, FCC Part 15 Class A
EMC standards	Quality standards and directives complied with	Quality standards and directives complied with
Standard features - Optional - not available - preliminary	Yes	Yes
Type designation	SC 4000 LP	SC 4200 LP

Caratteristiche apparecchiature AC bT-MT

Trasformatore bT/MT 30kV - 4000kVA

Norme / Standards: IEC CEI DIN EN 60076 EN 50388

Classe isolamento (ambiente temp) / Insulating Class (Temp. rise): F (100 K)

Classe isolamento MV (Classe UK 48) / Insulation Class MV (Class UK 48): 17.1 kV / 17.28 kV RL 75 kV

Classe isolamento MV (Classe UK 6N) / Insulation Class MV (Class UK 6N): 12.1 kV / 12.18 kV RL 75 kV

Classe isolamento LV / Insulation Class LV: 1.1 kV / 1.1 kV

Frequenza / Frequency: 50 Hz

Regolazione MV / Tapping MV: ± 7, 2, 2, 5%

Tolleranza / Tolerance: Tolleranza zero sulle perdite / No tolerance on the losses

Power kVA	UK %	P ₁ %	P ₂ %	I ₁ %	LWA dB(A)	LpA dB(A)	A mm	B mm	C mm	D mm	Weight Kg
50	6	230	1870	1.4	54	41	1260	670	1525	520	125 850
100	6	320	2250	1	56	43	1290	670	1545	520	125 1020
160	6	460	3190	0.86	57	46	1325	670	1565	520	125 1300
250	6	520	3630	0.85	58	44	1350	670	1600	670	125 1450
250	6	590	4180	0.8	59	45	1300	670	1700	520	125 1670
315	6	710	4980	0.79	60	46	1350	670	1750	670	125 1910
400	6	860	6050	0.76	61	47	1390	670	1800	670	125 2010
500	6	1030	7250	0.76	62	48	1420	670	1850	670	125 2250
630	6	1260	8360	0.75	63	49	1480	670	1900	670	125 2470
800	6	1490	8800	0.71	64	49	1710	1050	2150	620	125 2960
1000	6	1780	9900	0.7	65	50	1830	1050	2300	620	125 3580
1250	6	2070	12100	0.69	67	52	1850	1000	2360	620	150 3890
1600	6	2530	14300	0.67	68	53	2010	1050	2500	620	150 4880
2000	6	2990	17600	0.65	72	56	2100	1300	2595	1070	200 5860
2500	6	3560	20900	0.62	73	57	2250	1300	2625	1070	200 7160
3150	6	4370	24200	0.6	76	60	2340	1300	2805	1070	200 8610
4000	6	5290	28600	0.57	84	68	2500	1300	2825	1070	200 9660
5000	8	6900	35000	0.61	86	70	2610	1300	2835	1070	200 10770

* Dati riferiti a tensione nominale / Data referred to 120°C at rated voltage.

REGIONE PUGLIA | PROVINCIA DI TARANTO | COMUNE DI TARANTO

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Progetto definitivo per la realizzazione di un impianto Fotovoltaico denominato "BUFFOLUTO 2" per la realizzazione su aree demaniali in località "Buffoluto" nel territorio comunale di Taranto (TA) per una potenza complessiva di 47,439 MWp con sistema di accumulo da 25/50 MW/MWh nonchè delle opere connesse ed infrastrutture indispensabili alla costruzione e all'esercizio dell'impianto.

AUTORITÀ PROCEDENTE V.I.A.: MINISTERO DELL'AMBIENTE E DELLA SICUREZZA ENERGETICA | AUTORITÀ PROCEDENTE A.L.: REGIONE PUGLIA

JS3QH4 Elaborato Grafico: 10.pdf

Schema elettrico delle cabine MT e cabina di raccolta

Rev.	Data	Descrizione della revisione	Elaborazione	Verifica	Approvazione
00	Dicembre 2022	Progetto definitivo	Geom. P. Messeri	Ing. A. Miccini	B72 srl

Formato: A0 | Coda: Pratica | JS3QH4