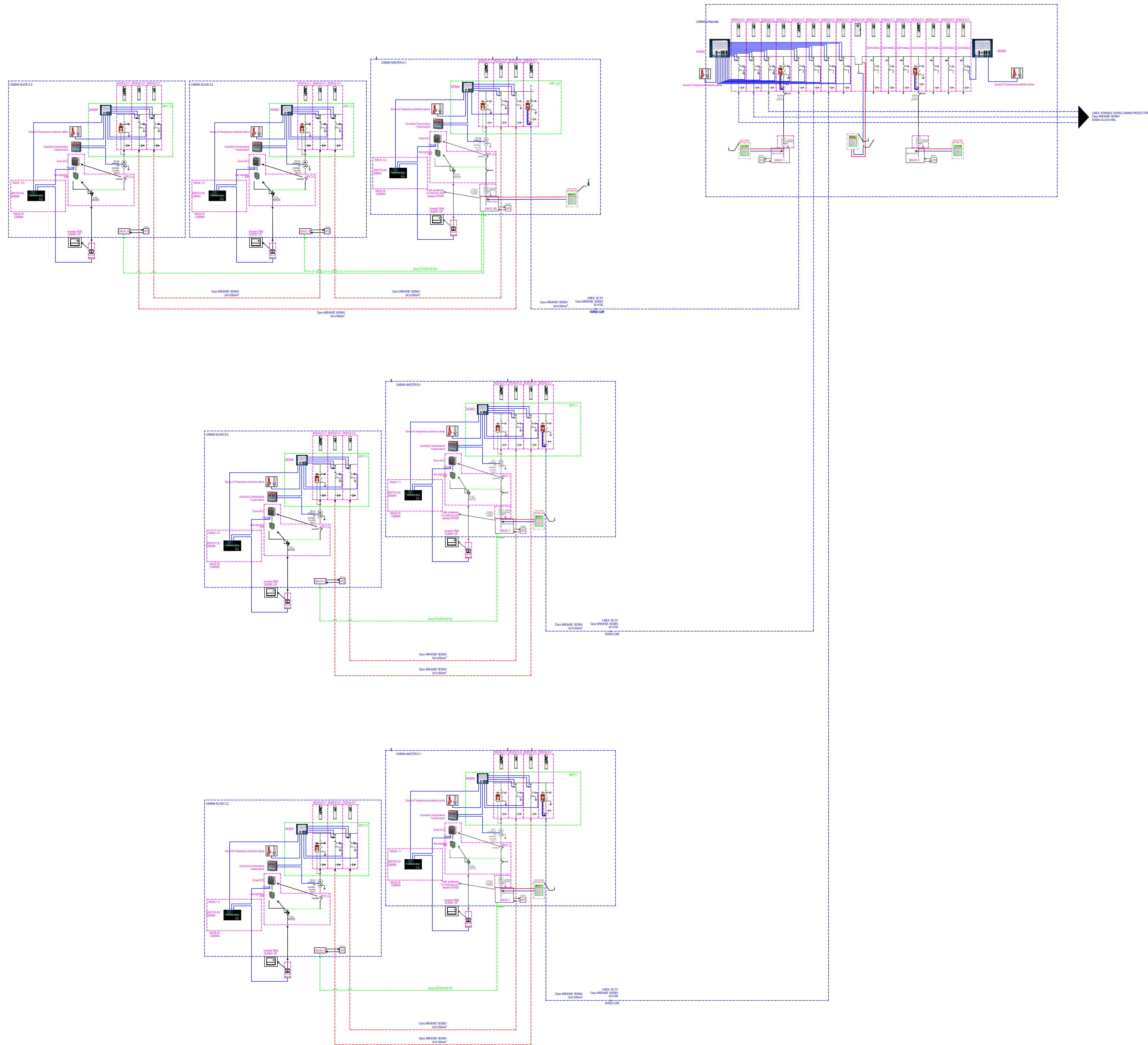


SCHEMA ELETTRICO CABINE MT E CABINA DI RACCOLTA



Inverter DC/AC 2800kVA

Technical Data	Sunny Central 2800 LP	Sunny Central 2800 LP
DC side		
MPP voltage range V_{in} (at 25 °C / at 50 °C)	880 to 1325 V / 1100 V	921 to 1325 V / 1100 V
Min. input voltage $V_{in, min}$ / Start voltage $V_{in, start}$	849 V / 1030 V	891 V / 1071 V
Max. input voltage $V_{in, max}$	1500 V	1500 V
Max. DC current I_{DC}	4750 A	4750 A
Max. short-circuit current I_{sc}	6400 A	6400 A
Number of DC inputs	Busbar with 28 connections per terminal, 24 double pole fused	Busbar with 28 connections per terminal, 24 double pole fused
Number of DC inputs with 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 km ² , 2 x 400 mm ²	2 x 800 km ² , 2 x 400 mm ²
Integrated zone monitoring	0	0
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		
Nominal AC power at cos φ = 1 (at 25°C / at 50°C)	2800 kW / 2260 kW	2800 kW / 2380 kW
Nominal AC power at cos φ = 0.8 (at 25°C / at 50°C)	2128 kW / 1808 kW	2240 kW / 1904 kW
Nominal AC current I_{AC} (at 25°C / at 50°C)	2560 A / 2176 A	2560 A / 2181 A
Max. total harmonic distortion	< 3% at nominal power	< 3% at nominal power
Nominal AC voltage / nominal 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 overcorrected to 0.8 undercorrected	1 / 0.8 overcorrected to 0.8 undercorrected
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 III	Lightning Protection Level III
Ground fault monitoring / remote ground-fault monitoring	0	0 / 0
Insulation monitoring	0	0
Degree of protection: electronics / air duct / connection area (as per IEC 60529)	IP54 / IP34 / IP34	IP54 / IP34 / IP34
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)	0	0
Internal auxiliary power or supply	0	0
Operating temperature range	-25°C to 60°C / -13°F to 140°F	-25°C to 60°C / -13°F to 140°F
Noise emission	67.0 dBS(A)	67.0 dBS(A)
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 (storage)	-40°C to 70°C / -40°F to 158°F	-40°C to 70°C / -40°F to 158°F
Max. permissible value for relative humidity (condensing / non-condensing)	95% to 100% (2 month/year) / 0% to 95%	95% to 100% (2 month/year) / 0% to 95%
Maximum operating altitude above MSL: 1000 m / 2000 m / 3000 m	0 / 0 / 0	0 / 0 / 0
Fresh air consumption	6500 m ³ /h	6500 m ³ /h
Features		
DC connection	Terminal lug on each input (without fuse)	Terminal lug on each input (without 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	0 - 2.5 kVA	0 - 2.5 kVA
Standards and directives complied with	CE, IEC / EN 62109-1, IEC / EN 62109-2, AR-N410, IEEE1547, IEC 55011, FCC Class A	CE, IEC / EN 62109-1, IEC / EN 62109-2, AR-N410, IEEE1547, IEC 55011, FCC Class A
EMC standards	Quality standards and directives complied with	Quality standards and directives complied with
Standard features	Optional - not available * preliminary	Optional - not available * preliminary
Type designation	SC 2800 LP	SC 2800 LP

Inverter DC/AC 4000kVA

Technical Data	SC 4000 LP	SC 4200 LP
Input (DC)		
MPP voltage range V_{in} (at 25 °C / at 50 °C)	880 to 1325 V / 1100 V	921 to 1325 V / 1100 V
Min. input voltage $V_{in, min}$ / Start voltage $V_{in, start}$	849 V / 1030 V	891 V / 1071 V
Max. input voltage $V_{in, max}$	1500 V	1500 V
Max. DC current I_{DC}	4750 A	4750 A
Max. short-circuit current I_{sc}	6400 A	6400 A
Number of DC inputs	24 double pole fused (12 single pole fused)	24 double pole fused (12 single pole fused)
Max. number of DC cables per DC input (for each polarity)	2 x 800 km ² , 2 x 400 mm ²	2 x 800 km ² , 2 x 400 mm ²
Integrated zone monitoring	0	0
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)		
Nominal AC power at cos φ = 1 (at 25°C / at 50°C)	4000 kVA / 3400 kVA	4200 kVA / 3570 kVA
Nominal AC power at cos φ = 0.8 (at 25°C / at 50°C)	3200 kW / 2720 kW	3360 kW / 2856 kW
Nominal AC current I_{AC} (at 25°C / at 50°C)	3850 A / 3273 A	3850 A / 3273 A
Max. total harmonic distortion	< 3% at nominal power	< 3% at nominal power
Nominal AC voltage / nominal 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 overcorrected to 0.8 undercorrected	1 / 0.8 overcorrected to 0.8 undercorrected
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 III	Lightning Protection Level III
Ground fault monitoring / remote ground-fault monitoring	0	0 / 0
Insulation monitoring	0	0
Degree of protection: electronics / air duct / connection area (as per IEC 60529)	IP54 / IP34 / IP34	IP54 / IP34 / IP34
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)	0	0
Internal auxiliary power or supply	0	0
Operating temperature range	-25°C to 60°C / -13°F to 140°F	-25°C to 60°C / -13°F to 140°F
Noise emission	67.0 dBS(A)	67.0 dBS(A)
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 (storage)	-40°C to 70°C / -40°F to 158°F	-40°C to 70°C / -40°F to 158°F
Max. permissible value for relative humidity (condensing / non-condensing)	95% to 100% (2 month/year) / 0% to 95%	95% to 100% (2 month/year) / 0% to 95%
Maximum operating altitude above MSL: 1000 m / 2000 m / 3000 m	0 / 0 / 0	0 / 0 / 0
Fresh air consumption	6500 m ³ /h	6500 m ³ /h
Features		
DC connection	Terminal lug on each input (without fuse)	Terminal lug on each input (without 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
Communication with SMA string monitor (transmission medium)	Modbus TCP / Ethernet (F.O.M. Gal-5)	Modbus TCP / Ethernet (F.O.M. Gal-5)
Enclosure / roof color	RAL 9016 / RAL 7004	RAL 9016 / RAL 7004
Supply transformer for external loads	0 - 2.5 kVA	0 - 2.5 kVA
Standards and directives complied with	CE, IEC / EN 62109-1, IEC / EN 62109-2, AR-N410, IEEE1547, IEC 55011, FCC Class A	CE, IEC / EN 62109-1, IEC / EN 62109-2, AR-N410, IEEE1547, IEC 55011, FCC Class A
EMC standards	Quality standards and directives complied with	Quality standards and directives complied with
Standard features	Optional - not available * preliminary	Optional - not available * preliminary
Type designation	SC 4000 LP	SC 4200 LP

Caratteristiche apparecchiature AC bT-MT Trasformatore bT/MT 30kV - 4000kVA

Power kVA	UK *	P ₁ %	P ₂ %	P ₃ %	I ₁ %	LWA dB(A)	LpA dB(A)	A mm	B mm	C mm	D mm	Wheel 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	0.88	57	44	1425	670	1545	520	125	1200	
200	6	520	3630	0.85	58	44	1500	670	1560	670	125	1450	
250	6	590	4180	0.8	59	45	1590	670	1700	520	125	1670	
315	6	710	4980	0.79	60	46	1590	670	1750	670	125	1910	
400	6	860	5950	0.78	61	47	1590	670	1850	670	125	2010	
500	6	1030	7050	0.76	62	48	1620	670	1880	670	125	2200	
630	6	1260	8350	0.75	63	49	1680	670	1980	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	3590	
1250	6	2070	12100	0.69	67	52	1850	1000	2350	620	150	3890	
1600	6	2520	14200	0.67	68	53	2010	1050	2500	620	150	4860	
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	8510	
4000	8	6260	29900	0.61	84	68	2520	1300	2825	1070	200	9650	
5000	8	6900	35000	0.61	86	70	2610	1300	2835	1070	200	10770	

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

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Progetto definitivo per la realizzazione di un impianto Fotovoltaico denominato "BUFFALUTO 1" da realizzarsi su aree demaniali in località "Buffaluto" nel territorio comunale di Taranto (TA) per una potenza complessiva di 23,857 MWp con sistema di accumulo da 25/50 MW/MWh nonché delle opere connesse ed infrastrutture indispensabili alla costruzione e all'esercizio dell'impianto

AUTORITA' PROCEDENTE V.I.A. : MINISTERO DELL'AMBIENTE E DELLA SICUREZZA ENERGETICA
AUTORITA' PROCEDENTE A.U. : REGIONE PUGLIA

9VQMKN3 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. Massaro	Ing. A. Mezzina	B72 srl

Scale: /
Formato: A0 Codice Pratica: 9VQMKN3