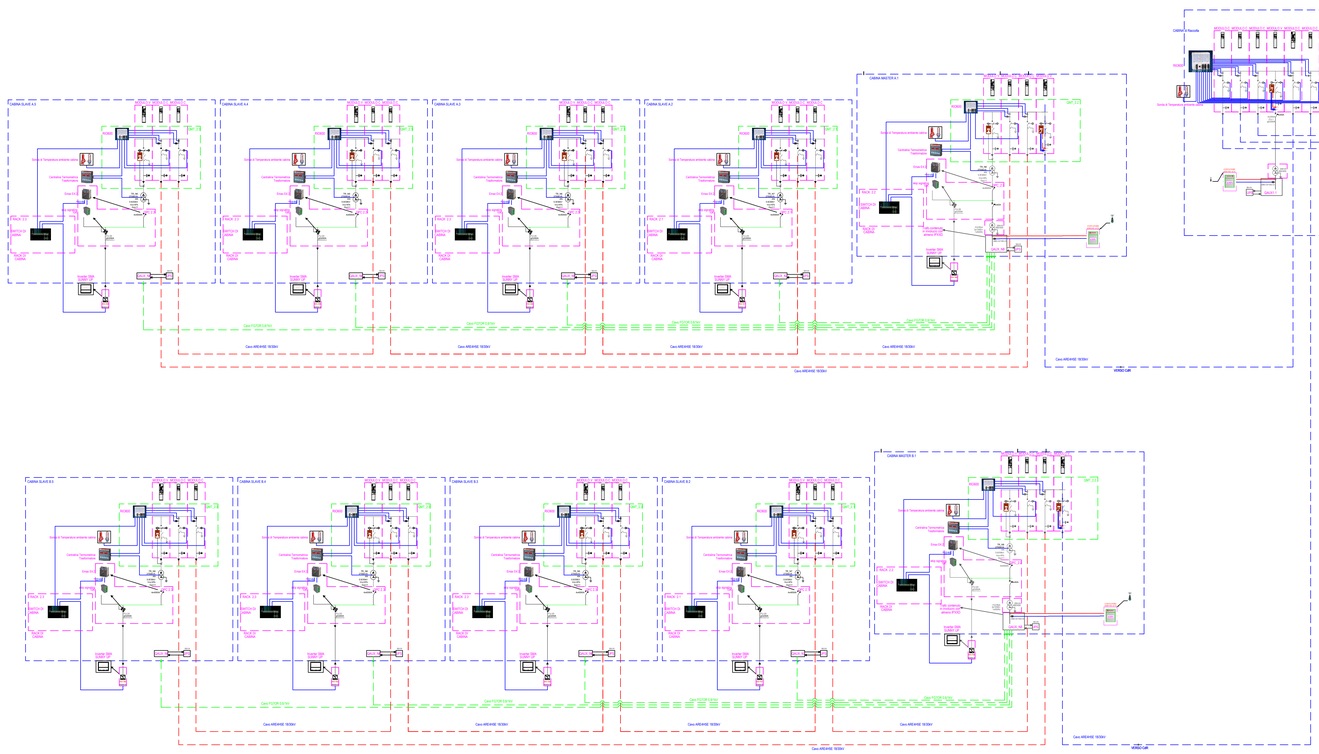
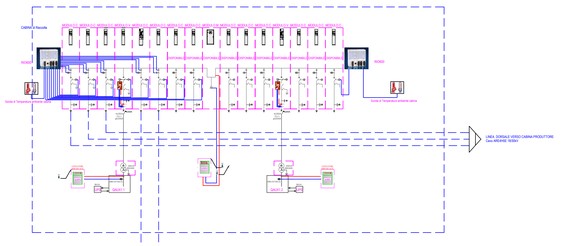
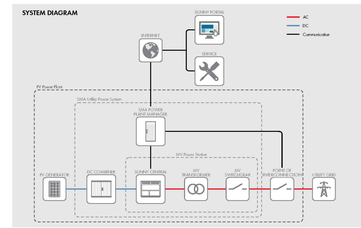
SCHEMA ELETTRICO CABINE MT E CABINA DI RACCOLTA

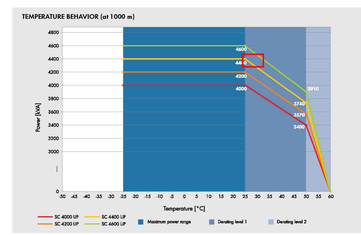




Inverter DC/AC 4000kVA

Technical Data	SC 4000 UP	SC 4200 UP
Input (DC)		
MPP voltage range V_{dc}(at 25 °C / at 50 °C)	880 to 1325 V / 1100 V	921 to 1325 V / 1100 V
Min. input voltage $V_{dc,min}$ / Start voltage $V_{dc,start}$	849 V / 1030 V	891 V / 1071 V
Max. input voltage $V_{dc,max}$	1500 V	1500 V
Max. input current $I_{dc,max}$	4750 A	4750 A
Max. short-circuit current $I_{dc,sc}$	6400 A	6400 A
Number of DC inputs	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 mm²	
Integrated zone monitoring	○	
Available DC fuse sizes (per input)	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 $I_{AC,nom}$(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$_{US}$	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	
Min. short-circuit ratio at the AC terminals$_{IEC}$	> 2	> 2
Power factor at rated power / displacement power factor adjustable$_{US}$	1 / 0.8 overexcited to 0.8 underexcited	
Efficiency		
Max. efficiency$_{US}$ / European efficiency$_{EU}$ / CEC efficiency$_{US}$	98.7%* / 98.6%* / 98.5%*	98.7%* / 98.8%* / 98.5%*
Protective Devices		
Input-side disconnection point	DC load break switch	
Output-side disconnection point	AC circuit breaker	
DC overvoltage protection	Surge arrester, type I	
AC overvoltage protection (optional)	Surge arrester, class I	
Lightning protection (according to IEC 62305-1)	Lightning Protection Level III	
Ground-fault monitoring / remote ground-fault monitoring	○ / ○	
Insulation monitoring	○	
Degree of protection: electronics / air duct / connection area (as per IEC 60529)	IP54 / IP54 / IP54	
General Data		
Dimensions (W / H / D)	2780 / 2318 / 1588 mm (109.4 / 91.3 / 62.5 inch)	
Weight	< 4000 kg / < 8818.5 lb	
Self-consumption (max. / partial load$_{US}$ / average$_{US}$)	< 8100 W / < 1800 W / < 2000 W	
Self-consumption (standby)	< 370 W	
Internal auxiliary power supply	○ Integrated 8.4 kVA transformer	
Operating temperature range$_{US}$	–25°C to 60°C / –13°F to 140°F	
Noise emission$_{US}$	67.0 dB(A)*	
Temperature range (standby)	–40°C to 60°C / –40°F to 140°F	
Temperature range (storage)	–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%	
Maximum operating altitude above MSL$_{US}$	1000 m / 2000 m / 3000 m	
Fresh air consumption	● / ○ / ○ (earlier temperature-dependent derating)	
	6500 m³/h	
Features		
DC connection	Terminal lug on each input (without fuse)	
AC connection	With busbar system (three busbars, one per line conductor)	
Communication	Ethernet, Modbus Master, Modbus Slave	
Communication with SMA string monitor (transmission medium)	Modbus TCP / Ethernet (FO MM, Cat-5)	
Enclosure / roof color	RAL 9016 / RAL 7004	
Supply transformer for external loads	○ (2.5 kVA)	
Standards and directives complied with	CE, IEC / EN 62109-1, IEC / EN 62109-2, A.R.N 4110, IEEE1547, UL 840 Cat. V, Arrêté du 23/04/08	
EMC standards	IEC 55011, FCC Part 15 Class A	
Quality standards and directives complied with	VDI/VDE 2862 page 2, DIN EN ISO 9001	
● Standard features ○ Optional * preliminary		
Type designation	SC 4000 UP	SC 4200 UP





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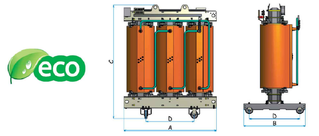
Caratteristiche apparecchiature AC bT-MT
Trasformatore bT/MT 30kV - 4000kVA



Norme / Standards:	IEC CEI DIN EN 60076 EN 50588
Classe Isolamento (aumento temp.) / Insulating Class (temp. rise):	F (100 K)
Classe Isolamento MV (Classe Uk 4%) / Insulation Class MV (Class Uk 4%):	12 kV FI 28 kV BIL 75 kV
Classe Isolamento MV (Classe Uk 6%) / Insulation Class MV (Class Uk 6%):	12 kV FI 28 kV BIL 75 kV
Classe Isolamento LV / Insulation Class LV:	1,1 kV FI 3 kV
Frequenza / Frequency:	50 Hz
Regolazione MV / Tappings MV:	± 2 x 2,5%
Tolleranza / Tolerance:	Tolleranza zero sulle perdite / No tolerance on the losses

CLASS 36 kV
EDI836

Power kVA	Uk * %	P_0 W	P_{cc} * W	I_0 %	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	450	3150	0,88	57	44	1425	670	1545	520	125	1300
200	6	520	3630	0,85	58	44	1500	820	1600	670	125	1490
250	6	590	4180	0,8	59	45	1500	670	1700	520	125	1670
315	6	710	4980	0,79	60	46	1590	820	1750	670	125	1910
400	6	860	6050	0,78	61	47	1590	820	1850	670	125	2010
500	6	1030	7050	0,76	62	48	1620	820	1880	670	125	2200
630	6	1260	8360	0,75	63	49	1680	820	1980	670	125	2470
800	6	1490	8800	0,71	64	49	1710	1050	2150	820	125	2960
1000	6	1780	9900	0,7	65	50	1830	1050	2300	820	125	3550
1250	6	2070	12100	0,69	67	52	1860	1000	2360	820	150	3850
1600	6	2530	14300	0,67	68	53	2010	1050	2500	820	150	4860
2000	6	2990	17600	0,65	72	56	2100	1300	2595	1070	200	5860
2500	6	3580	20900	0,62	73	57	2250	1300	2625	1070	200	7140
3150	6	4370	24200	0,6	75	60	2340	1300	2805	1070	200	8610
4000	7	6200	26900	0,61	84	68	2520	1300	2835	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.

REGIONE LAZIO — PROVINCIA DI ROMA — COMUNE DI SANTA MARINELLA — COMUNE DI CERVETERI — COMUNE DI TOLFA

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Collegio dei Cinzonderale Geometri e Geometri Laureati di Lucera matr. n. 1101

Opera: **Progetto definitivo per la realizzazione di un impianto Fotovoltaico denominato"SANTA SEVERA" da realizzarsi su aree demaniali militari in località "Santa Severa" nel territorio comunale di Santa Marinella (RM) per una potenza complessiva di 47,662 MWp nonchè delle opere connesse ed infrastrutture indispensabili alla costruzione e all'esercizio dell'impianto**

Oggetto: Fase: VIA_2
Nome Elaborato: ElaboratoGrafico_10.pdf
Descrizione Elaborato: Schema elettrico delle cabine MT e cabina di raccolta

Rev.	Data	Oggetto della revisione	Elaborazione	Verifica	Approvazione
00	Dicembre 2022	Progetto definitivo	Geom. P.Massaro	Ing. A. Mezzina	S40 S.r.l.

Scala: /
Formato: A0