Comune di : ROTELLO

Provincia di : CAMPOBASSO

Regione : MOLISE

Firmato digitalmente da

FERNANDO SONNINO

PROPONENTE

SONNEDIX SANTA CHIARA srl
Via Ettore da Sonnaz, 19
10121 TORINO (TO)
P.I. 12214330016

OPERA

PROGETTO DEFINITIVO

IMPIANTO DI PRODUZIONE DI ENERGIA ELETTRICA DA FONTE RINNOVABILE AGROFOTOVOLTAICA DI POTENZA NOMINALE PARI A 63.628,80 kWp E POTENZA DI IMMISSIONE PARI A 62.698,00 KW E DELLE RELATIVE OPERE DI CONNESSIONE ALLA RETE RTN

"VERTICCHIO"

OGGETTO

TITOLO ELABORATO :

BROCHURE TRASFORMATORI MT-BT

DATA : 20 novembre 2020

SCALA : -----

N°/CODICE ELABORATO : EL 037

Tipologia : EL (ELABORATI)

I TECNICI

PROGETTISTI:

EDILSAP s.r.l.
EDILSAP s.r.l.
Via di Selva Candida, 452
00166 ROMA
Ing. Fernando SONNINO
Project Manager

TIMBRI E FIRME:

N° REVISIONE	Cod. STMG	OGGETTO DELLA REVISIONE	ELABORAZIONE	VERIFICA	APPROVAZIONE
01	201901325	Emissione per Progetto Definitivo . Richiesta V.I.A. e A.U.	EDILSAP srl	Ing. Fernando Sonnino	Ing. Fernando Sonnino
00	201901325	Emissione per Progetto Definitivo . Richiesta V.I.A. e A.U.	EDILSAP srl	Ing. Fernando Sonnino	Ing. Fernando Sonnino

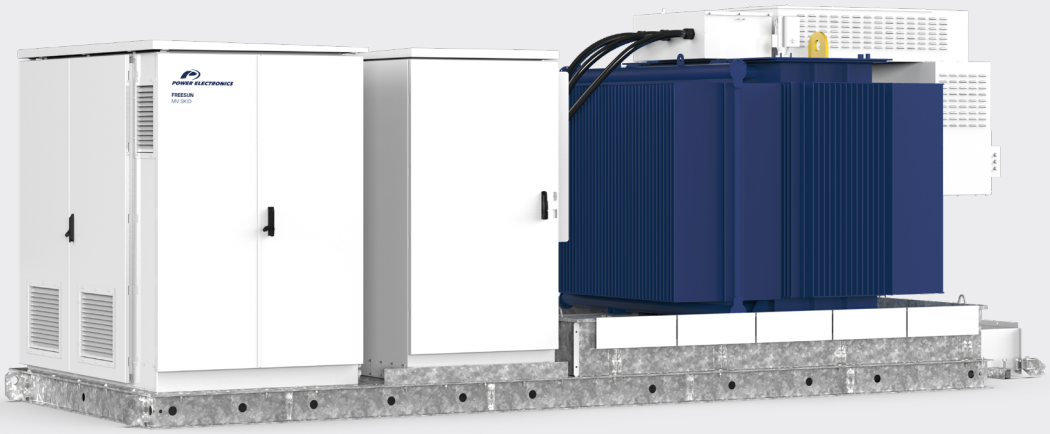
POWER ELECTRONICS

PURE ENERGY

SOLAR SOLUTIONS

MV SKID

STATION



MV SKID

UTILITY SCALE SOLAR STATION

TURN-KEY SOLUTION

HIGH RELIABILITY

EASY TO INSTALL

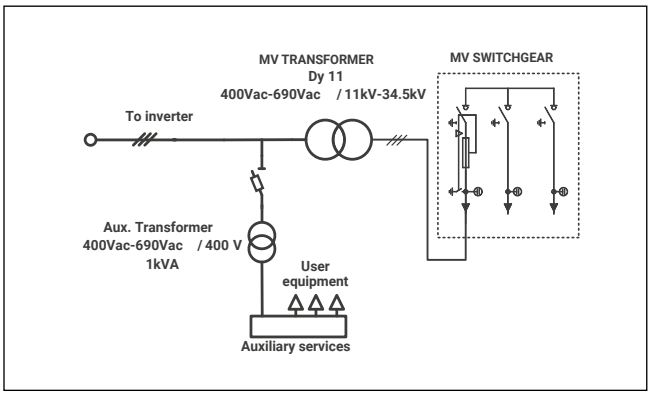
OUTDOOR DURABILITY

SIMPLIFY YOUR COMMISSIONING WITH THE MOST COMPETITIVE SOLUTION INTEGRATED WITH ALL THE MEDIUM VOLTAGE EQUIPMENT

The MV Skid is a compact turnkey outdoor platform made from high resistance galvanized steel with all the medium voltage equipment integrated, including an outdoor power transformer, MV switchgear, oil tank, filter and built in fast power connection to any HEC and HEMK solar inverter. With between 400V-460V and 565V-690V in the low voltage range and 12kV to 36kV in the high voltage range, this compact platform achieves power outputs between 1050kVA and 3800kVA when combined with the HEC and HEMK solar inverter series. This compact solution also allows the installation of a low voltage cabinet that is fully configurable to the customer needs as well as different types of cells and even an enclosure fence among other options. The MV SKID simplifies the project design of the PV plant, reducing installation costs and the amount of resources needed. The benefits of the MV Skid and the fact that it is also easier to transport and deliver into remote sites makes it the optimal solution for EPC`s (engineering, procurement and construction).

MODEL NUMBERS AND OPERATIONAL DIAGRAM

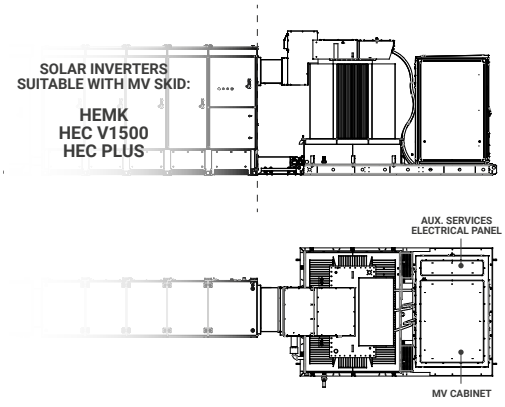
REFERENCE		RATED POWER (kVA)
FRAME 1 AND FRAME 2 [1]	MVS1050[ ]	1050
	MVS1100[ ]	1110
	MVS1220[ ]	1220
	MVS1335[ ]	1335
	MVS1440[ ]	1440
	MVS1550[ ]	1550
	MVS1630[ ]	1630
	MVS1710[ ]	1710
	MVS1800[ ]	1800
	MVS1900[ ]	1900
	MVS2000[ ]	2000
	MVS2110[ ]	2110
FRAME 2	MVS2225[L]	2225
	MVS2330[L]	2330
	MVS2440[L]	2440
	MVS2550[L]	2550
	MVS2660[L]	2660
	MVS2860[L]	2860
	MVS3000[L]	3000
	MVS3110[L]	3110
	MVS3345[L]	3345
	MVS3500[L]	3500
	MVS3630[L]	3630
	MVS3800[L]	3800



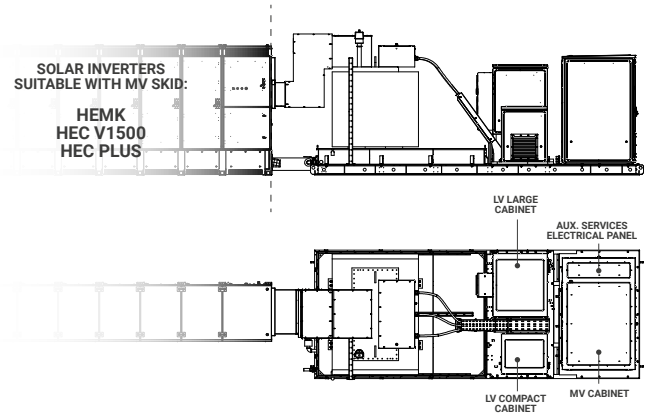
[1] Example: MVS1050S for Frame 1 / MVS10050L for Frame 2

SECTIONS

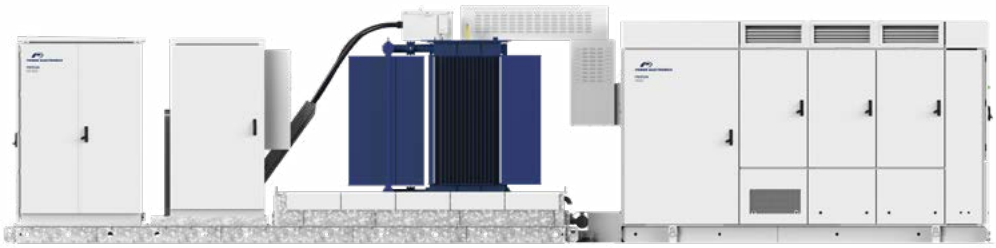
FRAME 1



FRAME 2



For customized solutions, contact Power Electronics.



TECHNICAL CHARACTERISTICS

MV SKID

MV SKID		FRAME 1	
		FRAME 2	
MEDIUM VOLTAGE EQUIPMENT	Rated Power range	1050kVA - 2110kVA	2220kVA - 3800kVA
	MV Voltage range	11kV / 20kV / 22kV / 23kV / 33kV / 34.5kV	
	LV Voltage range	400V / 420V / 440V / 460V - HEC PLUS inverters 565V / 600V / 615V / 630V / 645V / 660V / 690V - HEC V1500 and HEMK inverters	
	Type of tank	Oil-sealed	
	Cooling	ONAN (KNAN optional)	
	Vector Group	Dy11	
	Transformer protection	DGPT-2 (PT100 optional)	
	Oil tank	Integrated with valve and filter	
	Transformer protection rate	IP54	
	Switchgear configuration	Single feeder (L) or Double feeder (2L)	
	Switchgear protection[1]	Fuses (P) / Automatic circuit breaker (V)	
CONNECTIONS	Inverter AC connection	Close couple solution (Plug & Play)	
	LV protection	Circuit breaker included in the inverter	
	HV AC wiring	MV Bridge between transformer and protection switchgear prewired	
ENVIROMENT	Ambient Temperature	-20°C…+50°C (t>50°C power derating)	
	Extended Temperature[2] [3]	-35°C…+50°C (t>50°C power derating)	
	Max. Altitude (above sea level)	>2000m power derating	
	Relative Humidity	4% to 95% Non condensing	
MECHANICAL CHARACTERISTICS	Skid Dimensions (WxHxD) mm	3690x2340x2235	5640x2340x2235
	Skid weight with MV equipment[1]	< 8 Tn	
	Oil tank material	Galvanized Steel	
	Skid Body material	Galvanized Steel	
	Cabinet type	Outdoor	
	Anti-rodent protection	✔	
AUXILIARY SERVICES ELECTRICAL PANEL	Auxiliary supply	3x400V, 50/60Hz	
	User power supply available	1kVA or 6kVA	
	Additional auxiliary transformer[4]	10kVA / 15kVA / 25kVA	
	Cooling	Air	
	Auxiliary supply protection	✔	
	Communication[4]	Ethernet (Fiber optic or RJ45)	
	UPS system for monitoring[4]	1kVA / 3kVA, 10 minutes	
AUXILIARY OUTDOOR TRANSFORMER	Rated Power (Voltage)	-	30kVA / 40kVA / 50kVA (3x400V)
	Cooling	-	Air
	Protection	-	Circuit breaker
	Cabinet type	-	Outdoor
LV COMPACT CABINET	Additional indoor auxiliary transf.[4]	-	10kVA / 25kVA / 40kVA / 50kVA (3x400V)
	UPS system for monitoring[4]	-	1kVA / 3kVA, 10 minutes
	Cooling	-	Air forced
	Auxiliary supply protection	-	✔
	Cabinet type	-	Outdoor
LV LARGE CABINET	Additional indoor auxiliary transf.[4]	-	25kVA / 40kVA / 50kVA (3x400V)
	UPS for trackers[4]	-	20kVA / 40kVA, 10 minutes
	Cooling	-	Air forced
	Auxiliary supply protection	-	✔
	Cabinet type	-	Outdoor
OTHER EQUIPMENT	Safety mechanism	Trapped key safety interlock	
	Safety perimeter	Transformer access protection fence	
	Cabinet heating	Heating resistors	
	Interior lighting	Fluorescent lamp	
	Emergency lighting	Electronic supplier for emergency lighting (1h autonomy)	
	Air conditioner	UPS batteries cooling	
	Communication[4]	Splice box / MV Switchgear monitoring	
STANDARDS	Medium Voltage	IEC 62271-202, IEC 62271-200, IEC 60076, IEC 61439-1	

[1] Depending on customer configuration.

[2] Optional. For additional information or available configurations, please consult Power Electronics.

[3] Other temperature range, consult Power Electronics.

[4] By demand.