

Minera PV HE

Up to 1250 kVA, insulation \leq 24 kV, losses



Minera PV HE
High Efficiency oil immersed transformer for photovoltaic systems.

Standard

These transformers comply with standards:

- EN 50464-1
- EN 60076-1 to 10

Schneider Electric guarantees that its transformers are assembled using new PCB-free components.

Description

Mineral oil-immersed for photovoltaic systems, 50 Hz, three-phase distribution transformers with the following characteristics:

- Hermetically sealed with integral filling
- Cover bolted to the tank
- ONAN-type natural cooling
- Indoor / outdoor use (depending on selected fittings and options)
- Anti-corrosion surface treatment : corrosivity category class C3, "Medium" durability (according to ISO 12944-2)
- Final colour RAL 7033
- Protection index IP00 (coverless version)
- Inrush current limitation
- Compatible with multi energizations application (up to 500 per year)

Dielectric liquid

- New insulating mineral oil
- Tested in accordance with IEC 60296
- Compatible with all the transformer's components

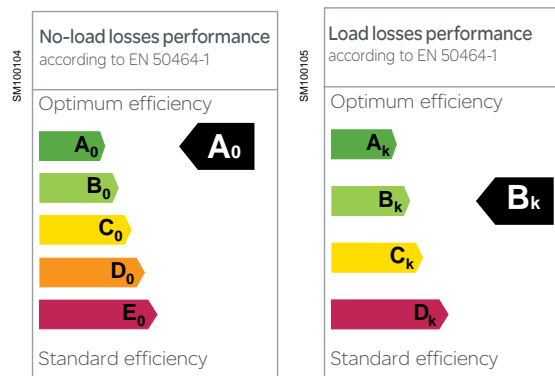
Standard fitting

- One 5-positions off-load tap changer on the cover, with padlocking
- 3 HV plug-in bushings (250 A / 24 kV) on the cover
- 8 LV flat-bars bushings
- 4 bi-directional flat rollers
- 2 lifting and unloading lugs
- 2 pulling eyes on the frame
- 2 earthing terminals on the cover (M12 studs)
- 1 filling plug
- 1 draining device according to EN 50216-4 or DIN 42551
- 1 aluminium rating plate

Optional fittings

- One 7-positions off-load tap changer ($\pm 2.5\%$, $\pm 5.0\%$ and $\pm 7.5\%$)
- Protection relays (DMCR® or DGPT2®) on the filling plug
- 1 free, thermometer pocket
- Control device in the oil-filled pocket (thermometer, thermostat, others on request)
- 3 HV porcelain bushings (250 A)
- 8 LV porcelain bushings
- 8 supple protections IP2X on LV flat-bars bushings
- LV, sealable cover, rated IP21 or IP54
- Locking device for plug-in bushings (with or without lock)
- 3 mobile connectors for plug-in bushings – straight or elbow (cable characteristics must be specified)
- Liquid retention bund

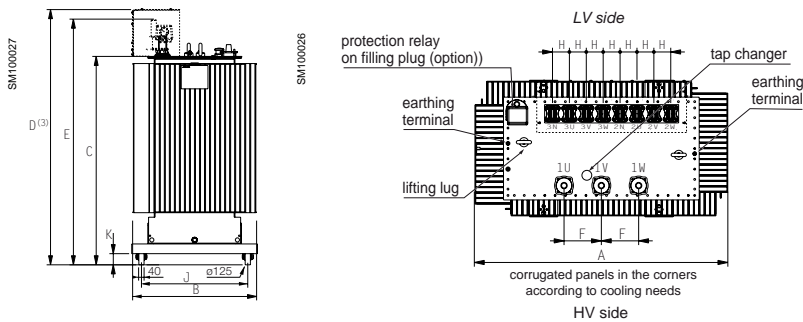
The above options concern usual cases and are not restrictive. For other information, please consult us.



Electrical characteristics

Power (kVA)	500	1000	1250
Rated voltage - Primary (between phases) - Secondary (at no-load)	2 X 315 V 15 and/or 20 kV	2 X 315 V	2 X 375 V
Rated insulation level (Primary)	17.5 kV for 15 kV 24 kV for 20 kV		
MV tapping range	± 2.5% and ± 5%		
Vector group	Dyn11		
No-load losses (w)	510	770	950
Load losses (w)	4600	9000	11000
Impedance voltage (%)	4	6	6
Acoustic Level dB(A): - power L _{WA} - pressure L _{PA} (1m)	51 40	63 51	65 53

Dimensions and weights



Note:

Bushings are marked according to the IEC 60616 standard.

D: Height over LV cable box (optional accessory)

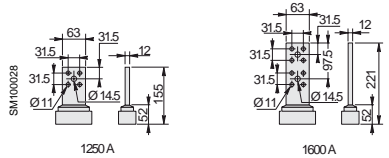
Dimensions and weights are for guidance only, and are provided for a transformer with the following electrical characteristics: 20 kV (HV), double LV 2*315 V (LV) – 5 positions tap changer 12.5% and 15%.

Rated power (kVA)		500	1000	1250
Dimensions (mm)	-A	1450	1500	1600
	-B	1000	1000	1050
	-C	1500	1720	1700
	-D	1840	2060	2040
	-E	1780	2000	1980
	-F	265	265	265
	-H	120	120	120
	-J	670	820	820
	-K	85	85	85
Weight (kg)	-Oil	700	850	950
	-Total	2600	3500	3950

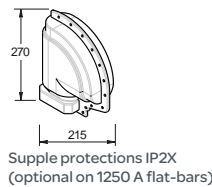
Terminations

Rated current (A)				
LV flat-bars bushings		1250	1250	1250
LV porcelain bushings		630	1000	1000

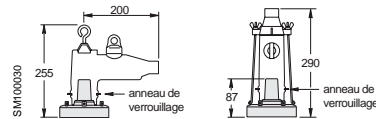
LV Terminations



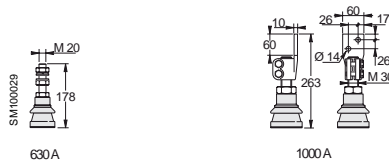
Flat-bars bushings according to EN 50387 (standard for all the powers)



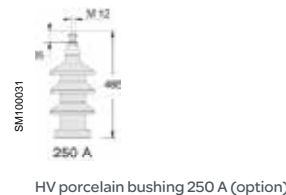
HV Terminations - EN 50180



HV plug-in bushings 250 A/24 kV (standard).



Porcelain bushings according to EN 50386 250 (optional for all the powers)



Routine fittings such as bar and cable supports, flexible connectors, etc. will be supplied by the contractor, who will ensure that the transformer bushings are not subject to mechanical stress.

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As standards, specifications and designs change from time to time, please ask for confirmation of the information given in this publication.

Design: Schneider Electric Industries SAS
Photos: Schneider Electric Industries SAS