

Minera PV

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



Minera PV
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 step-up 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

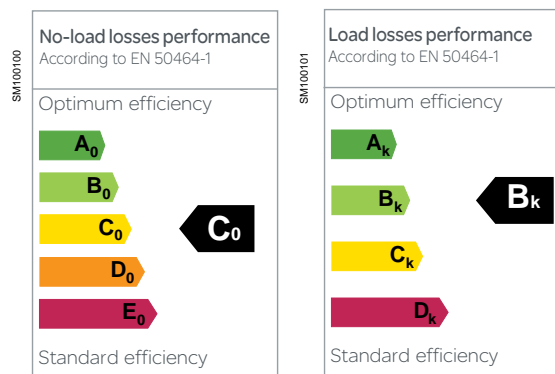
Standard fitting

- 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

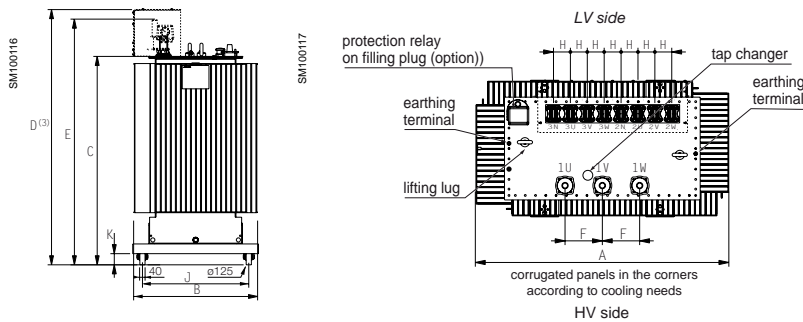
The above options concern usual cases and are not restrictive. For other information, please consult us.



Electrical characteristics

Power (kVA)	500	1000	1000 compact	1250
Rated voltage - Primary (between phases) - Secondary (at no-load)	2x315 V 15 and/or 20 kV	2x315 V	2x315 V	2x375 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)	720	1100	1100	1350
Load losses (w)	4600	9000	9000	11000
Impedance voltage (%)	4	6	6	6
Acoustic Level dB(A): - power L _{WA} - pressure L _{PA} (1m)	59 47	63 51	63 51	64 51

Dimensions and weights



Note:

Bushings are marked according to the IEC 60616 standard.

D: Height over LV cable box (optional accessory)

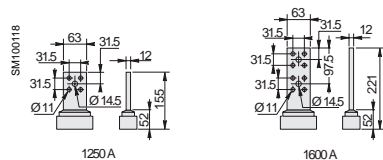
Dimensions and weights are for guidance only, and are provided for a transformer with the following electrical characteristics: 20 kV (HV), double LV 2*315 V (LV) – 5 positions tap changer 12.5% and 15%.

Rated power (kVA)	500	1000	1000 compact	1250
Dimensions (mm)				
-A	1550	1900	1550	1750
-B	1000	1000	1000	1100
-C	1720	1850	1720	1900
-D	2060	2190	2060	2240
-E	2000	2130	2000	2180
-F	265	265	265	265
-H	120	120	120	120
-J	670	820	820	820
-K	85	85	85	85
Weight (kg)				
-Oil	910	1120	850	1150
-Total	2950	3900	3550	4200

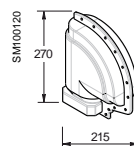
Terminations

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

LV Terminations

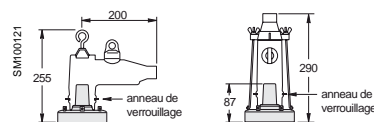


Flat-bars bushings according to EN 50387 (standard for all the powers)

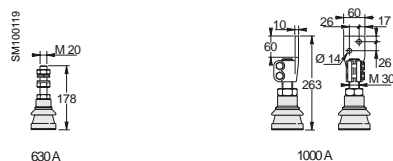


Supple protections IP2X (optional on 1250 A flat-bars)

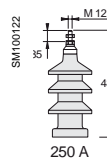
HV Terminations - EN 50180



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



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



HV porcelain bushing 250 A (option)

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
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