TRANSFORMER COMPACT STATION 1000SC / 1250SC / 1600SC / 1800SC





Cost efficient

- Simplified transport due to low weight
- Significant savings in PV farm road construction

Simple

- Complete turnkey solution in concrete construction
- Ideally suited for the central inverters of the CP series

Innovative

- Optimal steel enclosure for even easier transport
- Amorphous transformer for minimal no load losses

Extendable

- Medium-voltage switchgear for modular construction of PV farms
- Transformer for internal power to supply the inverter

TRANSFORMER COMPACT STATION 1000SC / 1250SC / 1600SC / 1800SC

Compact for medium voltage

The Transformer Compact Station – now also for 1800 kVA nominal power – is the ideal link between SMA central inverters and the medium-voltage grid. As a complete turnkey solution in a concrete design, it provides all options – from medium-voltage switchgear to amorphous transformer with greatly reduced no load losses. In steel design, it is also significantly smaller and lighter than the previous solutions, saving time and money. The Transformer Compact Station 1600SC and 1800SC include as standard equipment an adjustable voltage tap that can be controlled easily with a rotary switch, making the device an ideal companion for the central inverters from the CP series.

TRANSFORMER COMPACT STATION 1000SC / 1250SC / 1600SC / 1800SC

Technical data	Transformer Compact Station 1000SC	Transformer Compact Station 1250SC
Medium-voltage side		
Rated power (@ 25 °C)	1100 kVA	1375 kVA
Nominal AC power (@ 45 °C)	1000 kVA	1250 kVA
Rated grid voltage	20 kV1	20 kV1
Nominal AC voltage range	18 kV 22 kV	18 kV 22 kV
Rated power frequency	50 Hz	50 Hz
Nominal output current	28.9 A	36.4 A
Low-voltage side	201771	55.171
Nominal input voltage	270 V	315 V
2.5 % ²	_	010 7
5.0 % ²		_
7.5 % ²		_
	-	-
10.0 %2	_	-
12.5 %2	_	_
Nominal input current	2 x 1070 A	2 x 1155 A
Dimensions and weight		
Dimensions (W / H / D) ³	2380 / 2520 / 2980 mm	2380 / 2520 / 2980 mm
	(93.7 / 99.2 / 117.3 inch)	(93.7 / 99.2 / 117.3 inch)
Weight	∽12.8 t	∽13.6†
Dimensions (W / H / D) as steel model ³	2300 / 2640 / 3000 mm	2300 / 2640 / 3000 mm
	(90.6 / 103.9 / 118.1 inch)	(90.6 / 103.9 / 118.1 inch)
Weight	~5.5 t	~6.3 t
Dimensions (W / H / D) with medium-voltage switchgear ³	2380 / 2520 / 2980 mm	2380 / 2520 / 2980 mm
	(93.7 / 99.2 / 117.3 inch)	(93.7 / 99.2 / 117.3 inch)
Weight	~13.2 t	~14 t
Dimensions (W/H/D) with medium-voltage switchgear as steel model ³	2300 / 2640 / 3000 mm	2300 / 2640 / 3000 mm
- ···g- · · · · · · · · · · · · · ·	(90.6 / 103.9 / 118.1 inch)	(90.6 / 103.9 / 118.1 inch)
Weight	~5.9 t	~6.6 t
Features	0., .	0.0 1
Low-voltage switchgear	2 x LV/HRC switch-disconnector	2 x LV/HRC switch-disconnecto
Oil hermetical medium-voltage transformer	Iron core	Iron core
Degree of protection and ambient conditions	non core	non core
Degree of protection (according to IEC 60529)	IP23D	IP23D
Application	In unprotected outdoor environments	•
Operating temperature range	-20 °C +45 °C	-20 °C +45 °C
Max. permissible value for relative humidity (non-condensing)	15 % 95 %	15 % 95 %
Max. operating altitude above MSL	1000 m	1000 m
Options		
Transformer for auxiliary power supply	6 kVA⁴	6 kVA⁴
Medium-voltage switchgear	RE-T/C-C-T	RE-T/C-C-T
Communit	0	0
Low-voltage switchgear	2 circuit breakers	2 circuit breakers
Pre-assembled cable set ⁵	7.5 m / 10 m / 15 m	7.5 m / 10 m / 15 m
Compact station in steel model	0	0
Medium-voltage transformer with amorphous core	0	0
Use in a chemically aggressive environment	0	0
Certificates and approvals (more available on request)	IEC 62271-202	IEC 62271-202
● Standard feature O Optional feature — Not available Type designation	TCS-1000-SC	TCS-1250-SC
ype designation	100-1000-30	100-1200-00

- ¹ Additional voltages available upon request
- 2 Adjustable using a tap changer on the transformer
 3 Data may vary depending upon power class and options
- Additional power classes available on request
 Not available for all models. Refer to the document on installation requirements for further information.

Please note: The design of the stations is country-specific and may deviate from the station shown in the image.

Transformer Compact Station	Transformer Compact Station
1600SC	1800SC
1760 kVA	1980 kVA
1600 kVA	1800 kVA
20 kV1	20 kV1
18 kV 22 kV	18 kV 22 kV
50 Hz	50 Hz
46.2 A	52.0 A
360 V	405 V
351 V	395 V
342 V	386 V
333 V	377 V
324 V	368 V
315 V	_
2 x 1283 A	2 x 1283 A
ZX 1200 / (2 % 1200 %
0000 / 0500 / 0000	0000 / 0500 / 0000
2380 / 2520 / 2980 mm	2380 / 2520 / 2980 mm
(93.7 / 99.2 / 117.3 inch)	(93.7 / 99.2 / 117.3 inch)
∽14.1 t	~14.5 t
2300 / 2640 / 3000 mm	2300 / 2640 / 3000 mm
(90.6 / 103.9 / 118.1 inch)	(90.6 / 103.9 / 118.1 inch)
~6.8 t	~7.2 t
2380 / 2520 / 2980 mm	2380 / 2520 / 2980 mm
(93.7 / 99.2 / 117.3 inch)	(93.7 / 99.2 / 117.3 inch)
~14.5 t	~14.9 t
2300 / 2640 / 3000 mm	2300 / 2640 / 3000 mm
(90.6 / 103.9 / 118.1 inch)	(90.6 / 103.9 / 118.1 inch)
~7.2 t	~7.6 t
∽/.∠↑	~/.or
2 x LV/HRC switch-disconnector	2 x LV/HRC switch-disconnector
Iron core	Iron core
IP23D	IP23D
In unprotected outdoor environments	In unprotected outdoor environments
-20 °C +45 °C	-20 °C +45 °C
15 % 95 %	15 % 95 %
1000 m	1000 m
6 kVA⁴	6 kVA ⁴
RE-T/C-C-T	RE-T / C-C-T
0	0
2 circuit breakers	2 circuit breakers
7.5 m / 10 m / 15 m	7.5 m / 10 m / 15 m
0	0
	Ŭ
0	_
0	0
IEC 62271-202	IEC 62271-202
TCS-1600-SC	TCS-1800-SC

OPTIONS

Amorphous transformer

A transformer with amorphous core reduces no load losses by approximately 70 percent compared to a transformer with an iron core (loss class C). For example, no load losses of a 1,600 kVA transformer with iron core: 1,700 W. No load losses with an amorphous core: 510 W. Energy savings in 20 years: approximately 200,000 kWh.

Medium-voltage switchgear

Using medium-voltage switchgear, several transformer stations can be connected in a string or a ring. This allows modular construction of large PV farms

Communit

The Communit communication distributor is designed to house and wire together all communication components used in large-scale PV plants with SUNNY CENTRAL.

Transformer for auxiliary power supply

A transformer for auxiliary power supplies the transformer station and the attached inverters directly from the medium-voltage grid.

Steel enclosure

With the compact and light steel enclosure, the weight of the transformer station is reduced by 50 to 75 percent, meaning easier and less expensive transport.

Low-voltage switchgear

On demand, the standard LV/HRC fuse switch-disconnectors can be replaced by circuit breakers.

Use in a chemically aggressive environment

If desired, the TRANSFORMER COMPACT STATION can be optimized for use in a chemically aggressive environment, such as for seaside installation.

