

2. Main datasheets in PV BOX

2.1 Power Transformer T1 – 1080kVA

APPLIED STANDARD			IEC 60076
PHASES			3
TYPE OF COOLING			ONAN
POWER	kVA		1080
FREQUENCY	Hz		50
PRIMARY VOLTAGE/CONNECTION y	(kV)		0,3 – 0,3/y
PRIMARY SEPARATE SOURCE AC WITHSTAND VOLTAGE	(kV)		3
PRIMARY LIGHTNING IMPULSE WITHSTAND VOLTAGE	(kV)		-
SECONDARY VOLTAGE (at no load)/CONNECTION D	(kV)		23.256/D
SECONDARY SEPARATE SOURCE AC WITHSTAND VOLTAGE	(kV)		70
SECONDARY LIGHTNING IMPULSE WITHSTAND VOLTAGE	(kV)		170
VECTOR GROUP			Dy11y11
TAPPING RANGE	(%)		± 2 x 3.5
AMBIENT TEMPERATURE	°C		40
OIL TEMPERATURE RISE	K		60
WINDING TEMPERATURE RISE	K		65
IMPEDANCE VOLTAGE <i>One secondary in short circuit at Half power. The other one will be open</i>		(%)	6
IMPEDANCE VOLTAGE <i>Two secondaries in short circuit at Full power.</i>		(%)	7,4
SOUND LEVEL (Lwa)	dB		63
NO LOAD LOSSES	(W)		1100
LOAD LOSSES	(W)		9000
T/f WEIGHT (approx.)	(KGR)		4600
ALTITUDE	m		1060
MATERIAL			Cu/Cu/Cu
EFFICIENCY (cosφ = 0.1)			
a - 100% Load	%		99,07
b - 75% Load	%		99,24
c - 50% Load	%		99,38
d - 25% Load	%		99,39
VOLTAGE DROP (at full load)			
a - 1 power factor	%		1,01
b - 0.8 power factor	%		4,32
DIMENSIONS (approximately)	LENGTH	mm	1880
	WIDTH	mm	1175

2.2 INVERTER XC540

Schneider Electric XC Series Central Inverters

Introducing the XC Series

The XC Series is a new line of central inverters designed for high efficiency and flexibility for any PV panel type and installation. The XC series has peak efficiencies of 98.7% and its flexibility allows the inverter to be configured with voltage and power outputs up to 680 kVA. In addition, the XC series is designed to allow for DC inputs up to 1000 Vdc for longer string lengths. It contains the latest grid management features to meet global utility requirement including the new BDEW requirements for Germany.

Features

- Peak efficiencies up to 98.7% to maximize harvest
- Configurable DC voltage ranges and power outputs allow for flexibility for all panel types and installations
- Standard 1000 Vdc input for long string lengths
- Grid interactive capability including low voltage ride through and VAR control meets global utility requirements
- Design based on field proven Schneider Electric power drives and uses standard Schneider Electric industrial components
- Load break rated DC switch disconnect
- Integrated industry standard RS485/Modbus communications
- Compatible with optional insulation monitoring or GFDI kits



Schneider Electric XC Series

Device short name	XC 540	XC 630	XC 680
Electrical specifications			
Input (DC)			
Photovoltaic power	621 kW	725 kW	782 kW
Input voltage range, MPPT	440 - 800 V (GPF=1)	510 - 800 V (GPF=1)	550 - 800 V (GPF=1)
Input voltage range, operating	440 - 850 V	510 - 850 V	550 - 850 V
Max. input voltage, open circuit	1000 V	1000 V	1000 V
Max. input current	1280 A	1280 A	1280 A
Output (AC)			
Nominal output power	540 kVA	630 kVA	680 kVA
Nominal output power (France)	500 kW (for +/- 0.93)	585 kW (for +/- 0.93)	630 kW (for +/- 0.93)
Output voltage	300 V	350 V	380 V
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Nominal output current	1040 A	1040 A	1040 A
Power Factor	+/-0.8	+/-0.8	+/-0.8
Harmonic distortion	< 3% at rated power	< 3% at rated power	< 3% at rated power
Efficiency			
Maximum	98.6%	98.6%	98.7%
European	98.5%	98.5%	98.5%
General specifications			
Power consumption, night time	< 100 W	< 100 W	< 100 W
IP degree of protection	IP20	IP20	IP20
Enclosure material	Steel	Steel	Steel
Product weight	1900 kg (4189 lb)	1900 kg (4189 lb)	1900 kg (4189 lb)
Product dimensions (H x W x D)	200 x 240 x 63 cm (78.75 x 94.5 x 24.75 in)	200 x 240 x 63 cm (78.75 x 94.5 x 24.75 in)	200 x 240 x 63 cm (78.75 x 94.5 x 24.75 in)
Ambient air temperature for operation	-10°C to 45°C (14°F to 113°F) full power. Derating to 50°C		
Operating altitude	1500 m (4921 ft), derating for higher altitudes		
Relative humidity	0 to 95% non-condensing		
Part number	TBD		
Features and options			
Type of cooling	Temperature-dependent forced convection cooling		
Display type	LCD multifunction removable display standard		
Communication interface	RS485/Modbus standard		
AC/DC disconnect	Load break rated DC disconnect and AC circuit breaker standard		
Ground fault detection/interruption	Optional isolation monitoring relay or GFDI with circuit breaker		
Sub-array combiner	Optional external combiners with various quantities and trip sizes		
Regulatory approvals			
XC Series are CE marked for the EMC Directive (EN61000-6-2 and EN61000-6-4) and Low Voltage Directive (EN50178)			
XC Series complies with French (EDF) requirements			
Units with grid-interactive options comply with German (BDEW) requirements			

Other input voltage windows and power outputs available.
Specifications are subject to change without notice.