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Project name: 3 Phase Home , Backup, PV, Location: Botswana / Gaborone  
Project number:  
Project file: 3 Phase Home , Backup, PV, Grid voltage: 3~230 V

### System overview

40 x Zhong Yi New Energy ZY290M-72 (PV-array 1)  
Azimuth angle: 180°, Inclination: 25°, Mounting type: Roof, PV peak power: 11.60 kWp



1 x STP 12000TL-10

### Technical data

Total number of PV modules:	40	Energy usability factor:	100 %
PV peak power:	11.60 kWp	Performance ratio (approx.):*	84.5 %
Number of inverters:	1	Spec. energy yield (approx.):*	1942 kWh/kWp
Nominal AC power:	12.00 kW	Line losses (in % of PV energy):	0.21 %
AC active power:	12.00 kW	Unbalanced load:	0.00 VA
Active power ratio:	103.4 %	Self-consumption:	---
Annual energy yield (approx.):*	22527.80 kWh	Self-consumption quota:	---

Sunny Design 2.20.1.R

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Signature

\*Important: The yield values displayed are estimates. They are determined mathematically. SMA Solar Technology AG accepts no responsibility for the real yield value which can deviate from the yield values displayed here. Reasons for deviations are various outside conditions, such as soiling of the PV Modules or fluctuations in the efficiency of the PV modules.

# Evaluation of design

Project name: 3 Phase Home , Backup, PV, Feedin,  
 Project number:  
 Project file: 3 Phase Home , Backup, PV, Feedin, Grid,

Location: Botswana / Gaborone  
 Cell temperature:  
 Record Low Temperature: -10.00 °C  
 Average High Temperature: 50.00 °C  
 Record High Temperature: 70.00 °C

Part project 1

## 1 x STP 12000TL-10

PV peak power:	11.60 kWp	
Total number of PV modules:	40	
Number of inverters:	1	
Max. DC power (cos φ = 1):	12.25 kW	
Max. AC active power (cos φ = 1):	12.00 kW	
Grid voltage:	230 V	
Nominal power ratio:	106 %	✔
Displacement power factor cos φ:	1	

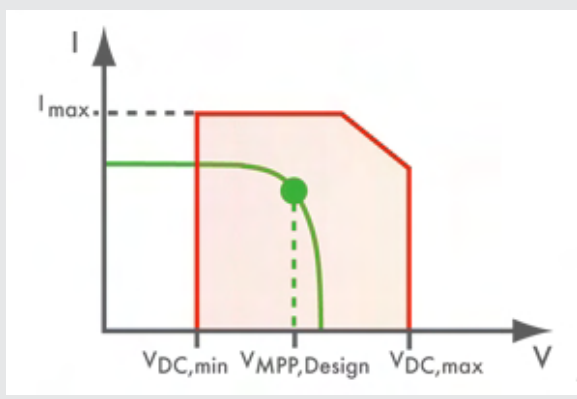


STP 12000TL-10

## Technical data

Input A: PV-array 1  
 20 x Zhong Yi New Energy ZY290M-72, Azimuth angle: 180°, Inclination: 25°, Mounting type: Roof  
 Input B: PV-array 1  
 20 x Zhong Yi New Energy ZY290M-72, Azimuth angle: 180°, Inclination: 25°, Mounting type: Roof

	Input A:	Input B:	
Number of strings:	1	1	
PV modules per string:	20	20	
Peak power (input):	5.80 kWp	5.80 kWp	
Typical PV voltage:	659 V <span style="float: right;">✔</span>	659 V <span style="float: right;">✔</span>	
Min. PV voltage:	610 V <span style="float: right;">✔</span>	610 V <span style="float: right;">✔</span>	
Min. DC voltage (Grid voltage 230 V):	150 V	150 V	
Max. PV voltage:	999 V <span style="float: right;">✔</span>	999 V <span style="float: right;">✔</span>	
Max. DC voltage (PV):	1000 V	1000 V	
Max. current of PV array:	8.1 A <span style="float: right;">✔</span>	8.1 A <span style="float: right;">✔</span>	
Max. DC current:	22.0 A	11.0 A	
Max. short-circuit current:	33.0 A	12.5 A	



PV/Inverter compatible

# Dreiphasiges Sunny Backup System / Threephase Sunny Backup System

