# **Product information**

## Valid from 01.04.2015 until 31.12.2015





Contents	
Inverters without transformer FLX PRO	5
Inverters without transformer Sunny Tripower Sunny Boy	9
Micro Inverter	23
SMART ENERGY	25
Central inverters Sunny Central	34
Central Inverter Stations	74
Monitoring Systems System Monitoring	80
Off-grid inverters	91

Sunny Island



# **Description of the Symbols Used**



This symbol indicates a specification of a product or an information which is important for correct ordering (e. g. differences in version). Please pay special attention to these sections in order to avoid incorrect ordering.



# **Exclusion of liability and Terms of delivery**

#### Terms of delivery

The General Terms and Conditions of Delivery of SMA Solar Technology AG shall apply. Other agreements apply only, if they have been explicitly confirmed by SMA in writing.

This price list replaces and renders invalid all previous prices.

Due to fluctuating exchange rates, SMA has the right to modify prices quarterly.

#### **Exclusion of liability**

The content of these documents is monitored in an ongoing manner and updated when necessary. Discrepancies may still arise. Subject to changes and errors. No guarantee is made for the completeness of these documents. The technical data and descriptions are non-binding and are solely for informational purposes. They do not constitute any guarantee of quality or durability for the goods to be supplied or services to rendered by SMA.

## Software licensing

The use of the software produced by SMA Solar Technology AG is subject to the following conditions:

This software may be copied for internal company purposes and may be installed on any number of computers. Supplied source codes may be changed or adapted for internal company purposes on your own responsibility. Drivers may also be imported to other operating systems. Source codes may only be published with the written permission of SMA Solar Technology AG. Sub-licensing of software is not permissible.

Limitation of liability: SMA Solar Technology AG rejects any liability for direct or indirect damages arising from the use of software developed by SMA Solar Technology AG. This also applies to the provision or non-provision of support activities.

Supplied software not developed by SMA Solar Technology AG is subject to the respective licensing and liability agreements of the manufacturer.

## **Trademarks**

All trademarks are recognized, even if they are not marked separately. If not identified as such, this does not mean that a product or brand is not a registered trademark.

## SMA Solar Technology AG

Sonnenallee 1 34266 Niestetal, Germany Germany Tel. +49 561 9522-0 Fax +49 561 9522-100 www.SMA.de E-Mail: info@SMA.de © 2015 SMA Solar Technology AG





## FLX PRO 17 kW inverter (139F2106)

Valid from: as provided in co	ontract
139F2106 (price before options):	Solar inverter for grid feed-in, Pac,-r/Sac. Max 17000 W/17000VA, three-phase feed-in, with reactive power supply, transformerless, graphic display, Country settings via display/integrated web server, Ethernet, RS485 communication, interface, 3 MPPT Inputs, IP65, DC SUNCLIX terminal, integrated DC-disconnector switch
specific price 1)	

## FLX PRO 15 kW inverter (139F2105)

Valid from: as provided in 139F2105 (price before options):	Solar inverter for grid feed-in, Pac,-r/Sac. Max 15000 W/15000VA, three-phase feed-in, with reactive power supply, transformerless, graphic display, Country settings via display/integrated web server, Ethernet, RS485 communication, interface, 3 MPPT Inputs, IP65, DC SUNCLIX terminal, integrated DC-disconnector switch
specific price 1)	

## Comments



## Accessories

139F0272	Retrofit module for FLX inverters, integrated interfaces for temperature and irradiation sensors, SO input, relay output

139F0273	Retrofit module for FLX inverters for data transmission via GSM radio standard

139F0275 Retrofit module for FLX inverters, 6 digital inputs for power limitation or reactive power setpoint





## Sunny Tripower 25000TL (STP 25000TL-30)

Valid from: as provided i	'alid from: as provided in contract								
STP 25000TL-30 (price before options):	xx	x	xx	x	x	Solar inverter for grid feed-in, Pac,-r/max 25000 W/ 25000 VA, three-phase feed-in, maximum efficiency 98.3%, with reactive power supply, transformerless, rotary switch for language settings, Multi-String function, integrated DC disconnector switch, DC SUNCLIX terminal			
specific price 1)									
Color of lid:	08					Gentian blue (additional colors on request)			
Communication:		1				RS485			
Communication:		2				Speedwire/Webconnect (Standard)			
Documentation:			00			Language package (DE, EN, ES, FR, IT, NL, PT)			
				0		Without (standard)			
I/O port moduls:				1		Multi-function relay			
-				2		Power Control Module			
DC overvoltage						Without DC overvoltage protector (type II) (Standard)			
discharger:					2	With DC overvoltage protector (type II) for input A and B			
-		<u> </u>		_		1			

#### Comments

1) Can vary depending on options.

## Sunny Tripower 20000TL (STP 20000TL-30)

/alid from: as provided in contract								
STP 20000TL-30 (price before options):	xx	x	xx	x	x	Solar inverter for grid feed-in, Pac,r/max 20000 W/ 20000 VA, three-phase feed-in, maximum efficiency 98.4%, with reactive power supply, transformerless, rotary switch for language settings, Multi-String function, integrated DC disconnector switch, DC SUNCLIX terminal		
specific price 1)								
Color of lid:	08					Gentian blue (additional colors on request)		
-						20.105		
C		1				RS485		
Communication:		2				RS485 Speedwire/Webconnect (Standard)		
Communication:  Documentation:		2	00					
Documentation:		2	00	0		Speedwire/Webconnect (Standard)		
		2	00	0		Speedwire/Webconnect (Standard) Language package (DE, EN, ES, FR, IT, NL, PT) Without (standard) Multi-function relay		
Documentation:		2	00	-		Speedwire/Webconnect (Standard) Language package (DE, EN, ES, FR, IT, NL, PT) Without (standard) Multi-function relay Power Control Module		
Documentation: I/O port moduls:		2	00	1	0	Speedwire/Webconnect (Standard) Language package (DE, EN, ES, FR, IT, NL, PT) Without (standard) Multi-function relay Power Control Module Without DC overvoltage protector (type II) (Standard)		
Documentation:		2	00	1	0	Speedwire/Webconnect (Standard) Language package (DE, EN, ES, FR, IT, NL, PT) Without (standard) Multi-function relay Power Control Module		

## Comments

## Sunny Tripower 15000TL (STP 15000TL-10)

Valid from: as provided i	/alid from: as provided in contract								
STP 15000TL-10 (price before options):	x	xx	x	x		xx	Solar inverter for grid feed-in Pac,r/Sac,max 15000 W/ 15000 VA three-phase feed, with reactive power supply, transformerless, graphic display, rotary coded switch for country settings SMA Bluetooth® communication interface, Multi-String function, DC SUNCLIX terminal incl. Electronic Solar Switch (ESS)		
specific price 1)									
Communication:	0 1 2						No add. Communication RS485 Speedwire/Webconnect		
Color of lid:		08					Gentian blue (additional colors on request)		
DC overvoltage discharger:			0				with DC overvoltage protector (type II) with DC overvoltage protector (type II) for input A and B		
I/O port moduls:				0 1 2			Without (standard) Multi-function relay Power Control Module		
Documentation:						00	Language package (DE, EN, ES, FR, IT, NL, PT)		

#### Comment

## Sunny Tripower 12000TL (STP 12000TL-20)

Valid from: as provided i	/alid from: as provided in contract							
STP 12000TL-20 (price before options):	xx	x	-	xx	Solar inverter for grid feed-in Pac,r/Sac, max 12000 W/12000 VA three-phase feed-in, with reactive power supply, transformerless, graphic display, rotating selection switch for country settings SMA Bluetooth® and Speedwire/Webconnect communication interface, multifunctions relay,multi-string function, DC SUNCLIX terminal incl. Electronic Solar Switch (ESS)			
specific price 1)								
Color of lid:	08				Gentian blue (additional colors on request)			
I/O port moduls:		0			Without (standard) Power Control Module			
Documentation:				00	Language package (DE, EN, ES, FR, GR, IT, PT, CZ, NL)			

## Comments

1) Can vary depending on options.

## Sunny Tripower 10000TL (STP 10000TL-20)

Valid from: as provided in contract						
STP 10000TL-20 (price before options):	xx	x	-	хх	Solar inverter for grid feed-in Pac,r/Sac, max 10000 W/10000 VA three-phase feed-in, with reactive power supply, transformerless, graphic display, rotating selection switch for country settings SMA Bluetooth® and Speedwire/Webconnect communication interface, multifunctions relay,multi-string function, DC SUNCLIX terminal incl. Electronic Solar Switch (ESS)	
specific price 1)						
Color of lid:	08				Gentian blue (additional colors on request)	
1/0		0			Without (standard)	
I/O port moduls:		2			Power Control Module	
Documentation:				00	Language package (DE, EN, ES, FR, GR, IT, PT, CZ, NL)	

#### Comments

## Sunny Tripower 9000TL (STP 9000TL-20)

/alid from: as provided in contract							
STP 9000TL-20 (price before options):	xx	x	-	хх	Solar inverter for grid feed-in Pac,r/Sac, max 9000 W/9000 VA three-phase feed-in, with reactive power supply, transformerless, graphic display, rotating selection switch for country settings SMA Bluetooth® and Speedwire/Webconnect communication interface, multifunctions relay,multi-string function, DC SUNCLIX terminal incl. Electronic Solar Switch (ESS)		
specific price 1)							
Color of lid:	08				Gentian blue (additional colors on request)		
I/O port moduls:		0			Without (standard) Power Control Module		
Documentation:				00	Language package (DE, EN, ES, FR, GR, IT, PT, CZ, NL)		

## Comments

1) Can vary depending on options.

## Sunny Tripower 8000TL (STP 8000TL-20)

/alid from: as provided in contract							
STP 8000TL-20 (price before options):	xx	x		xx	Solar inverter for grid feed-in Pac,r/Sac, max 8000 W/8000 VA three-phase feed-in, with reactive power supply, transformerless, graphic display, rotating selection switch for country settings SMA Bluetooth® and Speedwire/Webconnect communication interface, multifunctions relay, multi-string function, DC SUNCLIX terminal incl. Electronic Solar Switch (ESS)		
specific price 1)							
Color of lid:	08				Gentian blue (additional colors on request)		
1/0		0			Without (standard)		
I/O port moduls:		2			Power Control Module		
Documentation:				00	Language package (DE, EN, ES, FR, GR, IT, PT, CZ, NL)		

#### Comments

## Sunny Tripower 7000TL (STP 7000TL-20)

Valid from: as provided i	Valid from: as provided in contract										
STP 7000TL-20 (price before options):	xx	x		xx	Solar inverter for grid feed-in Pac,r/Sac, max 7000 W/7000 VA three-phase feed-in, with reactive power supply, transformerless, graphic display, rotating selection switch for country settings SMA Bluetooth® and Speedwire/Webconnect communication interface, multifunctions relay, multi-string function, DC SUNCLIX terminal incl. Electronic Solar Switch (ESS)						
specific price 1)											
Color of lid:	08				Gentian blue (additional colors on request)						
I/O port moduls:		0			Without (standard) Power Control Module						
Documentation:				00	Language package (DE, EN, ES, FR, GR, IT, PT, CZ, NL)						

## Comments

1) Can vary depending on options.

## Sunny Tripower 6000TL (STP 6000TL-20)

Valid from: as provided i	alid from: as provided in contract											
STP 6000TL-20 (price before options):	xx	x	-	xx	Solar inverter for grid feed-in Pac,r/Sac, max 6000 W/6000 VA three-phase feed-in, with reactive power supply, transformerless, graphic display, rotating selection switch for country settings SMA Bluetooth® and Speedwire/Webconnect communication interface, multifunctions relay, multi-string function, DC SUNCLIX terminal incl. Electronic Solar Switch (ESS)							
specific price 1)												
Color of lid:	08				Gentian blue (additional colors on request)							
1/0		0			Without (standard)							
I/O port moduls:		2			Power Control Module							
Documentation:				00	Language package (DE, EN, ES, FR, GR, IT, PT, CZ, NL)							

#### Comments



## Sunny Tripower 5000TL (STP 5000TL-20)

Valid from: as provided i	n co	ntro	act		
STP 5000TL-20 (price before options):	xx	x		хх	Solar inverter for grid feed-in Pac,r/Sac, max 5000 W/5000 VA three-phase feed-in, with reactive power supply, transformerless, graphic display, rotating selection switch for country settings SMA Bluetooth® and Speedwire/Webconnect communication interface, multifunctions relay, multi-string function, DC SUNCLIX terminal incl. Electronic Solar Switch (ESS)
specific price 1)					
Color of lid:	08				Gentian blue (additional colors on request)
1/0		0			Without (standard)
I/O port moduls:		2			Power Control Module
Documentation:				00	Language package (DE, EN, ES, FR, GR, IT, PT, CZ, NL)

## Comments

## Sunny Boy 6000TL (SB 6000TL-21)

specific price 1)	Valid from: as provided in SB 6000TL-21 (price before options):	Solar inverter for grid feed-in, Pac,r/max 6000 W / 6000 VA, transformerless, with reactive power control, graphic display, rotary switsch for country settings, SMA Bluetooth® communication interface, multifunctions relay, multi-string function, DC SUNCLIX terminal
	specific price 1)	

## Comments

Can vary depending on options.
 Only available in Italy.



#### Sunny Boy 5000TL (SB 5000TL-21)

SB 5000TL-21 (price before options):  2 xx 4 x x - xx graphic display, rotary switch for country settings SMA Bluetooth® communication interface, multistring function, DC connection SUNCLIX, incl. Electronic Solar Switch (ESS)  specific price 1)  Communication:  2 Speedwire/Webconnect  Color of lid:  50 Vihout Without With (Standard)  Without With (Standard)  1 Vo port moduls:  Documentation:  0 Language package (DE, EN, ES, FR, GR, IT, PT, CZ, NL)	Valid from: as provided	Valid from: as provided in contract											
Communication:         2         Speedwire/Webconnect           Color of lid:         00         red (additional colors on request)           ESS (DC switch):         0         Without With (Standard)           I/O port moduls:         0         Without (standard)           Multi-function relay Power Control Module	(price before	2	xx	4	x	x	- xx	Pac,r/Sac, max 4600 W/ 5000 VA* transformerless, for reactive power feed-in, graphic display, rotary switch for country settings SMA Bluetooth® communication interface, multistring function, DC connection SUNCLIX,					
Color of lid:	specific price 1)												
ESS (DC switch):    O	Communication:	2						Speedwire/Webconnect					
I With (Standard)  I/O port moduls:  1 With (Standard)  Without (standard)  Multi-function relay Power Control Module	Color of lid:		00					red (additional colors on request)					
I/O port moduls:  I/O port moduls:    1	FSS (DC switch):				0								
I/O port moduls:  1 Multi-function relay 2 Power Control Module					1								
2 Power Control Module						0		· · · ·					
	I/O port moduls:					1							
Documentation: 00 Language package (DE, EN, ES, FR, GR, IT, PT, CZ, NL)						2		Power Control Module					
	Documentation:						00	Language package (DE, EN, ES, FR, GR, IT, PT, CZ, NL)					

#### Comments

## Sunny Boy 4000TL (SB 4000TL-21)

Valid from: as provided in contract PV inverter for grid feed-in Pac,r/Sac, max 4000 W/4000 VA SB 4000TL-21 transformerless, for reactive power feed-in, (price before 2 4 graphic display, rotary switch for country settings options): SMA Bluetooth® communication interface, multistring function, DC connection SUNCLIX, incl. Electronic Solar Switch (ESS) specific price 1) Communication: 2 Speedwire/Webconnect Color of lid: 00 red (additional colors on request) 0 Without ESS (DC switch): With (Standard) Without (standard) Multi-function relay I/O port moduls: Power Control Module 00 Language package (DE, EN, ES, FR, GR, IT, PT, CZ, NL) Documentation:

## Comments

<sup>1)</sup> Can vary depending on options.

 $<sup>^{\</sup>star}$  with configuration according to VDE-AR-N 4105, limitation of Sac to max. 4600 VA.

## Sunny Boy 3600TL (SB 3600TL-21)

/alid from: as provided in contract											
SB 3600TL-21 (price before options):	2	xx	4	x	x	-	xx	PV inverter for grid feed-in Pac,r/Sac; max 3680 W/3680 VA transformerless, for reactive power supply, graphic display, rotary code switch for country settings SMA Bluetooth® communication interface, multi-string function DC connection SUNCLIX, incl. Electronic Solar Switch (ESS)			
specific price 1)											
Communication:	2							Speedwire/Webconnect			
Color of lid:		00						red (additional colors on request)			
ESS (DC switch):				0				Without			
LOG (DC SWIICH).				1				With (Standard)			
					0			Without (standard)			
I/O port moduls:					1			Multi-function relay			
		L			2			Power Control Module			
Documentation:							00	Language package (DE, EN, ES, FR, GR, IT, PT, CZ, NL)			

## Comments

For devices with reduced AC nominal power, please order SB 3600TL-21/V 0165. The order options are the same as for the SB 3600TL-21.

## Sunny Boy 3000TL (SB 3000TL-21)

Valid from: as provided in contract											
SB 3000TL-21 (price before options):	2	xx	4	x	x	-	xx	PV inverter for grid feed-in Pac,r/Sac, max 3000 W/ 3000 VA transformerless, for reactive power feed-in, graphic display, rotary switch for country settings SMA Bluetooth® communication interface, multistring function, DC connection SUNCLIX, incl. Electronic Solar Switch (ESS)			
specific price 1)											
Communication:	2							Speedwire/Webconnect			
Color of lid:		00						red (additional colors on request)			
FCC /DC				0				Without			
ESS (DC switch):				1				With (Standard)			
·					0	Ι		Without (standard)			
I/O port moduls:					1			Multi-function relay			
				L	2	L		Power Control Module			
Documentation:							00	Language package (DE, EN, ES, FR, GR, IT, PT, CZ, NL)			

#### Comments

<sup>1)</sup> Can vary depending on options.



## Sunny Boy 3000TL SINGLE TRACKER (SB 3000TLST-21)

/alid from: as provided in contract											
SB 3000TLST-21 (price before options):	2	xx	4	x	x	-	xx	PV inverter for grid feed-in Pac,r/Sac; max 3 000 W/ 3 000 VA transformerless, for reactive power feed-in, graphic display, rotary switch for country settings SMA Bluetooth® communication interface, DC connection SUNCLIX, incl. Electronic Solar Switch (ESS)			
specific price 1)											
Communication:	2							Speedwire/Webconnect			
Color of lid:		00						red (additional colors on request)			
ESS (DC switch):				0				Without			
		H		1		H		With (Standard)			
I/O port moduls:					0			Without (standard) Multi-function relay			
i/ O port moduls:					2			Power Control Module			
				H	2	H					
Documentation:							00	Language package (DE, EN, ES, FR, GR, IT, PT, CZ, NL)			

#### Comments

## Sunny Boy 2500TL SINGLE TRACKER (SB 2500TLST-21)

Valid from: as provided in contract PV inverter for grid feed-in Pac,r/Sac; max 2500 W/ 2500 VA SB 2500TLST-21 transformerless, for reactive power feed-in, (price before 4 graphic display, rotary switch for country settings SMA Bluetooth® communication interface, options): DC connection SUNCLIX, incl. Electronic Solar Switch (ESS) specific price 1) Communication: 2 Speedwire/Webconnect Color of lid: 00 red (additional colors on request) 0 Without ESS (DC switch): With (Standard) Without (standard) Multi-function relay I/O port moduls: Power Control Module 00 Language package (DE, EN, ES, FR, GR, IT, PT, CZ, NL) Documentation:

## Comments

<sup>1)</sup> Can vary depending on options.

## Sunny Boy 2100TL (SB 2100TL)

Valid from: as provided	in co	ontr	act					
SB 2100TL (price before options):	c			x	4	x	xx	Solar inverter for grid feed-in Pac,r/Sac, max 1950 W/2100 VA transformerless, text display, DC SUNCLIX terminal,
specific price 1)								
Communication:	С							Speedwire/Webconnect
Color of lid:				٥				red (additional colors on request)
ESS (DC switch):						0		Without
E33 (DC SWIICH):						1		With (Standard)
						ı	DE	German
						ı		English
						ı		Spanish
Documentation:						ı	FR	French
Documentation:								Greek
							ΙT	Italian
								Czech
-							NL	Dutch

## Comments

## Sunny Boy 1600TL (SB 1600TL-10)

Valid from: as provided in contract											
SB 1600TL-10 (price before options):	c	o	0	x	4	x	-	××	Solar inverter for grid feed-in Pac,r/Sac, max 1600 W/1600 VA transformerless, text display, DC SUNCLIX terminal		
specific price 1)											
Communication:	С								Speedwire/Webconnect		
Color of lid:				٥					red (additional colors on request)		
ESS (DC switch):						0			Without		
E33 (DC SWIICH):						1			With (Standard)		
								DE	German		
									English		
								ES	Spanish		
Documentation:								FR	French		
Documentation:								GR	Greek		
									Italian		
									Czech		
								NL	Dutch		

## Comments

1) Can vary depending on options.

## Sunny Boy 1300TL (SB 1300TL-10)

Valid from: as provided in contract											
SB 1300TL-10 (price before options):	c	0	0	x	4	x		- xx	PV inverter for grid feed-in Pac,r/Sac; max 1 300 W/ 1 300 W transformerless, text display, DC SUNCLIX terminal		
specific price 1)											
Communication:	С								Speedwire/Webconnect		
Color of lid:				0					red (additional colors on request)		
ESS (DC switch):						0			Without		
E33 (DC SWIICH):						1			With (Standard)		
									German		
									English		
									Spanish		
Documentation:									French		
									Greek		
									Italian		
									Czech		
								NL	Dutch		

#### Comments

## Sunny Boy 1.5 (SB1.5-1VL-40)

Valid from: as provided	in co	ntro	act Control of the Co
SB1.5-1VL-40 (price before options):	×	xx	PV string inverter for single-phase grid feed-in, Pac,r/Sac, max 1.5kW/1.5kVA, transformerless, with integrated W-LAN and Speedwire/Webconnect communication interface, DC connection SUNCLIX, incl. DC disconnect
specific price 1)			
Color of lid:	0		Red RAL3020
Documentation:		00	Language package (DE, EN, ES, FR, IT, GR)

#### Comments

1) Can vary depending on options.

## Sunny Boy 2.5 (SB2.5-1VL-40)

Valid from: as provided in contract				
SB2.5-1VL-40 (price before options):	x	xx	PV string inverter for single-phase grid feed-in, Pac,r/Sac, max 2.5kW/2.5kVA, transformerless, with integrated W-LAN and Speedwire/Webconnect communication interface, DC connection SUNCLIX, incl. DC disconnect	
specific price 1)				
Color of lid:	0		Red RAL3020	
Documentation:		00	Language package (DE, EN, ES, FR, IT, GR)	
-				

## Comments



SB240-99-10	SMA micro inverters for grid feed-in, lid color untreated alumuninum, Pac,r/Sac, max. 230 W/230 VA, HF transformer, minimun order quantity of six devices.
MULTIGATE-10	Power supply unit with integrated communication interface for SMA micro inverter, Pac,r/Sac, max. 2760 W/2760 VA
MI-ACCAB14-10	AC cables for connecting SMA micro inverters together, length 1.4 m. Packaging units of 24
MI-ACCAB20-10	AC cables for connecting SMA micro inverters together, length 2.0 m. Packaging units of 24
MI-ACCAP-10	AC protective cap for sealing the AC connection at the last SMA micro inverter. Packaging units of 200.
MI-ACCON-10	AC field plug for the connection between an SMA micro inverter and Sunny Multigate for external applications. Packaging units of 20
MI-DCMC4-10	DC-MC4 adapters for connecting SMA micro inverter to the PV module. Packaging units of 24
MI-DCTYCO-10	DC-TYCO adapters for connecting SMA micro inverter to the PV module. Packaging units of 24



#### Sunny Boy 3600 Smart Energy (SB 3600SE-10)

Valid from: as p	provided in contract
------------------	----------------------

SB 3600SE-10 (price before options):

PV inverter with integrated lithium-ion battery for grid feed-in Pac,r/Sac, max. 3,680 W/ 3,680 VA with reactive power supply, 2 kWh of usable battery capacity, transformerless, graphic display, rotary code switch for language settings Communication interface Speedwire/Webconnect, Multi-string function, DC connection SUNCLIX, integrated DC load-break switch

specific price 1)

00 Language package (DE, EN, ES, FR, IT, PT, NL)

## Sunny Boy 5000 Smart Energy (SB 5000SE-10)

Valid from: as provided in contract

SB 5000SE-10 (price before options):

PV inverter with integrated lithium-ion battery for grid feed-in Pac,r/Sac, max. 4600 W/5000 VA\* with reactive power supply, 2 kWh of usable battery capacity, transformerless, graphic display, rotary code switch for language settings Communication interface Speedwire/Webconnect, Multi-string function, DC connection SUNCLIX, integrated DC load-break switch with configuration in accordance with VDE-AR-N 4105,

limitation of Sac, max to 4,600 VA.

specific price 1)

Documentation: oo Language package (DE, EN, ES, FR, IT, PT, NL)

#### Comments

1) Can vary depending on options.

For storage, transport and service of the battery inverter, specific liability terms and guidelines apply.

## Integrated system solutions

ISS-SB3600SE-10-1 SMA Integrated Storage System, Set 3600

Set consisting of Sunny Boy 3600 Smart Energy, Sunny Home Manager with Bluetooth® + Speedwire, SMA radio-controlled socket and SMA

Energy Mete

Target country: Germany, Italy, Spain, Portugal, Netherlands, Greece; Austria

ISS-SB3600SE-10-2 SMA Integrated Storage System, Set 3600

Set consisting of Sunny Boy 3600 Smart Energy, Sunny Home Manager with Bluetooth® + Speedwire, SMA radio-controlled socket and SMA

Energy Meter

Target country: France, Belgium, Czech Republic

ISS-SB5000SE-10-1 SMA Integrated Storage System, Set 5000

Set consisting of Sunny Boy 5000 Smart Energy, Sunny Home Manager with Bluetooth® + Speedwire, SMA radio-controlled socket and SMA

Energy Meter

Target country: Germany, Italy, Spain, Portugal, Netherlands, Greece, Austria

ISS-SB5000SE-10-2 SMA Integrated Storage System, Set 5000

Set consisting of Sunny Boy 5000 Smart Energy, Sunny Home Manager with Bluetooth® + Speedwire, SMA radio-controlled socket and SMA

Energy Meter

Target country: France, Belgium, Czech Republic



## Sunny Boy/Sunny Tripower Demo

SB 5000TL-2Z (price before options):	x	xx	×	Demo device SB 3000TL-21, SB 3600TL-21, SB 4000TL-21, SB 5000TL-21, SB 2500TLST-21, SB 3000TLST-21
	1			Typ: Sunny Boy 3000TL-21
	2			Typ: Sunny Boy 4000TL21
Davidso koman	3			Typ: Sunny Boy 5000TL21
Device type:	4			Typ: Sunny Boy 3600TL-21
	5			Typ: Sunny Boy 2500TLST-21
	6			Typ: Sunny Boy 3000TLST-21
Color of lid:		00		red (additional colors on request)
Cabinet:			0	only enclosure with display, no function
SB 5000SE-10-1Y (price before options):	×	x	De	mo device SB 5000SE-10, SB 3600SE-10
D. 1	0		Typ	o: Sunny Boy 3600SE-10
Device type:	1		Tyr	o: Sunny Boy 5000SE-10
Color of lid:		00	rec	(additional colors on request)

90-234400.01

Stand system for SB5000SE-10-1Y



STP 17000TL-1Y (price before options):	×	xx	x	Demo device STP 15000TL-10
Device type:	2			Typ: Sunny Tripower 15000TL
Color of lid:		08	_	Gentian blue (additional colors on request)
Cabinet:			0	only enclosure with display, no function
STP 9000TL-2Y				
(price before options):	×	xx	×	Demo device STP 5000TL-20, STP 6000TL-20, STP 7000TL-20, STP 8000TL-20, STP 9000TL-20, STP 10000TL-20, STP 12000TL-20
	0			Typ: Sunny Tripower 5000TL
	1			Typ: Sunny Tripower 6000TL
	2			Typ: Sunny Tripower 7000TL
Device type:	3			Typ: Sunny Tripower 8000TL
	4			Typ: Sunny Tripower 9000TL
	5			Typ: Sunny Tripower 10000TL
	6			Typ: Sunny Tripower 12000TL
Color of lid:		08		Gentian blue (additional colors on request)
Cabinet:			0	only enclosure with display, no function
STP 25000TL-3Y				
(price before	×	×	De	mo device STP 25000TL-30, STP 20000TL-30
options):				
Device type:	0			b: Sunny Tripower 20000TL-30
	1		Тур	b: Sunny Tripower 25000TL-30
Color of lid:		08	Ge	entian blue (additional colors on request)

29/124

45-9933 Stand system Sunny TriPower

Stand system for SB3000HF-3Y, SB5000TL-2Z, STP9000TL-2Y and SIX.XHM-DUMMY  $\label{eq:standard} % \begin{array}{ll} \text{SB}_{2}(x) & \text{SB}_$ 45-9934

#### **Communication interfaces**

485PB-NR RS485 interface type Piggy-Back as retrofit kit for

SB 1200

SB 1300TL-10/1600TL-10

SB 2100TL

DM-485CB-10 RS485 interface type data module as retrofit kit for

SB 3000TL-21/3600TL-21/4000TL-21/5000TL-21/6000TL-21

SB 2500TLST-21/3000TLST-21

STP 15000TL-10

STP 20000TL-30/25000TL-30

485BRD-10 RS485 interface type data module type B as retrofit kit for:

STP 5000TL-20/6000TL-20/7000TL-20/8000TL-20/9000TL-20/10000TL-20/12000TL-20

SWDM-10 Speedwire/Webconnect interface type data module as retrofit kit for:

SB 3000TL-21/3600TL-21/4000TL-21/5000TL-21/6000TL-21

SB 2500TLST-21/3000TLST-21 STP 15000TL-10

STP 20000TL-30/25000TL-30

SWPB-10 Speedwire/Webconnect interface type piggy-back as retrofit kit for:

SB1300TL-10/SB 1600TL-10

SB 2100TL





BTPBINV-NR (price before options):	xx	SMA Bluetooth® interface typ Piggy-Back as retrofit kit for
Device type:		SB 1300TL-10/1600TL-10
Device type.		SB 2100TL
	AU	Australia (Documentation: English)
	BE	Belgium (Documentation: German, Dutch, French)
	cz	Czech Republic (Documentation: Czech)
	DE	Germany (Documentation: German)
	ES	Spain (Documentation: Spanish)
	FR	France (Documentation: French)
Documentation:	GB	Great Britain (Documentation: English)
	GR	Greece (documentation: Greek)
	IT	Italy (Documentation: Italian)
	KR	Korea (Documentation: Korean)
	NL	Netherlands (Documentation: Dutch)
	PT	Portugal (Documentation: Portuguese)
	us	USA (Documentation: English)

BTPB-EXTANT-NR (price before options):	xx	SMA Bluetooth® interface type Piggy-Back incl. external antenna as retrofit kit for
	-	SB 1300TL-10/1600TL-10
Device type:		SB 2100TL
	AU	Australia (Documentation: English)
	ВЕ	Belgium (Documentation: German, Dutch, French)
	cz	Czech Republic (Documentation: Czech)
	DE	Germany (Documentation: German)
	ES	Spain (Documentation: Spanish)
Documentation:	FR	France (Documentation: French)
Documentation.	GB	Great Britain (Documentation: English)
	GR	Greece (documentation: Greek)
	IT	Italy (Documentation: Italian)
	KR	Korea (Documentation: Korean)
	NL	Netherlands (Documentation: Dutch)
	PT	Portugal (Documentation: Portuguese)
	US	USA (Documentation: English)



ANTEXTKIT25-10 Antenna extension add-on kit for SMA Bluetooth® Piggy-Back BTPB-EXTANT-NR

MFR01-10 Multi-function relay as retrofit kit for

SB 3000TL-21/3600TL-21/4000TL-21/5000TL-21

SB 2500TLST-21/3000TLST-21

STP 15000TL-10

SB 3600SE-10/5000SE-10 STP 20000TL-30/25000TL-30

FANKIT01-10 Additional fan kit for use of inverters in high ambient temperatures for

SB 3000TL-21/3600TL-21/4000TL-21/5000TL-21/6000TL-21

SB 2500TLST-21/3000TLST-21

PWCMOD-10 Power control module for retrofit kit for

SB 3000TL-21/3600TL-21/4000TL-21/5000TL-21

SB 2500TLST-21/3000TLST-21

STP 15000TL-10

SB 3600SE-10/5000SE-10 STP 20000TL-30/25000TL-30

PWCBRD-10 Power control module type B for retrofit kit for

STP 5000TL-20/6000TL-20/7000TL-20/8000TL-20/9000TL-20/10000TL-20/12000TL-20

**DC Connection** 

SUNCLIX-FC6-SET

SUNCLIX field connector for cross-sections from 2.5 to 6 mm $^2$ , Set (+/-) for 10 strings

Grounding

PLUGIN-GRD-10-NR SMA Plug-in Grounding as an upgrade kit (Stick) for the positive or negative connection to ground of the DC input for

SB 2000HF-30/2500HF-30/3000HF-30

PVO-N-20 PV OFFSET BOX

External device for automatic application of a reverse voltage at the PV generator.

For regeneration of PV-panels affected by PID.

## **System Components**

GRIDGATE-10 (price before options):	0	хх	Central grid and plant protection 3N~ 230/400 V, with display, terminal for 2 relays
Netzparameter Länder- einstellungen:		DE	Default Setting VDE-AR-N 4105 (standard)

GRIDGATE-20 (price before options):	0	хх	Grid and plant protection 3N~ 230/400 V in compliance with the CEI 0-21 standard (Italy), terminal for 2 relays, 6 digital inputs, IEC 61850-7-2, Speedwire communication
Netzparameter Länder- einstellungen:		ΙT	Default Setting CEI 0-21 (standard)

## Protection and fuse elements

Upgrade kit DC overvoltage protector (type II) for input A and B Fits for STP 8000TL-10/1000TL-10/12000TL-10/15000TL-10/17000TL-10 DC\_SPD\_KIT2-10

Upgrade kit DC overvoltage protector (type II) for input A and B Fits for STP 20000TL-30/25000TL-30 DC\_SPD\_KIT3-10



# SMA Solar Technology AG

#### Sunny Central 900CP XT (SC-900CP-10-BS)

Valid from: as provided in contract

Self-commutated 900 kVA PV inverter, suitable for outdoor use, with IGBT semi-conductors in proven B6 topology. Maximum apparent power of 990 kVA at +25°C ambient temperature. Optimum power output through highly efficient MPP tracker. Planned for connection to an external transformer.

IP 54-protected inverter enclosure (connection area in IP 43), for protection against aggressive ambient conditions in accordance with IEC 60721-3-4. Innovative air cooling concept OptiCool, standard DC input voltage range to 1000 V, system-integrated DC main distribution with up to nine inputs, motor-driven DC loadbreak switch, AC contactor and AC circuit breaker, overvoltage protection on DC side.

Connection for three-phase electricity supply for operation of the inverter.

Equipped as standard with SC-COM as central communication interface which manages the inverter data and ensures the connection to a PV park control. The inverter performs comprehensive grid management functions including:

#### SC-900CP-10-BS (price before options):

- AC grid monitoring
- Active power reduction to external requirements
- Active power reduction in event of overfrequency P(f)
- Reactive power reduction to external requirements
- Reactive power provision depending on line voltage or the active power
- AID (Active Islanding Detection)
- FRT (Fault Ride Through) with
  - restricted, dynamic grid support (FRT partial)
  - complete, dynamic grid support (FRT full)

All valid technical data of the inverter can be found in the separate datasheet.

#### specific price 1)

#### Comments

1) Can differ depending on options.

#### Sunny Central 850CP XT (SC-850CP-10-BS)

Valid from: as provided in contract

Self-commutated 850 kVA PV inverter, suitable for outdoor use, with IGBT semi-conductors in proven B6 topology. Maximum apparent power of 935 kVA at +25°C ambient temperature. Optimum power output through highly efficient MPP tracker. Planned for connection to an external transformer

IP 54-protected inverter enclosure (connection area in IP 43), for protection against aggressive ambient conditions in accordance with IEC 60721-3-4. Innovative air cooling concept OptiCool, standard DC input voltage range to 1000 V, system-integrated DC main distribution with up to nine inputs, motor-driven DC loadbreak switch, AC contactor and AC circuit breaker, overvoltage protection on DC side.

Connection for three-phase electricity supply for operation of the inverter.

Equipped as standard with SC-COM as central communication interface which manages the inverter data and ensures the connection to a PV park control. The inverter performs comprehensive grid management functions including:

#### SC-850CP-10-BS (price before

- AC grid monitoring Active power reduction to external requirements
- Active power reduction in event of overfrequency P(f)
- Reactive power reduction to external requirements
- Reactive power provision depending on line voltage or the active power
- AID (Active Islanding Detection)
- FRT (Fault Ride Through) with
  - restricted, dynamic grid support (FRT partial)
- complete, dynamic grid support (FRT full)

All valid technical data of the inverter can be found in the separate datasheet.

## specific price 1)

#### Comments

options):

1) Can differ depending on options.

# SMA Solar Technology AG

#### Sunny Central 800CP XT (SC-800CP-10-BS)

Valid from: as provided in contract

Self-commutated 800 kVA PV inverter, suitable for outdoor use, with IGBT semi-conductors in proven B6 topology. Maximum apparent power of 880 kVA at +25°C ambient temperature. Optimum power output through highly efficient MPP tracker. Planned for connection to an external transformer.

IP 54-protected inverter enclosure (connection area in IP 43), for protection against aggressive ambient conditions in accordance with IEC 60721-3-4. Innovative air cooling concept OptiCool, standard DC input voltage range to 1000 V, system-integrated DC main distribution with up to nine inputs, motor-driven DC loadbreak switch, AC contactor and AC circuit breaker, overvoltage protection on DC side.

Connection for three-phase electricity supply for operation of the inverter.

Equipped as standard with SC-COM as central communication interface which manages the inverter data and ensures the connection to a PV park control. The inverter performs comprehensive grid management functions including:

#### SC-800CP-10-BS (Basispreis):

- AC grid monitoring
- Active power reduction to external requirements
- Active power reduction in event of overfrequency P(f)
- Reactive power reduction to external requirements
- Reactive power provision depending on line voltage or the active power
- AID (Active Islanding Detection)
- FRT (Fault Ride Through) with
  - restricted, dynamic grid support (FRT partial)
  - complete, dynamic grid support (FRT full)

All valid technical data of the inverter can be found in the separate datasheet.

#### specific price 1)

#### Comments

1) Can differ depending on options.

#### Sunny Central 760CP XT (SC-760CP-10-BS)

Valid from: as provided in contract

Self-commutated 760 kVA PV inverter, suitable for outdoor use, with IGBT semi-conductors in proven B6 topology. Maximum apparent power of 836 kVA at +25°C ambient temperature. Optimum power output through highly efficient MPP tracker. Planned for connection to an external transformer

IP 54-protected inverter enclosure (connection area in IP 43), for protection against aggressive ambient conditions in accordance with IEC 60721-3-4. Innovative air cooling concept OptiCool, standard DC input voltage range to 1000 V, system-integrated DC main distribution with up to nine inputs, motor-driven DC loadbreak switch, AC contactor and AC circuit breaker, overvoltage protection on DC side.

Connection for three-phase electricity supply for operation of the inverter.

Equipped as standard with SC-COM as central communication interface which manages the inverter data and ensures the connection to a PV park control. The inverter performs comprehensive grid management functions including:

#### AC grid monitoring SC-760CP-10-BS (Basispreis):

- Active power reduction to external requirements
- Active power reduction in event of overfrequency P(f)
- Reactive power reduction to external requirements
- Reactive power provision depending on line voltage or the active power
- AID (Active Islanding Detection)
- FRT (Fault Ride Through) with
  - restricted, dynamic grid support (FRT partial)
  - complete, dynamic grid support (FRT full)

All valid technical data of the inverter can be found in the separate datasheet.

#### specific price 1)

#### Comments

1) Can differ depending on options.

### Sunny Central 720CP XT (SC-720CP-10-BS)

Valid from: as provided in contract

Self-commutated 720 kVA PV inverter, suitable for outdoor use, with IGBT semi-conductors in proven B6 topology. Maximum apparent power of 792 kVA at +25°C ambient temperature. Optimum power output through highly efficient MPP tracker. Planned for connection to an external transformer.

IP 54-protected inverter enclosure (connection area in IP 43), for protection against aggressive ambient conditions in accordance with IEC 60721-3-4. Innovative air cooling concept OptiCool, standard DC input voltage range to 1000 V, system-integrated DC main distribution with up to nine inputs, motor-driven DC loadbreak switch, AC contactor and AC circuit breaker, overvoltage protection on DC side.

Connection for three-phase electricity supply for operation of the inverter.

Equipped as standard with SC-COM as central communication interface which manages the inverter data and ensures the connection to a PV park control. The inverter performs comprehensive grid management functions including:

#### SC-720CP-10-BS (Basispreis):

- AC grid monitoring
- Active power reduction to external requirements
- Active power reduction in event of overfrequency P(f)
- Reactive power reduction to external requirements
- Reactive power provision depending on line voltage or the active power
- AID (Active Islanding Detection)
- FRT (Fault Ride Through) with
- restricted, dynamic grid support (FRT partial)
- complete, dynamic grid support (FRT full)

All valid technical data of the inverter can be found in the separate datasheet.

### specific price 1)

#### Comments

1) Can differ depending on options.

#### Sunny Central 630CP XT (SC-630CP-10-BS)

Valid from: as provided in contract

Self-commutated 630 kVA PV inverter, suitable for outdoor use, with IGBT semi-conductors in proven B6 topology. Maximum apparent power of 700 kVA at +25°C ambient temperature. Optimum power output through highly efficient MPP tracker. Planned for connection to an external transformer

IP 54-protected inverter enclosure (connection area in IP 43), for protection against aggressive ambient conditions in accordance with IEC 60721-3-4. Innovative air cooling concept OptiCool, standard DC input voltage range to 1000 V, system-integrated DC main distribution with up to nine inputs, motor-driven DC loadbreak switch, AC contactor and AC circuit breaker, overvoltage protection on DC side.

Connection for three-phase electricity supply for operation of the inverter.

Equipped as standard with SC-COM as central communication interface which manages the inverter data and ensures the connection to a PV park control. The inverter performs comprehensive grid management functions including:

#### AC grid monitoring SC-630CP-10-BS (Basispreis):

- Active power reduction to external requirements
- Active power reduction in event of overfrequency P(f)
- Reactive power reduction to external requirements
- Reactive power provision depending on line voltage or the active power
- AID (Active Islanding Detection)
- FRT (Fault Ride Through) with
  - restricted, dynamic grid support (FRT partial)
  - complete, dynamic grid support (FRT full)

All valid technical data of the inverter can be found in the separate datasheet.

### specific price 1)

#### Comments

1) Can differ depending on options.

### Sunny Central 500CP XT (SC-500CP-10-BS)

Valid from: as provided in contract

Self-commutated 500 kVA PV inverter, suitable for outdoor use, with IGBT semi-conductors in proven B6 topology. Maximum apparent power of 550 kVA at +25°C ambient temperature. Optimum power output through highly efficient MPP tracker. Planned for connection to an external transformer.

IP 54-protected inverter enclosure (connection area in IP 43), for protection against aggressive ambient conditions in accordance with IEC 60721-3-4. Innovative air cooling concept OptiCool, standard DC input voltage range to 1000 V, system-integrated DC main distribution with up to nine inputs, motor-driven DC load-break switch, AC contactor and AC circuit breaker, overvoltage protection on DC side.

Connection for three-phase electricity supply for operation of the inverter.

Equipped as standard with SC-COM as central communication interface which manages the inverter data and ensures the connection to a PV park control. The inverter performs comprehensive grid management functions including:

### SC-500CP-10-BS (Basispreis):

- AC grid monitoring
- Active power reduction to external requirements
- Active power reduction in event of overfrequency P(f)
- Reactive power reduction to external requirements
- Reactive power provision depending on line voltage or the active power
- AID (Active Islanding Detection)
- FRT (Fault Ride Through) with
  - restricted, dynamic grid support (FRT partial)
- complete, dynamic grid support (FRT full)

All valid technical data of the inverter can be found in the separate datasheet.

### specific price 1)

#### Comments

1) Can differ depending on options.

### Options for SCxxxCP-10-BS

Valid from: as provided in contract

	0	0	0	1	0	х	хx	хx	2	2	6	0	0	0	0	
specific price 1)																
Communication						2										SC-COM + LWL
interface						3										SC-COM + RJ45
							DE									German
							EN									English
							ES									Spanish
							KR									Korean
Language:							IT									Italian
Language:							FR									French
							CN									Chinese
							GR									Greek
							RO									Romanian
							TR									Turkish
								DE								Germany
								EN								England
								ES								Spain
								KR								Korea
								IT								Italy
								FR								France
								CN								China
								GR								Greece
Country of								RO								Romania
destination:								IL								Israel
								TR								Turkey
								US								USA
								ZΑ								South Africa
								PL								Poland
								TH								Thailand
								IN								India
								5H				I				Standard 50 Hz
								6Н								Standard 60 Hz

### Comments

1) Can differ depending on options.



### Sunny Central 1000CP XT (SC-1000CP-10)

Valid from: as provided in contract

Self-commutated 1000 kVA PV inverter, suitable for outdoor use, with IGBT semi-conductors in proven B6 topology. Maximum apparent power of 1100 kVA at +25°C ambient temperature. Optimum power output through highly efficient MPP tracker. Planned for connection to an external transformer.

IP 54-protected inverter enclosure (connection area in IP 43), for protection against aggressive ambient conditions in accordance with IEC 60721-3-4. Innovative air cooling concept OptiCool, standard DC input voltage range to 1000 V, system-integrated DC main distribution with up to eight inputs, motor-driven DC load-break switch, AC contactor and AC circuit breaker, overvoltage protection on DC side.

Connection for three-phase electricity supply for operation of the inverter.

Equipped as standard with SC-COM as central communication interface which manages the inverter data and ensures the connection to a PV park control. The inverter performs comprehensive grid management functions including:

### SC-1000CP-10 (price before options):

- AC grid monitoring
- Active power reduction to external requirements
- Active power reduction in event of overfrequency P(f)
- Reactive power reduction to external requirements
- Reactive power provision depending on line voltage or the active power
- AID (Active Islanding Detection)
- FRT (Fault Ride Through) with
  - restricted, dynamic grid support (FRT partial)
  - complete, dynamic grid support (FRT full)

All valid technical data of the inverter can be found in the separate datasheet.



### Options for SC-1000CP-10

Valid from: as provided in contract

Valid from: as provided i											_					
	x	х	x	х	0	x	xx	хx	x	х -	х	x	х	×		
specific price 1)																
	0														uses on	poles
	1														:	lus, isolating blades in minus
DC connection:															uses iii þ	ios, isolaling blades in minos
	2														uses in n	ninus, isolating blades in plus
		0													Vithout	
		3													15 A (7	per pole)
DC fuses:		4													00 A (6	per pole)
DC ruses:		7													15 A (8	pcs. per pole)
		8													8) A 00	pcs. per pole)
		9													00 A (7	pcs. per pole)
			0												Vithout	
			1												FDI min	us grounding
Grounding:			2												emote G	FDI minus grounding
			3												FDI plus	grounding
			4													FDI plus grounding
				0											one	
Insulation monitoring:				1											es	
·				2											es, with	grounding
						2									C-COM	
Communication						3									C-COM	
interface						6										
						-									с-сом	+ Optical fibre + RJ45+ Managed Switch
·		Т				П	DE	DE			г					Germany
							EN								nglish/E	
							ES								panish/	
							KR								orean/k	
							IT	IT							alian/Ita	
							FR	- 1							rench/Fr	
							GR								Freek/G	
Language:/Country							RO	- 1								n/Romania
of destination:								TR							urkish/Ti	
or desimation.							IK	IL							rael	nkey
							-	US							JSA	
								PL							oland	
								TH							hailand	
								- 1							ndia	
								IN								50.11
								5H							tandard tandard	
AC switch:		H				Н		6H	2		Н		H		ircuit br	
AC SWITCH:		H		$\vdash$		Н		-		_	Н		$\vdash$			EUNEI
Carin a accuracy				l				Į		0					one	
String current										1					es, 2 hul	
monitoring:										2					es, 3 hul	
		⊢				Н		-		9	Н				one Mo	niforing
Cabinet layout:											0				tandard	e a li e
Additional functions:		H				H		4		+	2	0			or station	n installation
						Н		7			Н		0		25°C	
Temperature range:								I					1		40°C	
								T					Г	0	0	
Q at Night				l				Į						1	es	
-		-		•							-		•		-	

### Comments

1) Can differ depending on options.

### Sunny Central 900CP XT (SC-900CP-10)

Valid from: as provided in contract

Self-commutated 900 kVA PV inverter, suitable for outdoor use, with IGBT semi-conductors in proven B6 topology. Maximum apparent power of 990 kVA at +25°C ambient temperature. Optimum power output through highly efficient MPP tracker. Planned for connection to an external transformer.

IP 54-protected inverter enclosure (connection area in IP 43), for protection against aggressive ambient conditions in accordance with IEC 60721-3-4. Innovative air cooling concept OptiCool, standard DC input voltage range to 1000 V, system-integrated DC main distribution with up to nine inputs, motor-driven DC load-break switch, AC contactor and AC circuit breaker, overvoltage protection on DC side.

Connection for three-phase electricity supply for operation of the inverter.

Equipped as standard with SC-COM as central communication interface which manages the inverter data and ensures the connection to a PV park control. The inverter performs comprehensive grid management functions including:

### SC-900CP-10 (price before options):

- AC grid monitoring
- Active power reduction to external requirements
- Active power reduction in event of overfrequency P(f)
- Reactive power reduction to external requirements
- Reactive power provision depending on line voltage or the active power
- AID (Active Islanding Detection)
- FRT (Fault Ride Through) with
  - restricted, dynamic grid support (FRT partial)
  - complete, dynamic grid support (FRT full)

All valid technical data of the inverter can be found in the separate datasheet. Reduced inverter output power at altitudes above 2000 meters.

specific price 1)

### Sunny Central 850CP XT (SC-850CP-10)

Valid from: as provided in contract

Self-commutated 850 kVA PV inverter, suitable for outdoor use, with IGBT semi-conductors in proven B6 topology. Maximum apparent power of 935 kVA at +25°C ambient temperature. Optimum power output through highly efficient MPP tracker. Planned for connection to an external transformer.

IP 54-protected inverter enclosure (connection area in IP 43), for protection against aggressive ambient conditions in accordance with IEC 60721-3-4. Innovative air cooling concept OptiCool, standard DC input voltage range to 1000 V, system-integrated DC main distribution with up to nine inputs, motor-driven DC load-break switch, AC contactor and AC circuit breaker, overvoltage protection on DC side.

Connection for three-phase electricity supply for operation of the inverter.

Equipped as standard with SC-COM as central communication interface which manages the inverter data and ensures the connection to a PV park control. The inverter performs comprehensive grid management functions including:

#### SC-850CP-10 (price before options):

- AC grid monitoring
- Active power reduction to external requirements
- Active power reduction in event of overfrequency P(f)
- Reactive power reduction to external requirements
- Reactive power provision depending on line voltage or the active power
- AID (Active Islanding Detection)
- FRT (Fault Ride Through) with
  - restricted, dynamic grid support (FRT partial)
- complete, dynamic grid support (FRT full)

All valid technical data of the inverter can be found in the separate datasheet. Reduced inverter output power at altitudes above 2000 meters.

### Sunny Central 800CP XT (SC-800CP-10)

Valid from: as provided in contract

Self-commutated 800 kVA PV inverter, suitable for outdoor use, with IGBT semi-conductors in proven B6 topology. Maximum apparent power of 880 kVA at +25°C ambient temperature. Optimum power output through highly efficient MPP tracker. Planned for connection to an external transformer.

IP 54-protected inverter enclosure (connection area in IP 43), for protection against aggressive ambient conditions in accordance with IEC 60721-3-4. Innovative air cooling concept OptiCool, standard DC input voltage range to 1000 V, system-integrated DC main distribution with up to nine inputs, motor-driven DC load-break switch, AC contactor and AC circuit breaker, overvoltage protection on DC side.

Connection for three-phase electricity supply for operation of the inverter.

Equipped as standard with SC-COM as central communication interface which manages the inverter data and ensures the connection to a PV park control. The inverter performs comprehensive grid management functions including:

### SC-800CP-10 (price before options):

- AC grid monitoring
- Active power reduction to external requirements
- Active power reduction in event of overfrequency P(f)
- Reactive power reduction to external requirements
- Reactive power provision depending on line voltage or the active power
- AID (Active Islanding Detection)
- FRT (Fault Ride Through) with
  - restricted, dynamic grid support (FRT partial)
  - complete, dynamic grid support (FRT full)

All valid technical data of the inverter can be found in the separate datasheet. Reduced inverter output power at altitudes above 2000 meters.

specific price 1)

### Sunny Central 760CP XT (SC-760CP-10)

Valid from: as provided in contract

Self-commutated 760 kVA PV inverter, suitable for outdoor use, with IGBT semi-conductors in proven B6 topology. Maximum apparent power of 836 kVA at +25°C ambient temperature. Optimum power output through highly efficient MPP tracker. Planned for connection to an external transformer.

IP 54-protected inverter enclosure (connection area in IP 43), for protection against aggressive ambient conditions in accordance with IEC 60721-3-4. Innovative air cooling concept OptiCool, standard DC input voltage range to 1000 V, system-integrated DC main distribution with up to nine inputs, motor-driven DC load-break switch, AC contactor and AC circuit breaker, overvoltage protection on DC side.

Connection for three-phase electricity supply for operation of the inverter.

Equipped as standard with SC-COM as central communication interface which manages the inverter data and ensures the connection to a PV park control. The inverter performs comprehensive grid management functions including:

#### SC-760CP-10 (price before options):

- AC grid monitoring
- Active power reduction to external requirements
- Active power reduction in event of overfrequency P(f)
- Reactive power reduction to external requirements
- Reactive power provision depending on line voltage or the active power
- AID (Active Islanding Detection)
- FRT (Fault Ride Through) with
  - restricted, dynamic grid support (FRT partial)
- complete, dynamic grid support (FRT full)

All valid technical data of the inverter can be found in the separate datasheet. Reduced inverter output power at altitudes above 2000 meters.

### Sunny Central 720CP XT (SC-720CP-10)

Valid from: as provided in contract

Self-commutated 720 kVA PV inverter, suitable for outdoor use, with IGBT semi-conductors in proven B6 topology. Maximum apparent power of 792 kVA at +25°C ambient temperature. Optimum power output through highly efficient MPP tracker. Planned for connection to an external transformer.

IP 54-protected inverter enclosure (connection area in IP 43), for protection against aggressive ambient conditions in accordance with IEC 60721-3-4. Innovative air cooling concept OptiCool, standard DC input voltage range to 1000 V, system-integrated DC main distribution with up to nine inputs, motor-driven DC load-break switch, AC contactor and AC circuit breaker, overvoltage protection on DC side.

Connection for three-phase electricity supply for operation of the inverter.

Equipped as standard with SC-COM as central communication interface which manages the inverter data and ensures the connection to a PV park control. The inverter performs comprehensive grid management functions including:

### SC-720CP-10 (price before options):

- AC grid monitoring
- Active power reduction to external requirements
- Active power reduction in event of overfrequency P(f)
- Reactive power reduction to external requirements
- Reactive power provision depending on line voltage or the active power
- AID (Active Islanding Detection)
- FRT (Fault Ride Through) with
  - restricted, dynamic grid support (FRT partial)
  - complete, dynamic grid support (FRT full)

All valid technical data of the inverter can be found in the separate datasheet. Reduced inverter output power at altitudes above 2000 meters.

specific price 1)

### Sunny Central 630CP XT (SC-630CP-10)

Valid from: as provided in contract

Self-commutated 630 kVA PV inverter, suitable for outdoor use, with IGBT semi-conductors in proven B6 topology. Maximum apparent power of 700 kVA at +25°C ambient temperature. Optimum power output through highly efficient MPP tracker. Planned for connection to an external transformer.

IP 54-protected inverter enclosure (connection area in IP 43), for protection against aggressive ambient conditions in accordance with IEC 60721-3-4. Innovative air cooling concept OptiCool, standard DC input voltage range to 1000 V, system-integrated DC main distribution with up to nine inputs, motor-driven DC load-break switch, AC contactor and AC circuit breaker, overvoltage protection on DC side.

Connection for three-phase electricity supply for operation of the inverter.

Equipped as standard with SC-COM as central communication interface which manages the inverter data and ensures the connection to a PV park control. The inverter performs comprehensive grid management functions including:

#### SC-630CP-10 (price before options):

- AC grid monitoring
- Active power reduction to external requirements
- Active power reduction in event of overfrequency P(f)
- Reactive power reduction to external requirements
- Reactive power provision depending on line voltage or the active power
- AID (Active Islanding Detection)
- FRT (Fault Ride Through) with
  - restricted, dynamic grid support (FRT partial)
- complete, dynamic grid support (FRT full)

All valid technical data of the inverter can be found in the separate datasheet. Reduced inverter output power at altitudes above 2000 meters.



### Sunny Central 500CP XT (SC-500CP-10)

Valid from: as provided in contract

Self-commutated 500 kVA PV inverter, suitable for outdoor use, with IGBT semi-conductors in proven B6 topology. Maximum apparent power of 550 kVA at +25°C ambient temperature. Optimum power output through highly efficient MPP tracker. Planned for connection to an external transformer.

IP 54-protected inverter enclosure (connection area in IP 43), for protection against aggressive ambient conditions in accordance with IEC 60721-3-4. Innovative air cooling concept OptiCool, standard DC input voltage range to 1000 V, system-integrated DC main distribution with up to nine inputs, motor-driven DC load-break switch, AC contactor and AC circuit breaker, overvoltage protection on DC side.

Connection for three-phase electricity supply for operation of the inverter.

Equipped as standard with SC-COM as central communication interface which manages the inverter data and ensures the connection to a PV park control. The inverter performs comprehensive grid management functions including:

### SC-500CP-10 (price before options):

- AC grid monitoring
- Active power reduction to external requirements
- Active power reduction in event of overfrequency P(f)
- Reactive power reduction to external requirements
- Reactive power provision depending on line voltage or the active power
- AID (Active Islanding Detection)
- FRT (Fault Ride Through) with
  - restricted, dynamic grid support (FRT partial)
  - complete, dynamic grid support (FRT full)

All valid technical data of the inverter can be found in the separate datasheet. Reduced inverter output power at altitudes above 2000 meters.



### Options for SCxxxCP-10

Valid from: as provided in contract

Valid from: as provided														_		
.6	х	х	x	x	0	x	xx	хx	х	x	- 1	<b>(</b> )	х :	ĸ	x	
specific price 1)	0											+	+			Fuses on all poles
DC connection:	1															Fuses in all poles  Fuses in plus, isolating blades in minus
DC connection:	2															Fuses in minus, isolating blades in plus
	4															Bus bar
		1 2														Without 200 A (9 per pole) 250 A (9 per pole)
DC fuses:		3 4 5														315 A (7 per pole) 400 A (6 per pole) 125 A (9 pcs. per pole)
		6 7														160 A (9 pcs. per pole) 315 A (8 pcs. per pole)
		8 9														400 A (8 pcs. per pole) 400 A (7 pcs. per pole)
C			1													Without GFDI minus grounding
Grounding:			2													Remote GFDI minus grounding GFDI plus grounding
-			4													Remote GFDI plus grounding
Insulation monitoring:				1												none Yes
-	H			2		2				+		Ŧ		+		Yes, with grounding SC-COM + LWL
Communication interface						3 6										SC-COM + RJ45
																SC-COM + Optical fibre + RJ45+ Managed Switch
							DE FN	DE EN								German/Germany English/England
							ES									Spanish/Spain
							KR									Korean/Korea
							IT									Italian/Italy
							FR CN	FR CN								French/France Chinese/China
								GR								Greek/Greece
Language:/Country								RO								Romanian/Romania
of destination:							TR	TR								Turkish/Turkey
							-	IL								Israel
								US								USA Contact of the co
							-	ZA PL								South Africa Poland
								TH								Thailand
								IN								India
								5H								Standard 50 Hz
								6H	2	+		+		+		Standard 60 Hz Circuit breaker
AC switch:									3	_				4		Without
String current										0						none yes, 2 hubs
monitoring:										2						yes, 3 hubs
Cabinet layout:										y		2		1		Zone Monitoring Standard For station installation
Additional functions:											Í		0	Ī		ion sumministration none
Temperature range:												ľ	•	0		-25°C -40°C
Q at Night														1	0	no yes
										-				-		,

### Comments

1) Can differ depending on options.



### **Stations and Transformers**

### Transformer Compact Station for SC-CP-Inverter (TCS 1800SC-DE)

Valid from: as provided	in cor	ıtra	ct											· <del></del>
TCS 1800SC-DE (price before options):	6 [	DE	×	x	x	x	x	x	×	x	0	0	хх	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
Cabinet:			0											Concrete compact station Steel compact station
Voltage level:		T		0										20 kV
Medium voltage transformer:					1									Transformer with iron core
LV power switch:						0 1								Without With
Internal power supply:							0							Without With
Communit:								0						Without With
Medium voltage switchgear:									0					Without Ring connection (3-field)
Surrounding area:										0				Standard Protection against chemically active substances
Language:													DE	German English

#### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Germany (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

DE) Version for Germany

### Transformer Compact Station for SC-CP-Inverter (TCS 1600SC-DE)

Valid from: as provided	in c	ontr	act											
TCS 1600SC-DE (price before options):	5	DE	x	x	x	x	x	x	x	x	0	0	xx	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
Cabinet:		ı	0											Concrete compact station
<del></del>		Н	1	L				_						Steel compact station
Voltage level:		ш		0				<u> </u>						20 kV
Medium voltage transformer:					1									Transformer with iron core
LV power switch:						0								Without With
Internal power		Г		Г		Г	0							Without
supply:		ı					1							With
		Г		Г		Г		0						Without
Communit:								1						With
Medium voltage		Г		Г		Г			0					Without
switchgear:									2					Ring connection (3-field)
										0				Standard
Surrounding area:		L		L						1				Protection against chemically active substances
Language:		Ι		Ι		Ι							DE	German
Language.		L				L							EN	English
·														

#### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Germany (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

DE) Version for Germany

### Transformer Compact Station for SC-CP-Inverter (TCS 1250SC-DE)

Valid from: as provided	in c	ontr	act											
TCS 1250SC-DE (price before options):	4	DE	x	x	x	x	x	x	x	x	0	0	xx	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
Cabinet:		ı	0											Concrete compact station
<del></del>		Н	1	L				_						Steel compact station
Voltage level:		ш		0				<u> </u>						20 kV
Medium voltage transformer:					1									Transformer with iron core
LV power switch:						0								Without With
Internal power		Г		Г		Г	0							Without
supply:							1							With
Communit:								0						Without
Communit:								1						With
Medium voltage									0					Without
switchgear:									2					Ring connection (3-field)
Surrounding area:										0				Standard
Juli Juli Guillang area:										1				Protection against chemically active substances
Language:		l				Ι							DE	German
Lunguage.													EN	English

#### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Germany (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

DE) Version for Germany

### Transformer Compact Station for SC-CP-Inverter (TCS 1000SC-DE)

Valid from: as provided	in c	ontr	act											
TCS 1000SC-DE (price before options):	3	DE	: x	x	x	x	×	x	x	x	0	0	xx	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
Cabinet:			0											Concrete compact station Steel compact station
Voltage level:				0										20 kV
Medium voltage transformer:					1									Transformer with iron core
LV power switch:						0								Without With
Internal power supply:							0							Without With
Communit:								0						Without With
Medium voltage switchgear:									0					Without Ring connection (3-field)
Surrounding area:										0 1				Standard Protection against chemically active substances
Language:														German English

#### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Germany (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

DE) Version for Germany

### Transformer Compact Station for SC-CP-Inverter (TCS 900SC-DE)

Valid from: as provided	l in c	ont	ract												
TCS 900SC-DE (price before options):	7	DI	E x	x		×	×	×	x	x	×	0	0	xx	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
Cabinet:			0												Concrete compact station Steel compact station
Voltage level:		Г		c	,	T	1				1				20 kV
Medium voltage transformer:					1	1					İ				Transformer with iron core
LV power switch:							0								Without With
Internal power supply:								0							Without With
Communit:									0						Without With
Medium voltage switchgear:										0					Without Ring connection (3-field)
Surrounding area:											0 1				Standard Protection against chemically active substances
Language:													- 1		German English

#### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Germany (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

DE) Version for Germany

### Transformer Compact Station for SC-CP-Inverter (TCS 800SC-DE)

Valid from: as provided	in c	ontr	act												
TCS 800SC-DE (price before options):	2	DE	x	x	×	c	x	×	ĸ :	×	×	0	0	хх	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
Cabinet:			0								١				Concrete compact station Steel compact station
Voltage level:				0							T				20 kV
Medium voltage transformer:					1	1									Transformer with iron core
LV power switch:							0								Without With
Internal power supply:								0			1				Without With
Communit:									1						Without With
Medium voltage switchgear:										0 2	İ				Without Ring connection (3-field)
Surrounding area:											0 1				Standard Protection against chemically active substances
Language:															German English

#### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Germany (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

DE) Version for Germany

### Transformer Compact Station for SC-CP-Inverter (TCS 630SC-DE)

Valid from: as provided	in c	ontr	act											
TCS 630SC-DE (price before options):		DE		x	х	×	: xx	3	к ж	×	0	o	xx	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
								T		T				
Cabinet:			0											Concrete compact station Steel compact station
Voltage level:				0		Г		Т						20 kV
Medium voltage transformer:					1									Transformer with iron core
LV power switch:						0								Without With
Internal power supply:							0							Without With
Communit:									)					Without With
Medium voltage switchgear:									0					Without Ring connection (3-field)
Surrounding area:										0				Standard Protection against chemically active substances
Language:														German English

#### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Germany (not including islands).

CIP INCOTERMS® 2010

 $\label{proposed parameters can vary.} Depending on country-specific requirements the price and technical parameters can vary.$ 

DE) Version for Germany

### Transformer Compact Station for SC-CP-Inverter (TCS 500SC-DE)

Valid from: as provided	in co	ontr	act											
TCS 500SC-DE (price before options):	0	DE	x	x	x	x	×	x	x	x	0	0	хх	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
Cabinet:			0											Concrete compact station Steel compact station
Voltage level:				0		Г								20 kV
Medium voltage transformer:					1									Transformer with iron core
LV power switch:						0								Without With
Internal power supply:							0							Without With
Communit:								0						Without With
Medium voltage switchgear:									0					Without Ring connection (3-field)
Surrounding area:										0				Standard Protection against chemically active substances
Language:														German English

#### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Germany (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

DE) Version for Germany

### Transformer Compact Station for SC-CP-Inverter (TCS 1800SC-BG)

Valid from: as provided	in c	ontr	act										
TCS 1800SC-BG (price before options):	6	BG	x	x	x	x	×	×	×	×	0	0 ж	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
Cabinet:			0			Ш							Concrete compact station
Voltage level:				0		Ш							20 kV
Medium voltage					1	ш		- 1					Transformer with iron core
transformer:					'	ш		- 1					Transformer with Iron core
n/ 5.1						0							Without
LV power switch:						1		- 1					With
Internal power						П	0						Without
supply:						Ш	1	- 1					With
•						П		0		-		-	Without
Communit:						Ш		ı					With
Medium voltage		т				Н		_	0	1			Without
switchgear:								- 11	2				Ring connection (3-field)
		Н		H		Н		1	_	0			Standard
Surrounding area:						Ш				ĭ			Protection against chemically active substances
		Н		H		Н		-1		-		F	N English
Language:													G Bulgarian
				<u> </u>								ь	≈ poiguriar

### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Bulgaria (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

BG) Version for Bulgaria

### Transformer Compact Station for SC-CP-Inverter (TCS 1600SC-BG)

Valid from: as provided	in c	ontr	act											
TCS 1600SC-BG (price before options):	5	BG	×	×	x	×	x	x	×	x	0	0	xx	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
Cabinet:			0											Concrete compact station
Voltage level:				0										20 kV
Medium voltage transformer:					1									Transformer with iron core
LV power switch:						0								Without With
Internal power supply:							0							Without With
Communit:								0						Without With
Medium voltage switchgear:									0 2					Without Ring connection (3-field)
Surrounding area:										0				Standard Protection against chemically active substances
Language:														English Bulgarian

### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Bulgaria (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

BG) Version for Bulgaria

### Transformer Compact Station for SC-CP-Inverter (TCS 1250SC-BG)

Valid from: as provided	in c	ontr	act											
TCS 1250SC-BG (price before options):	4	BG	×	x	×		x x	x x	x	x	0	0	xx	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
Cabinet:		_	0	_										Concrete compact station
Voltage level:				0										20 kV
Medium voltage					1									Transformer with iron core
transformer:					•									Irdisionnel with fron core
11/ 2-1				Г		ľ	0							Without
LV power switch:						ı	1							With
Internal power		Г		Г			C	)		П				Without
supply:							1							With
	T	Г		r				0	T	П				Without
Communit:								l,						With
Medium voltage	т	Н		H			+	H	0	Н				Without
switchgear:									2					Ring connection (3-field)
	۰			H					Ť	0		$\vdash$		Standard
Surrounding area:										ľ		l		Protection against chemically active substances
-	H	Н		H					+	Ľ		$\vdash$	ENI	English
Language:														
													ьG	Bulgarian

### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Bulgaria (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

BG) Version for Bulgaria

### Transformer Compact Station for SC-CP-Inverter (TCS 1000SC-BG)

Valid from: as provided	in c	ontr	act											
TCS 1000SC-BG (price before options):	3	BG	×	×	x	×	×	×	×	x	0	o	xx	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
Cabinet:			0	_										Concrete compact station
Voltage level:				0										20 kV
Medium voltage transformer:					1									Transformer with iron core
LV power switch:						0								Without With
Internal power supply:							0							Without With
Communit:				r		l	ľ	0						Without With
Medium voltage switchgear:				Ī					0 2					Without Ring connection (3-field)
Surrounding area:										0				Standard Protection against chemically active substances
Language:														English Bulgarian

### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Bulgaria (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

BG) Version for Bulgaria

### Transformer Compact Station for SC-CP-Inverter (TCS 900SC-BG)

Valid from: as provided	in c	ontr	act											
TCS 900SC-BG (price before options):	7	BG	×	x	×	:: 2	x x	x x	x	x	0	0	xx	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
Cabinet:		ш	0	_		L				L				Concrete compact station
Voltage level:				0										20 kV
Medium voltage					1									Transformer with iron core
transformer:					•									Irdisionnel with fron core
11/ 11				Г		(	0							Without
LV power switch:						ŀ	1							With
Internal power		Г		Г			C	)		Г				Without
supply:							1							With
		П		Г		Ť		0		Г		Г		Without
Communit:								1				l		With
Medium voltage				Н		т			0					Without
switchgear:									2					Ring connection (3-field)
		Н		Н		۰	+	т	Ť	0				Standard
Surrounding area:										ľ				Protection against chemically active substances
		Н		۲		۲				Ė			FN	English
Language:														Bulgarian
-													טפ	buganan

### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Bulgaria (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

BG) Version for Bulgaria

### Transformer Compact Station for SC-CP-Inverter (TCS 800SC-BG)

Valid from: as provided	in c	ont	ract												
TCS 800SC-BG (price before options):	2	ВС	e x	د	ĸ	×	x	x	x	x	x	0	0	хх	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
		T													
Cabinet:			0												Concrete compact station
Voltage level:				0	0										20 kV
Medium voltage transformer:						1									Transformer with iron core
LV power switch:							0								Without With
Internal power supply:								0							Without With
Communit:									0						Without With
Medium voltage switchgear:										0					Without Ring connection (3-field)
Surrounding area:											0				Standard Protection against chemically active substances
Language:														EN	English Bulgarian

### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Bulgaria (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

BG) Version for Bulgaria

### Transformer Compact Station for SC-CP-Inverter (TCS 630SC-BG)

Valid from: as provided	in c	ontr	act											
TCS 630SC-BG (price before options):	1	BG	×	x	x	x	x	x	x	x	0	0	хх	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
Cabinet:		L	0	_				L		L				Concrete compact station
Voltage level:				0										20 kV
Medium voltage					١,									Transformer with iron core
transformer:					Ľ									Irdisionnel with fron core
IV 2.1				Г		0								Without
LV power switch:						1								With
Internal power		Г		Г		г	0	Г		Г				Without
supply:							1							With
	Т	Г		Г	T	Г		0		Г				Without
Communit:								1						With
Medium voltage	Н			Н		Н		Н	0	Н				Without
switchgear:									2					Ring connection (3-field)
	t	Н		Н	t	Н		Н	Ť	0				Standard
Surrounding area:										ľ				Protection against chemically active substances
	Н	Н		۲	Н	Н		Н		Ė				English
Language:														Bulgarian
-													ы	buganan

### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Bulgaria (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

BG) Version for Bulgaria

### Transformer Compact Station for SC-CP-Inverter (TCS 500SC-BG)

Valid from: as provided	in c	ontr	act											
TCS 500SC-BG (price before options):	0	BG	×	x	x	x	×	x	x	x	0	0		The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
Cabinet:			0	L								_		Concrete compact station
Voltage level:				0								_		20 kV
Medium voltage					1									Transformer with iron core
transformer:					•									Italistomer with from core
IV 2.1						0								Without
LV power switch:						1								With
Internal power		Г		Г			0					ヿ		Without
supply:							1					I		With
		П		Г		П		0		П		_		Without
Communit:								1				ı		With
Medium voltage		Н		H		Н			0			<b>-</b> †		Without
switchgear:									2					Ring connection (3-field)
		Н		H		Н			f	0		$\dashv$		Standard
Surrounding area:										ľ		ı		Protection against chemically active substances
		Н		H		Н				H		ᅥ		English
Language:														Bulgarian
-													50	buganan

### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Bulgaria (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

BG) Version for Bulgaria

### Transformer Compact Station for SC-CP-Inverter (TCS 1800SC-RO)

Valid from: as provided	in c	ontr	act												
TCS 1800SC-RO (price before options):	6	RC	) x	×	×	K	x	x :	ĸ :	×	×	0	0	xx	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
Cabinet:			0	L							_				Concrete compact station
Voltage level:				0											20 kV
Medium voltage transformer:					1	ı									Transformer with iron core
LV power switch:							0								Without With
Internal power supply:								0							Without With
Communit:							ı	•							Without With
Medium voltage switchgear:										0	İ				Without Ring connection (3-field)
Surrounding area:											0 1				Standard Protection against chemically active substances
Language:															English Romanian

### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Romania (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

RO) Version for Romania

### Transformer Compact Station for SC-CP-Inverter (TCS 1600SC-RO)

Valid from: as provided	in c	ontr	act										
TCS 1600SC-RO (price before options):	5	RO	x	x	x	x	×	x	x	x	0	0	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
Cabinet:			0	L		Ш				_			Concrete compact station
Voltage level:				0		Ш				_			20 kV
Medium voltage					1								Transformer with iron core
transformer:													nuisioniei win non core
1V						0							Without
LV power switch:						1							With
Internal power						П	0						Without
supply:						H	1						With
·		Г				П		0					Without
Communit:						H		1					With
Medium voltage		Т		T		П			0	$\neg$			Without
switchgear:						П			2				Ring connection (3-field)
-		H		H		H				0			Standard Standard
Surrounding area:						H				1			Protection against chemically active substances
		H		H		H				T			English
Language:						П							Romanian
-		_		_									 romanan

### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Romania (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

RO) Version for Romania

### Transformer Compact Station for SC-CP-Inverter (TCS 1250SC-RO)

Valid from: as provided	in c	ontr	act										
TCS 1250SC-RO (price before options):	4	RO	x	x	x	x	×	x	×	×	0	0	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
Cabinet:			0	L		Ш				_		_	Concrete compact station
Voltage level:				0		Ш							20 kV
Medium voltage					1	ш						- 1	Transformer with iron core
transformer:													Turisionner with non-core
1V						0							Without
LV power switch:						1						- 1	With
Internal power						П	0	T					Without
supply:						H	1			ı			With
·						П		0		T		1	Without
Communit:						Ш		1				- 1	With
Medium voltage		г		T		H		┪	0	T		1	Without
switchgear:						Ш		1	2			- 1	Ring connection (3-field)
-				H		H		7	_	0		-	Standard
Surrounding area:						Ш				1			Protection against chemically active substances
				H		H		7		_		-1	English
Language:						Ш		1					Romanian
-		_		_		ш				_			Nomen and the second

### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Romania (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

RO) Version for Romania

### Transformer Compact Station for SC-CP-Inverter (TCS 1000SC-RO)

Valid from: as provided	in c	ontr	act											
TCS 1000SC-RO (price before options):	3	RC	) х	×	к х	×	x	×	<b>x</b> :	× >	c 0	0	xx	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
Cabinet:		_	0	-										Concrete compact station
Voltage level:				0										20 kV
Medium voltage					1	,								Transformer with iron core
transformer:					ľ	•								Ironsionner with fron core
11/ 2-1				Г			0							Without
LV power switch:							1							With
Internal power		Г		Г				0				Т		Without
supply:								1						With
	T	Г		r			1	1	,			Т		Without
Communit:									Ш					With
Medium voltage	t	Н		Н		Ť	+		_	)		т		Without
switchgear:										2				Ring connection (3-field)
	Н	Н		۲		+	+		Ť		,	1		Standard
Surrounding area:										ı,				Protection against chemically active substances
	٠	Н		Н	+	+	+		٠			۰	FN	English
Language:														Romanian
													ĸC	Kollidilali

### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Romania (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

RO) Version for Romania

### Transformer Compact Station for SC-CP-Inverter (TCS 900SC-RO)

Valid from: as provided	in c	ontr	act											
TCS 900SC-RO (price before options):	7	RC	) х	×	×		x x	x x	×	x	0	0	хх	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
Cabinet:		ш	0	-										Concrete compact station
Voltage level:				0										20 kV
Medium voltage					١,									Transformer with iron core
transformer:					Ľ									Irdisioniler with fron core
IV 2.1				Г		Ī	0							Without
LV power switch:						ı	1							With
Internal power		Г		Г			C	)		П				Without
supply:							1							With
		П		r				0		П				Without
Communit:								1						With
Medium voltage				Н					0					Without
switchgear:									2					Ring connection (3-field)
		Н		Н	t		+	т	Ť	0				Standard
Surrounding area:										ľ				Protection against chemically active substances
		Н		۲	t					Ė				English
Language:														Romanian
-													ĸ0	KOMUNIUM

### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Romania (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

RO) Version for Romania

### Transformer Compact Station for SC-CP-Inverter (TCS 800SC-RO)

Valid from: as provided in contract														
TCS 800SC-RO (price before options):	2	RC	) x	×	· >	×	x	×	x :	× :	× (	0	XX	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
Cabinet:			0	-										Concrete compact station
Voltage level:				0										20 kV
Medium voltage					1	,								Transformer with iron core
transformer:						•								Italisionel with iron core
11/ 11				Г			0							Without
LV power switch:							1							With
Internal power				Г				0						Without
supply:								1						With
		г		r			1		0					Without
Communit:									ı					With
Medium voltage				Н						0	T			Without
switchgear:										2				Ring connection (3-field)
		Н	+	Н			-		-		,	Н	t	Standard Standard
Surrounding area:														Protection against chemically active substances
		Н		۲									FN	English
Language:														Romanian
-													~ (	Kollidilali

### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Romania (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

RO) Version for Romania

### Transformer Compact Station for SC-CP-Inverter (TCS 630SC-RO)

Valid from: as provided in contract															
TCS 630SC-RO (price before options):	1	RC	) x	×	×		×	x	×	×	×	0	0	xx	The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.
Cabinet:			0	_					_						Concrete compact station
Voltage level:				0											20 kV
Medium voltage transformer:					1	ı									Transformer with iron core
LV power switch:							0								Without With
Internal power supply:								0							Without With
Communit:									0 1						Without With
Medium voltage switchgear:									- 11	0					Without Ring connection (3-field)
Surrounding area:											0				Standard Protection against chemically active substances
Language:															English Romanian

### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Romania (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

RO) Version for Romania

### Transformer Compact Station for SC-CP-Inverter (TCS 500SC-RO)

Valid from: as provided	in c	Valid from: as provided in contract													
TCS 500SC-RO (price before options):	0	RO	×	x	×	x	x	x	x	×	0	0		The compact station comes with an oil-hermetic transformer for 20 kV is permitted for ambient temperatures from - 20°C to +40°C.	
Cabinet:		L	0	L										Concrete compact station	
Voltage level:				0										20 kV	
Medium voltage					1									Transformer with iron core	
transformer:					Ľ.									nuisioniei win non core	
11/2 2: 1						0								Without	
LV power switch:						1								With	
Internal power							0							Without	
supply:							1	l						With	
·								0						Without	
Communit:								1						With	
Medium voltage		T		T		Н		H	0					Without	
switchgear:									2					Ring connection (3-field)	
-				H		Н				0				Standard Standard	
Surrounding area:										1				Protection against chemically active substances	
				H		Н								English	
Language:														Romanian	
		_		_				_		_				Kondilan	

### Comments

Incl. transport, transport insurance and off-loading in the excavation prepared customer-side. The customer guarantees unlimited access to the off-loading site.

Prices valid for delivery within Romania (not including islands).

CIP INCOTERMS® 2010

Depending on country-specific requirements the price and technical parameters can vary.

RO) Version for Romania



### **Sunny Central Accessories**



### SC-XXX-CP-KIT-SMB The SMB connection kit is part of the accessories to connect the Sunny Main Box to the following inverters:

SC 900CP-10 SC 850CP-10 SC 800CP-10 SC 760CP-10 SC 720CP-10 SC 630CP-10 SC 500CP-10

The busbar enables the connection of up to 4 DC cables.

### **65-1519910011** Concrete base for inverters (Country AU):

SC 900CP-10 SC 850CP-10 SC 800CP-10 SC 760CP-10 SC 720CP-10 SC 630CP-10 SC 500CP-10

### **65-1519910013** Concrete base for inverters (Country Europe):

SC 900CP-10 SC 850CP-10 SC 800CP-10 SC 760CP-10 SC 720CP-10 SC 630CP-10 SC 500CP-10

41-5326	Cable set 5 m for TCS-SC 3 x 3 x 1 x 240mm <sup>2</sup>
41-5327	Cable set 7,5 m for TCS-SC 3 x 3 x 1 x 240mm <sup>2</sup>
41-5328	Cable set 10 m for TCS-SC 3 x 3 x 1 x 240mm²
41-5329	Cable set 15 m for TCS-SC 3 x 3 x 1 x 240mm <sup>2</sup>
95-7319	Cable set 10 m for TCS-SC (Country AU)
95-7320	Cable set 15 m for TCS-SC (Country AU)
41-5336	5-meter cable set for TCS-SC 4 x 3 x 1 x 240mm²
41-5337	7.5-meter cable set for TCS-SC 4 x 3 x 1 x $240$ mm $^2$
41-5338	10-meter cable set for TCS-SC 4 x 3 x 1 x 240mm $^2$
41-5339	15-meter cable set for TCS-SC 4 x 3 x 1 x 240mm²





**Central Inverter Stations** 



#### MV Power Station 2000 SC (MVPS-2000-SC-21)

Valid from: as provided	in contract
MVPS-2000-SC-21 (price before options):	20 Feet container, completely prepared for the integration of central inverters SC-CP-XT, MV-transformer, MV-switchgear, LV- and communication components

#### MV Power Station 2000 SC (MVPS-2000-SC-21)



Valid from: as provided i						_																
	х	x	х	x	х	x	x	x	х	x	x	x	x	х	x	x	x	x	×	۲	x	
Voltage level:	0 1 2 3 4 5 6 7 8 9 A B C																					6,6 kV 10 kV 11 kV 12 kV 12,5 kV 13,2 kV 13,8 kV 15 kV 20 kV 22 kV 23 kV 30 kV 33, kV
Power frequency:	Е	0														r		ı		Ī		35 kV 50 Hz 60 Hz
Transformer vector		Ė	1			Н										H		H				Dy11y11
group:			3	Ļ		L										L						YNd11d11
Transformer Oil:				0	0	H										H		H				Mineral oil Without
Oil containment:					1	L								L		L		L				With
Medium voltage switchgear:						0 1 2 3 4 5																Without 3 feeder with fuses 24 kV 3 feeder with circuit breaker 24 kV 3 feeder with fuses 36 kV 3 feeder with circuit breaker 36 kV 3 feeder with circuit breaker 40.5 kV
Accessories:							0															Without Cascade Control
SCAS-Transformer:							J	0 1 2 3 4														Without 6 kVA 10 kVA 20 kVA 30 kVA
LV meter:									0 1 2 3													Without For SC For SCAS For SC und SCAS
UPS:										0	0					H		-				Without For Sc room
Working platforms/Canopies:											1											Both rooms and sea worthy packaging
Mounting Communit:												0						ı				Without Without (standard)
Mounting SC Storage:													0 1 2									Without With mounting SCS With mounting SCS + FSC
Ambient temperature:														0								-25°C to +40°C -25°C to +50°C/55°C with Derating
Installation altitude:															0 1 2							0 - 1000m 1000 - 2000m 2000 - 3000m
Environmental class:																0 1 3						Standard chemically active, e.g. near cost chemically active and desert
Additional equipment:																Ť	1					Without Earth quake and storm qualification
Grid protection:																l		0				Standard See worthy packaging
Country package:																				0 1 2		Standard Italy Australia
Language:																					DE EN ES FR	German English Spanish French Italian

SMA Solar	Technology AG
	SMA

#### MV Power Station 1800 SC (MVPS-1800-SC-21)

MVPS-1800-SC-21 (price before options):  20 Feet container, completely prepared for the integration of central inverters SC-CP-XT, MV-transformer, MV-switchgear, LV- and communication components
--

#### MV Power Station 1800 SC (MVPS-1800-SC-21)

SMA

Valid from: as provided in contract

Valid from: as provided i	n c					I		1		1				l		ı		l			T
	×	×	x	x	x	x	х	x	x	x	x	x	x	x	x	x	x	x	х	x	
	0	Г		Г		Г								Г		Г		Г			6,6 kV
	1																				10 kV
	2																				11 kV
	3																				12 kV
	5																				12,5 kV 13,2 kV
Voltage level:	6																				13,8 kV
vollage level.	7																				15 kV
	8																				20 kV
	9																				22 kV
	Α																				23 kV
	В																				30 kV
	С																				33 kV
	D																				34,5 kV
	E	_		H		H										H		Н			35 kV
Power frequency:		0																			50 Hz 60 Hz
Transformer vector		Ľ	1	H		Н										Н		Н			Dyllyll
group:			3																		YNd11d11
		Н		0		Н										Н		Н			Mineral oil
Transformer Oil:				1																	Organic oil
Oil containment:		Г		Г	0	Г										Г		П			Without
Oil containment:		L		L	1	L								L		L		L			With
		Ī		٦		0								l							Without
						1															3 feeder with fuses 24 kV
Medium voltage						2															3 feeder with circuit breaker 24 kV
switchgear:						3															3 feeder with fuses 36 kV
						4 5															3 feeder with circuit breaker 36 kV
		Н		H		3	0									Н		Н			3 feeder with circuit breaker 40.5 kV Without
Accessories:							3														Cascade Control
-	H	Н		H		Н	_	0								Н		Н			Without
								1													6 kVA
SCAS-Transformer:								2													10 kVA
								3													20 kVA
								4													30 kVA
									0												Without
LV meter:									1												For SC
									2												For SCAS
UPS:		H		H		H			3	0						H		Н			For SC und SCAS Without
	H	H		H		H				Ů	0			_		H		Н			For Sc room
Working											1										Both rooms and sea worthy packaging
platforms/Canopies:																					pom rooms and soc wormy paskaging
		г		Г		П						0				П					Without
Mounting Communit:												1									With
													0								Without
Mounting SC Storage:													1								With mounting SCS
		Ш				ш							2			ш					With mounting SCS + FSC
Ambient														0							-25°C to +40°C
temperature:														1							-25°C to +50°C/ 55°C with Derating
		۲		H		۲		Н		Н		-		$\vdash$	0			Н		-	0 - 1000m
Installation altitude:		ı				ı					الا			l	1						1000 - 2000m
misiananon annoae.															2						2000 - 3000m
		Н		Н		Н									_	0		Н			Standard
Environmental class:		ı				ı					الا			l		1					chemically active, e.g. near cost
		L		L		L						L		L		3		L		L	chemically active and desert
Additional		Γ				Γ										Γ	0				Without
equipment:		L		L		L										L	1	_			Earth quake and storm qualification
Grid protection:																		0			Standard
p		L		L		L		Ш		Ш				L		L		1			See worthy packaging
<b>.</b>		ı				ı					الا			l		ı			0		Standard
Country package:																			1 2		Italy Australia
		Н		H		۲		H		H		$\vdash$		$\vdash$		Н		Н			Australia German
		ı				ı					الا			l		ı					English
Language:																					Spanish
		1																			French
		1																		IT	Italian
		_	_			-		_		_						-		•		•	1

#### Comments



#### MV Power Station 1600 SC (MVPS-1600-SC-21)

Valid from: as provided in	n contract
Inrice before	20 Feet container, completely prepared for the integration of central inverters SC-CP-XT, MV-transformer, MV-switchgear, LV- and communication components

#### MV Power Station 1600 SC (MVPS-1600-SC-21)



Valid from: as provided in contract

Valid from: as provided i	n c					I		1		1				l		ı		l			T
	×	×	x	x	x	x	х	x	x	x	x	x	x	x	x	x	x	x	х	x	
	0	Г		Г		Г								Г		Г		Г			6,6 kV
	1																				10 kV
	2																				11 kV
	3																				12 kV
	5																				12,5 kV 13,2 kV
Voltage level:	6																				13,8 kV
vollage level.	7																				15 kV
	8																				20 kV
	9																				22 kV
	Α																				23 kV
	В																				30 kV
	С																				33 kV
	D																				34,5 kV
	E	_		H		H										H		Н			35 kV
Power frequency:		0																			50 Hz 60 Hz
Transformer vector		Ľ	1	H		Н										Н		Н			Dyllyll
group:			3																		YNd11d11
		Н		0		Н										Н		Н			Mineral oil
Transformer Oil:				1																	Organic oil
Oil containment:		Г		Г	0	Г										Г		П			Without
Oil containment:		L		L	1	L								L		L		L			With
		Ī		٦		0								l							Without
						1															3 feeder with fuses 24 kV
Medium voltage						2															3 feeder with circuit breaker 24 kV
switchgear:						3															3 feeder with fuses 36 kV
						4 5															3 feeder with circuit breaker 36 kV
		Н		H		3	0									Н		Н			3 feeder with circuit breaker 40.5 kV Without
Accessories:							3														Cascade Control
	H	Н		H		Н	_	0								Н		Н			Without
								1													6 kVA
SCAS-Transformer:								2													10 kVA
								3													20 kVA
								4													30 kVA
									0												Without
LV meter:									1												For SC
									2												For SCAS
UPS:		H		H		H			3	0						H		Н			For SC und SCAS Without
	H	H		H		H				Ů	0			_		H		Н			For Sc room
Working											1										Both rooms and sea worthy packaging
platforms/Canopies:																					pom rooms and soc wormy paskaging
		г		Г		П						0				П					Without
Mounting Communit:												1									With
													0								Without
Mounting SC Storage:													1								With mounting SCS
		Ш				ш							2			ш					With mounting SCS + FSC
Ambient														0							-25°C to +40°C
temperature:														1							-25°C to +50°C/ 55°C with Derating
		۲		H		۲		Н		Н		-		$\vdash$	0			Н		-	0 - 1000m
Installation altitude:		ı				ı					الا			l	1						1000 - 2000m
misiananon annoae.															2						2000 - 3000m
		Н		Н		Н									_	0		Н			Standard
Environmental class:		ı				ı					الا			l		1					chemically active, e.g. near cost
		L		L		L						L		L		3		L		L	chemically active and desert
Additional		Γ				Γ										Γ	0				Without
equipment:		L		L		L										L	1	_			Earth quake and storm qualification
Grid protection:																		0			Standard
p		L		L		L		Ш		Ш				L		L		1			See worthy packaging
<b>.</b>		ı				ı					الا			l		ı			0		Standard
Country package:																			1 2		Italy Australia
		Н		H		۲		Н		Н		$\vdash$		$\vdash$		۲		Н			Australia German
		ı				ı					الا			l		ı					English
Language:																					Spanish
		1																			French
		1																		IT	Italian
		_	_			-		_		_						-		•		•	1

#### Comments



#### MV Power Station 1250 SC (MVPS-1250-SC-21)

Valid from: as provided	in contract
MVPS-1250-SC-21 (price before options):	20 Feet container, completely prepared for the integration of central inverters SC-CP-XT, MV-transformer, MV-switchgear, LV- and communication components

#### MV Power Station 1250 SC (MVPS-1250-SC-21)



Valid from: as provided in contract

Valid from: as provided i	n c					I		1		1				l		ı		l			T
	×	×	x	x	x	x	х	x	x	x	x	x	x	x	х	x	x	x	х	x	
	0	Г		Г		Г								Г		Г		Г			6,6 kV
	1																				10 kV
	2																				11 kV
	3																				12 kV
	5																				12,5 kV 13,2 kV
Voltage level:	6																				13,8 kV
vollage level.	7																				15 kV
	8																				20 kV
	9																				22 kV
	Α																				23 kV
	В																				30 kV
	С																				33 kV
	D																				34,5 kV
	E	_		H		H										H		Н			35 kV
Power frequency:		0																			50 Hz 60 Hz
Transformer vector		Ľ	1	H		Н										Н		Н			Dyllyll
group:			3																		YNd11d11
		Н		0		Н										Н		Н			Mineral oil
Transformer Oil:				1																	Organic oil
Oil containment:		Г		Г	0	Г										Г		П			Without
Oil containment:		L		L	1	L								L		L		L			With
		Ī		٦		0								l							Without
						1															3 feeder with fuses 24 kV
Medium voltage						2															3 feeder with circuit breaker 24 kV
switchgear:						3															3 feeder with fuses 36 kV
						4 5															3 feeder with circuit breaker 36 kV
		Н		H		3	0									Н		Н			3 feeder with circuit breaker 40.5 kV Without
Accessories:							3														Cascade Control
-	H	Н		H		Н	_	0								Н		Н			Without
								1													6 kVA
SCAS-Transformer:								2													10 kVA
								3													20 kVA
								4													30 kVA
									0												Without
LV meter:									1												For SC
									2												For SCAS
UPS:		H		H		H			3	0						H		Н			For SC und SCAS Without
	H	H		H		H				Ů	0			_		H		Н			For Sc room
Working											1										Both rooms and sea worthy packaging
platforms/Canopies:																					pom rooms and soc wormy paskaging
		г		Г		П						0				П					Without
Mounting Communit:												1									With
													0								Without
Mounting SC Storage:													1								With mounting SCS
		Ш				ш							2			ш					With mounting SCS + FSC
Ambient														0							-25°C to +40°C
temperature:														1							-25°C to +50°C/ 55°C with Derating
		۲		H		۲		Н		Н		-		$\vdash$	0			Н		-	0 - 1000m
Installation altitude:		ı				ı					الا			l	1						1000 - 2000m
misiananon annoae.															2						2000 - 3000m
		Н		Н		Н									_	0		Н			Standard
Environmental class:		ı				ı					الا			l		1					chemically active, e.g. near cost
		L		L		L						L		L		3		L		L	chemically active and desert
Additional		Γ				Γ										Γ	0				Without
equipment:		L		L		L										L	1	_			Earth quake and storm qualification
Grid protection:																		0			Standard
p		L		L		L		Ш		Ш				L		L		1			See worthy packaging
		ı				ı					الا			l		ı			0		Standard
Country package:																			1 2		Italy Australia
		Н		H		Н		H		Н		$\vdash$		$\vdash$		۲		Н			Australia German
		ı				ı					الا			l		ı					English
Language:																					Spanish
		1																			French
		1																		IT	Italian
		_	_			-		_		_						-		•		•	1

#### Comments



#### MV Power Station 1000 SC (MVPS-1000-1SC-21 with 1 x SC1000)

Valid from: as provided	in confract
MVPS-1000-15C-21 (price before options):	20 Feet container, completely prepared for the integration of central inverters SC-CP-XT, MV-transformer, MV-switchgear, LV- and communication components

#### MV Power Station 1000 SC (MVPS-1000-1SC-21 with 1 x SC1000)

Valid from: as provided in								,													
	х	×	×	x	x	x	×	×	x	x	x	x	x	x	x	×	x	×	x	x	
	0					Г				Ħ						Г		П			6,6 kV
	1																				10 kV
	2																				11 kV
	3																				12 kV
	4 5																				12,5 kV 13,2 kV
Voltage level:	6																				13,8 kV
vollago lovoli	7																				15 kV
	8																				20 kV
	9																				22 kV
	A																				23 kV
	В																				30 kV
	C D																				33 kV 34,5 kV
	E																				35 kV
		0				r										Н		Н			50 Hz
Power frequency:		1																			60 Hz
Transformer vector			0																		Dy11
group:			2																		YNd11
Transformer Oil:				0																	Mineral oil
				1	_											L		Ш			Organic oil
Oil containment:					0																Without With
					Ė	0										Н		H			Without
						1															3 feeder with fuses 24 kV
Medium voltage						2															3 feeder with circuit breaker 24 kV
switchgear:						3															3 feeder with fuses 36 kV
						4															3 feeder with circuit breaker 36 kV
						5										L		Ш			3 feeder with circuit breaker 40.5 kV
Accessories:							0														Without
							3	0								H		H			Cascade Control Without
								1													6 kVA
SCAS-Transformer:								2													10 kVA
								3													20 kVA
								4													30 kVA
									0												Without
LV meter:									1												For SC
									2												For SCAS For SC und SCAS
UPS:						H				0						H		H			Without
-						T					0							Г			For Sc room
Working											1										Both rooms and sea worthy packaging
platforms/Canopies:																					
Mounting Communit:												0									Without
						L						1	_			L					With
M													0								Without
Mounting SC Storage:													1 2								With mounting SCS With mounting SCS + FSC
		H				H								0		H		H			-25°C to +40°C
Ambient														1							-25°C to +50°C/ 55°C with Derating
temperature:																					·
															0						0 - 1000m
Installation altitude:															1						1000 - 2000m
															2	0		H			2000 - 3000m
Environmental class:																1					Standard chemically active, e.g. near cost
Liivii oiiiiieiiiai ciass.																3					chemically active, e.g. fled cost
Additional																Ė	0	П			Without
equipment:																	1				Earth quake and storm qualification
Grid protection:						Γ										Γ		0			Standard
Ona protection:																L		1			See worthy packaging
Causalina																			0		Standard
Country package:																			1 2		Italy Australia
		Н		$\vdash$		H		H		H		H		H		H		Н	ŕ	DE	German
																					English
Language:																					Spanish
				Ì		1															French
																				IT	Italian

#### Comments



#### MV Power Station 1000 SC (MVPS-1000-2SC-21 with 2 x SC500)

Inrice before	20 Feet container, completely prepared for the integration of central inverters SC-CP-XT, MV-transformer, MV-switchgear, LV- and communication components

#### MV Power Station 1000 SC (MVPS-1000-2SC-21 with 2 x SC500)

SMA

Valid from: as provided i	n c	ontr	act																		3
	x	х	х	х	х	х	х	х	х	х	x	x	x	х	х	х	x	х	х	x	
	0																				6,6 kV
	1 2																				10 kV 11 kV
	3																				12 kV
	4																				12,5 kV
	5																				13,2 kV
Voltage level:	6																				13,8 kV
· ·	7																				15 kV
	8																				20 kV
	9																				22 kV
	Α																				23 kV
	В																				30 kV
	C D																				33 kV
	E																				34,5 kV 35 kV
	_	0														Н		Н			50 Hz
Power frequency:		1																			60 Hz
Transformer vector			0 2																		Dy11 YNd11
group:		H		0		H				H		_		_		H		Н			Mineral oil
Transformer Oil:				1																	Organic oil
Oil containment:					0																Without
Oil confainment:					1																With
						0															Without
44 P II						1															3 feeder with fuses 24 kV
Medium voltage						2															3 feeder with circuit breaker 24 kV 3 feeder with fuses 36 kV
switchgear:						3															3 feeder with circuit breaker 36 kV
						5															3 feeder with circuit breaker 40.5 kV
		Т		Т		Ė	0									Н					Without
Accessories:							3														Cascade Control
								0													Without
								1													6 kVA
SCAS-Transformer:								2													10 kVA
								3													20 kVA
								4	0							H		H			30 kVA Without
									1												For SC
LV meter:									2												For SCAS
									3												For SC und SCAS
UPS:										0											Without
Working											0										For Sc room
platforms/Canopies:											1										Both rooms and sea worthy packaging
· · ·		H		H		H						0				H		H			Without
Mounting Communit:												1									With
		r		r		r						Ė	0			Н		Н			Without
Mounting SC Storage:													1								With mounting SCS
													2								With mounting SCS + FSC
Ambient														0							-25°C to +40°C
temperature:														1							-25°C to +50°C/ 55°C with Derating
										Н					0	H		H			0 - 1000m
Installation altitude:															1						1000 - 2000m
															2						2000 - 3000m
		T		T		T										0					Standard
Environmental class:																1					chemically active, e.g. near cost
																3					chemically active and desert
Additional																	0				Without
equipment:		L		L		L										L	1	_			Earth quake and storm qualification
Grid protection:																		0			Standard See worthy packaging
		Н		Н		Н				H						H		Ė	0		Standard
Country package:																			1		Italy
		L		L		L		L						L		L		L	2	L	Australia
·																Ι		Ι			German
																					English
Language:		1		1		1		l						l							Spanish
		1		1		1		l						l							French
																				П	Italian

#### Comments



#### MV Power Station 900 SC (MVPS-900-SC-21)

Valid from: as provided in contract
MVPS-900-SC-21 (price before options):  20 Feet container, completely prepared for the integration of central inverters SC-CP-XT, MV-transformer, MV-switchgear, LV- and communication components

#### MV Power Station 900 SC (MVPS-900-SC-21)



Valid from: as provided i																					
	x	x	x	x	x	×	x	x	x	x	х	x	x	×	х	×	×	x	x	x	
	0					г												Г			6,6 kV
	1																				10 kV
	2																				11 kV
	3																				12 kV
	5																				12,5 kV 13,2 kV
Voltage level:	6																				13,8 kV
, <b>g.</b>	7																				15 kV
	8																				20 kV
	9																				22 kV
	A																				23 kV
	В																				30 kV 33 kV
	D																				34,5 kV
	E																				35 kV
- ·		0				Г															50 Hz
Power frequency:		1																			60 Hz
Transformer vector			0																		Dyl1
group:		L	2	L		L										L					YNd11
Transformer Oil:				0																	Mineral oil
		H		1	0	H		H		H		-		-		H		Н		-	Organic oil Without
Oil containment:					1																With
		Г		Г		0		П		H						Г		П			Without
						1															3 feeder with fuses 24 kV
Medium voltage						2															3 feeder with circuit breaker 24 kV
switchgear:						3															3 feeder with fuses 36 kV
						4															3 feeder with circuit breaker 36 kV
-		H		H		5	0							_		H		H			3 feeder with circuit breaker 40.5 kV Without
Accessories:							3														Cascade Control
		H		H		H		0								H		H			Without
								1													6 kVA
SCAS-Transformer:								2													10 kVA
								3													20 kVA
		L		L		H		4	_							L		Ш			30 kVA
									0												Without For SC
LV meter:									2												For SCAS
									3												For SC und SCAS
UPS:										0											Without
Working											0										For Sc room
platforms/Canopies:											1										Both rooms and sea worthy packaging
		L		L		H										L		Ш			h.a.
Mounting Communit:												0									Without With
		H		H		H				Н		Ė	0			H		H			Without
Mounting SC Storage:													1								With mounting SCS
· ·													2								With mounting SCS + FSC
Ambient														0							-25°C to +40°C
temperature:														1							-25°C to +50°C/ 55°C with Derating
		H		H		L				Н					_	H		H			0 - 1000m
Installation altitude:															0						1000 - 1000m
marananon umrude:						ı								Ì	2						2000 - 3000m
		Н		Н		Н									_	0		Н			Standard
Environmental class:														Ì		1					chemically active, e.g. near cost
																3					chemically active and desert
Additional																	0				Without
equipment:		L		L		H										L	1	_			Earth quake and storm qualification
Grid protection:														Ì				0			Standard See worthy packaging
		Н		Н		H		Н		H						Н		H	0		Standard
Country package:																			1		Italy
		L		L		L		L				L		L		L		L	2	L	Australia
																				DE	
														Ì							English
Language:																					Spanish
														Ì						FR IT	French Italian
-		I		I								_		<u> </u>		I		_			nunun

#### Comments



#### MV Power Station 800 SC (MVPS-800-SC-21)

Valid from: as provided	in contract
MVPS-800-5C-21 (price before options):	20 Feet container, completely prepared for the integration of central inverters SC-CP-XT, MV-transformer, MV-switchgear, LV- and communication components

#### MV Power Station 800 SC (MVPS-800-SC-21)



Valid from: as provided in contract

Voltage level:	Valid from: as provided i	n co	ontro	act ×	x	х	×	x	x	х	v	~	ı,	·	x	x	l v		x	x	x	T
Voltage level:		X	×	X	×	×	Ť	X	Ĺ	^	x	x	x	x	×	×	×	x	×	X	×	
Voltage level:																						
12   12   12   12   12   12   12   12																	ı					
Veltage level:    Veltage level:																	ı					
13.8 kV   20 kV   22 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   24 kV   25																	ı					
7		5															ı					13,2 kV
20 kV   22 kV   23 kV   23 kV   33 kV   33 kV   33 kV   35 k	Voltage level:																ı					
Power frequency:																	ı					
23 kV   33 kV   33 kV   33 kV   33 kV   33 kV   33 kV   33 kV   34 k kV   34 k kV   34 k kV   35 kV																	ı					
Section   Sect																	ı					
Power frequency:   1		В															ı					30 kV
Power frequency:																	ı					
Power frequency:																	ı					
Control   Cont		-	0		H		H						-		H		H	H	Н			
2	Power frequency:																ı					
Transformer Oil:	Transformer vector			0			Г															
Containment	group:			2																		
Oil containment:	Transformer Oil:																ı					
Medium voltage			L		1	_	L								L		L	H	-			
Medium voltage switchgear:    1	Oil containment:												Ì									
Madium voltage switchgear:    2	-		Н				0						H		Н		г	t				
switchgear:  3 4 4 5 8 8 Accessories:  CAS-Transformer:  DATE of the process of t																						3 feeder with fuses 24 kV
A   A   S   S   S   S   S   S   S   S	Medium voltage																ı					
Accessories:    Solid    switchgear:																ı						
Accessories:    Control																	ı					
SCAS-Transformer:    Cascade Control   Mihout   6 kVA   10 kVA   20 kVA   3							Ť	0									H	H				
SCAS-Transformer:    1	Accessories:																ı					
SCAS-Transformer:    2   3   4   4   20 kVA   20 kVA   30 kVA																						
LV meter:  LV meter:    V meter:	CCACT (																ı					
LV meter:    Vertical Content of the content of the	SCAS-Transformer:																ı					
LV meter:    Vision																	ı					
LV meter:    2							Г			0												
UPS:  Working platforms/Canopies:  Mounting Communit:  Mounting SC Storage:  Ambient temperature:  Installation altitude:  Environmental class:  Additional equipment:  Grid protection:  Country package:  I	IV meter									1							ı					
Working platforms/Canopies:  Mounting Communit:  Mounting SC Storage:  Mounting SC Stora	LV moler.																ı					
Working platforms/Canopies:	IIDS:		H				H			3	0		H		H		Н	H	Н			
1			H				H				Ť	0			H		Н	Ħ	Н			
Mounting Communit:    Mounting SC Storage:																	ı					
Mounting SC Storage:    1	pidiforms/ Canopies:																L					
Mounting SC Storage:	Mounting Communit:																ı					
Mounting SC Storage:    1			H				H						1	_	L		Н	H	Н			
Ambient temperature:    1	Mounting SC Storage:																ı					
Ambient temperature:	<b>3 3 3</b>																ı					· ·
Installation altitude:  Instal	Ambient														ľ							-25°C to +40°C
Installation altitude:    1	temperature:														1		ı					-25°C to +50°C/ 55°C with Derating
Installation altitude:    1			H				H								H	-		H	Н			0 1000m
Environmental class:	Installation altitude:																					
Environmental class:  Additional equipment:  Grid protection:  Country package:  Language:    1																						
Additional equipment:  Grid protection:  Country package:  Language:  3																						
Additional equipment:  Grid protection:  Country package:  Language:  Without Earth quake and storm qualification  Standard See worthy packaging  Standard Italy Australia  DE German EN English Es Spanish FR French	Environmental class:						1															
equipment:  Grid protection:  Country package:  Language:  1 Earth quake and storm qualification  Standard See worthy packaging  Standard Italy Australia  DE German EN English Es Spanish FR French	Additional		H				H								H		3					
Grid protection:  Country package:  Country pack							1															
Country package:  Country package:  Country package:  Country package:  Country package:  Country package:  Country package:  Country packaging  Standard  Italy  Australia  DE German  EN English  English  Es Spanish  FR French			Г				Г								Г		Г	T	_			
Country package:    1   Italy   Australia	Gria protection:		L				L								L				1			
2   Australia     DE   German   English   Es   Spanish   FR   French   Fr							1															
Language:  DE German EN English Es Spanish FR French	Country package:						1															, ·
Language:    Image:			Н		H		H		H				$\vdash$		Н		H	H	H		DE	
Language:  Es Spanish FR French							1															
	Language:												Ì								ES	Spanish
π Italian													Ì									
							<u> </u>														IT	Italian

#### Comments



#### MV Power Station 630 SC (MVPS-630-SC-21)

Valid from: as provided in	n contract
MVPS-630-SC-21	20 Feet container, completely prepared for the integration of central inverters SC-CP-XT, MV-transformer, MV-switchgear, LV- and communication components

#### MV Power Station 630 SC (MVPS-630-SC-21)



Valid from: as provided in								,													
	х	×	×	x	x	x	×	×	x	x	x	x	x	x	x	×	x	×	x	x	
	0					Г				Ħ						Г		П			6,6 kV
	1																				10 kV
	2																				11 kV
	3																				12 kV
	4 5																				12,5 kV 13,2 kV
Voltage level:	6																				13,8 kV
vollago lovoli	7																				15 kV
	8																				20 kV
	9																				22 kV
	A																				23 kV
	В																				30 kV
	C D																				33 kV 34,5 kV
	E																				35 kV
		0				r										Н		Н			50 Hz
Power frequency:		1																			60 Hz
Transformer vector			0																		Dy11
group:			2																		YNd11
Transformer Oil:				0																	Mineral oil
				1	_											L		Ш			Organic oil
Oil containment:					0																Without With
					Ė	0										Н		H			Without
						1															3 feeder with fuses 24 kV
Medium voltage						2															3 feeder with circuit breaker 24 kV
switchgear:						3															3 feeder with fuses 36 kV
						4															3 feeder with circuit breaker 36 kV
						5										L		Ш			3 feeder with circuit breaker 40.5 kV
Accessories:							0														Without
							3	0								H		H			Cascade Control Without
								1													6 kVA
SCAS-Transformer:								2													10 kVA
								3													20 kVA
								4													30 kVA
									0												Without
LV meter:									1												For SC
									2												For SCAS For SC und SCAS
UPS:						H				0						H		H			Without
-						T					0							Г			For Sc room
Working											1										Both rooms and sea worthy packaging
platforms/Canopies:																					
Mounting Communit:												0									Without
						L						1	_			L					With
M													0								Without
Mounting SC Storage:													1 2								With mounting SCS With mounting SCS + FSC
		H				H								0		H		H			-25°C to +40°C
Ambient														1							-25°C to +50°C/ 55°C with Derating
temperature:																					·
															0						0 - 1000m
Installation altitude:															1						1000 - 2000m
															2	0		H			2000 - 3000m
Environmental class:																1					Standard chemically active, e.g. near cost
Liivii oiiiiieiiiai ciass.																3					chemically active, e.g. fled cost
Additional																Ė	0	П			Without
equipment:																	1				Earth quake and storm qualification
Grid protection:						Γ										Γ		0			Standard
Ona protection:																L		1			See worthy packaging
Causalina																			0		Standard
Country package:																			1 2		Italy Australia
		Н		$\vdash$		H		H		H		H		H		H		Н	ŕ	DE	German
																					English
Language:																					Spanish
				Ì		1															French
																				IT	Italian

#### Comments



#### MV Power Station 500 SC (MVPS-500-SC-21)

Valid from: as provided i	in contract
MVPS-500-SC-21 (price before options):	20 Feet container, completely prepared for the integration of central inverters SC-CP-XT, MV-transformer, MV-switchgear, LV- and communication components

#### MV Power Station 500 SC (MVPS-500-SC-21)



Valid from: as provided in contract

Voltage level:	Valid from: as provided i	n co	ontro	act ×	x	х	×	x	x	х	v	~	ı,	·	x	x	l v		x	x	x	T
Voltage level:		X	×	X	×	×	Ť	X	Ĺ	^	x	x	x	x	×	×	×	x	×	X	×	
Voltage level:																						
12   12   12   12   12   12   12   12																	ı					
Veltage level:    Veltage level:																	ı					
13.8 kV   20 kV   22 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   23 kV   24 kV   25																	ı					
7		5															ı					13,2 kV
20 kV   22 kV   23 kV   23 kV   33 kV   33 kV   33 kV   35 k	Voltage level:																ı					
Power frequency:																	ı					
23 kV   33 kV   33 kV   33 kV   33 kV   33 kV   33 kV   33 kV   34 k kV   34 k kV   34 k kV   35 kV																	ı					
Section   Sect																	ı					
Power frequency:   1		В															ı					30 kV
Power frequency:																	ı					
Power frequency:																	ı					
Control   Cont		-	0		H		H						-		H		H	H	Н			
2	Power frequency:																ı					
Transformer Oil:	Transformer vector			0			Г															
Containment	group:			2																		
Oil containment:	Transformer Oil:																ı					
Medium voltage			L		1	_	L								L		L	H	-			
Medium voltage switchgear:    1	Oil containment:												Ì									
Madium voltage switchgear:    2	-		Н				0						H		Н		г	t				
switchgear:  3 4 4 5 8 8 Accessories:  CAS-Transformer:  DATE of the process of t																						3 feeder with fuses 24 kV
A   A   S   S   S   S   S   S   S   S	Medium voltage																ı					
Accessories:    Solid    switchgear:																ı						
Accessories:    Control																	ı					
SCAS-Transformer:    Cascade Control   Mihout   6 kVA   10 kVA   20 kVA   3							Ť	0									H	H				
SCAS-Transformer:    1	Accessories:																ı					
SCAS-Transformer:    2   3   4   4   20 kVA   20 kVA   30 kVA																						
LV meter:  LV meter:    V meter:	CCACT (																ı					
LV meter:    Vertical Content of the content of the	SCAS-Transformer:																ı					
LV meter:    Vision																	ı					
LV meter:    2							Г			0												
UPS:  Working platforms/Canopies:  Mounting Communit:  Mounting SC Storage:  Ambient temperature:  Installation altitude:  Environmental class:  Additional equipment:  Grid protection:  Country package:  I	IV meter									1							ı					
Working platforms/Canopies:  Mounting Communit:  Mounting SC Storage:  Mounting SC Stora	LV moler.																ı					
Working platforms/Canopies:	IIDS:		H				H			3	0		H		H		Н	H	Н			
1			H				H				Ť	0			H		Н	Ħ	Н			
Mounting Communit:    Mounting SC Storage:																	ı					
Mounting SC Storage:    1	planorms/ canopies:																L					
Mounting SC Storage:	Mounting Communit:																ı					
Mounting SC Storage:    1			H				H						1	_	L		Н	H	Н			
Ambient temperature:    1	Mounting SC Storage:																ı					
Ambient temperature:	<b>3 3 3</b>																ı					· ·
Installation altitude:  Instal	Ambient														ľ							-25°C to +40°C
Installation altitude:    1	temperature:														1		ı					-25°C to +50°C/ 55°C with Derating
Installation altitude:    1			H				H								H	-		H	Н			0 1000m
Environmental class:	Installation altitude:																					
Environmental class:  Additional equipment:  Grid protection:  Country package:  Language:    1																						
Additional equipment:  Grid protection:  Country package:  Language:  3																						
Additional equipment:  Grid protection:  Country package:  Language:  Without Earth quake and storm qualification  Standard See worthy packaging  Standard Italy Australia  DE German EN English Es Spanish FR French	Environmental class:						1															
equipment:  Grid protection:  Country package:  Language:  1 Earth quake and storm qualification  Standard See worthy packaging  Standard Italy Australia  DE German EN English Es Spanish FR French	Additional		H				H								H		3					
Grid protection:  Country package:  Country pack							1															
Country package:  Country package:  Country package:  Country package:  Country package:  Country package:  Country package:  Country packaging  Standard  Italy  Australia  DE German  EN English  English  Es Spanish  FR French			Г				Г								Г		Г	T	_			
Country package:    1   Italy   Australia	Gria protection:		L				L								L				1			
2   Australia     DE   German   English   Es   Spanish   FR   French   Fr							1															
Language:  DE German EN English Es Spanish FR French	Country package:						1															, ·
Language:    Image:			Н		H		۲		H				$\vdash$		Н		H	H	H		DE	
Language:  Es Spanish FR French							1															
	Language:												Ì								ES	Spanish
π Italian													Ì									
							<u> </u>														IT	Italian

#### Comments



# Sunny Central System Technology



95/124

#### Sunny String Monitor SSM8-21-BS

Valid from: as provide	ed in co	ontract
SSM8-21-BS (price before options):		PV array junction box for PV systems, made of UV-resistant, fiberglass-reinforced polyester with degree of protection IP54, suitable for outdoors, wall-mounting with 16 fuse holders on both the plus- and minus sides, DC disconnector and monitored overvoltage protection including remote signaling. 8-channel string-current monitoring including RS485 communication unit for data transmission and -evaluation in the Sunny Central. Connection of two cables per pole via terminal lug to the busbar up to 300 mm² cross-section. Suitable for operating temperatures as low as -25°C and standby temperatures as low as -40°C.
		German
		English
		Spanish
		Korean
Language:		Italian
		French
		Greek
		Japanese
	RO	Romanian

#### Sunny String Monitor SSM16-21-BS

(price before x channel string-current monitoring including RS485 communication unit for data transmission and evaluation in the Sunny Central. Sealing range of the	Valid from: as provide
	SSM16-21-BS (price before options):
DE German	
EN English	
ES Spanish	
KR Korean	
Language: rr Italian	Language:
FR French	
GR Greek	
JP Japanese	
RO Romanian	



#### Accessories SSMxx-21-BS

Valid from: as provided in contract

SSM21-FUSE (price before options):	x 1 pack containing 10 gPV fuses or bridges, 10 x 38 mm, 1000 VDC for SSMxx-21
	1 8 A (1000 V)
	2 10 A (1000 V)
	3 12 A (1000 V)
	4 15 A (1000 V)
	5 20 A (1000 V)
	6 25 A (1000 V)
	7 30 A (1000 V)
	8 Neutral link

**PSM21** Base 1058 x 892 x 245 mm for SSMxx-21 for outdoor pillar installation

AFC-300

2 V box terminals with connection lug for the DC output, up to  $300 \ mm^2$  aluminum- or copper cable

PADCON-CMB16-10

Padcon DC-Combiner TGA16

PV array junction box suitable for outdoor use for PV systems with system voltages up to 1,000 VDC. Enclosure for wall mounting made of UV-resistant plastic with degree of protection IP54. Equipped with 16 fuse holders on both plus and minus sides, DC disconnect units and type 2 overvoltage protection. Information attached to device and documentation in language English / German / French. Exclusive string fuses, suitable string fuses (Padcon TGA Fuse) are available as accessories.

PADCON-CMB24-10

Padcon DC-Combiner TGA24

PV array junction box suitable for outdoor use for PV systems with system voltages up to 1,000 VDC. Enclosure for wall mounting made of UV-resistant plastic with degree of protection IP54. Equipped with 24 fuse holders on both plus and minus sides, DC disconnect units and type 2 overvoltage protection. Information attached to device and documentation in language English / German / French. Exclusive string fuses, suitable string fuses (Padcon TGA Fuse) are available as accessories.

PADCON-CMB32-10

Padcon DC-Combiner TGA32

PV array junction box suitable for outdoor use for PV systems with system voltages up to 1,000 VDC. Enclosure for wall mounting made of UV-resistant plastic with degree of protection IP54. Equipped with 32 fuse holders on both plus and minus sides, DC disconnect units and type 2 overvoltage protection. Information attached to device and documentation in language English / German / French. Exclusive string fuses, suitable string fuses (Padcon TGA Fuse) are available as accessories.

TGA-FUSE-10

Fuse link 10x38 gPV 10A 1000 VDC

fuse for short circuit and overload protection with 10 A rated power

TGA-FUSE-12

Fuse link 10x38 gPV 12A 1000 VDC

fuse for short circuit and overload protection with 12 A rated power

TGA-FUSE-16

Fuse link 10x38 gPV 16A 1000 VDC

fuse for short circuit and overload protection with 16 A rated power

TGA-FUSE-20

Fuse link 10x38 gPV 20A 1000 VDC

fuse for short circuit and overload protection with 20 A rated power

TGA-FUSE-25

Fuse link 10x38 gPV 25A 1000 VDC

fuse for short circuit and overload protection with 25 A rated power

#### Communit

Valid from: as provided i	n co	ntro	act									
Communit-10	x	x	х	x	x	x	x	x	x	x	xx	Communication distribution box for up to 7 communication components, incl. 24 V power supply for connection to 100 240 V AC, 45 65 Hz.
												Wall as south a
Cabinet:	0											Wall mounting Base Mounting
	3			L								Mounting in a station
Installation location 1		0										Without
		7	0	H								Customer installation location Without
Installation location 2			3									WebBox + SensorBox
			7									Customer installation location
Installation location 3				0								Without
				5						_		Cluster Controller
Network installation					0							Without Switch 8 TX
location 4					2							Switch 2 FX-M (SC) 8 TX
					В							Switch 2 FX-M (SC) 6 TX MNG
						0						Without
Network installation location 5						1						Switch 8 TX
location 5						2 B						Switch 2 FX-M (SC) 8 TX Switch 2 FX-M (SC) 6 TX MNG
				Г		Ť	0					Without
							1					Ethernet
Router:							2					UMTS/GSM/GPRS**
							3					DSL + modem (Annex B)** DSL + modem (Annex A)**
				H			4	0				Power supply unit, redundant
Power Supply:								2				Power supply unit redundant, buffered
									0			no
n. e. l.									5			Patch panel 4 CU ETH
Patch panel:									6 7			Patch panel 8 CU ETH Patch panel 4 CU ETH + 6 FO
									8			Patch panel 6 FO
				Г						0		Without
Ethernet I/O:										1		Moxa ioLogik E1240
				H						2	<b>D</b> F	Moxa iologik E1242 German
												German English
												Spanish
												Korean
Language:												Italian
										- 1		French
										- 1		Greek Japanese
											RO	Romanian
						•		•				

#### Comments

<sup>\*\*</sup> not to be used outside Europe



GSM-UMTS-OUTAN

Antenna with a 5 m cable and an SMA plug for GSM and UMTS



#### SMA ENERGY METER

(price before	3 phase, bidirectional measurement unit with SMA Speedwire interface to capture electrical measurements by each phase (direct grid connection up to 63 A)

#### Sunny Home Manager with Bluetooth® (HM-BT-10)

HM-BT-10 (price before options):	×	×	Sunny Home Manager with Bluetooth® + Speedwire - wireless plant monitoring and intelligent energy management
Power supply:	1		with power supply
		1	Germany , France, Italy , Spain , Czech Republic , Belgium , Netherlands , Greece , Portugal , Austria, Switzerland
Language:			
		_	Great Britain , Australia

#### Sunny Home Manager with Bluetooth® set incl. SMA radio-controlled sockets (HM-BT-10-Set)

Valid from: as provide	d in co	ontr	act	
HM-BT-10-SET (price before options):	x	xx	×	Set consisting of Sunny Home Manager with Bluetooth® + Speedwire and two SMA radio-controlled sockets
Power supply:	1			with power supply
		01		Type of connector CEE7/4; Germany , Austria, Netherlands , Portugal , Greece , Italy , Spain
Male connector:		02		Type of connector CEE7/5; France, Belgium , Czech Republic
Language:			1	Germany , Italy , Spain , Netherlands , Greece , Portugal , Austria, Switzerland, France, Belgium , Czech Republic

#### SMA radio-controlled socket with Bluetooth® (BT-SOCKET-10)

BT-SOCKET-10 (price before options):	xx	SMA radio-controlled socket with Bluetooth® - wireless control and energy measurement of loads and increase of Bluetooth® range
Male connector;	01	Type of connector CEE7/4; Germany , Austria, Netherlands , Portugal , Greece , Italy , Spain
Language:	02	Type of connector CEE7/5; France, Belgium , Czech Republic

#### SMA radio-controlled socket value pack (BT-SOCKETSET5-10)

Valid from: as provided	in co	ontract
BT-SOCKET-SET5-10 (price before options):		SMA radio-controlled socket with Bluetooth® Value pack with 5 SMA radio-controlled sockets
Male connector; Language:		Type of connector CEE7/4; Germany , Austria, Netherlands , Portugal , Greece , Italy , Spain  Type of connector CEE7/5; France, Belgium , Czech Republic

#### HM-DO-METERADAPTER

Adapter to read out the optical meter interface according to IEC 62056-21 (D0) with 4-pole plug



#### SMA Cluster Controller (CLCON-10)

CLCON-10 (price before options):	×	SMA Cluster Controller Device for the monitoring and control of SMA inverters in decentralized large-scale PV plants with Speedwire network, LC display, top-hat rail mounted, supports max. 75 SMA devices.
Language:		USA , Canada Germany , France, Italy , Spain , Czech Republic , Belgium , Netherlands , Greece , Portugal , Austria, Switzerland, Japan

#### SMA Cluster Controller (CLCON-S-10)

Valid from: as provided  CLCON-S-10 (price before options):		Device for monitoring and controlling SMA inverters in decentralized large-scale PV power plants with Speedwire network, LC-Display, top-hat
Language:	1	Germany , France, Italy , Spain , Czech Republic , Belgium , Netherlands , Greece , Portugal , Austria, Switzerland

#### CLCON-PWRSUPPLY Top-hat rail power supply unit 24 V DC / 2.5 A $\,$

power supply unit for the SMA Cluster Controller and SMA Inverter Manager, top-hat rail mounted, Input: 100-240 V AC, output: 24 V DC / 2.5 A

not available in Japan and USA

#### USB-FLASHDRV4GB USB memory stick 4 GB

 $High Speed \ USB \ 2.0 \ Flash \ memory, \ highly \ reliable \ industrial \ quality, \ water- \ and \ dust \ proof, \ ESD \ protected, \ operating \ temperature \ -40 ^{\circ}C \ ...$ 

+85°C

#### USB-FLASHDRV8GB

High Speed USB 2.0 Flash memory, highly reliable industrial quality, water- and dust proof, ESD protected, operating temperature -40°C ... +85°C



#### Sunny View

Valid from: as provided in contract						
VIEW-10	Sunny View Color touch display for plant monitoring of up to 12 SMA inverters					

#### SMA Bluetooth® Repeater

Sinia biocioomo kep	-		
Valid from: as provided	in co	ontr	act
BTREP-IN (price before options):	×	xx	SMA Bluetooth® repeater for increasing the range of SMA Bluetooth® products for use indoors
Power supply:	1		with plug-in power supply
- со. зорр.у.	2		Power Modul, without plug-in power supply, not for USA
			Australia (Documentation: English)
			Belgium (Documentation: German, Dutch, French)
		cz	Czech Republic (Documentation: Czech)
		DE	Germany (Documentation: German)
		ES	Spain (Documentation: Spanish)
Language:		FR	France (Documentation: French)
Language.		GB	Great Britain (Documentation: English)
		GR	Greece (documentation: Greek)
		IT	Italy (Documentation: Italian)
		NL	Netherlands (Documentation: Dutch)
		PT	Portugal (Documentation: Portuguese)
		US	USA (Documentation: English)

Valid from: as provided	l in c	ontr	act
BTREP-OUT (price before options):	×	xx	SMA Bluetooth® Repeater Outdoor for increasing the range of SMA Bluetooth® products for use outdoors
D*	1		with power supply for DIN rail mounting
Power supply:*	2		Power Modul, without power supply for DIN rail mounting
Language:		DE	Germany (Documentation: German)

 $<sup>\</sup>ensuremath{^{\star}}$  The option 2 is not valid for the US



PWRM-10-NR Module for the power supply of the SMA Bluetooth® Repeater or the SMA Power Injector with Bluetooth® from follwing inverters:

STP 15000TL-10

**PWRSUPPLY** 

Plug-in power supply (EU, US, UK, AU, KR) for SMA Bluetooth® Repeater, Sunny WebBox, Power Reducer Box, Power Injector of the Sunny SensorBox and Wireless-Set 485-01/02 radio set

#### Power Reducer Box

Valid from: as provided in contract							
POWERREDUCER BOX (price before options):	×	×	xx	Power Reducer Box control device for feed-in and grid management in large-scale PV plants.			
Inputs:	1			4 digital inputs			
Memory Card:		0		none			
memory cara.		4		2 GB SDcard			
		Г	DE	Germany (documentation: German)			
Language:			ΑU	Australia (documentation: English)			
			cz	Czech Republic (documentation: Czech)			
			ES	Spain (documentation: Spanish)			



#### Sunny WebBox

Valid from: as provided in contract					
SUNNYWEBBOX (price before options):	×	×	×	xx	Sunny WebBox Central measurement data acquisition and diagnostic unit for the professional monitoring of the PV plant
SMA COM:	0				Without (Communication via Ethernet) RS485
AUX COM:		0			Without (Communication via Ethernet)
Memory Card:			0 3 4		none 1 GB SD Card 2 GB SD Card
Language:				CZ DE ES FR GB GR IT KR	Australia (documentation: English) Belgium (documentation: German, Dutch, French)  Czech Republic (documentation: Czech) Germany (documentation: German) Spain (documentation: Spanish) France (documentation: French) Great Britain (documentation: English) Greece (documentation: Greek) Italy (documentation: Italian) Korea (documentation: Korean) Netherlands (documentation: Dutch) Portugal (documentation: Portuguese)

#### Sunny WebBox with Bluetooth®

WEBBOX.BT-20 (price before options):  x x x xx xx xx xx xx xx xx xx xx xx xx	Valid from: as provided in contract					
Memory Card:  0 none 1 GB SD Card 2 GB SD Card  AU Australia (documentation: English) BE Belgium (documentation: German, Dutch, French)  CZ Czech Republic (documentation: Czech) Germany (documentation: German) ES Spain (documentation: Spanish) FR France (documentation: French) GB Great Britain (documentation: English) GR Greece (documentation: Toreek) IT Italy (documentation: Italian)	(price before	×	×		Central measurement data acquisition and diagnostic unit for the professional	
Memory Card:  0 none 1 GB SD Card 2 GB SD Card  AU Australia (documentation: English) BE Belgium (documentation: German, Dutch, French)  CZ Czech Republic (documentation: Czech) Germany (documentation: German) ES Spain (documentation: Spanish) FR France (documentation: French) GB Great Britain (documentation: English) GR Greece (documentation: Toreek) IT Italy (documentation: Italian)						
Memory Card:  3	SMA COM:	0			incl. Bluetooth® Wireless Technology	
AU Australia (documentation: English) BE Belgium (documentation: German, Dutch, French)  CZ Czech Republic (documentation: Czech) DE Germany (documentation: German) Spain (documentation: Spanish) FR France (documentation: French) GR Great Britain (documentation: English) GR Greece (documentation: French) Italy (documentation: Italian)	_		0			
AU Australia (documentation: English)  BE Belgium (documentation: German, Dutch, French)  CZ Czech Republic (documentation: Czech)  DE Germany (documentation: German)  S Spain (documentation: Spanish)  FR france (documentation: French)  GB Great Britain (documentation: English)  GR Greece (documentation: Greek)  IT Italy (documentation: Italian)	Memory Card:		3			
BE Belgium (documentation: German, Dutch, French)  CZ Czech Republic (documentation: Czech)  DE Germany (documentation: German)  Spain (documentation: Spanish)  France (documentation: French)  GB Great Britain (documentation: English)  GR Greece (documentation: Greek)  IT Italy (documentation: Italian)						
Czech Republic (documentation: Czech) DE Germany (documentation: German) Spain (documentation: Spanish) France (documentation: French) GB Great Britain (documentation: English) GR Greece (documentation: Greek) IT Italy (documentation: Italian)						
DE Germany (documentation: German)  Spain (documentation: Spanish)  FR France (documentation: French)  GB Great Britain (documentation: English)  GR Greece (documentation: Greek)  Italy (documentation: Italian)				BE	Belgium (documentation: German, Dutch, French)	
DE Germany (documentation: German)  Spain (documentation: Spanish)  FR France (documentation: French)  GB Great Britain (documentation: English)  GR Greece (documentation: Greek)  Italy (documentation: Italian)						
Spain (documentation: Spanish) France (documentation: French) Great Britain (documentation: English) Greece (documentation: Greek) It Italy (documentation: Italian)						
Language:  France (documentation: French)  Ge GR Greece (documentation: English)  Greece (documentation: Greek)  Italy (documentation: Italian)						
GR Great Britain (documentation: English) GR Greece (documentation: Greek) IT Italy (documentation: Italian)						
GR Greece (documentation: Greek)  It ltaly (documentation: Italian)	Language:				· · · · · · · · · · · · · · · · · · ·	
IT Italy (documentation: Italian)						
NI Netherlands (documentation: Dutch)						
					Netherlands (documentation: Dutch)	
PT Portugal (documentation: Portuguese)						
us USA (documentation: English)				US	USA (documentation: English)	



**SD-Card 1 GB** 1 GB Secure Digital Memory Card for Sunny WebBox,

I-Grade

**SD-Card 2 GB** 2 GB Secure Digital Memory Card for Sunny WebBox,

I-Grade

SUNNYWEBBOX-

DUMMY

Sunny WebBox Demo, no function

WEBBOX-20-DUMMY Non-functioning dummy for Sunny WebBox with Bluetooth®



#### Sunny SensorBox

Valid from: as provided	in co	ontr	act	
SUNNYSENSOR (price before options):	×	×	xx	Sunny SensorBox  Measuring system for environmental data capture for professional monitoring of the PV plant, incl. integrated irradiation and external module temperature sensor
	2			RS485 Power Injector Feed-in unit for power supply via the RS485 communication bus, incl. plug-in power supply and installation material  SMA Power Injector with BLUETOOTH® Feed-in and communication unit for power supply via the RS485 communication bus and connection to the Sunny SensorBox to the SMA Bluetooth communication, incl. plug-in power supply and mounting material
SMA Power- Injector:*	3			SMA Power Injector with BLUETOOTH® incl. Power Modul Feed-in and communication bus and connection to the Sunny SensorBox to the SMA Bluetooth communication, incl. Power Modul for power supply from the SB 3/4/5000TL-21, STP 15000TL-10, (instead of plug-in power supply) and mounting material
Mounting plate:		0		Without Mounting plate for mounting the Sunny SensorBox on module rail
Language:			BE CZ DE ES FR GB GR IT KR NL PT	Australia (documentation: English)  Belgium (documentation: German, Dutch, French)  Czech Republic (documentation: Czech)  Germany (documentation: German)  Spain (documentation: Spanish)  France (documentation: French)  Great Britain (documentation: English)  Greece (documentation: Greek)  Italy (documentation: Italian)  Korea (documentation: Korean)  Netherlands (documentation: Dutch)  Portugal (documentation: Portuguese)  USA (documentation: English)

 $<sup>^{\</sup>star}$  The options 2 + 3 with Bluetooth are not valid for Korea

## SEALKIT-SSENSOR

Set of replacement sealings for the Sunny SensorBox consisting of 1  $\times$  enclosure sealing and 6  $\times$  cable gland incl. corresponding sealings

Valid from: as provided	in contro	act
WINDSENSOR (price before options):	xx Wi	ind speed sensor for connection to Sunny SensorBox; 0.8 40 m/s, incl. 3 m connection cable, mounting angle and pole clamp
Language:	BE Bel CZ Czı DE Ge ES Spr FR Fra GB Gr GR Gr IT Ital KR Kol NL Ne PT Por	stralia (documentation: English) (gium (documentation: German, Dutch, French) (sech Republic (documentation: Czech) (sermany (documentation: German) (ain (documentation: Spanish) (since (documentation: French) (seat Britain (documentation: English) (seece (documentation: Greek) (sy (documentation: Italian) (see (documentation: Norean) (sheriands (documentation: Dutch) (stugal (documentation: Portuguese) (sy (documentation: Portuguese) (sy (documentation: Portuguese) (sy (documentation: Portuguese)
Wall-Mount-Bracket		wall mounting angle for mounting the wind speed sensor to wall, length $35~\mathrm{cm/90}^\circ$
Valid from: as provided	in contro	act
TEMPSENSOR- AMBIENT (price before options):	xx PT1	100 ambient temperature sensor for Sunny SensorBox, measuring range -30°C to 80°C incl. mounting materials
Language:	BE Bel CZ Czı DE Ge ES Spr FR Fra GB Gr GR Gr IT Ital KR Koı NL Ne PT Por	stralia (documentation: English) (gium (documentation: German, Dutch, French) tech Republic (documentation: Czech) termany (documentation: German) ain (documentation: Spanish) tence (documentation: French) eart Britain (documentation: English) eece (documentation: Greek) ly (documentation: Italian) trea (documentation: Italian) trea (documentation: Korean) stherlands (documentation: Dutch) trugal (documentation: Portuguese) EA (documentation: English)
TEMPSENSOR-MODU	LE	PT100 module temperature sensor for Sunny SensorBox, incl. 2-component thermally conductive adhesive and 2.5 m connection cable
Monplat-Sensor		Mounting plate for mounting the Sunny SensorBox on module rail
Roofan-Sensor		Roof bracket for mounting the Sunny SensorBox
Valid from: as provided	in contro	act
METEOSTATION-10 (price before options):	× pro	MA Meteo Station  Stessional compact weather station with pyranometer for monitoring the PV plant via RS485-communication bus, incl. module-temperature also and top-hat rail power supply
Danie III	<b>0</b> US.	A , Canada
Region:	1 EU	



Power-Injector

RS485 Power Injector supply unit for power supply via the RS485 communication bus, incl. plug-in power supply and mounting materials

Valid from: as provided in a BT-485-CON-DEV (price before options):		SMA Power Injector with BLUETOOTH®  Feed-in and communication unit for power supply via the RS485 communication bus and connection to the Sunny SensorBox to the SMA  Bluetooth communication, incl. plug-in power supply and mounting material
	1	without plug-in power supply with plug-in power supply with plug-in power supply incl. Power Modul for power supply from the SB 3/4/5000TL-21, STP 15000TL-10 (instead of plug-in power supply) and mounting material

#### **Communication Accessories**

**W\$485-01-10\*** Wireless-Set 485-01 radio set

for longer distances with RS485 communication

for operation with Sunny WebBox, incl. antenna for outside mounting

**W\$485-02-10\*** Wireless-Set 485-02 radio set

Extension kit for Wireless-Set 485-01

for second radio link

 $^{\star}$  except combination of the Sunny Boy Control and inverters type STP 15000TL-10



**Battery Inverter** 





#### Sunny Island 3.0M (SI3.0M-11)

Valid from: as provided	alid from: as provided in contract							
SI3.0M-11 (price before options):	x	x	x	o	x	x	Battery inverter: 230 VAC/50 Hz; 48 VDC; 3.0 kW (30 min); 2.3 kW (continuous power); incl. battery temperature sensor, com-cable (2 m)	
	0						Without	
Communication:	4						RS485	
	8					ш	Speedwire	
User interface:		0					With SRC-20	
		1				ш	Without SRC-20	
Color of lid:			3				yellow (standard), other colors upon request	
					DE		German	
Documentation:					EN	1	English	
Docomernation.					ES		Spanish	
					FR		French	
Application:						0	On-Grid self consumption	
Application:						2	Off-Grid	



#### Sunny Island 4.4M (SI4.4M-11)

Valid from: as provided	alid from: as provided in contract							
SI4.4M-11 (price before options):	x	x	x	o	х	x	Battery inverter: 230 VAC/50 Hz; 48 VDC; 4.4 kW (30 min); 3.3 kW (continuous power); incl. battery temperature sensor, com-cable (2 m)	
	0						Without	
Communication:	4						RS485	
	8						Speedwire	
User interface:		0					With SRC-20	
		1					Without SRC-20	
Color of lid:			3				yellow (standard), other colors upon request	
					DE		German	
Documentation:					EN	1	English	
Documentation.					ES		Spanish	
					FR		French	
Application:						0	On-Grid self consumption	
Application:						2	Off-Grid	

#### Sunny Island 6.0H (SI6.0H-11)

Valid from: as provided	in co	ontro	act				
SI6.0H-11 (price before options):	x	×	×	0	x	x	Battery inverter: 230 VAC/50 Hz; 48 VDC; 6.0 kW (30 min); 4.6 kW (continuous power); incl. battery temperature sensor, com-cable (2 m)
	0						Without
	4						RS485
Communication:	5						CAN
Commonication.	6						RS485 + CAN
	8						Speedwire
	9						Speedwire + CAN
User interface:		0					With SRC-20
		1				L	Without SRC-20
Color of lid:			3			L	yellow (standard), other colors upon request
					DE		German
Documentation:					EN		English
					ES		Spanish
					FR	_	French
Application:							On-Grid self consumption
						2	Off-Grid

## Sunny Island 8.0H (SI8.0H-11)

Valid from: as provided	in co	ontro	act				
SI8.0H-11 (price before options):	×	x	x	o	x	x	Battery inverter: 230 VAC/50 Hz; 48 VDC; 8,0 kW (30 min); 6,0 kW (continuous power); incl. battery temperature sensor; com-cable (2 m)
	0						Without
	4					ı	RS485
Communication:	5					ı	CAN
Commonication.	6					ı	RS485 + CAN
	8					ı	Speedwire
	9						Speedwire + CAN
User interface:		0				ı	With SRC-20
		1					Without SRC-20
Color of lid:			3				yellow (standard), other colors upon request
					DE		German
Documentation:					EN	1	English
					ES		Spanish
					FR	_	French
Application:							On-Grid self consumption
друксинон.						2	Off-Grid

## Sunny Island Demo

SIX.XHM-DUMMY

Sunny Island SI3.0M/4.4M/6.0H/8.0H demo device, without function

45-9934

Stand system for SB3000HF-3Y, SB5000TL-2Z, STP9000TL-2Y and SIX.XHM-DUMMY

## **Sunny Island Charger**

Valid from: as provided in contract

SIC50-MPT (price before options):	×		0	MPP solar charge controller battery voltage: 48 V/24 V/12 V battery current: 50 A/ 50 A/ 50 A nominal power: 2400 W at 48 V, max. PV voltage: 140 V incl. SIC-PB for communication with Sunny Island
	0			Sunny Island Charger Piggy Back for the communication between Sunny Island Charger and the Sunny Island
				SI3.0M/4.4M/6.0H/8.0H via sync bus of the Sunny Islands, including 5 m synchronization cable for indoor installation
Communication:				
	1			No communication
		0		Without temperature sensor
Temperature sensor:		1		With external temperature sensor
-				



#### Multicluster-Boxes

#### Multicluster Box 6 (MC-BOX-6.3-11)

Valid from: as provided in contract

MC-BOX-6.3-11 Three-phase Multicluster Box

 $\overset{\cdot}{230}$  V/50 Hz for up to 6 SI 6.0H/8.0H,

generator/load connection of 55 kW each, incl. com cable, Documentation: Language package (DE, EN, ES, FR)

#### Multicluster Box MC-BOX-12.3

Valid from: as provided	in co	ontr	act			
MC-BOX-12.3 (price before options):	0	o	0	o	×	3-phase Multicluster-Box 230 V/50 Hz for up to 12 SI 6.0H/8.0H, generator/PV/load connection with 110 kW each, incl. com-cable
Dokumentation:					EN ES	German English Spanish French

#### Multicluster Box 36 (MC-BOX-36.3-11)

MC-BOX-36.3-11 Three-phase Multicluster Box

230 V/50 Hz for up to 36 SI 6.0H/8.0H,

 $generator/load\ connection\ of\ 300\ kW\ each,\ PV\ connection\ of\ 360\ kW,\ incl.\ com\ cable,\ Documentation:\ Language\ package\ (DE,$ 

EN, ES, FR)



# **Sunny Island Accessories**

SI-COM-RJ45-3

SI-CONFIG-10-V	SMA Off-Grid Configurator: Program for the design and simulation of off-grid PV plants with SMA components
SRC-20	Control panel Sunny Remote Control for SI3.0M/4.4M/6.0H/8.0H, incl. 128 MB SD card, and 5 m communication cable for indoor installation, mounting material
SI-485PB-NR	RS485 communication interface as a retrofit kit for Sunny Island SI 5048, incl.: 1 x adapter cable white (from RJ45 to 3 open insulated conductors with wire-end ferrules for clamping), 1 x terminator, mounting instructions
SI-COMSMA-NR	RS485 communication interface as retrofit kit for Sl3.0M/4.4M/6.0H/8.0H, 1 x 5 m data cable (grey), 1 x adapter cable (white) from RJ45 to 3 open insulated conductors, 1 x terminator (plugged), 1 x screw, mounting instructions
SI-SYSCAN-NR	CAN communication interface as retrofit kit for SI 8.0H/6.0H master device in multicluster systems, 1 x 5 m data cable (yellow), 1 x terminator (plugged), 1 x screw, mounting instructions
SWDMSI-NR10	Speedwire data module as retrofit kit for SI3.0M/4.4M/6.0H/8.0H, 1 x 5 m patch cable, 3 x spacers, 1 x screw, 1 x cable support sleeve, 1 x filler plug, 1 x installation manual
МС-РВ	Multicluster communication interface as a retrofit kit for SI 5048 master device (CAN and RS485 communication interface on a Piggy-Back), incl.: 1 x 5 m data cable CAN-Bus (yellow), 1 x 5 m data cable RS485 (grey), 1 x adapter cable (white) from RJ45 to three open insulated conductors, 1 x grounding cable, 2 x termination resistor, mounting instructions
SIC-PB	SIC Piggy Back for the communication between SIC and the SI3.0M/4.4M/6.0H/8.0H via the sync bus of the Sunny Islands, 5 m synchronization cable for indoor installation

Adapter cables (from RJ45 to 3 open insulated conductors with bootlace ferrules with fasteners) for using RS485 communication between

Sunny Island and Sunny WebBox

# Battery fuse boxes

#### BATFUSE-B.01

Valid from: as provided in contract

BATFUSE-B.01 (price before options):	×		2-pole NH1 battery fuse switch disconnector for one Sunny Island, 3 DC input ports (1 x battery and 2 x Sunny Island Chargers), 1 X auxiliary voltage output with 8 A
	1		2 x 160 A fuse plug for Sunny Island 6.0H with 2 spare fuses
	2		2 x 200 A fuse plug for Sunny Island 8.0H with 2 spare fuses
Fuse value:	4		$2 \times 80$ A fuse plug for Sunny Island 3.0M with 2 spare fuses
	5		2 x 100 A fuse plug for Sunny Island 4.4M with 2 spare fuses
Dokumentation:		01	DE, EN, ES, FR

# BATFUSE-B.03

Valid from: as provided in contract

BATFUSE-B.03 (price before options):	x		2-pole NH1 battery fuse switch disconnector for up to 3 Sunny Island, 6 DC input ports (2 x battery and 4 x Sunny Island Charger), 1 X auxiliary voltage output with 8 A
Fuse value:	1		6 x 160 A fuse plug for Sunny Island 6.0H with 6 spare fuses
ruse value.	2		6 x 200 A fuse plug for Sunny Island 8.0H with 6 spare fuses
	4		6 x 80 A fuse plug for Sunny Island 3.0M with 6 spare fuses
	5		6 x 100 A fuse plug for Sunny Island 4.4M with 6 spare fuses
Dokumentation:		01	DE, EN, ES, FR

# Battery cable sets

**DC-CABLE.70-3** 2 x 3 m ready to use, double-insulated battery cable type NSGAFöu for connection of the battery or the BatFuse with

SI3.0M/4.4M/6.0H/8.0H. Cross-section 70 mm<sup>2</sup>, with narrow cable shoes (M8) pre assembled

**DC-CABLE.70-6** 2 x 6 m ready to use, double-insulated battery cable type NSGAFöu for connection of the battery or the BatFuse with

SI3.0M/4.4M/6.0H/8.0H. Cross-section 70 mm<sup>2</sup>, with narrow cable shoes (M8) pre assembled

PL\_EUR\_2015\_1.1\_in Bearbeitung.xlsm

SI-LS100-48

3-pole load-shedding contactor with 100 A nominal current (AC-1) with 48 V DC coil for Sunny Island SI3.0M/4.4M/6.0H/8.0H

#### Measuring shunts for the battery current detection

SI-SHUNT200 Battery current measuring shunt for Sunny Island SI3.0M/4.4M/6.0H/8.0H (200 A nominal current / 60 mV)

SI-SHUNT600 Battery current measuring shunt for Sunny Island SI3.0M/4.4M/6.0H/8.0H (600 A nominal current / 60 mV)

#### Sunny Island spare parts

BAT-TEMP-SENSOR

Reserve battery temperature sensor type KTY with 10 m connection cable for Sunny Island, Sunny Backup or Sunny Island Charger

