

electronic

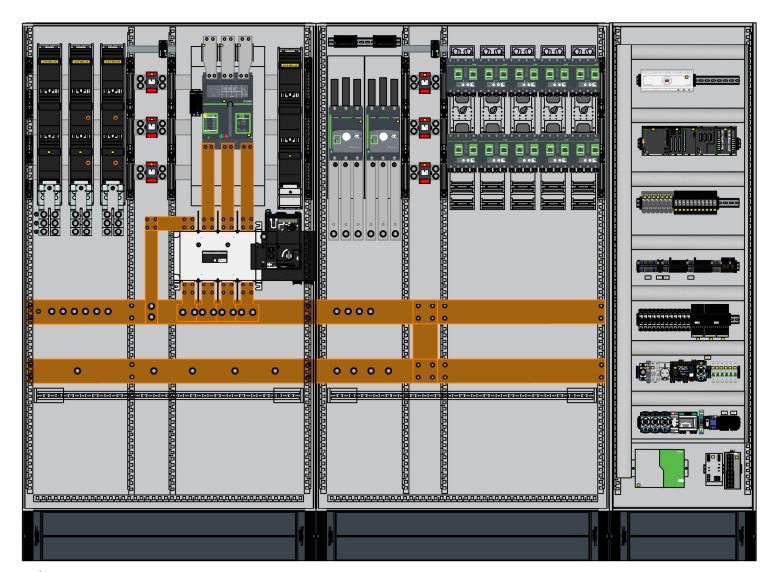
Art. no. 10018968

Central Connection Cabinet | 3PH_SMA.X_10_3CCC_500KW_3PH_SYNC_ATS

enwitec electronic GmbH Scherrwies 2 | 84329 Wurmannsquick Email info@enwitec.eu

www.enwitec.eu

CENTRAL CONNECTION CABINET, 500 KW - 10 x Sunny Island X with sync switch



SCOPE OF DELIVERY

Quantity	Designation	Quantity	Designation
1	Installation instructions	12	Cable entry plate
1	Multiline circuit diagram DIN A1	24	Screw for plinth panel
1	Singleline circuit diagram DIN A4	12	M5 plastic screw
1	Torque chart	16	M6 plastic screw
1	Test protocol	16	6.5 mm plastic disc
4	Switch cabinet key	24	screw lock
2	Key for fast stop	4	M4x12 screw
8	Long plinth panel	4	NH safety edge screw
4	Short plinth panel	4	Crane eye

Last updated: January 2025

10018968_datasheet_3PH_SMA.X_10_3CCC_500KW_3PH_SYNC_ATS_2025_01_28

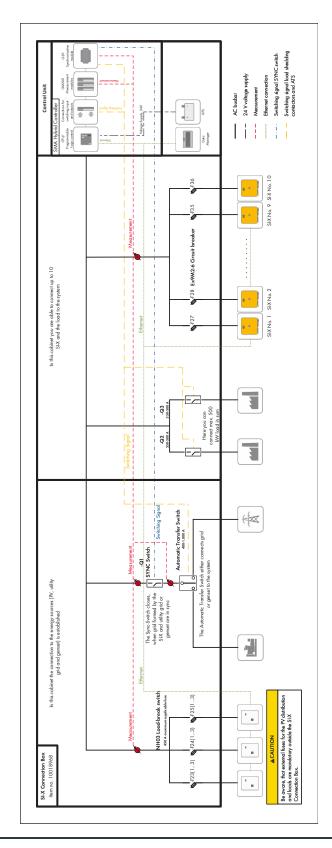




Central Connection Cabinet | 3PH_SMA.X_10_3CCC_500KW_3PH_SYNC_ATS

enwitec electronic GmbH Scherrwies 2 | 84329 Wurmannsquick Email info@enwitec.eu www.enwitec.eu

♦ SCHEMATICS – VARIANT WITH MAINS OR GENERATOR CONNECTION







Central Connection Cabinet | 3PH_SMA.X_10_3CCC_500KW_3PH_SYNC_ATS

enwitec electronic GmbH Scherrwies 2 | 84329 Wurmannsquick Email info@enwitec.eu

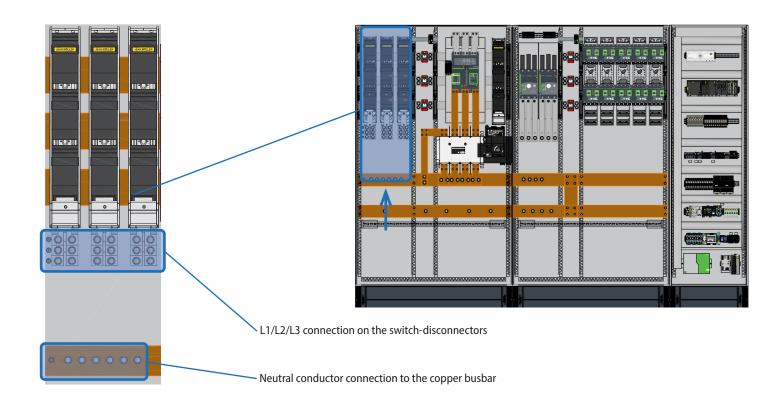
www.enwitec.eu

POWER CONNECTIONS

1. Photovoltaics

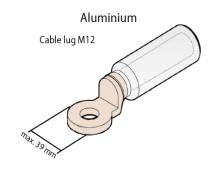
The photovoltaic system can be connected using three switch-disconnectors. The NH03 switch-disconnectors have the option of accepting two cable lugs per phase connection. The same applies to the neutral conductor connection on the copper busbar.

For more information, please refer to the technical data from page 8 onwards. For connection torques, see torque diagram.



Requirement for cable lug





Use of bi-metal cable lugs!

Last updated: January 2025 10018968_datasheet_3PH_SMA.X_10_3CCC_500KW_3PH_SYNC_ATS_2025_01_28



enwitec electronic

Art. no. 10018968

Central Connection Cabinet | 3PH_SMA.X_10_3CCC_500KW_3PH_SYNC_ATS

enwitec electronic GmbH Scherrwies 2 | 84329 Wurmannsquick Email info@enwitec.eu

www.enwitec.eu

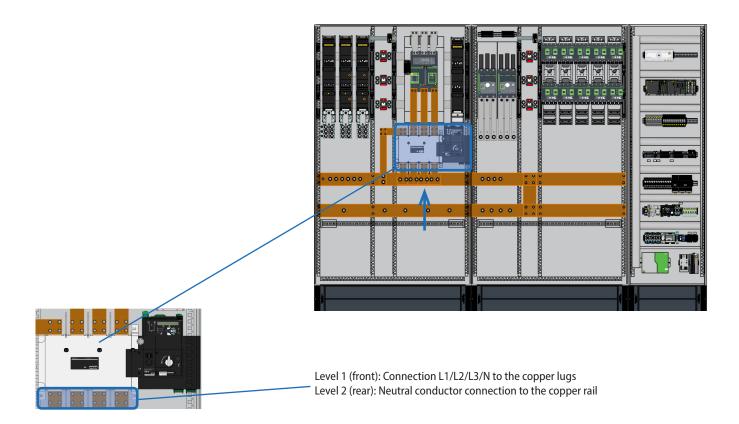
POWER CONNECTIONS

2. Generator or mains connection

A generator or the mains can be connected to the copper connection lugs of the ATS switch (Automatic Transfer Switch). The ATS switch can be used to switch on the power supply to the source. A synchronisation switch is installed downstream of this.

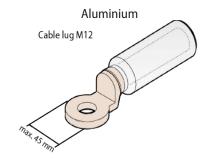
The copper terminal lugs on the ATS switch can accommodate up to four cable lugs per phase and neutral conductor.

For more information, please refer to the technical data from page 8 onwards. For connection torques, see torque diagram.



Requirement for cable lug





Use of bi-metal cable lugs!





Central Connection Cabinet | 3PH_SMA.X_10_3CCC_500KW_3PH_SYNC_ATS

enwitec electronic GmbH Scherrwies 2 | 84329 Wurmannsquick Email info@enwitec.eu

www.enwitec.eu

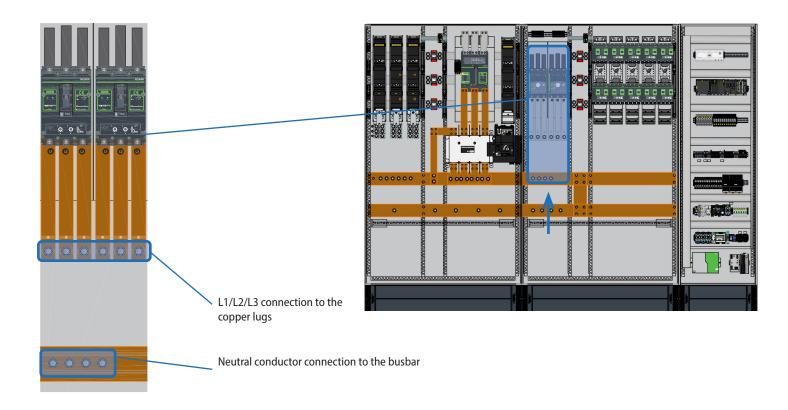
POWER CONNECTIONS

3. Load outlets

The loads are distributed to two power outlets. Loads up to a maximum of 400 A can be connected to each circuit breaker. The loads, distributed over both circuit breakers, should not exceed a total power of 500 KW*. This corresponds to a total current of approx. 725 A.

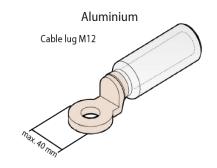
The copper terminal lugs offer the option of accommodating two cable lugs per phase connection.

For more information, please refer to the technical data from page 8 onwards. For connection torques, see torque diagram.



Requirement for cable lug





Use of bi-metal cable lugs!

^{*} Please note that the maximum power of the loads may be lower depending on the number of connected Sunny Island X battery inverters.



electronic

Art. no. 10018968

Central Connection Cabinet | 3PH_SMA.X_10_3CCC_500KW_3PH_SYNC_ATS

enwitec electronic GmbH Scherrwies 2 | 84329 Wurmannsquick Email info@enwitec.eu

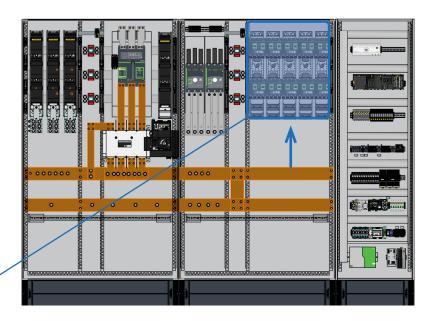
www.enwitec.eu

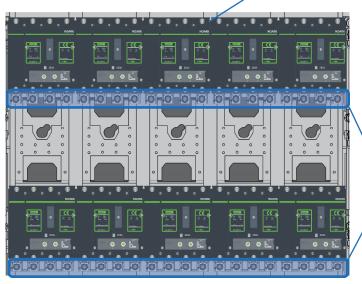
POWER CONNECTIONS

4. Connecting the Sunny Island X

A total of ten Sunny Island X units can be connected to the Central Connection Cabinet. The terminal cages on the corresponding circuit breakers are used for this.

For more information, please refer to the technical data from page 8 onwards. For connection torques, see torque diagram.





L1/L2/L3/N connection of the circuitbreaker



enwitec

Art. no. 10018968

Central Connection Cabinet | 3PH_SMA.X_10_3CCC_500KW_3PH_SYNC_ATS

enwitec electronic GmbH Scherrwies 2 | 84329 Wurmannsquick Email info@enwitec.eu

www.enwitec.eu

CONTROL COMPONENTS

The Central Connection Cabinet is supplied directly from the AC coupling for the stand-alone system. The SMA Hybrid Controller (and Data Manager M) is powered by a 24 VDC power supply buffered with 12 Ah.

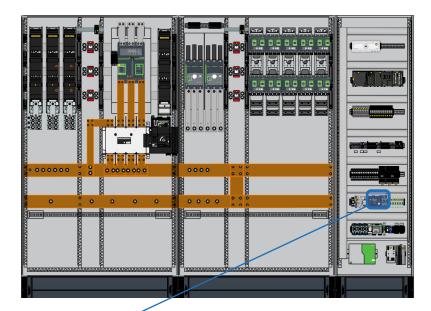
1. Source switch

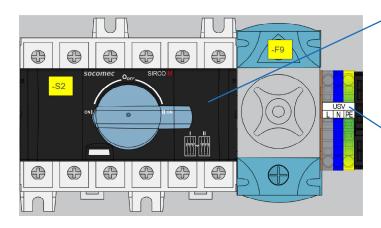
In this normal operating mode, the manual source changeover switch in the control compartment is set to position I. The service socket (on the DIN bar) is also activated in this position.

In the event of a fault or maintenance work, an external UPS can also replace the internal supply via the AC bus.

To do this, connect the UPS to the terminals provided. (max. cross-section Cu 10 mm²).

A 16 A back-up fuse (gG) is used.





L/N/PE Spring-loaded terminal





Central Connection Cabinet | 3PH_SMA.X_10_3CCC_500KW_3PH_SYNC_ATS

enwitec electronic GmbH Scherrwies 2 | 84329 Wurmannsquick Email info@enwitec.eu

www.enwitec.eu

TECHNICAL DATA

PV system CONNECTION		• applicable / - not applicable
Rated voltage	[V]	3 x 230/400
Rated frequency	[Hz]	50
Number of NH03 switch-disconnectors		3
Rated current per switch-disconnector	[A]	3 x 360
Feed-in simultaneity factor (SF) (feed-in generator – grid/PV feed-in)		1
Fuse type	[gG]	NH03
Max. applicable fuse value per switch-disconnector	[A]	3 x 450
Max. total power of the PV*	[KW]	3 x 250
Max. number of connections per switch-disconnector		2 x 3-phase
Connection type		M12 cable lug
Max. conductor cross-sections Cu	[mm²]	240
Max. conductor cross-sections Al#	[mm²]	300
GENERATOR – MAINS CONNECTION		

Rated voltage	[V]	3 x 230/400 – earthed neutral point
Rated frequency	[Hz]	50
Rated short-time current resistance I _{cw}	[nA]	20/1s
Conditional rated short-circuit current I _{cc}	[nA]	50
Rated input power generator	[KW]	max. 690
Rated current (setting range MCCB*)	[A]	max. 1000
Feed-in simultaneity factor (SF) (feed-in generator – grid/PV feed-in)		1
Number of connections		max. 4 x 3-phase + neutral conductor
Connection type		M12 cable lugs
Max. conductor cross-section Cu	[mm²]	240
Max. conductor cross-section Al [#]	[mm²]	300

For aluminium cables: Use AL-CU compression cable lugs (filled with contact grease)!

^{*} Moulded case circuit breaker = circuit breaker

^{*} Please note that the maximum total output of the photovoltaic system may be lower depending on the number of connected Sunny Island X battery inverters.





Central Connection Cabinet | 3PH_SMA.X_10_3CCC_500KW_3PH_SYNC_ATS

enwitec electronic GmbH Scherrwies 2 | 84329 Wurmannsquick Email info@enwitec.eu www.enwitec.eu

TECHNICAL DATA

CONNECTION CONSUMER I

Rated voltage	[V]	3 x 230/400
Rated frequency	[Hz]	50
Rated current (setting range MCCB*)	[A]	350 – 500
Rated diversity factor (RDF)		1
Rated power*	[KW]	max. 275
Number of connections		max. 2 x 3-phase
Connection type		M12 cable lugs
Max. conductor cross-section Cu/Al#	[mm²]	240

CONNECTION CONSUMER II

Rated voltage	[V]	3 x 230/400
Rated frequency	[Hz]	50
Rated current (setting range MCCB*)	[A]	350 – 500
Rated diversity factor (RDF)		1
Rated power*	[KW]	max. 275
Number of connections		max. 2 x 3-phase
Connection type		M12 cable lugs
Max. conductor cross-section Cu/Al#	[mm²]	240

SUNNY ISLAND X CONNECTION

Maximum number of devices		10
Rated current (setting range overcurrent release MCCB*)	[A]	87 – 125
Rated current (setting range short-circuit release MCCB*)	[A]	625 - 1250
Feed-in simultaneity factor (SF)		1
Conditional rated short-circuit current I _{cc} (per MCCB*)	[kA]	25
Connection type (directly on the MCCB*)		tunnel clamp
Conductor cross-section Cu/Al#	[mm²]	95

^{*} Total rated power for consumer I and consumer II: max. 500 KW

For aluminium cables: Use AL-CU compression cable lugs (filled with contact grease)!

^{*} Moulded case circuit breaker = circuit breaker





Central Connection Cabinet | 3PH_SMA.X_10_3CCC_500KW_3PH_SYNC_ATS

enwitec electronic GmbH Scherrwies 2 | 84329 Wurmannsquick Email info@enwitec.eu www.enwitec.eu

♦ TECHNICAL DATA

GENERAL INFORMATION Permitted grid form (for grid connection)		• applicable / - not applic TN-S, TN-C-S, TT
Rated impulse withstand voltage U _{imp}	[kV]	8
·		
Rated insulation voltage U _i (pollution degree II)	[V]	1000
Surge protection type		I/II (I _{imp} = 100 kA)
Overall dimensions incl. plinth WxHxD (without screw connections)	[mm]	3000 x 2200 x 600
Plinth height	[mm]	200
Weight, approx.	[kg]	880
Cable entries		Brush strips
Cable interceptor		C-busbar, variable in height and depth adjustable
Operating temperature range	[°C]	-25 to 40
Femperature – transport/storage (24 hours) 70°C)	[°C]	-25 to 60
Humidity – condensing permitted	•/-	-
Humidity – permissible range	[%]	0 to 80
Max. installation height (above sea level)	[m]	2000
Protection class IP (EN 60529)		54
Mechanical protection class IK (metal housing)		10
Outdoor suitability (protected area)	•/-	-
Protection class (EN 61140)		I
Housing material		decarbonised steel
RoHS-compliant (2011/65/EU)	•/-	•
Housing colour		RAL 7035
Mounting type		standing, on plinth
Closure type		cylinder lock
OTHER INFORMATION		
Customs tariff number		85371098