Certificat de conformité

Demandeur	**Hangzhou Yixing Intelligent Technology Co., Ltd.** **Room S408-2, 4th Floor, South Building, Zhifudi Building No. 181 Jingda Road,** **Xihu District, Hangzhou, Zhejiang** **China**
Produit	**Onduleur photovoltaïque et batterie**
Modèle	**CME03-2BS204, CME03-2BS204-19, CME03-2BS204-08,** **CME03-2BS204-1, CME03-2BS204-19-1, CME03-2BS204-08-1,** **CME03-2BS204-2, CME03-2BS204-19-2, CME03-2BS204-08-2,** **CME03-2BS204-3, CME03-2BS204-19-3, CME03-2BS204-08-3,** **CME03-2BS204-4, CME03-2BS204-19-4, CME03-2BS204-08-4,** **CME03-2BS204-5, CME03-2BS204-19-5, CME03-2BS204-08-5**

L'appareil est conçu pour fonctionner comme une unité de génération du type: A

Onduleur pour connexion parallèle monophasée au réseau public.

Réglementations et normes appliquées:

EN 50549-1:2019/A1:2023, NBN EN 50549-1:2019/A1:2023
Exigences relatives aux centrales électriques destinées à être raccordées en parallèle à des réseaux de distribution - Partie 1: Raccordement à un réseau de distribution BT - Centrales électriques jusqu'au Type B inclus

4.4 Plage de fonctionnement normale
4.5 Immunité aux perturbations
4.6 Réponse active à l'écart de fréquence
4.7 Réponse de puissance aux variations de tension et aux changements de tension
4.8 CEM et qualité de l'alimentation
4.9 Protection d'interface
4.10 Connexion et démarrage de la production d'énergie électrique
4.11 Arrêt et réduction de la puissance active au point de consigne
4.13 Exigences concernant la tolérance de panne unique du système de protection d'interface et du commutateur d'interface

C10/11:2024-10
Prescriptions techniques spécifiques de raccordement d'installations de production décentralisée fonctionnant en parallèle sur le réseau de distribution

EN 50549-10:2022, NBN EN 50549-10:2022
Exigences relatives aux centrales électriques destinées à être raccordées en parallèle à des réseaux de distribution - Partie 10: essais d'évaluation de la conformité des unités de production

Conformité aux paramètres des annexes C de la norme
(voir annexe Tableau des paramètres)

Règlement (UE) 2016/631 De La Commission du 14 avril 2016
Etablissant un code de réseau sur les exigences applicables au raccordement au réseau des installations de production d'électricité. Homologation de type pour les unités de production à utiliser dans les installations de type A.

Au moment de la délivrance de ce certificat, le produit représentatif énuméré ci-dessus correspond aux règles et normes énoncées.

Numéro de rapport: **LS2A25062404EGEU01** **Programme de certification:** **NSOP-0032-DEU-ZE-V10**

Numéro de certificat: **U25-0908** **Délivré le:** **2025-10-16**

Organisme de certification **Accréditation**

Georg LORITZ
Lab Supervisor Energy Systems

DAkkS Deutsche Akkreditierungsstelle D-ZE-12024-01-00

Type Approval and declaration of compliance with the requirements of EN 50549-1 and Commission Regulation (EU) 2016/631 of 14 April 2016 and C10/11 for Belgium				
Manufacturer	Hangzhou Yixing Intelligent Technology Co., Ltd. Room S408-2, 4th Floor, South Building, Zhifudi Building No. 181 Jingda Road, Xihu District, Hangzhou, Zhejiang China			
Product type	Photovoltaic and battery inverter (Hybrid-Inverter)			
Static converter model	CME03-2BS204 CME03-2BS204-1* CME03-2BS204-2 * CME03-2BS204-3* CME03-2BS204-4* CME03-2BS204-5*	CME03-2BS204-19 CME03-2BS204-19-1* CME03-2BS204-19-2* CME03-2BS204-19-3* CME03-2BS204-19-4* CME03-2BS204-19-5*	CME03-2BS204-08 CME03-2BS204-08-1* CME03-2BS204-08-2* CME03-2BS204-08-3* CME03-2BS204-08-4* CME03-2BS204-08-5*	--
Input DC (photovoltaic)				
MPP voltage range [V]	16-60	16-60	16-60	--
Max. input voltage [V]	60	60	60	--
Max. input current per MPPT [A]	4 x 18	4 x 18	4 x 18	--
Input DC (battery)				
DC voltage range [V]	51,2	51,2	51,2	--
Standard charge / discharge current [A]	20 / 20	20 / 20	20 / 20	--
Max. charge / discharge current [A]	40 / 45	40 / 45	40 / 45	--
Output AC				
Rated AC voltage [V]	220V / 230V, L+N+PE, 50 Hz	220V / 230V, L+N+PE, 50 Hz	220V / 230V, L+N+PE, 50 Hz	--
Rated output current [A]	11	9	3,5	--
Max. output current [A]	11	11	11	--
Nom. converter output (P_{NINV}) [W]	2500	1999	800	--
Rated apparent power [VA]	2500	1999	800	--
In on-grid battery mode AC				
P_{sn} (nom. discharge power) [W]	2500	1999	800	--
P_{cn} (nom. charging power) [W]	2500	2500	2500	--
P_{smax} (max. discharge power) [W]	2500	1999	800	--
P_{cmax} (max. charging power) [W]	2500	2500	2500	--
Type	Bidirectional	Bidirectional	Bidirectional	--
In off-grid battery mode				
P_{sn} (nom. discharge power) [kW]	2500	2500	2500	--
P_{smax} (max. discharge power) [kW]	2500	2500	2500	--

Interface protection system and interface switch (Network and system protection "NS-protection")	
Type of protection	Integrated NS-protection
Assigned to generation unit type	CME03-2BS204, CME03-2BS204-19, CME03-2BS204-08, CME03-2BS204-1, CME03-2BS204-19-1, CME03-2BS204-08-1, CME03-2BS204-2, CME03-2BS204-19-2, CME03-2BS204-08-2, CME03-2BS204-3, CME03-2BS204-19-3, CME03-2BS204-08-3, CME03-2BS204-4, CME03-2BS204-19-4, CME03-2BS204-08-4, CME03-2BS204-5, CME03-2BS204-19-5, CME03-2BS204-08-5
Integrated interface switch	Type of switching equipment 1: Galvanic separation HF-Transformer Type of switching equipment 2: Relais (Model HF3FF)
Firmware version	V1.10

Note

The settings of the generators are password protected adjustable.

In case the generators are used with an external protection device, the protection settings of the inverters are to be adjusted according to the manufacturer's declaration.

The above stated generators are tested according to the requirements in the EN 50549-1 and the Commission Regulation (EU) 2016/631 of 14 April 2016. Any modification that affects the stated tests must be named by the manufacturer/supplier of the product to ensure that the product meets all requirements.

Parameter list						
Name of parameter set		8				
Clause(s) / subclause(s) of EN 50549-1:2019+A1:2023	Parameter	Remarks / additional information	configurable value range	Step size	unit	default value
4.3.2 Interface switch	Single fault tolerance for interface switch required	Requirement met	---	---	---	---
4.4.2 Operating frequency range	LowFrequencyProtectPoint1	Requirement acc. EN 50549-1, table 1 can be met	47.49-50.0	0.01	Hz	47.49
	HighFrequencyProtectPoint1	Requirement acc. EN 50549-1, table 1 can be met	50.0-51.51	0.01	Hz	51.51
4.4.3 Minimal requirement for active power delivery at under frequency	UnderFrequencyStartFrequency1	Requirement acc. EN 50549-1, clause 4.4.3 can be met	---	---	Hz	49.8
4.4.4 Continuous operating voltage range	LowVoltageProtectPoint1	---	180-207.0	0.1	V	193.5
	HighVoltageProtectPoint1	---	253.0-276.0	0.1	V	255.3
4.5.2 Rate of change of frequency (ROCOF) immunity	---	ROCOF withstand capability ≥ 2Hz/s	not configurable	---	Hz/s	2
4.5.3.2 Generating plant with non-synchronous generating technology (FRT)	LowThroughRevTime	---	Not configurable	---	---	≤ 1s
	LVRT_Enable	Enable under voltage ride through	1: Enable, 0: Disable	---	---	1
	LVRT_V1	LVRT-voltage level1	0.0-100.0	0.1	%Un	85.0
	LVRT_V2	LVRT-voltage level2	0.0-100.0	0.1	$\%U_n$	5.0
	LVRT_T1	LVRT-time level1	0.00-60.00	0.01	s	3.00
	LVRT_T2	LVRT-time level2	0.00-60.00	0.01	s	0.25
	LVRT_Vin	LVRT-entry voltage	0.0-100.0	0.1	V	85.0
	LVRT_Vout	LVRT-exit voltage	0.0-100.0	0.1	V	90.0
	LVRT_ZCM	LVRT-zero current mode	0-1	1	---	0
	LVRT_ZCTV	LVRT-zero current trigger voltage	0.0-100.0	0.1	V	80.0
4.5.4 Over-voltage ride through (OVRT)	HVRT_Enable	Enable over voltage ride through	1: Enable, 0: Disable	---	---	0
	HVRT_V1	HVRT-voltage level1	0.0 - 150.0	0.1	%Un	115.0
	HVRT_V2	HVRT-voltage level2	0.0 - 150.0	0.1	$\%U_n$	120.0
	HVRT_V3	HVRT-voltage level3	0.0 - 150.0	0.1	$\%U_n$	125.0
	HVRT_T1	HVRT-time level1	0.00 - 60.00	0.01	s	60.00
	HVRT_T2	HVRT-time level2	0.00 - 60.00	0.01	s	5.00
	HVRT_T3	HVRT-time level3	0.00 - 60.00	0.01	s	0.10
	HVRT_Vin	HVRT-entry voltage	100.0 - 150.0	0.1	V	115.0
	HVRT_Vout	HVRT-exit voltage	100.0 - 150.0	0.1	V	110.0
	HVRT_ZCM	HVRT-zero current mode	0-1	1	---	0
	HVRT_ZCTV	HVRT-zero current trigger voltage	100.0-150.0	0.1	V	115.0

4.6.1 Power response to over frequency (LFSM-O)	OverFrequencyStartPoint	Threshold frequency f1	50.00 - 52.00	0.01	Hz	50.20
	P-OF-F1	---	47.50-52.50	0.01	Hz	50.00
	P-OF -P1	---	5.0-15.0	0.1	%	10.0
	P-OF-F2	---	47.50-52.50	0.01	Hz	50.20
	P-OF -P2	---	5.0-15.0	0.1	%	10.0
	P-OF-F3	---	50.00-55.00	0.01	Hz	52.70
	P-OF -P3	---	0.0-10.0	0.1	%	0.0
	P_OF_F_R	---	47.50-52.50	0.01	Hz	50.20
	P_OF_Tin	---	0-50	1	s	10
	P_OF_Tout	---	0-50	1	s	10
	P_OF_PrefSet	---	0-2000	1	---	1000
	P_OF_SSRin	---	6-6000	10	%Pn/min	100
	P_OF_RRout	---	6-6000	100	%Pn/min	6000
4.6.2 Power response to under frequency (LFSM-U)	P-LF-F1	---	47.50-52.50	0.01	Hz	50.00
	P-LF -P1	---	0.0-10.0	0.1	%	0.0
	P-LF-F2	---	47.50-52.50	0.01	Hz	49.80
	P-LF -P2	---	0.0-10.0	0.1	%	0.0
	P-LF-F3	---	45.00-52.50	0.01	Hz	47.30
	P-LF -P3	---	0.0-100.0	0.1	%	100.0
	P-LF-F_R	---	47.50-52.50	0.01	Hz	49.80
	P_LF_Tin	---	0-10	1	s	1
	P_LF_Tout	---	0-10	1	s	1
	P_LF_PrefSet	---	0-100	1	---	1000
	P_LF_SSRin	---	6-600	10	%Pn/min	100
	P_LF_RRout	---	6-600	100	%Pn/min	100
4.7.2.2 voltage support by reactive power - Capabilities	Reactive power range	---	-1087 - 1087	1	Var	0
	PFSet	---	-0.90 - 1.00 – 0.90	0.01	---	1.00
4.7.2.3 Control modes	VQEnable	---	Q setpoint Q(U) cosφ setpoint cosφ(P)	---	---	Q setpoint
4.7.2.3.2 Set point control modes (Q setpoint and excitation)	Reactive power setting value	---	-1087 - 1087	1	Var	0
	tau	PT1-filtering time constant	0.00 - 60.00	0.01	s	3.33
4.7.2.3.2 Set point control modes (cosφ setpoint and excitation)	cosφ setting value	---	-0.90 - 1.00 - 0.90	0.01	---	1.00
	Tau value	PT1-filtering time constant	0.00 - 60.00	0.01	s	3.33

4.7.2.3.3 Voltage related control modes - Q(U)	QU -U1	---	90.0-110.0	0.1	%	93.0
	QU -Q1	---	-100.0 - 100.0	0.1	%Q_n	100.0
	QU -U2	---	90.0-110.0	0.1	%	94.0
	QU -Q2	---	-100.0 - 100.0	0.1	%Q_n	0.0
	QU -U3	---	90.0-110.0	0.1	%	100.0
	QU -Q3	---	-100.0 - 100.0	0.1	%Q_n	0.0
	QU -U4	---	90.0-110.0	0.1	%	106.0
	QU -Q4	---	-100.0 - 100.0	0.1	%Q_n	0.0
	QU -U5	---	90.0-110.0	0.1	%	108.0
	QU -Q5	---	-100.0 - 100.0	0.1	%Q_n	-100.0
	tau	PT1-filtering time constant	0.0 - 60.0	0.1	s	2.0
	QU_Pin	---	---	0.1	%	0
	QU_Pout	---	---	0.1	%	0
	QU_PFmin	---	---	0.01	---	40
4.7.2.3.4 Power related control mode - cosφ(P)	Cosφ-P Ctrl	Cos ϕ (P) curve Mode 1: Cosφ-P 0: Disable	[0 / 1]	---	---	0
	Cosφ-P-P1	---	0.0-100.0	0.1	%Sn	10.0
	Cosφ-P-F1	---	-0.90 – 0.90	0.01	---	0.90
	Cosφ-P-P2	---	0.0-100.0	0.1	% Sn	20.0
	Cosφ-P-F2	---	-0.90 – 0.90	0.01	---	0.10
	Cosφ-P-P3	---	0.0-100.0	0.1	% Sn	50.0
	Cosφ-P-F3	---	-0.90 – 0.90	0.01	---	1.00
	Cosφ-P-P4	---	0.0-100.0	0.1	% Sn	80.0
	Cosφ-P-F4	---	-0.90 – 0.90	0.01	---	0.10
	Cosφ-P-P5	---	0.0-100.0	0.1	% Sn	90.0
	Cosφ-P-F5	---	-0.90 – 0.90	0.01	---	-0.90
	tau	PT1-filtering time constant	0.0 - 60.0	0.1	s	2.0
	Cosφ-P-Vin	---	---	0.1	%	0.0
	Cosφ-P-Vout	---	---	0.1	%	0.0
	Cosφ-P-Pout	---	---	0.1	%	0.0
4.7.4.2.2 Zero current mode for converter connected generating technology	LVRT_ZCTV	---	0.00-1.00	0.01	%U_n	0.80
	HVRT_ZCTV	---	1.00-1.25	0.01	%U_n	1.15

4.9.2 Requirements on voltage and frequency protection	LowVoltageProtectPoint1	Undervoltage threshold stage 1	180.0 - 207.0	0.1	V	193.5
	LowVoltageTripTime1	Undervoltage operate time stage 1	100 - 100000	100	ms	10000
	LowVoltageProtectPoint2	Undervoltage threshold stage 2	92.0 - 161.0	0.1	V	114.0
	LowVoltageTripTime2	Undervoltage operate time stage 2	100 - 5000	10	ms	120
	HighVoltageProtectPoint1	Overvoltage threshold stage 1	253.0-276.0	0.1	V	276.0
	HighVoltageTripTime1	Overvoltage operate time stage 1	100 - 100000	100	ms	10000
	HighVoltageProtectPoint2	Overvoltage threshold stage 2	276.0 – 288.5	0.1	V	288.5
	HighVoltageTripTime2	Overvoltage operate time stage 2	100 - 5000	100	ms	200
	OverVoltageProtectVoltage10Minute	Overvoltage threshold 10min mean protection	230.0 – 264.5	0.1	V	253.0
	LowFrequencyProtectPoint1	Underfrequency threshold stage 1	47.49 – 50.00	0.01	Hz	47.49
	LowFrequencyTripTime1	Underfrequency operate time stage 1	100 - 100000	100	ms	2000
	LowFrequencyProtectPoint2	Underfrequency threshold stage 2	46.99 –47.50	0.01	Hz	46.99
	LowFrequencyTripTime2	Underfrequency operate time stage 2	100 - 5000	100	ms	120
	HighFrequencyProtectPoint1	Overfrequency threshold stage 1	50.00 – 51.51	0.01	Hz	51.51
	HighFrequencyTripTime1	Overfrequency operate time stage 1	100 - 100000	100	ms	2000
	HighFrequencyProtectPoint2	Overfrequency threshold stage 2	51.00 - 52.50	0.01	Hz	52.01
	HighFrequencyTripTime2	Overfrequency operate time stage 2	100 - 5000	10	ms	120
4.10.2 Automatic reconnection after tripping	OnGirdWaitTime2	---	10.0 - 600.0	0.1	s	60.0
	ReconnectUpwardSlope	---	6 - 3000	10	s/100%Pn	660
	ConnectVoltageMaxThreshold2	---	230.0 - 276.0	0.1	V	253.0
	ConnectVoltageMinThreshold2	---	190.0 - 230.0	0.1	V	195.5
	ConnectFrequencyMaxThreshold2	---	50.00 – 50.50	0.01	Hz	50.20
	ConnectFrequencyMaxThreshold2	---	47.00 - 50.00	0.01	Hz	49.50
4.10.3 Starting to generate electrical power	OnGirdWaitTime1	---	10.0 - 600.0	0.1	s	60.0
	ReconnectUpwardSlope	---	6 - 3000	10	s/100%Pn	660
	ConnectVoltageMaxThreshold1	---	230.0 - 276.0	0.1	V	253.0
	ConnectVoltageMinThreshold1	---	115.0 - 230.0	0.1	V	195.5
	ConnectFrequencyMaxThreshold1	---	50.00 - 52.00	0.01	Hz	50.10
	ConnectFrequencyMinThreshold1	---	47.00 - 50.00	0.01	Hz	49.50

4.11.1 Ceasing active power	---	---	---	---	---	RS485
4.11.2 Reduction of active power on set point	ActivePowerControlPower	---	0.0 - 100.0	0.1	%	100.0
	ActivePowerSlope	---	6 - 3000	10	s/100%Pn	660
4.12 Remote information exchange	---	---	---	---	---	---