

ist Hersteller und verantwortlich für:

## Konformitätserklärung / Declaration of Conformity

Produkt-Typ:	Plug & Play Photovoltaik-Set für Netzparallelbetrieb steckbar mittels Haushaltsstecker in Endstromkreis
Modell:	420 Wp Plug & Play Solar (CN)
Komponenten:	<ul style="list-style-type: none"> <li>• 1x JA Solar JAM54S30-420/GR / 420 Wp / IP-67 / Schutzklasse II</li> <li>• 1x Hoymiles HM-300 mit N/A Schutz und eingebauter RCMU / IP67 Schutzart / Schutzklasse II / Input max. 60VDC, Output max. 230VAC, 50-60Hz, 300VA, 1,30A</li> <li>• 1x Anschlusskabel vorkonfektioniert mit Betteri Buchse IP67, 5m oder 10m / 3x1,5mm<sup>2</sup> Leitung / AC Seitig CH-Typ 13 Stecker IP 55</li> </ul>

**Konform nach ESTI-Mitteilung 07/2014 und in Übereinstimmung mit der Verordnung über elektrische Niederspannungserzeugnisse (NEV; SR 734.26) (Stand 06.03.2023).**

### Dazu angewandte Normen:

JA Solar JAM54S30-420/GR	EN 61215-1:2016, EN 61215-1-1:2016, IEC 61215-2:2016, EN 61215-2:2017, IEC 61730-1:2016, EN IEC 61730-1:2018, EN IEC 61730-1:2018/AC:2018-06, IEC 61730-2:2016, EN IEC 61730-2:2018, EN IEC 61730-2:2018/AC:2018-06
Hoymiles HM-300	VDE-ARN-N 4105: 2018-11, VDE V 0124-100:2019 & EN50549-1:2019, VFR 2019 IEC/EN 62109-1:2010/-2:2011, IEC/EN 61000-6-1:2019;EN 61000-6-2:200; EN 61000-6-3:2007+A1:2011; EN 61000-6-4:2019; EN 61000-3-2:2019; EN 61000-3-3:2013+A1:2019, IEC/EN 62311:2008 NEMA (IP67) Gehäuse; 6000 V Stromstossschutz
Hoymiles Anschlusskabel vorkonfektioniert in 5m oder 10m ausführung	Betteri Buchse Wechselrichterseite, Schutzart IEC EN 60529 IP67 Anschlusskabel 5m oder 10m H07RN-F, EN 50525-2-21: 2011 Stecker CH Typ 13: IEC 60884-1 (Ed 4.0): 2022 / SN 441011-1: 2019 +Corr2019 / SN 441011-2-1:2021, IP55
ROHS	Gesamtes Set konform gemäss IEC EN 63000: 2018

Michael Sebel, Geschäftsführung  
erneuer.bar services GmbH



## Technische Daten zu Hoymiles HM-300

Modell	HM-300	HM-350	HM-400
<b>Eingabedaten (DC)</b>			
Leistung des gewöhnlich verbrauchten Moduls(W)	240~380	280~440	320~500
Modulkompatibilität	PV-Module mit 60 Zellen oder 72 Zellen		
Spitzenleistung MPPT des Spannungsbereichs (V)	29~48	33-48	34~48
Anlaufspannung (V)	22	22	22
Betriebsspannungsbereich (V)	16~60	16-60	16~60
Maximale Eingangsspannung (V)	60	60	60
Maximaler Eingangsstrom (A)	11.5	11.5	12.5
<b>Ausgangsdaten (AC)</b>			
Spitzenausgangsleistung (VA)	300	350	400
Nennausgangsstrom (A)	1.36 / 1.30 / 1.25	1.59 / 1.52 / 1.46	1.82 / 1.74 / 1.67
Nennausgangsspannung (V)	220 / 230 / 240	220 / 230 / 240	220 / 230 / 240
Bereich der Nennausgangsspannung (V)	180-275 <sup>1</sup>	180-275 <sup>1</sup>	180-275 <sup>1</sup>
Nennfrequenz/-bereich (Hz)	50/45-55 <sup>1</sup> oder 60/55-65 <sup>1</sup>	50/45-55 <sup>1</sup> oder 60/55-65 <sup>1</sup>	50/45-55 <sup>1</sup> oder 60/55-65 <sup>1</sup>
Leistungsfaktor (einstellbar)	>0,99 standardmäßig 0,8 führend.....0,8 verzögert	>0,99 standardmäßig 0,8 führend.....0,8 verzögert	>0,99 standardmäßig 0,8 führend.....0,8 verzögert
Gesamte harmonische Verzerrung	<3%	<3%	<3%
Maximale Einheiten pro Abweig <sup>2</sup>	16 / 16 / 16	14 / 14 / 14	12 / 12 / 12
<b>Effizienz</b>			
CEC-Spitzenwirkungsgrad	96.70%	96.70%	96.70%
CEC-gewichteter Wirkungsgrad	96.50%	96.50%	96.50%
Nominaler MPPT-Wirkungsgrad	99.80%	99.80%	99.80%
Nächtlicher Stromverbrauch (mW)	<50	<50	<50
<b>Mechanische Daten</b>			
Umgebungstemperaturbereich (°C)	-40~+65		
Abmessungen (B×H×T mm)	182 x 164 x 29.5		
Gewicht (kg)	1.98		
Gehäuseeinstufung	Außenbereich-NEMA(IP67)		
Lüftung	Natürliche Umluft – keine Lüfter		
<b>Merkmale</b>			
Kommunikation	2.4 GHz Proprietäre RF (Nordisch)		
Überwachung	Hoymiles-Überwachungssystem		
Garantie	Bis zu 25 Jahre		
Einhaltung	VDE-R-N 4105: 2018, EN 50549-1: 2019, VFR 2019, IEC/EN 62109-1/-2, IEC/EN 61000-6-1/-2/-3/-4, IEC/EN 61000-3-2/-3		

## Konformitätserklärung zu JA Solar JAM60S20-385/MR

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ CERTIFICADO ◆ СЕРТИФИКАТ ◆ CERTIFICAT



# CERTIFICATE

No. Z2 072092 0295 Rev. 45

**Holder of Certificate:** Shanghai JA Solar Technology Co., Ltd.  
No. 118, Lane 3111  
West Huancheng Road  
Fengxian District  
201401 Shanghai  
PEOPLE'S REPUBLIC OF CHINA

**Certification Mark:**




**Product:** Crystalline Silicon Terrestrial Photovoltaic (PV) Modules  
Mono-Crystalline Silicon Photovoltaic Module

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition, the certification holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. All applicable requirements of the testing and certification regulations of TÜV SÜD Group have to be complied. For details see: [www.tuvsud.com/ps-cert](http://www.tuvsud.com/ps-cert)

**Test report no.:** 704061604115-60

**Valid until:** 2027-01-18

**Date,** 2022-01-20

  
( Zhulin Zhang )



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### Model(s):

1500 V DC Maximum System voltage, Fire Safety Class A or C Modules:  
 JAM72D00-xxx/BP/1500V, JAM72D00-xxx/BP, xxx= 330 to 385 in steps of 5;  
 JAM60D00-xxx/BP/1500V, JAM60D00-xxx/BP, xxx= 275 to 320 in steps of 5;  
 JAM60D00-xxx/PR/1500V, JAM60D00-xxx/PR, xxx= 285 to 320 in steps of 5;  
 JAM72D00-xxx/PR/1500V, JAM72D00-xxx/PR, xxx= 340 to 385 in steps of 5;  
 JAM60D00-xxx/MB/1500V, JAM60D00-xxx/MB, xxx= 310 to 315 in steps of 5;  
 JAM72D00-xxx/MB/1500V, JAM72D00-xxx/MB, xxx= 370 to 380 in steps of 5;  
 JAM72D09-xxx/BP/1500V, JAM72D09-xxx/BP, xxx= 360 to 400 in steps of 5;  
 JAM60D09-xxx/BP/1500V, JAM60D09-xxx/BP, xxx= 300 to 340 in steps of 5;  
 JAM72D10-xxx/MB/1500V, JAM72D10-xxx/MB, xxx= 385 to 430 in steps of 5;  
 JAM60D10-xxx/MB/1500V, JAM60D10-xxx/MB, xxx= 320 to 355 in steps of 5;  
 JAM72D10-xxx/BP/1500V, JAM72D10-xxx/BP, xxx= 385 to 415 in steps of 5;  
 JAM60D10-xxx/BP/1500V, JAM60D10-xxx/BP, xxx= 320 to 345 in steps of 5;  
 JAM66D10-xxx/MB/1500V, JAM66D10-xxx/MB, xxx= 360 to 380 in steps of 5;  
 JAM78D10-xxx/MB/1500V, JAM78D10-xxx/MB, xxx= 435 to 455 in steps of 5;  
 JAM72D20-xxx/MB/1500V, JAM72D20-xxx/MB, xxx= 430 to 465 in steps of 5;  
 JAM60D20-xxx/MB/1500V, JAM60D20-xxx/MB, xxx= 355 to 385 in steps of 5;  
 JAM72D10-xxx/TB/1500V, JAM72D10-xxx/TB, xxx= 400 to 420 in steps of 5;  
 JAM60D10-xxx/TB/1500V, JAM60D10-xxx/TB, xxx= 335 to 350 in steps of 5;  
 JAM78D30-xxx/MB/1500V, JAM78D30-xxx/MB, xxx= 580 to 605 in steps of 5;  
 JAM72D30-xxx/MB/1500V, JAM72D30-xxx/MB, xxx= 505 to 555 in steps of 5;  
 JAM72D30-xxx/MB/F/1500V, JAM72D30-xxx/MB/F,  
 xxx= 505 to 555 in steps of 5;  
 JAM66D30-xxx/MB/1500V, JAM66D30-xxx/MB, xxx= 465 to 505 in steps of 5;  
 JAM66D30-xxx/MB/F/1500V, JAM66D30-xxx/MB/F,  
 xxx= 465 to 505 in steps of 5;  
 JAM60D30-xxx/MB/1500V, JAM60D30-xxx/MB, xxx=435 to 460 in steps of 5;  
 JAM54D30-xxx/MB/1500V, JAM54D30-xxx/MB, xxx= 390 to 415 in steps of 5;  
 JAM50D40-xxx/MB/1500V, JAM50D40-xxx/MB, xxx= 485 to 500 in steps of 5;  
 JAM78D30-xxx/GB/1500V, JAM78D30-xxx/GB, xxx= 585 to 595 in steps of 5;  
 JAM72D30-xxx/GB/1500V, JAM72D30-xxx/GB, xxx= 540 to 550 in steps of 5;  
 JAM66D30-xxx/GB/1500V, JAM66D30-xxx/GB, xxx= 495 to 500 in steps of 5;  
 JAM60D30-xxx/GB/1500V, JAM60D30-xxx/GB, xxx= 450 to 455 in steps of 5;  
 JAM54D30-xxx/GB/1500V, JAM54D30-xxx/GB, xxx= 405 to 410 in steps of 5;  
 JAM72D30-xxx/HB/1500V, JAM72D30-xxx/HB, xxx= 530 to 560 in steps of 5;  
 JAM78D30-xxx/TB/1500V, JAM78D30-xxx/TB, xxx= 580 to 610 in steps of 5;  
 JAM72D30-xxx/TB/1500V, JAM72D30-xxx/TB, xxx= 540 to 560 in steps of 5;  
 JAM66D30-xxx/TB/1500V, JAM66D30-xxx/TB, xxx= 500 to 515 in steps of 5;  
 JAM60D30-xxx/TB/1500V, JAM60D30-xxx/TB, xxx= 455 to 470 in steps of 5;  
 JAM54D30-xxx/TB/1500V, JAM54D30-xxx/TB, xxx= 405 to 420 in steps of 5;

1000 V DC Maximum System voltage, Fire Safety Class C Modules:  
 JAM6(K)-72-xxx/PR, xxx= 345 to 370 in steps of 5;  
 JAM6(K)-60-xxx/PR, xxx= 285 to 310 in steps of 5;  
 JAM6(K)-72-xxx/4BB, xxx= 320 to 345 in steps of 5;  
 JAM6(K)-60-xxx/4BB, xxx= 265 to 285 in steps of 5;  
 JAM72S01-xxx/SC/1000V, xxx= 320 to 365 in steps of 5;  
 JAM60S01-xxx/SC/1000V, xxx= 265 to 305 in steps of 5;  
 JAM72S01-xxx/PR/1000V, xxx= 345 to 390 in steps of 5;  
 JAM60S01-xxx/PR/1000V, xxx= 285 to 325 in steps of 5;  
 JAM72S01-xxx/MR/1000V, xxx= 365 to 385 in steps of 5;  
 JAM60S01-xxx/MR/1000V, xxx= 305 to 320 in steps of 5;  
 JAM72S03-xxx/PR/1000V, xxx= 360 to 395 in steps of 5;  
 JAM60S03-xxx/PR/1000V, xxx= 300 to 330 in steps of 5;  
 JAM72S09-xxx/PR/1000V, xxx= 370 to 405 in steps of 5;  
 JAM60S09-xxx/PR/1000V, xxx= 310 to 335 in steps of 5;  
 JAM72S10-xxx/PR/1000V, xxx= 380 to 410 in steps of 5;  
 JAM60S10-xxx/PR/1000V, xxx= 315 to 345 in steps of 5;  
 JAM72S10-xxx/MR/1000V, xxx= 390 to 430 in steps of 5;  
 JAM60S10-xxx/MR/1000V, xxx= 325 to 355 in steps of 5;  
 JAM60S10-xxx/MR-L/1000V, xxx= 325 to 355 in steps of 5;  
 JAM78S10-xxx/MR/1000V, xxx= 435 to 465 in steps of 5;  
 JAM66S10-xxx/MR/1000V, xxx= 345 to 390 in steps of 5;  
 JAM72S09-xxx/BP/1000V, xxx= 375 to 385 in steps of 5;  
 JAM60S09-xxx/BP/1000V, xxx= 315 to 320 in steps of 5;  
 JAM72S10-xxx/BP/1000V, xxx= 385 to 400 in steps of 5;  
 JAM60S10-xxx/BP/1000V, xxx= 320 to 330 in steps of 5;  
 JAM72S02-xxx/PR/1000V, xxx= 345 to 390 in steps of 5;  
 JAM60S02-xxx/PR/1000V, xxx= 285 to 325 in steps of 5;  
 JAM72S02-xxx/SC/1000V, xxx= 320 to 365 in steps of 5;

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JAM60S02-xxx/SC/1000V, xxx= 265 to 305 in steps of 5;  
 JAM72S02-xxx/MR/1000V, xxx= 365 to 385 in steps of 5;  
 JAM60S02-xxx/MR/1000V, xxx= 305 to 320 in steps of 5;  
 JAM72S08-xxx/PR/1000V, xxx= 360 to 395 in steps of 5;  
 JAM60S08-xxx/PR/1000V, xxx= 300 to 330 in steps of 5;  
 JAM72S12-xxx/PR/1000V, xxx= 365 to 385 in steps of 5;  
 JAM60S12-xxx/PR/1000V, xxx= 305 to 330 in steps of 5;  
 JAM72S17-xxx/PR/1000V, xxx= 380 to 390 in steps of 5;  
 JAM60S17-xxx/PR/1000V, xxx= 315 to 325 in steps of 5;  
 JAM72S17-xxx/MR/1000V, xxx= 390 to 430 in steps of 5;  
 JAM60S17-xxx/MR/1000V, xxx= 315 to 355 in steps of 5;  
 JAM72S10-xxx/MB/1000V, xxx= 395 to 415 in steps of 5;  
 JAM60S10-xxx/MB/1000V, xxx= 330 to 345 in steps of 5;  
 JAM72S20-xxx/MR/1000V, xxx= 430 to 470 in steps of 5;  
 JAM60S20-xxx/MR/1000V, xxx= 355 to 390 in steps of 5;  
 JAM78S30-xxx/MR/1000V, xxx= 580 to 605 in steps of 5;  
 JAM72S30-xxx/MR/1000V, xxx= 510 to 555 in steps of 5;  
 JAM66S30-xxx/MR/1000V, xxx= 470 to 505 in steps of 5;  
 JAM60S30-xxx/MR/1000V, xxx= 435 to 460 in steps of 5;  
 JAM54S30-xxx/MR/1000V, xxx= 390 to 415 in steps of 5;  
 JAM60S21-xxx/MR/1000V, xxx= 355 to 390 in steps of 5;  
 JAM50S40-xxx/MR/1000V, xxx= 490 to 500 in steps of 5;  
 JAM72S20-xxx/MB/1000V, xxx= 450 to 465 in steps of 5;  
 JAM60S20-xxx/MB/1000V, xxx= 375 to 390 in steps of 5;  
 JAM72S31-xxx/MR/1000V, xxx= 510 to 545 in steps of 5;  
 JAM66S31-xxx/MR/1000V, xxx= 470 to 500 in steps of 5;  
 JAM60S31-xxx/MR/1000V, xxx= 425 to 450 in steps of 5;  
 JAM54S31-xxx/MR/1000V, xxx= 385 to 405 in steps of 5;  
 JAM76S11-xxx/PR(B)/1000V, xxx= 395 to 415 in steps of 5;  
 JAM78S30-xxx/GR/1000V, xxx= 575 to 600 in steps of 5;  
 JAM72S30-xxx/GR/1000V, xxx= 535 to 555 in steps of 5;  
 JAM66S30-xxx/GR/1000V, xxx= 500 to 505 in steps of 5;  
 JAM60S30-xxx/GR/1000V, xxx= 445 to 460 in steps of 5;  
 JAM54S30-xxx/GR/1000V, xxx= 400 to 415 in steps of 5;  
 JAM78S31-xxx/GR/1000V, xxx= 570 to 590 in steps of 5;  
 JAM72S31-xxx/GR/1000V, xxx= 525 to 545 in steps of 5;  
 JAM66S31-xxx/GR/1000V, xxx= 480 to 500 in steps of 5;  
 JAM60S31-xxx/GR/1000V, xxx= 430 to 450 in steps of 5;  
 JAM54S31-xxx/GR/1000V, xxx= 395 to 405 in steps of 5;  
 JAM72S17-xxx/GR/1000V, xxx= 385 to 400 in steps of 5;

1000 V DC or 1500 V DC Maximum System voltage,  
 Fire Safety Class C Modules:

JAM72S01-xxx/SC, xxx= 320 to 365 in steps of 5;  
 JAM60S01-xxx/SC, xxx= 265 to 305 in steps of 5;  
 JAM60S01-xxx/PR, xxx= 285 to 325 in steps of 5;  
 JAM72S01-xxx/MR, xxx= 365 to 385 in steps of 5;  
 JAM60S01-xxx/MR, xxx= 305 to 320 in steps of 5;  
 JAM72S03-xxx/PR, xxx= 360 to 395 in steps of 5;  
 JAM60S03-xxx/PR, xxx= 300 to 330 in steps of 5;  
 JAM72S09-xxx/PR, xxx= 370 to 405 in steps of 5;  
 JAM60S09-xxx/PR, xxx= 310 to 335 in steps of 5;  
 JAM72S10-xxx/PR, xxx= 380 to 410 in steps of 5;  
 JAM60S10-xxx/PR, xxx= 315 to 345 in steps of 5;  
 JAM72S10-xxx/MR, xxx= 390 to 430 in steps of 5;  
 JAM60S10-xxx/MR, xxx= 325 to 355 in steps of 5;  
 JAM60S10-xxx/MR-L, xxx= 325 to 355 in steps of 5;  
 JAM78S10-xxx/MR, xxx= 435 to 465 in steps of 5;  
 JAM66S10-xxx/MR, xxx= 345 to 390 in steps of 5;  
 JAM72S09-xxx/BP, xxx= 375 to 385 in steps of 5;  
 JAM60S09-xxx/BP, xxx= 315 to 320 in steps of 5;  
 JAM72S10-xxx/BP, xxx= 385 to 400 in steps of 5;  
 JAM60S10-xxx/BP, xxx= 320 to 330 in steps of 5.  
 JAM72S02-xxx/PR, xxx= 345 to 390 in steps of 5;  
 JAM60S02-xxx/PR, xxx= 285 to 325 in steps of 5;  
 JAM72S02-xxx/SC, xxx= 320 to 365 in steps of 5;  
 JAM60S02-xxx/SC, xxx= 265 to 305 in steps of 5;  
 JAM72S02-xxx/MR, xxx= 365 to 385 in steps of 5;  
 JAM60S02-xxx/MR, xxx= 305 to 320 in steps of 5;  
 JAM72S08-xxx/PR, xxx= 360 to 395 in steps of 5;



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JAM60S08-xxx/PR, xxx= 300 to 330 in steps of 5;  
 JAM72S12-xxx/PR, xxx= 365 to 385 in steps of 5;  
 JAM60S12-xxx/PR, xxx= 305 to 330 in steps of 5;  
 JAM72S17-xxx/PR, xxx= 380 to 390 in steps of 5;  
 JAM60S17-xxx/PR, xxx= 315 to 325 in steps of 5;  
 JAM72S17-xxx/MR, xxx= 390 to 430 in steps of 5;  
 JAM60S17-xxx/MR, xxx= 315 to 355 in steps of 5;  
 JAM72S10-xxx/MB, xxx= 395 to 415 in steps of 5;  
 JAM60S10-xxx/MB, xxx= 330 to 345 in steps of 5;  
 JAM72S20-xxx/MR, xxx= 430 to 470 in steps of 5;  
 JAM60S20-xxx/MR, xxx= 355 to 390 in steps of 5;  
 JAM78S10-xxx/MR-J, xxx= 435 to 465 in steps of 5;  
 JAM78S30-xxx/MR, xxx= 580 to 605 in steps of 5;  
 JAM72S30-xxx/MR, xxx= 510 to 555 in steps of 5;  
 JAM66S30-xxx/MR, xxx= 470 to 505 in steps of 5;  
 JAM60S30-xxx/MR, xxx= 435 to 460 in steps of 5;  
 JAM54S30-xxx/MR, xxx= 390 to 415 in steps of 5;  
 JAM60S21-xxx/MR, xxx= 355 to 390 in steps of 5;  
 JAM50S40-xxx/MR, xxx= 490 to 500 in steps of 5;  
 JAM72S20-xxx/MB, xxx= 450 to 465 in steps of 5;  
 JAM60S20-xxx/MB, xxx= 375 to 390 in steps of 5;  
 JAM68S11-xxx/PR, xxx= 355 to 365 in steps of 5;  
 JAM68S11-xxx/PR(B), xxx= 345 to 365 in steps of 5;  
 JAM72S31-xxx/MR, xxx= 510 to 545 in steps of 5;  
 JAM66S31-xxx/MR, xxx= 470 to 500 in steps of 5;  
 JAM60S31-xxx/MR, xxx= 425 to 450 in steps of 5;  
 JAM54S31-xxx/MR, xxx= 385 to 405 in steps of 5;  
 JAM76S11-xxx/PR(B), xxx= 395 to 415 in steps of 5;  
 JAM78S30-xxx/GR, xxx= 575 to 600 in steps of 5;  
 JAM72S30-xxx/GR, xxx= 535 to 555 in steps of 5;  
 JAM66S30-xxx/GR, xxx= 500 to 505 in steps of 5;  
 JAM60S30-xxx/GR, xxx= 445 to 460 in steps of 5;  
 JAM54S30-xxx/GR, xxx= 400 to 415 in steps of 5;  
 JAM78S31-xxx/GR, xxx= 570 to 590 in steps of 5;  
 JAM72S31-xxx/GR, xxx= 525 to 545 in steps of 5;  
 JAM66S31-xxx/GR, xxx= 480 to 500 in steps of 5;  
 JAM60S31-xxx/GR, xxx= 435 to 450 in steps of 5;  
 JAM54S31-xxx/GR, xxx= 395 to 405 in steps of 5;  
 JAM72S17-xxx/GR, xxx= 385 to 400 in steps of 5;

1500 V DC Maximum System voltage, Fire Safety Class C Modules:

JAM6(K)-72-xxx/PR/1500V, xxx= 345 to 370 in steps of 5;  
 JAM6(K)-60-xxx/PR/1500V, xxx= 285 to 310 in steps of 5;  
 JAM6(K)-72-xxx/4BB/1500V, xxx= 320 to 345 in steps of 5;  
 JAM6(K)-60-xxx/4BB/1500V, xxx= 265 to 285 in steps of 5;  
 JAM72S01-xxx/SC/1500V, xxx= 320 to 365 in steps of 5;  
 JAM60S01-xxx/SC/1500V, xxx= 265 to 305 in steps of 5;  
 JAM72S01-xxx/PR, xxx= 345 to 390 in steps of 5;  
 JAM60S01-xxx/PR/1500V, xxx= 285 to 325 in steps of 5;  
 JAM72S01-xxx/MR/1500V, xxx= 365 to 385 in steps of 5;  
 JAM60S01-xxx/MR/1500V, xxx= 305 to 320 in steps of 5;  
 JAM72S03-xxx/PR/1500V, xxx= 360 to 395 in steps of 5;  
 JAM60S03-xxx/PR/1500V, xxx= 300 to 330 in steps of 5;  
 JAM72S09-xxx/PR/1500V, xxx= 370 to 405 in steps of 5;  
 JAM60S09-xxx/PR/1500V, xxx= 310 to 335 in steps of 5;  
 JAM72S10-xxx/PR/1500V, xxx= 380 to 410 in steps of 5;  
 JAM60S10-xxx/PR/1500V, xxx= 315 to 345 in steps of 5;  
 JAM72S10-xxx/MR/1500V, xxx= 390 to 430 in steps of 5;  
 JAM60S10-xxx/MR/1500V, xxx= 325 to 355 in steps of 5;  
 JAM60S10-xxx/MR-L/1500V, xxx= 325 to 355 in steps of 5;  
 JAM78S10-xxx/MR/1500V, xxx= 435 to 465 in steps of 5;  
 JAM66S10-xxx/MR/1500V, xxx= 345 to 390 in steps of 5;  
 JAM72S09-xxx/BP/1500V, xxx= 375 to 385 in steps of 5;  
 JAM60S09-xxx/BP/1500V, xxx= 315 to 320 in steps of 5;  
 JAM72S10-xxx/BP/1500V, xxx= 385 to 400 in steps of 5;  
 JAM60S10-xxx/BP/1500V, xxx= 320 to 330 in steps of 5;  
 JAM72S02-xxx/PR/1500V, xxx= 345 to 390 in steps of 5;  
 JAM60S02-xxx/PR/1500V, xxx= 285 to 325 in steps of 5;  
 JAM72S02-xxx/SC/1500V, xxx= 320 to 365 in steps of 5;  
 JAM60S02-xxx/SC/1500V, xxx= 265 to 305 in steps of 5;

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JAM72S02-xxx/MR/1500V, xxx= 365 to 385 in steps of 5;  
 JAM60S02-xxx/MR/1500V, xxx= 305 to 320 in steps of 5;  
 JAM72S08-xxx/PR/1500V, xxx= 360 to 395 in steps of 5;  
 JAM60S08-xxx/PR/1500V, xxx= 300 to 330 in steps of 5;  
 JAM72S12-xxx/PR/1500V, xxx= 365 to 385 in steps of 5;  
 JAM60S12-xxx/PR/1500V, xxx= 305 to 330 in steps of 5;  
 JAM72S17-xxx/PR/1500V, xxx= 380 to 390 in steps of 5;  
 JAM60S17-xxx/PR/1500V, xxx= 315 to 325 in steps of 5;  
 JAM72S17-xxx/MR/1500V, xxx= 390 to 430 in steps of 5;  
 JAM60S17-xxx/MR/1500V, xxx= 315 to 355 in steps of 5;  
 JAM72S10-xxx/MB/1500V, xxx= 395 to 415 in steps of 5;  
 JAM60S10-xxx/MB/1500V, xxx= 330 to 345 in steps of 5;  
 JAM72S20-xxx/MR/1500V, xxx= 430 to 470 in steps of 5;  
 JAM60S20-xxx/MR/1500V, xxx= 355 to 390 in steps of 5;  
 JAM78S30-xxx/MR/1500V, xxx= 580 to 605 in steps of 5;  
 JAM72S30-xxx/MR/1500V, xxx= 510 to 555 in steps of 5;  
 JAM66S30-xxx/MR/1500V, xxx= 470 to 505 in steps of 5;  
 JAM60S30-xxx/MR/1500V, xxx= 435 to 460 in steps of 5;  
 JAM54S30-xxx/MR/1500V, xxx= 390 to 415 in steps of 5;  
 JAM60S21-xxx/MR/1500V, xxx= 355 to 390 in steps of 5;  
 JAM50S40-xxx/MR/1500V, xxx= 490 to 500 in steps of 5;  
 JAM72S20-xxx/MB/1500V, xxx= 450 to 465 in steps of 5;  
 JAM60S20-xxx/MB/1500V, xxx= 375 to 390 in steps of 5;  
 JAM72S31-xxx/MR/1500V, xxx= 510 to 545 in steps of 5;  
 JAM66S31-xxx/MR/1500V, xxx= 470 to 500 in steps of 5;  
 JAM60S31-xxx/MR/1500V, xxx= 425 to 450 in steps of 5;  
 JAM54S31-xxx/MR/1500V, xxx= 385 to 405 in steps of 5;  
 JAM76S11-xxx/PR(B)/1500V, xxx= 395 to 415 in steps of 5;  
 JAM78S30-xxx/GR/1500V, xxx= 575 to 600 in steps of 5;  
 JAM72S30-xxx/GR/1500V, xxx= 535 to 555 in steps of 5;  
 JAM66S30-xxx/GR/1500V, xxx= 500 to 505 in steps of 5;  
 JAM60S30-xxx/GR/1500V, xxx= 445 to 460 in steps of 5;  
 JAM54S30-xxx/GR/1500V, xxx= 400 to 415 in steps of 5;  
 JAM78S31-xxx/GR/1500V, xxx= 570 to 590 in steps of 5;  
 JAM72S31-xxx/GR/1500V, xxx= 525 to 545 in steps of 5;  
 JAM66S31-xxx/GR/1500V, xxx= 480 to 500 in steps of 5;  
 JAM60S31-xxx/GR/1500V, xxx= 435 to 450 in steps of 5;  
 JAM54S31-xxx/GR/1500V, xxx= 395 to 405 in steps of 5;  
 JAM72S17-xxx/GR/1500V, xxx= 385 to 400 in steps of 5;  
 xxx is standing for rated output power at STC

### Parameters:

Construction:	Framed or Frameless, with Junction box, Cable and Connectors.
Test Laboratory:	Yangzhou Opto-Electrical Products Testing Institute No. 10 West Kaifa Road, Yangzhou 225009 Jiangsu, P. R. China
Safety Class:	Class II
Maximum System Voltage:	1500 V DC or 1000 V DC
Fire Safety Class:	Class C or Class A according to UL790.
Production Facility(ies):	079395, 105674, 107160, 095903, 090968, 096558, 108293, 102852, 108746, 072092, 109998, 112017, 108944, 004170, 112715, 113691, 113943, 114922.



ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

## CERTIFICATE

No. Z2 072092 0295 Rev. 45

**Tested  
according to:**

IEC 61215-1:2016  
EN 61215-1:2016  
IEC 61215-1-1:2016  
EN 61215-1-1:2016  
IEC 61215-2:2016  
EN 61215-2:2017  
IEC 61730-1:2016  
EN IEC 61730-1:2018  
EN IEC 61730-1:2018/AC:2018-06  
IEC 61730-2:2016  
EN IEC 61730-2:2018  
EN IEC 61730-2:2018/AC:2018-06



## Konformitätserklärung zu Hoymiles HM-300



**BUREAU  
VERITAS**

### Zertifikat für den NA-Schutz

**Hersteller / Antragsteller:** Hoymiles Converter Technology Co., Ltd.  
No. 18 Kangjing Road,  
HangZhou, Zhejiang Province  
P.R. China

<b>Typ NA-Schutz:</b>	Integrierter NA-Schutz
<b>Zugeordnet zu Erzeugungseinheit Typ:</b>	HM-250, HM-250A, HM-250T, HM-300, HM-300A, HM-300T, HM-350, HM-350A, HM-350T, HM-400, HM-400A, HM-400T, HM-450, HM-450A, HM-450T, HM-500, HM-500T, HM-600, HM-600T, HM-700, HM-700T, HM-800, HM-800T

**Firmwareversion:** ab V01.01.00

**Netzanschlussregel:** VDE-AR-N 4105:2018-11 – Erzeugungsanlagen am Niederspannungsnetz  
Technische Mindestanforderungen für Anschluss und Parallelbetrieb von Erzeugungsanlagen am Niederspannungsnetz

**Mitteltende Normen / Richtlinien:** DIN VDE V 0124-100 (VDE V 0124-100):2019-09 – Netzintegration von Erzeugungsanlagen – Niederspannung  
Prüfanforderungen an Erzeugungseinheiten vorgesehen zum Anschluss und Parallelbetrieb am Niederspannungsnetz

Der oben bezeichnete NA-Schutz wurde nach der Prüfrichtlinie VDE 0124-100 geprüft und zertifiziert. Die in der Netzanschlussregel geforderten elektrischen Eigenschaften werden erfüllt:

- Einstellwerte und die Abschaltzeiten
- Funktionstüchtige Wirkungskette „NA-Schutz-Kuppelschalter“
- Technische Anforderungen der Schalteinrichtung
- Aktive Inselnetzkerennung
- Einfehlersicherheit

Das Zertifikat beinhaltet folgende Angaben:

- Technische Daten des NA-Schutz und zugehörige EZE Typen
- Einstellwerte der Schutzfunktionen
- Auslösewerte der Schutzfunktionen

**Berichtsnummer:** BMH-ESH-P200410697-1  
BMH-ESH-P200410697-2

**Zertifizierungsprogramm:** NSOP-0032-DEU-ZE-V01

**Zertifikatsnummer:** U20-0692

**Ausstellungsdatum:** 2020-08-26



Zertifizierungsstelle der Bureau Veritas Consumer Products Services Germany GmbH akkreditiert nach DIN EN ISO/IEC 17065

Eine auszugsweise Darstellung des Zertifikats bedarf der schriftlichen Genehmigung der Bureau Veritas Consumer Products Services Germany GmbH



## Anhang zum Zertifikat für den NA-Schutz Nr. U20-0692

### E.6 und E.7 Anforderungen an den Prüfbericht zum NA-Schutz

Auszug aus dem Prüfbericht für den NA-Schutz  
„Bestimmung der elektrischen Eigenschaften“

Nr. BMH-ESH-P200410697-1

Nr. BMH-ESH-P200410697-2

## NA-Schutz als integrierter NA-Schutz

<b>Hersteller / Antragsteller:</b>	Hoymiles Converter Technology Co., Ltd. No. 18 Kangjing Road, HangZhou, Zhejiang Province P.R. China
<b>Typ NA-Schutz:</b>	Integrierter NA-Schutz
<b>Zugeordnet zu Erzeugungseinheit Typ:</b>	HM-250, HM-250A, HM-250T, HM-300, HM-300A, HM-300T, HM-350, HM-350A, HM-350T, HM-400, HM-400A, HM-400T, HM-450, HM-450A, HM-450T, HM-500, HM-500T, HM-600, HM-600T, HM-700, HM-700T, HM-800, HM-800T
<b>Firmwareversion:</b>	V01.01.00
<b>Integrierter Kuppelschalter:</b>	Typ Schalteinrichtung 1: HF-Transformator Typ Schalteinrichtung 2: Relais
<b>Messzeitraum:</b>	2020-04-12 - 2020-07-30

Schutzfunktion	Einstellwert	Auslösewert	Abschaltzeit <sup>a</sup>
Spannungsrückgangsschutz U<	184,0 V	183,4 V	3060 ms
Spannungsrückgangsschutz U<<	103,5 V	102,8 V	348ms
Spannungssteigerungsschutz U>	253,0 V	--	580,0 s <sup>b</sup>
Spannungssteigerungsschutz U>>	287,5 V	288,4 V	192,1 ms
Frequenzrückgangsschutz f<	47,50 Hz	47,50 Hz	196,0 ms
Frequenzsteigerungsschutz f>	51,50 Hz	51,50 Hz	198,4 ms

<sup>a</sup> davon Eigenzeit des Kuppelschalters 6 ms

<sup>b</sup> längste Abschaltung des Spannungssteigerungsschutz als gleitender 10-min-Mittelwert, nach 5.5.7 Schutzeinrichtungen und Schutzeinstellungen aus der VDE 0124-100

Die Abschaltzeit (Summe der Auslösezeit NA-Schutz zzgl. Eigenzeit des Kuppelschalters) darf 200 ms nicht überschreiten.

Die Überprüfung der Gesamtwirkungskette „NA-Schutz – Kuppelschalter“ führte zu einer erfolgreichen Abschaltung.

Der oben genannte NA-Schutz hat mit den zugeordneten Erzeugungseinheiten die Anforderungen zur Inselnetzerkennung mit Hilfe aktiven Verfahrens (Schwingkreistest) erfüllt.

Der oben genannte NA-Schutz erfüllt die Anforderungen zur Synchronisation.



BV LCIE  
CHINA  
Number

N° 2066AS05BMH35313

## ATTESTATION of conformity with European Directives

*Product:* PV Microinverter (Grid-tied photovoltaic Microinverter)  
HM-1500, HM-1200, HM-1000, HM-1500T, HM-1200T, HM-1000T, HM-800T, HM-800, HM-700, HM-700T, HM-600, HM-600T,  
*Reference* HM-500, HM-500T, HM-250, HM-250A, HM-250T, HM-300, HM-300A, HM-300T, HM-350, HM-350A, HM-350T, HM-400, HM-400A, HM-400T, HM-450, HM-450A, HM-450T  
*Issued to* Hoymiles Converter Technology Co., Ltd.  
*Address* No. 18 Kangjing Road, HangZhou, Zhejiang Province  
*Technical characteristics* See Next Page

The submitted sample of the above equipment has been tested for **CE** marking according to following European Directive and following standards:

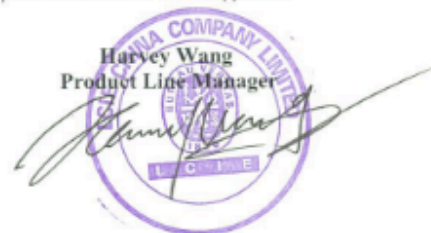
Low Voltage Directive 2014/35/EU

Standards	Report number	Report date
EN 50549-1:2019	BMH-ESH-P200408503-1	20/04/2020
	BMH-ESH-P200408503-2	12/05/2020
	BMH-ESH-P200408503-3	19/05/2020

The referred test report(s) show that the product complies with standard(s) recognized as giving presumption of compliance with the essential requirements in the specified European Directive

This verification does not imply assessment of the production of the product  
The **CE** marking may be affixed if all relevant and effective European Directives with **CE** are applicable

Shanghai (P.R. China), May 28<sup>th</sup>, 2020.



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Information given in this document, are related to the tested specimen of the described electrical sample.

LCIE CHINA  
必维欧亚电气技术咨询服务(上海)有限公司  
Version 3/2016.02.19

Building 4, No. 518, Xin Zhuan Road,  
CaoHejing Songjiang High-Tech Park,  
Shanghai P.R.C (201612)

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LCIE

BV LCIE  
CHINA  
Number

N° 2066AS05BMH35313

Model / Type.....:	HM-1500 HM-1500T	HM-1200 HM-1200T	HM-1000 HM-1000T
Range of Peak Power MPPT Voltage.....:	36-48V d.c.	29-48V d.c.	27-48V d.c.
Max. Input voltage [V].....:	60 V d.c.		
Max. Continuous Input current [A].....:	4*11,5A d.c.		4*10,5A d.c.
Nominal Output voltage [V].....:	220/230/240V a.c. 50/60 Hz		
Max. Continuous Output AC current [A].....:	7,5	6	5
Max. Continuous Output power [VA].....:	1500	1200	1000

Model / Type.....:	HM-800 HM-800T	HM-700 HM-700T	HM-600 HM-600T	HM-500 HM-500T
Range of Peak Power MPPT Voltage.....:	34-48V d.c.	33-48V d.c.	29-48V d.c.	27-48V d.c.
Max. Input voltage [V].....:	60 V d.c.			
Max. Continuous Input current [A].....:	2*12,5 A d.c.	2*11,5 A d.c.		2*10,5 A d.c.
Nominal Output voltage [V].....:	220/230/240V a.c. 50/60 Hz			
Max. Continuous Output AC current [A].....:	4,0	3,5	3,0	2,5
Max. Continuous Output power [VA].....:	800	700	600	500

Shanghai (P.R. China), ), May 28<sup>th</sup>, 2020.



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LCIE CHINA  
必维欧亚电气技术服务(上海)有限公司

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Version 3/2016.02.19

Harvey Wang  
Product Line Manager



### EU-Type Examination Certificate

with respect to the presumption of  
Compliance of a product with the essential requirements of

## RE DIRECTIVE 2014/53/EU

Certificate Number	CS32227
Certificate Holder	Hoymiles Power Electronics Inc.
Address	No. 18 Kangjing Road, Hangzhou, Zhejiang Province, P.R. China
Manufacturer	Hoymiles Power Electronics Inc.
Address	No. 18 Kangjing Road, Hangzhou, Zhejiang Province, P.R. China
Product Type/Description	PV Microinverter
Trade Name	Hoymiles
Model Number	HM-450, HM-450T, HM-450A, HM-400, HM-400T, HM-400A, HM-350, HM-350T, HM-350A, HM-300, HM-300T, HM-300A, HM-250, HM-250T, HM-250A, MI-450, MI-450T, MI-400, MI-400T, MI-350, MI-350T, MI-300, MI-300T, MI-250, MI-250T
Product Identification Element	HM-450, HM-450T, HM-450A, HM-400, HM-400T, HM-400A, HM-350, HM-350T, HM-350A, HM-300, HM-300T, HM-300A, HM-250, HM-250T, HM-250A, MI-450, MI-450T, MI-400, MI-400T, MI-350, MI-350T, MI-300, MI-300T, MI-250, MI-250T

Applied / Complied Harmonized Standards		Complied
RE Directive 2014/53/EU, Article 3(1)(a) ■ Safety	EN 62109-1:2010, EN 62109-2:2011	Y
RE Directive 2014/53/EU, Article 3(1)(a) ■ Health	EN 62311:2008	Y
RE Directive 2014/53/EU, Article 3(1)(b) ■ EMC	EN 301 489-1 V2.2.3, EN 301 489-3 V2.1.1 EN IEC 61000-6-1:2019, EN 61000-6-2:2005, EN 61000-6-3:2007+A1:2011, EN IEC 61000-6-4:2019, EN IEC 61000-3-2:2019, EN 61000-3-3:2013+A1:2019	Y
RE Directive 2014/53/EU, Article 3(2) ■ Radio	EN 300 440 V2.1.1	Y

Authorized By: *Darren Shih*

Darren Shih, Senior Manager

Issue Date: Jan. 12, 2021

Expiry Date: Jan. 11, 2026

PS: This Certificate is Issued in Accordance with Annex III of the RE Directive 2014/53/EU and is only valid in Conjunction with the Following Annex I.