Certificate of compliance

Applicant: **SMA Solar Technology AG**
Sonnenallee 1
34266 Niestetal
Germany

Product: **Grid-tied photovoltaic (PV) inverter**

Model: **SB5.0-1AV-40**
SB4.0-1AV-40
SB3.6-1AV-40
SB3.0-1AV-40

Use in accordance with regulations:

The inverter(s) are tested according the IEC 61683:1999, EN 61683:2000, DIN EN 61683:2000 procedure for measuring efficiency.

Applied rules and standards:

IEC 61683:1999, EN 61683:2000, DIN EN 61683:2000
Photovoltaic systems – Power conditioners – Procedure for measuring efficiency

At the time of issue of this certificate the safety concept of an aforementioned representative product corresponds to the valid safety specifications for the specified use in accordance with regulations.

Report number: **PV170801N014-1**
Certificate number: **U17-0528**
Date of issue: **2017-09-20**

Certification body

Holger Schaffer
Certification body of Bureau Veritas Consumer Products Services Germany GmbH
Accredited according to DIN EN ISO/IEC 17065

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

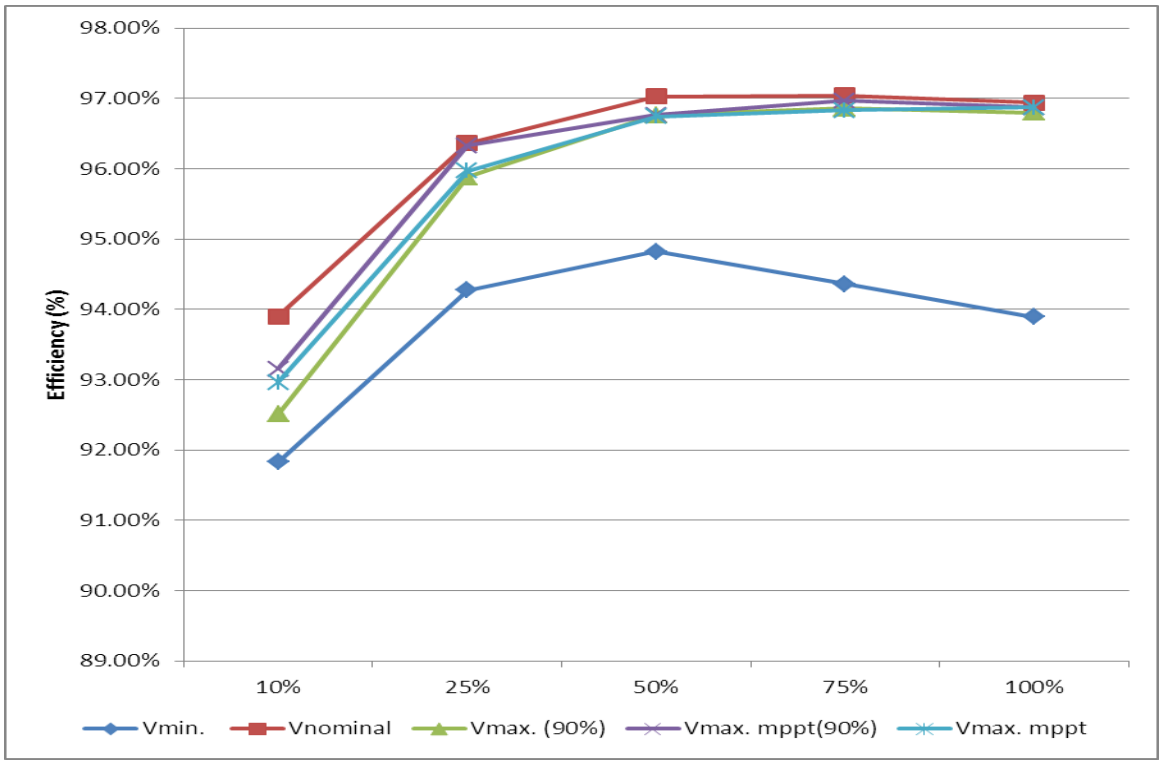
Measuring of efficiency

Extract from test report according the IEC 61683 **Nr. PV170801N014-1**

Efficiency measurement conditions test results

SB3.0-1AV-40

Input voltage [Vdc]		Power in [W] (nom. 3,0kW)				
		10%	25%	50%	75%	100%
		0,3kW	0,75kW	1,5kW	2,25kW	3kW
		η in [%]				
V_{min}	110	91,83%	94,27%	94,82%	94,36%	93,89%
$V_{nominal}$	400	93,90%	96,36%	97,03%	97,04%	96,94%
$V_{max\ (90\%\ MPPT)}$	540	92,51%	95,88%	96,76%	96,86%	96,80%
$V_{max\ (90\%)}$	432	93,15%	96,33%	96,76%	96,97%	96,87%
$V_{max\ (MPPT)}$	480	92,96%	95,97%	96,74%	96,83%	96,87%



Internal power consumption via PV No-load: 1,27W / 6,40W Max.

Internal power consumption via AC stand by: 2,06W Max.

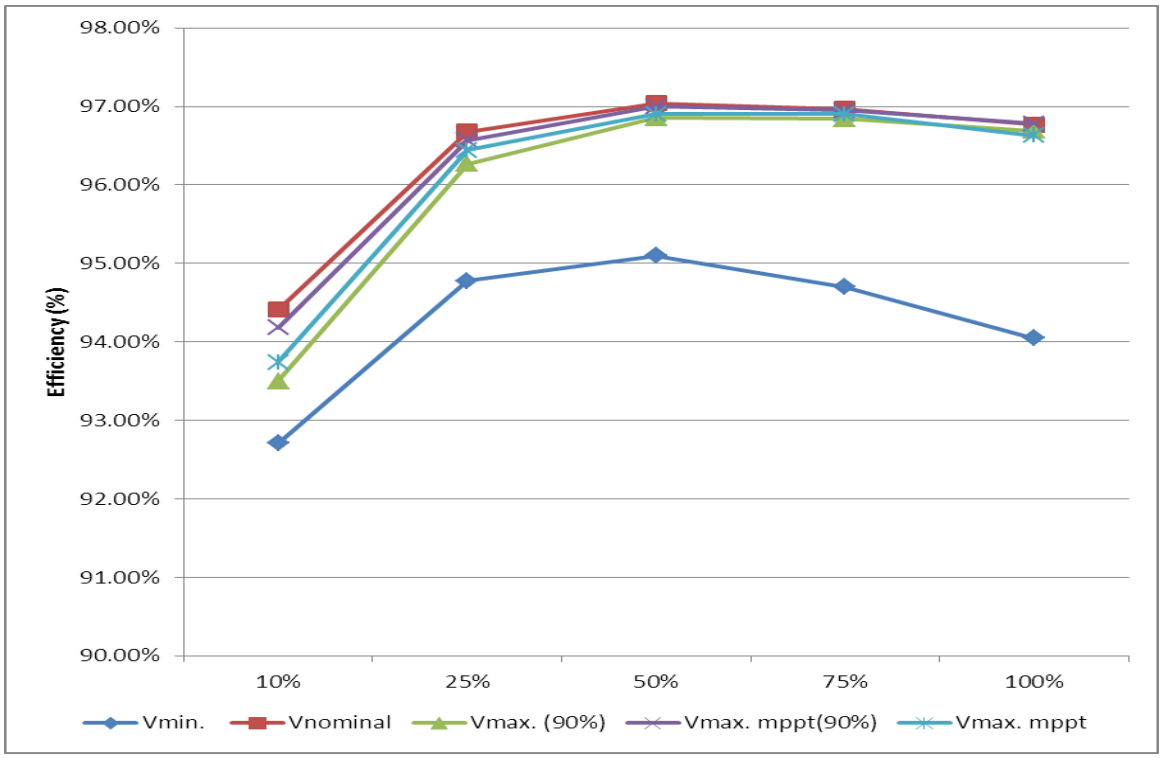
Measuring of efficiency

Extract from test report according the IEC 61683 **Nr. PV170801N014-1**

Efficiency measurement conditions test results

SB3.6-1AV-40

Input voltage [Vdc]		Power in [W] (nom. 3,0kW)				
		10%	25%	50%	75%	100%
		0,368kW	0,91kW	1,84kW	2,76kW	3,68kW
		η in [%]				
V_{min}	130	92,71%	94,78%	95,10%	94,70%	94,05%
$V_{nominal}$	400	94,41%	96,68%	97,04%	96,97%	96,77%
$V_{max\ (90\%\ MPPT)}$	540	93,50%	96,27%	96,85%	96,84%	96,69%
$V_{max\ (90\%)}$	432	94,18%	96,57%	97,00%	96,95%	96,78%
$V_{max\ (MPPT)}$	480	93,74%	96,44%	96,90%	96,90%	96,63%



Internal power consumption via PV No-load: 1,27W / 6,40W Max.

Internal power consumption via AC stand by: 2,06W Max.

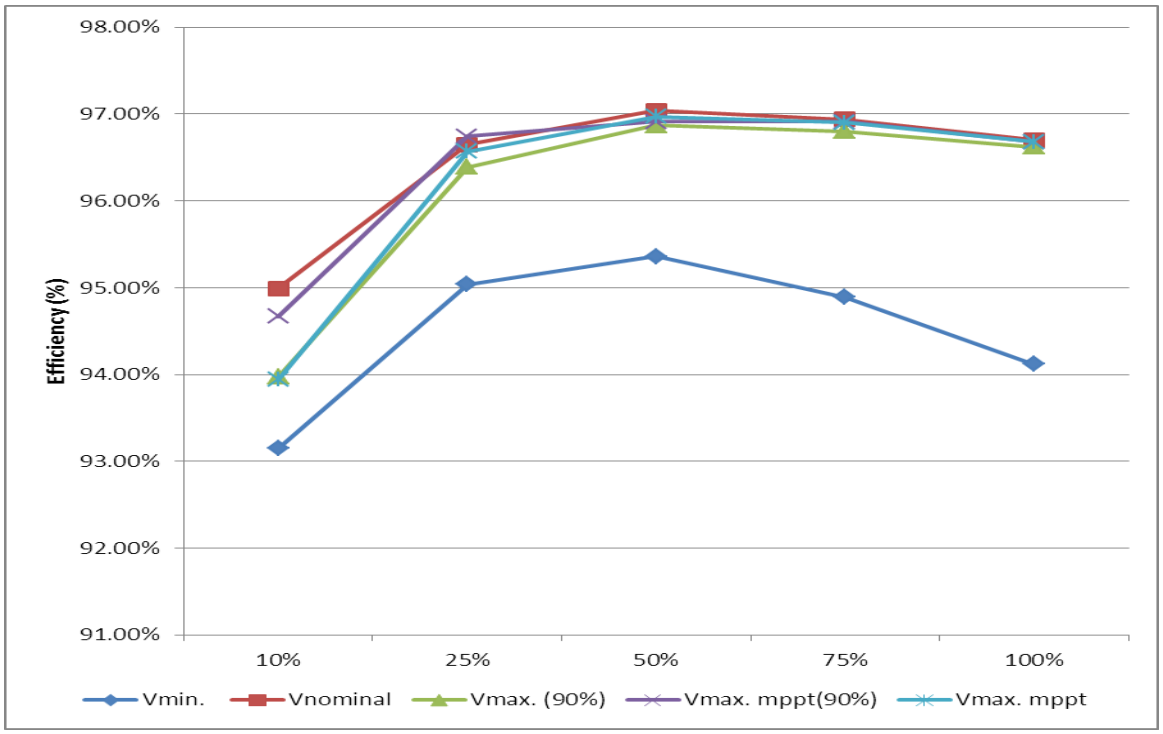
Measuring of efficiency

Extract from test report according the IEC 61683 **Nr. PV170801N014-1**

Efficiency measurement conditions test results

SB4.0-1AV-40

Input voltage [Vdc]		Power in [W] (nom. 3,0kW)				
		10%	25%	50%	75%	100%
		0,4kW	1kW	2kW	3kW	4kW
		η in [%]				
V_{min}	140	93,15%	95,04%	95,36%	94,89%	94,12%
$V_{nominal}$	400	94,99%	96,65%	97,04%	96,94%	96,70%
$V_{max\ (90\%\ MPPT)}$	540	93,97%	96,39%	96,87%	96,80%	96,62%
$V_{max\ (90\%)}$	432	94,67%	96,74%	96,91%	96,91%	96,68%
$V_{max\ (MPPT)}$	480	93,94%	96,57%	96,97%	96,90%	96,68%



Internal power consumption via PV No-load: 1,27W / 6.40W Max.

Internal power consumption via AC stand by: 2,06W Max.

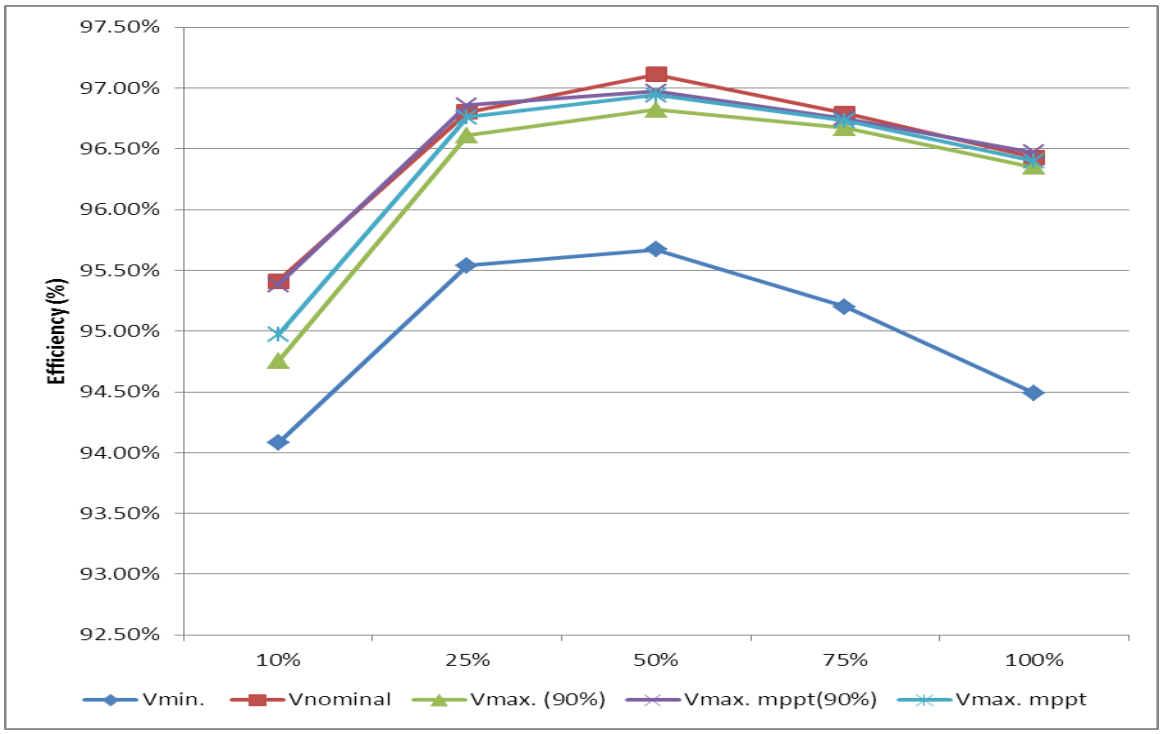
Measuring of efficiency

Extract from test report according the IEC 61683 **Nr. PV170801N014-1**

Efficiency measurement conditions test results

SB5.0-1AV-40

Input voltage [Vdc]		Power in [W] (nom. 3,0kW)				
		10%	25%	50%	75%	100%
		0,5kW	1,25kW	2,5kW	3,75kW	5kW
		η in [%]				
V_{min}	175	94,08%	95,54%	95,67%	95,20%	94,49%
$V_{nominal}$	400	95,41%	96,80%	97,11%	96,79%	96,43%
$V_{max\ (90\%\ MPPT)}$	540	94,75%	96,61%	96,82%	96,67%	96,35%
$V_{max\ (90\%)}$	432	95,38%	96,86%	96,97%	96,75%	96,47%
$V_{max\ (MPPT)}$	480	94,97%	96,76%	96,94%	96,73%	96,40%



Internal power consumption via PV No-load: 1,27W / 6,40W Max.

Internal power consumption via AC stand by: 2,06W Max.