



**BUREAU
VERITAS**

Certificate of compliance

Applicant: SMA Solar Technology AG
Sonnenallee 1
34266 Niestetal
Germany

Product: Photovoltaic (PV) inverter

Model: STP3.0-3AV-40
STP4.0-3AV-40
STP5.0-3AV-40
STP6.0-3AV-40
STP8.0-3AV-40
STP10.0-3AV-40

Use in accordance with regulations:

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

Calculation of the static conversion efficiency

STP3.0-3AV-40	98,09%
STP4.0-3AV-40	98,23%
STP5.0-3AV-40	98,18%
STP6.0-3AV-40	98,16%
STP8.0-3AV-40	98,27%
STP10.0-3AV-40	98,32%

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 representative product listed above corresponds to the stated rules and standards.

Report number: 18TH0325-IEC61683_0

Certification program: NSOP-0032-DEU-ZE-V01

Certificate number: U22-0160

Date of issue:

2022-03-09

Certification body



Thomas Lammel

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

Testing laboratory accredited according to DIN EN ISO/IEC 17025

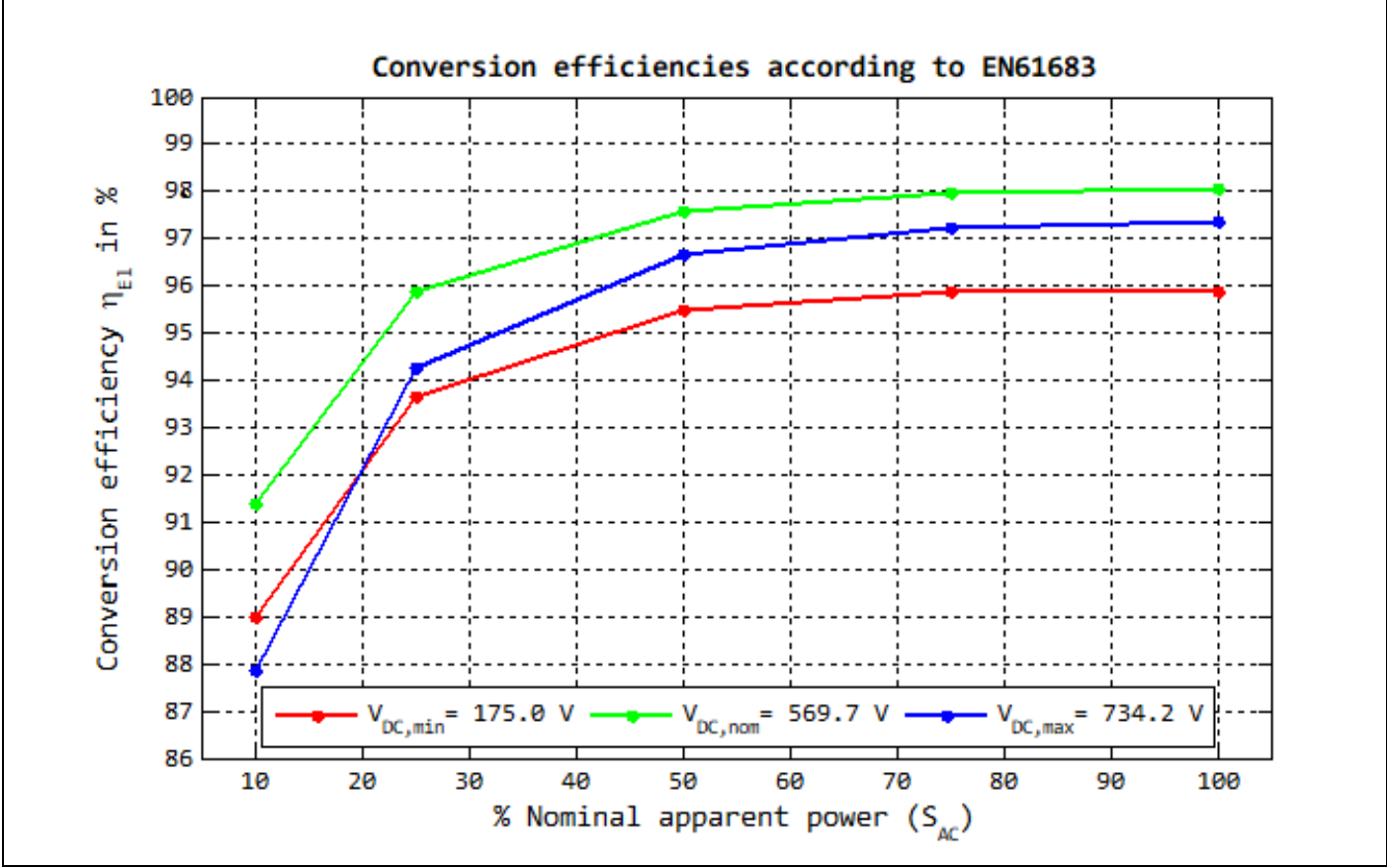
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Appendix
 Extract from test report according the IEC 61683 Nr. 18TH0325-IEC61683_0

Efficiency measurement conditions test results						
STP3.0-3AV-40						
Input voltage [Vdc]		Power in [W] (nom. 3000 W)				
		10%	25%	50%	75%	100%
		300	750	1500	2250	3000
		η in [%]				
V_{min}	175,0	88,99	93,67	95,50	95,89	95,88
$V_{nominal}$	569,7	91,41	95,88	97,56	97,97	98,06
V_{max} (90% MPPT)	734,2	87,83	94,29	96,66	97,24	97,38

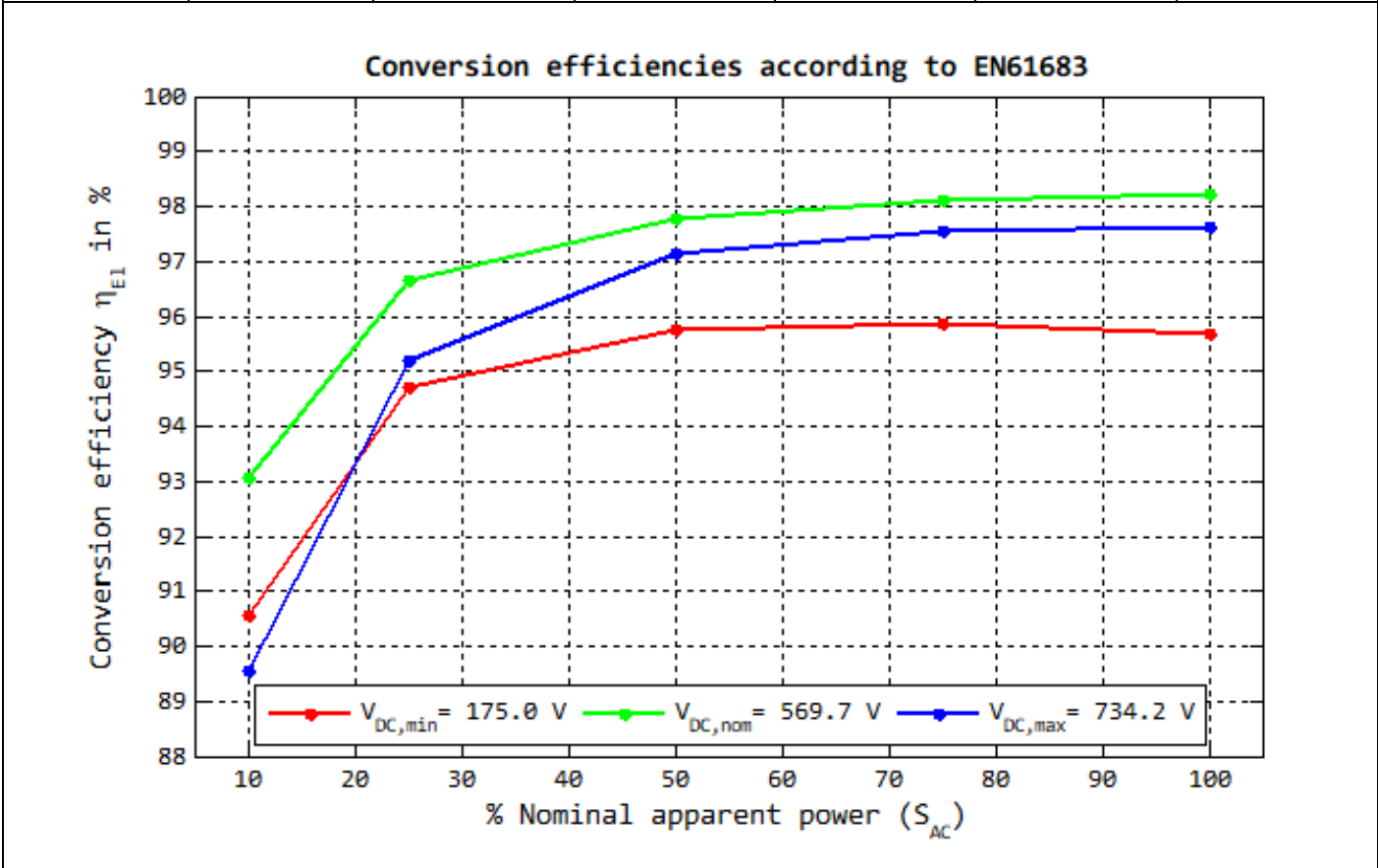




Appendix
 Extract from test report according the IEC 61683 Nr. 18TH0325-IEC61683_0

Efficiency measurement conditions test results

STP4.0-3AV-40						
Input voltage [Vdc]		Power in [W] (nom. 4000 W)				
		10%	25%	50%	75%	100%
		400	1000	2000	3000	4000
		η in [%]				
V _{min}	175,0	90,58	94,71	95,75	95,86	95,66
V _{nominal}	569,7	93,07	96,64	97,79	98,10	98,23
V _{max (90% MPPT)}	734,2	89,54	95,19	97,16	97,53	97,64





Appendix

Extract from test report according the IEC 61683

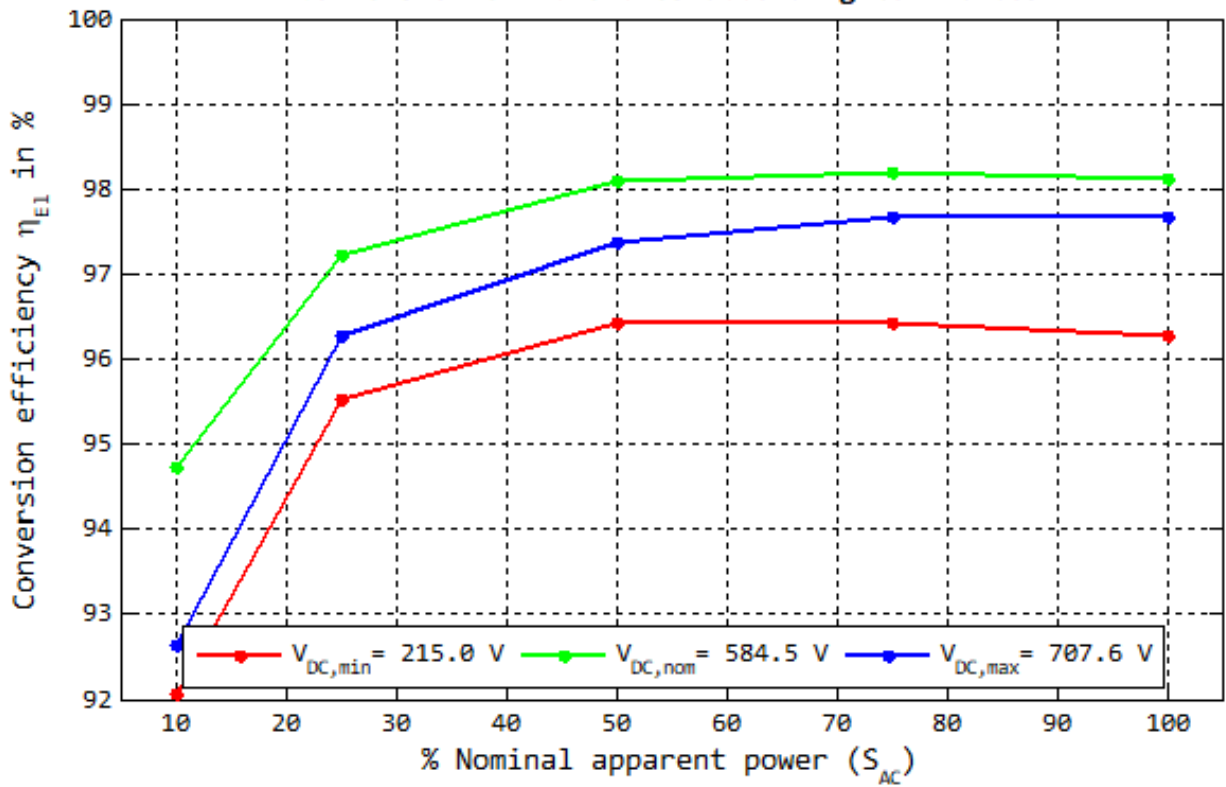
Nr. 18TH0325-IEC61683_0

Efficiency measurement conditions test results

STP5.0-3AV-40

Input voltage [Vdc]		Power in [W] (nom. 5000 W)				
		10%	25%	50%	75%	100%
V_{min}	215,0	92,05	95,53	96,42	96,43	96,27
$V_{nominal}$	584,5	94,73	97,22	98,08	98,18	98,12
V_{max} (90% MPPT)	707,6	92,65	96,26	97,38	97,66	97,67

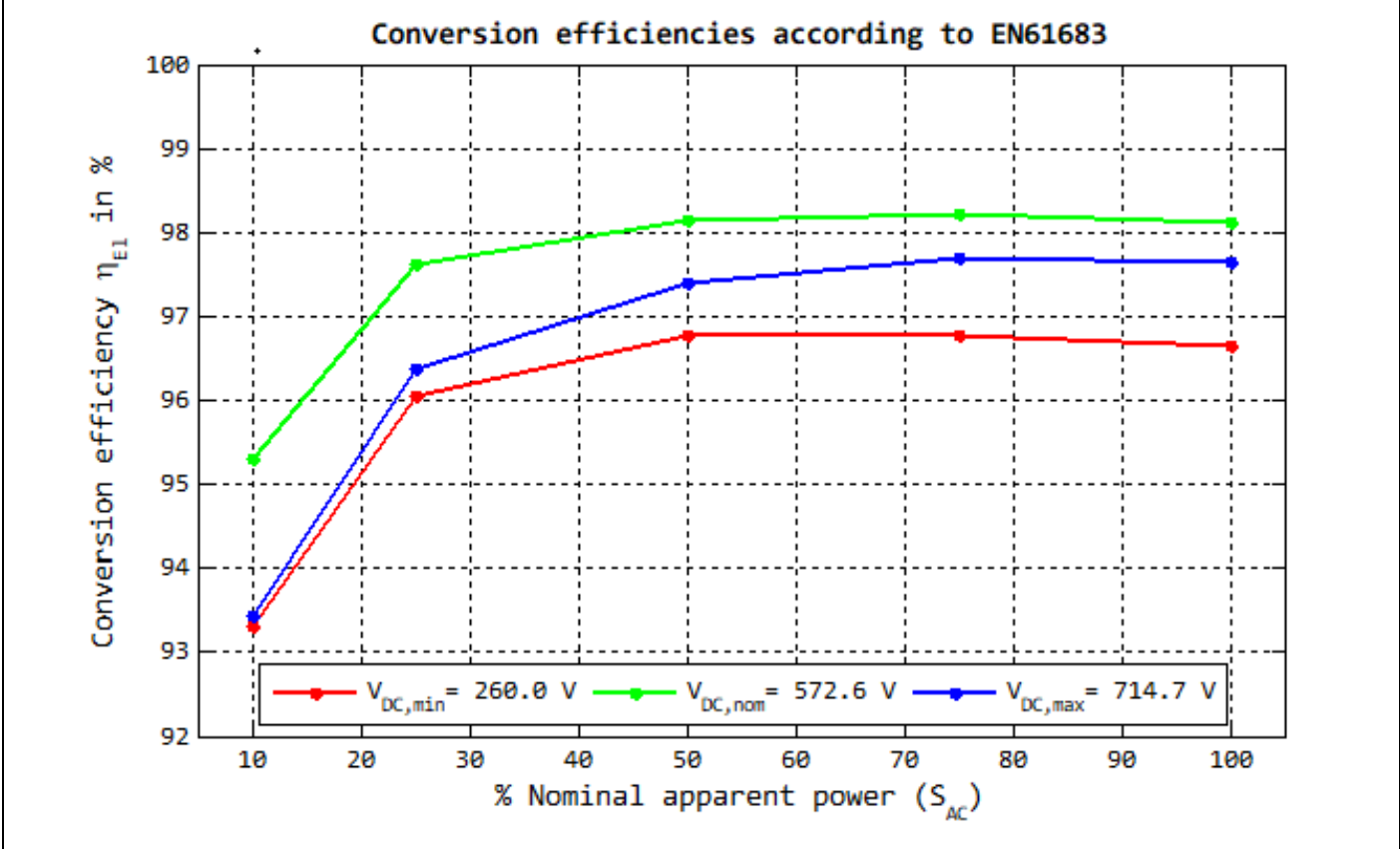
Conversion efficiencies according to EN61683





Appendix
 Extract from test report according the IEC 61683 Nr. 18TH0325-IEC61683_0

Efficiency measurement conditions test results						
STP6.0-3AV-40						
Input voltage [Vdc]		Power in [W] (nom. 6000 W)				
		10%	25%	50%	75%	100%
		600	1500	3000	4500	6000
		η in [%]				
V _{min}	260,0	93,30	96,05	96,78	96,77	96,64
V _{nominal}	572,6	95,31	97,63	98,16	98,21	98,11
V _{max (90% MPPT)}	714,7	93,43	96,38	97,39	97,70	97,66





Appendix

Extract from test report according the IEC 61683

Nr. 18TH0325-IEC61683_0

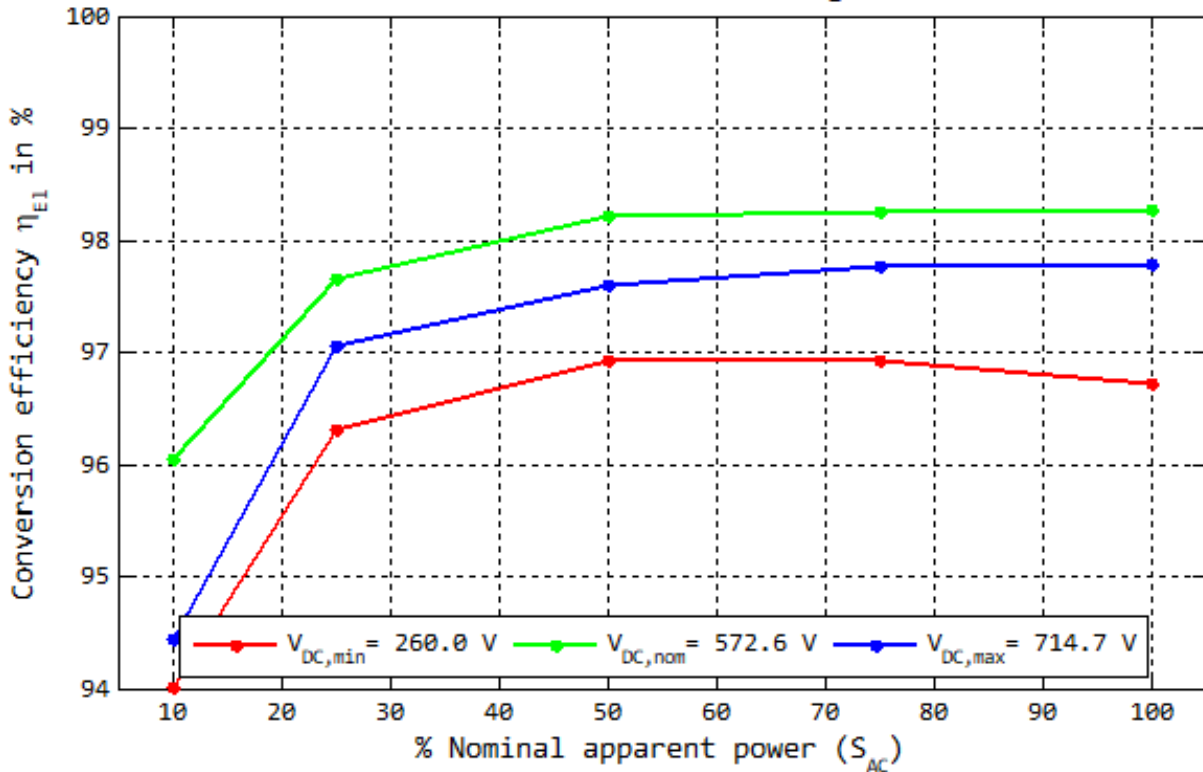
Efficiency measurement conditions test results

STP8.0-3AV-40

Power in [W] (nom. 8000 W)

Input voltage [Vdc]		Power in [W] (nom. 8000 W)				
		10%	25%	50%	75%	100%
		800	2000	4000	6000	8000
		η in [%]				
V_{min}	260,0	94,00	96,31	96,93	96,92	96,73
$V_{nominal}$	572,6	96,04	97,66	98,22	98,25	98,27
V_{max} (90% MPPT)	714,7	94,44	97,05	97,59	97,76	97,78

Conversion efficiencies according to EN61683





Appendix

Extract from test report according the IEC 61683

Nr. 18TH0325-IEC61683_0

Efficiency measurement conditions test results

STP10.0-3AV-40

Input voltage [Vdc]		Power in [W] (nom. 10000 W)				
		10%	25%	50%	75%	100%
V_{min}	320,0	95,08	96,77	97,17	97,05	96,81
$V_{nominal}$	572,6	96,77	98,08	98,32	98,15	98,01
V_{max} (90% MPPT)	724,2	95,37	97,34	97,67	97,71	97,61

Conversion efficiencies according to EN61683

