



**BUREAU
VERITAS**

Certificate of compliance

Applicant: REFU Elektronik GmbH
Marktstraße 185
72793 Pfullingen
Germany

Product: Grid-tied photovoltaic (PV) inverter

Model: REFUsol 40K (842P040)
REFUsol 46K (842P046)

Use in accordance with regulations:

The inverters are tested according to 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: 16TH0364-IEC61683_0
Certificate number: U17-0595
Date of issue: 2017-11-08

Certification body



Holger Schaffer

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



Measuring of efficiency

Extract from test report according the IEC 61683

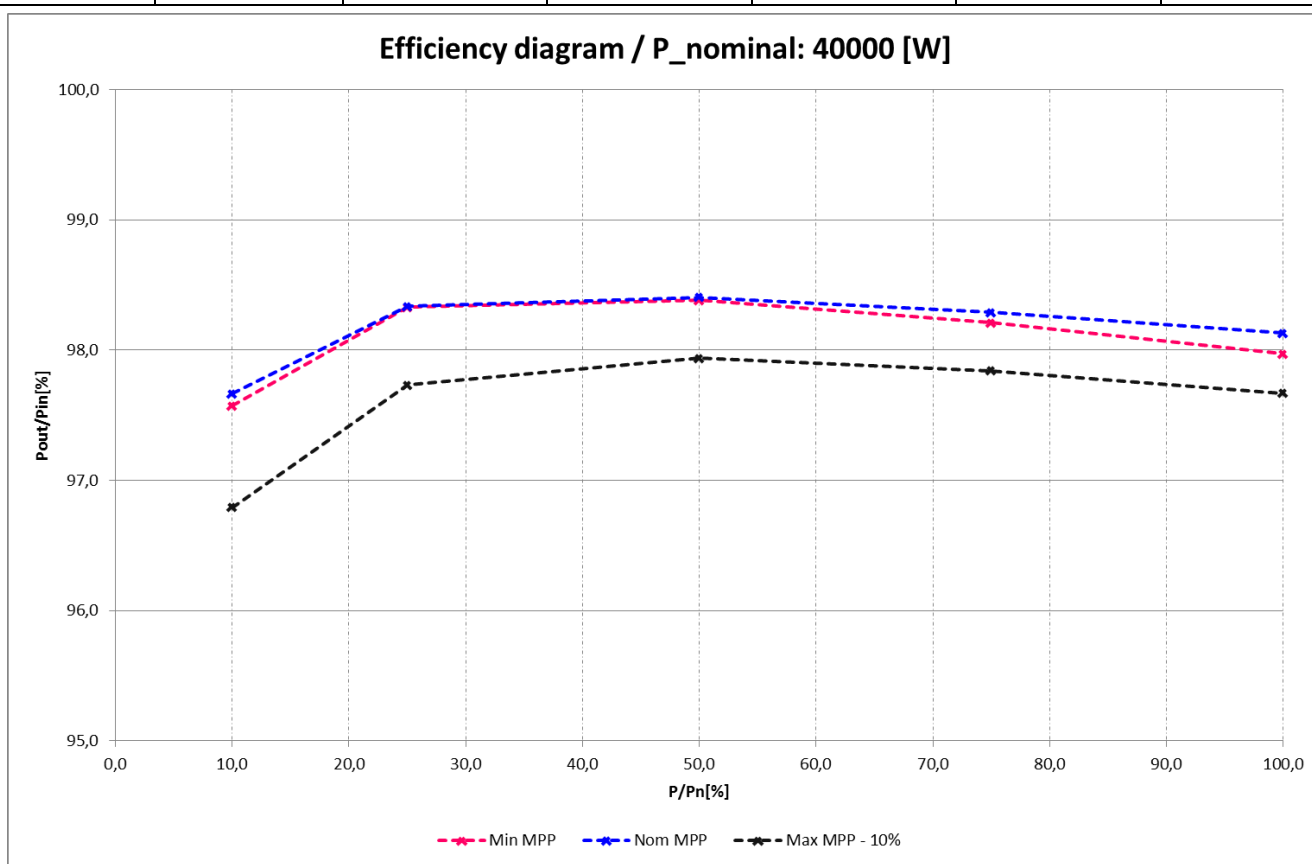
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Efficiency measurement conditions test results

REFUsol 40K (842P040)

Input voltage [Vdc]		Power in [kW] (nom. 40kW)				
		10%	25%	50%	75%	100%
		[4kW]	[10kW]	[20kW]	[30kW]	[40kW]
		η in [%]				
V_{min}	490	97,6	98,3	98,4	98,2	98,0
$V_{nominal}$	625	97,7	98,3	98,4	98,3	98,1
V_{max} (90% MPPT)	850	96,8	97,7	97,9	97,8	97,7

Efficiency diagram / P_nominal: 40000 [W]



Measuring of efficiency

Extract from test report according the IEC 61683

Nr. 16TH0364-IEC61683_0

Efficiency measurement conditions test results

REFUso1 46K (842P046)

Power in [kW] (nom. 46kW)

Input voltage [Vdc]		Power in [kW] (nom. 46kW)				
		10%	25%	50%	75%	100%
		[4,6kW]	[11,5kW]	[23kW]	[34,5kW]	[46kW]
		η in [%]				
V _{min}	575	97,7	98,2	98,3	98,2	98,0
V _{nominal}	675	97,8	98,3	98,4	98,3	98,1
V _{max (90% MPPT)}	850	97,5	98,0	98,2	98,1	97,8

Efficiency diagram / P_{nominal}: 46000 [W]

