

## Evaluation Report No. 492014215.001

### Photovoltaic Module Qualification

Applicant: **Engelmann Haustechnik GmbH**  
Zum Kyrbach 14 55481 Ober Kostenz, Germany

File No.: PVP12159/25P

Designed:  
(Project Engineer)

by:

*Tingting Liu*

Digitally signed  
by Tingting Liu

Date:  
2026.01.19  
18:37:26 +08'00'

Reviewed:  
(Technical Certifier)

by:

*Nancy Zhang*

Digitally signed  
by Nancy Zhang  
Date: 2026.01.19  
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Applicant..... :	<b>Engelmann Haustechnik GmbH</b> Zum Kyrbach 14 55481 Ober Kostenz, Germany
Manufacturer ..... :	<b>Engelmann Haustechnik GmbH</b> Zum Kyrbach 14 55481 Ober Kostenz, Germany
Factory 1..... :	<b>Econess Energy Co., Ltd.</b> No.58, Haida Road, Huashi Town, Jiangyin City, Jiangsu Province, 214421, P.R. China
Factory 2..... :	<b>Sunrev (Yangzhou) Photovoltaic Technology Co., Ltd.</b> No. 118, Jingang Road, Yangzhou economic and Technological Development Zone 225100 Yangzhou City, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA
Order No..... :	HZHVP12159/25P_R1
Date of Application ..... :	2025-12-30
Product..... :	Crystalline Silicon Terrestrial Photovoltaic (PV) Modules
Module type(s)..... :	<b>PV Modules with Half-cut 182mm TOPCon Mono-crystalline Silicon Solar Cells:</b> 108 cells: Engel.Solar xxxW HQ Serie 1 (xxx=415-445, in increments of 5)  <b>PV Modules with Half-cut 182.2*188mm TOPCon Mono-crystalline Silicon Solar Cells:</b> 108 cells: Engel.Solar xxxW HQ Serie 2 (xxx=435-455, in increments of 5)  <b>PV Modules with Half-cut 182.2*191.6mm TOPCon Mono-crystalline Silicon Solar Cells:</b> 108 cells: Engel.Solar xxxW HQ Serie 3 (xxx=445-465, in increments of 5)  <b>PV Modules with Half-cut 182*210mm TOPCon Mono-crystalline Silicon Solar Cells:</b> 96 cells: Engel.Solar xxxW HQ Serie 4 (xxx=430-450, in increments of 5)  xxx indicates rated output power generated from front side under STC
General Information	
• Maximum System Voltage.... :	DC 1500V
• Electrical Protection Class.... :	Class II
• Fire Safety Class ..... :	Class C
Type of examination ..... :	Parallel certification for application of TÜV mark
Testing Period ..... :	N/A
Testing Laboratory..... :	N/A
Attachment(s)	Attachment: Constructional Data Form (20 pages)

Test results listed in this test report refer exclusively to the mentioned test sample.

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The submitted test samples as described in the reports hereunder are in compliance with the requirements:

IEC 61215-1:2021 / EN IEC 61215-1:2021 "Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1: Test requirements"

IEC 61215-1-1:2021 / EN IEC 61215-1-1:2021 "Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-1: Special requirements for testing of crystalline silicon photovoltaic (PV) modules"

IEC 61215-2:2021 / EN IEC 61215-2:2021 "Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 2: Test procedures"

IEC 61730-1:2023 "Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction"

IEC 61730-2:2023 "Photovoltaic (PV) module safety qualification - Part 2: Requirements for testing"

EN IEC 61730-1:2018 "Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction"

EN IEC 61730-2:2018 "Photovoltaic (PV) module safety qualification - Part 2: Requirements for testing"

<b>History of certification</b>	
File no. ....:	N/A
Certificate no. ....:	N/A
Date of issue ....:	N/A
Report no. ....:	N/A
Module type(s) .:	N/A
Description: .....	N/A
Supplementary information: Basic project, no history of certification	

**Summary of Certification**

According to the enquiry of the applicant, based on certificate no. 44 780 24 406749 - 293R2M2 hold by Econess Energy Co., Ltd. issue a parallel certificate to Engelmann Haustechnik GmbH.

Factory inspection has been performed annually, from the result of document reviewing, it is recommended that certification should be granted.

**Detailed product information is to be found in the CDF (constructional data form) attached to this report with same file no.**

----- End of report -----