



**Customized Testing based on  
IEC 61215-1:2016, IEC 61215-2:2016 and  
IEC 61730-2:2016  
Photovoltaic (PV) modules  
Validation of test results**

**VDE Renewables File Ref.:** 10460/2019-40178

**Applicant:** GCLE-EXE Energy Industry Co. Ltd.  
501-2 Manufacturing Park, 65 Dacang Road,  
213000 Zhonglou, Jiangsu, China

**Product:** Crystalline silicon Photovoltaic (PV)-Modules

**Type:** **A) A-MXXX/60**  
**B) A-PXXX/60**  
**C) A-HCMXXX/120**

XXX in the type replace the power in Watt and can be any number between:

300 – 340 for A)  
280 – 295 for B)  
310 – 345 for C)

**Manufacturer:** GCLE-EXE Industry Co. Ltd, Jiangsu Nantong  
China

**Standard:** IEC 61215-2:2016, Clause 4.16  
IEC 61730-2:2016, Clause 10.23

**Testing Laboratory:** Eurotest Laboratori S.r.l.  
Via Marconi, 23 – 35020 Brugine (PD) Italy

**Tests Performed on applicant's request:**

MQT 02 / MST 03:	Maximum power determination (initial) without stabilization
MQT 03 / MST 16:	Insulation test (Initial)
MQT16 / MST34:	Static mechanical load test
MQT 03 / MST 16:	Insulation test (Final)
MQT 02 / MST 03:	Maximum power determination (Final)

**Test conditions:**

**Mounting method:** Two horizontal bars fixed with four clamps on long side as  
indicated in the manual.

**Safety factor  $\gamma_m$ :** 1.5

**Design load:** 5333 Pa for front and rear side

**Test load:** 8000 Pa for front and rear side

**Number of cycles:** 3 (One cycle consists of 1h load on front and 1h on rear  
side)



**Pass criteria:**

Power degradation: < 5%

Dry Insulation: > 40 MΩm<sup>2</sup>

**Summary of test results:**

**Power degradation:** allowed: max. 5 %

measured: 0.19 %

The measured degradation is below the allowed degradation.

**Dry Insulation:** required: min. 24 MΩ

measured: >1000 MΩ

The measured dry insulation resistance is above the limit.

The complete test results are given in the Eurotest Laboratori S.r.l.

Test Report No.: PQS01 48414-231P19, dated 2019-10-17.

The used bill of materials has not been specified.

The calibration data of the used measurement equipment haven't been provided.

Information regarding the estimated uncertainty for the maximum power determination and the dry insulation test are given in the Test Report.

**VDE Renewables GmbH**

**Dean Wen**

**Arnd Roth**

63755 Alzenau, 2020-01-28

