ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Product Service

CERTIFICATE

No. Z2 12 10 82480 001

Holder of Certificate: **Zhangzhou Nheolis Technology Co.,Ltd.**
Wenpu Industrial Zone
Jiaomei Industrial Comprehensive Development District
363107 Longhai, Zhangzhou, Fujian
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:

Product: **Converter**
(Wind grid-connected converter)

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

Test report no.: 64290120153901

546828

Date, 2012-11-02 (Frank Zhu)

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Model(s): **WPI3500-B, WPI4200-B**

Parameters:

Maximum. input line voltage:
400Va.c. 3 phase
Maximum input current:
15.0 Aa.c.
Nominal a.c. output voltage:
230Va.c.
Nominal a.c. output frequency:
50Hz
Nominal active output power (Pn):
3500W (WPI3500-B), 4200W (WPI4200-B)
Nominal a.c. output current:
15.2Aa.c. (WPI3500-B), 18.3Aa.c. (WPI4200-B)
Maximum continuous a.c. output current:
16.0Aa.c. (WPI3500-B), 20.0Aa.c. (WPI4200-B)
Maximum active power of the power generation unit (PEMax):
3502W (WPI3500-B), 4287W (WPI4200-B)
Maximum apparent power of the power generation unit (SEmax):
3505VA (WPI3500-B), 4292VA (WPI4200-B)
Power factor (cos phi):
Fixed, >0.99 (full load) (WPI3500-B); Adjustable,
0.95under-excited to 0.95over-excited (WPI4200-B)
Protection class:
I
IP code:
IP65
Remark:
See page 3 for license condition

Tested according to:

IEC 62477-1:2012
EN 62477-1:2012
DIN V VDE V 0126-1-1/A1:2012
VDE-AR-N 4105:2011-08
DIN V VDE V 0124-100:2012-07

Production Facility(ies):

76733

Frank Zhu

TÜV SÜD Product Service GmbH · Zertifizierstelle · Ridlerstraße 65 · 80339 München · Germany

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License condition:

1. The units are non-isolated wind grid-connected converters, converting small wind turbine three phase output power into stable AC single phase power and feed into grid;
2. The maximum power point tracking is not provided in the wind converter. The converted power from the small wind turbine is run through P-U feature curve of wind turbine. Therefore, the converter is designed for non-variable type power generation system.
3. The maximum voltage of installed small wind turbine shall not exceed the maximum rated input voltage in any condition;
4. The grid connection protection system is evaluated according to VDE 0126-1-1/A1 and VDE-AR-N 4105. For other case, the local grid code shall be further considered and not evaluated in this report. The features required by VDE-AR-N 4105 are described as follows:
   a) This wind converter is designed for use within non-variable type power generation system according to VDE-AR-N 4105. During installation, the disconnection frequency of each unit shall be uniformly distributed in range 50.2Hz and 51.5Hz in maximum increments of 0.1Hz in the power generation system. And the reconnection time may connect after 1 minute to 10 minutes. Detail setting shall be referred to local network operator;
   b) Model WPI3500-B designed for use with power generation system with no default displacement factor is given by the network operator;
   c) Model WPI4200-B designed for use with power generation system with the default displacement factor is given by the network operator in range from $0.95_{\text{under-excited}}$ to $0.95_{\text{over-excited}}$.
   d) The Table F.3 and F.4 of VDE-AR-N 4105: 2011 are referred to technical report 64.290.12.01539.01.
5. The unit is designed for outdoor use covering normal environmental conditions specified as equal to Clause 6.4.2 of IEC 61400-2 Wind turbines- design requirements for small wind turbines. Further detail environmental condition is given as below table and user manual. The installation condition shall be within the specification;
6. It's intended for professional incorporation into small wind turbine and shall be installed and maintained by skilled personnel;
7. For compatibility with residual current-operated protective devices (RCD), type B is required for the installation or according to the local regulation;
8. Measure shall be provided to control over-voltage suitable for converter sources terminal: OVC II for wind turbine and OVC III for mains;
9. The firmware version is V1.0;
10. Specified maximum ambient temperature is 60°C and derating operation when above 50°C.

Date, 2012-11-02