

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Electric Motor

with type designation(s)
W22 Line (Series Xn, Xe and Xd)

Issued to

WEG Equipamentos Elétricos S. A.
Jaraguá do sul, SC, Brazil

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Degree of protection	IP55, IP56, IP65 and IP66
Insulation class	F & H
Temp. class (°C)	155 & 180
Voltage (V)	See page 2
Power (kW)	see page 2
Frequency (Hz)	See page 2
Speed (RPM)	See page 2

Issued at **Hamburg** on **2020-09-10**

This Certificate is valid until **2025-09-09**.

DNV GL local station: **Station Rio de Janeiro**

for **DNV GL**

Approval Engineer: **Maik Gagern**

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Arne Schaarmann
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description **(see Application / Limitation)

Type WEG W22 line 3-phase induction motor:

W22Xn - Non Sparking

Frame: IEC 63 to 355 and NEMA equivalent
Output: 0.12 to 550kW
Poles: 2 to 12 poles and combinations
Frequency: 50Hz or 60Hz and VFD (up to 100Hz)
Voltage: Up to 1000V
IP Rating: IP55, IP56, IP65 and IP66
Amb. Temp.: -55°C to +80°C
Marking: Ex ec IIC T3 Gc / Ex tc IIIB T125°C Dc / Ex tc IIIB T160°C Dc /
Ex tb IIIC T125°C Db / Ex tb IIIC T160°C Db
(T3 - T4 option for frame sizes 250S/M and 355M/L only)
Certificate: IECEx BAS 10.0099X

W22Xe - Increased Safety

Frame: IEC 63 to 355 and NEMA equivalent
Output: 250kW max.
Poles: 2 to 8 poles and combinations
Frequency: 50, 60, 50/60Hz and VFD (up to 120Hz)
Voltage: Up to 690V
IP Rating: IP55, IP56, IP65 and IP66
Amb. Temp.: -55°C to +60°C
Marking: Ex eb IIC T3 Gb / Ex tb IIIC T125°C Db (T1 to T3)
Certificate: IECEx BAS 15.0132X

W22Xd - Explosion Proof

Frame: 71 and 80

Frame: IEC 71 and 80 and NEMA equivalent
Output: 0.12 to 1.5kW
Poles 71: 2 to 8 poles and combinations 80: 2 to 10 poles and combinations
Frequency: 50Hz, 60Hz, 50/60Hz and VFD (up to 120Hz)
Voltage: 220V to 1000V
IP Rating: IP55, IP56, IP65 and IP66
Amb. Temp.: -55°C to +80°C
Marking: Ex db IIC T4 Gb / Ex db I T4 Mb / Ex tb IIIC T125°C Db (T1 to T6)
Certificate: IECEx BAS 13.0008X

Frame: 90 to 132

Frame: IEC 90 to 132 and NEMA equivalent
Output: 0.12 to 11kW Poles 2 to 12 poles and combinations
Frequency: 50Hz, 60Hz, 50/60Hz and VFD (up to 120Hz)
Voltage: 220V to 1000V
IP Rating: IP55, IP56, IP65 and IP66
Amb. Temp.: -55°C to +80°C
Marking: Ex db IIC T4 Gb / Ex db eb IIC T4 Gb / Ex db I T4 Mb /
Ex db eb I T4 Mb / Ex tb IIIC T125°C Db (T1 to T6)
Certificate: IECEx BAS 13.0045X

Frame: 160 to 200

Frame: IEC 160 to 200 and NEMA equivalent
Output: 1.5 to 45kW

Poles: 2 to 12 poles and combinations
Frequency: 50Hz, 60Hz, 50/60Hz and VFD (up to 120Hz)
Voltage: 220V to 1000V
IP Rating: IP55, IP56, IP65 and IP66
Amb. Temp.: -55°C to +80°C
Marking: Ex db IIC T4 Gb / Ex db eb IIC T4 Gb / Ex db I T4 Mb /
Ex db eb I T4 Mb / Ex tb IIIC T125°C Db (T1 to T6)
Certificate: IECEX BAS 13.0142X

Frame: 225 and 250

Frame: IEC 225 and 250 and NEMA equivalent
Output: 7.5 to 90kW
Poles: 2 to 24 poles and combinations
Frequency: 50Hz, 60Hz, 50/60Hz and VFD (up to 120Hz)
Voltage: 220V to 1000V
IP Rating: IP55, IP56, IP65 and IP66
Amb. Temp.: -55°C to +80°C
Marking: Ex db IIC T4 Gb / Ex db eb IIC T4 Gb / Ex db I Mb /
Ex db eb I Mb / Ex tb IIIC T125°C Db (T1 to T6)
Certificate: IECEX INE 16.0060X

Frame: 280 to 355

Frame: IEC 280 to 355 and NEMA equivalent
Output: Up 440kW Poles 2 to 24 poles and combinations
Frequency: 50Hz, 60Hz, 50/60Hz and VFD (2 poles max 120Hz, 6300 rpm all poles)
Voltage: 220V to 1000V
IP Rating: IP55, IP56, IP65 and IP66
Amb. Temp.: IIIC -55°C to +80°C / IIC -20°C to +80°C (315 to 355)
IIC -55°C to +80°C (280):
use W22Xd WEG-Euro design for frames 315/355 /
IIB -55°C to +80°C (315 to 355)
Marking: Ex db IIC T4 Gb / Ex db eb IIC T4 Gb / Ex db I Mb /
Ex db eb I Mb / Ex tb IIIC T125°C Db (T1 to T6)
Certificate: IECEX INE 16.0044X

Application/Limitation

****Note:** All details about electrical explosion protection mentioned in this certificate are for information only. For relevant binding information the corresponding Certificate of Conformity with regard to electrical explosion protection, issued by a recognised Authority, shall be observed.

Special conditions and requirements for safe use acc. to the applicable Certificate of Conformity with regard to electrical explosion protection and Maker's instructions are to be observed.

Ambient temperature range for all types as listed above is based on Certificate of Compliance No. 20161005-E104590, issued by UL LLC and/or on the relevant Certificate of Conformity with regard to electrical explosion protection.

Type Approval documentation

Tests carried out

Temperature
Overload
Over-speed
Insulation resistance
Winding resistance

Job Id: **262.1-030233-1**
Certificate No: **TAE0000429**

No load
IP class.

Marking of product

WEG motors – type designation – technical data including rated voltage, RPM, rated power, ambient temperature, rated current, rated frequency, insulation class & IP class.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE