

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Electric Motor**

with type designation(s)  
**AK, K, AB**

Issued to

**VALIADIS S.A.**  
**LIKOVIRISI-ATHENS, Greece**

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.**

<b>Enclosure class</b>	<b>IP 23, IP 55, IP 56, IP 65</b>
<b>Insulation class</b>	<b>155 (F)</b>
<b>Temp. class (°C)</b>	<b>155 (F)</b>
<b>Voltage (V)</b>	<b>220 V up to 690 V</b>
<b>Power (kW)</b>	<b>0,09 kW up to 710 kW</b>
<b>Frequency (Hz)</b>	<b>50 Hz, 60 Hz</b>
<b>Speed (RPM)</b>	<b>750 1/min up to 3600 1/min</b>

Issued at **Hamburg** on **2017-04-06**

This Certificate is valid until **2021-03-03**.  
DNV GL local station: **Piraeus**

Approval Engineer: **Heinz-Dieter Hespe**



Digitally Signed By: Rinkel, Marco  
for **DNV GL**  
Signing Date: 2017-04-05  
Location: Hamburg - On behalf of

**Duy Nam Le**  
**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.



## Product description

### AC Induction Motors, Aluminium Frame

Type: **AK - series**

<b>AK</b> (Type designation)	<b>Technical data</b>
Sizes	56 up to 132 - S, M, L
Rated power	0.06 kW up to 9 kW
Rated Voltage	220 V up to 690 V
Duty Type	S1
No. of poles	2, 4, 6, 8
Synchronous Speed	750 1/min up to 3600 1/min
Rated Frequency	50 Hz, 60 Hz
Ambient Temperature	45 °C
Thermal Class	155 (F)
Degree of Protection	IP 55, IP 56, IP 65
Standard	IEC 60034-1:2010-02 IEC 92-301-3 <sup>rd</sup> ed. 1980 + Amd 1:1994 + Amd 2:1995
	For Marine environments

### AC Induction Motors, Cast Iron Frame

Type: **K - series**

<b>K</b> (Type designation)	<b>Technical data</b>
Sizes	80 up to 355 - S, M, L
Rated power	0.75 kW up to 315 kW
Rated Voltage	220 V up to 690 V
Duty Type	S1
No. of poles	2, 4, 6, 8 (sizes 80 to 315) 2, 4, 5 (size 355)
Synchronous Speed	750 1/min up to 3600 1/min
Rated Frequency	50 Hz, 60 Hz
Ambient Temperature	45 °C
Thermal Class	155 (F)
Degree of Protection	IP 55, IP 56, IP 65
Standard	IEC 60034-1:2010-02 IEC 92-301-3 <sup>rd</sup> ed. 1980 + Amd 1:1994 + Amd 2:1995
	For Marine environments

Job Id: **262.1-025367-1**  
Certificate No: **TAE00001W8**

## **AC Induction Motors, Cast Iron Frame, Open Drip Motors**

Type: **AB - series**

<b>AB</b> (Type designation)	<b>Technical data</b>
Sizes	160 up to 355 - X
Rated power	15 kW up to 710 kW
Rated Voltage	220 V up to 690 V
Duty Type	S1
No. of poles	2, 4, 6, 8
Synchronous Speed	750 1/min up to 3600 1/min
Rated Frequency	50 Hz, 60 Hz
Ambient Temperature	45 °C
Thermal Class	155 (F)
Degree of Protection	IP 23
Standard	IEC 60034-1:2010-02 IEC 92-301-3 <sup>rd</sup> ed. 1980 + Amd 1:1994 + Amd 2:1995
	For Marine environments

## **Application/Limitation**

This Type Approval Certificate does not replace the requirement to DNV GL Product Certificate.

Place of manufacturing:

China, Jiangsu Prov., according to the statement of Valiadis S.A. of 2016-11-03

## **Type Approval documentation**

AK series

Drawing: O..2 160-2, 1171600201 / 2013-03-08

Datasheet: IE2 – 160M2 / 08.03.2013

Catalogue Valiadis S.A. Helenic Motors, AK series, ed. 2012

K series

Drawing: O..1 355-4, 11635550413 / 2013-03-07

Datasheet: IE2 – 355MX-4 / 07.03.2013

Catalogue Valiadis S.A. Helenic Motors, K series, ed. 2012

AB series

Drawing: O.. 315-M4, 1073150409 / 2013-03-07

Datasheet: IE2 – O..315M-4 / 07.03.2013

Catalogue Valiadis S.A. Helenic Motors, AB series, ed. 2012

## **Tests carried out**

Test reports

O..2-160-M2, Ser. No 20701004001 / 08.03.2013

O..1-F2 315S-4 / 2015.11.19, IE3-355M-2 / 20.11.15

O..—315M4, Ser. No 20701005001 / 2013.03.07

## Marking of product

According to IEC 60034-1, clause 10.2

## 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