



Certificate No:
TAA000035T

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Electric Actuator

with type designation(s)
HL-Series, LQ-series

Issued to

Wenzhou Heli Automatic Meter Co., Ltd.
Wenzhou, China

is found to comply with

DNV rules for classification – Ships and offshore units

Application :

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

Location classes:

Type	Temperature	Humidity	Vibration	EMC	Enclosure
HL-Series	D	B	A	A	IP67
LQ-series	D	B	A	A	IP67

Issued at **Hamburg** on **2022-06-15**

This Certificate is valid until **2027-06-14**.

for **DNV**

DNV local station: **Ningbo CMC**

Approval Engineer: **Holger Jansen**

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Joannis Papanuskas
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 AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") 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.



Form code: TA 251

Revision: 2021-03

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Product description

HL-Series electrical actuators

Control Voltage: 220 Vac

Type	Max. Output Torque	Controls	Motor consumption
HL-ZXEx-02S	24 Nm	ON-OFF	6.8 W
HL-05S	50 Nm	ON-OFF	10 W
HL-05A	50 Nm	Modulating	10 W
HL-10S	100 Nm	ON-OFF	23 W
HL-10A	100 Nm	Modulating	23 W
HL-20S	200 Nm	ON-OFF	40 W
HL-20A	200 Nm	Modulating	40 W
HL-40S	400 Nm	ON-OFF	90 W
HL-40A	400 Nm	Modulating	90 W
HL-50S	500 Nm	ON-OFF	90 W
HL-50A	500 Nm	Modulating	90 W
HL-60S	600 Nm	ON-OFF	90 W
HL-60A	600 Nm	Modulating	90 W
HL-100S	1000 Nm	ON-OFF	100 W
HL-100A	1000 Nm	Modulating	100 W
HL-200S	2000 Nm	ON-OFF	100 W
HL-200A	2000 Nm	Modulating	100 W
HL-300S	3000 Nm	ON-OFF	200 W
HL-300A	3000 Nm	Modulating	200 W

LQ-Series electrical actuators

Control Voltage: 220 Vac

Type	Max. Output Torque	Controls	Motor consumption
LQ1Ex-06	60 Nm	ON-OFF	20 W
LQ1 Ex-06A	60 Nm	Modulating	20 W
LQ1 Ex-10	100 Nm	ON-OFF	20 W
LQ1 Ex-10A	100 Nm	Modulating	20 W
LQ2 Ex-16	160 Nm	ON-OFF	40 W
LQ2 Ex-16A	160 Nm	Modulating	40 W
LQ2 Ex-20	200 Nm	ON-OFF	40 W
LQ2 Ex-20A	200 Nm	Modulating	40 W
LQ2 Ex-24	240 Nm	ON-OFF	45 W
LQ2 Ex-24A	240 Nm	Modulating	45 W
LQ3 Ex-35	350 Nm	ON-OFF	60 W
LQ3 Ex-35A	350 Nm	Modulating	60 W
LQ3 Ex-50	500 Nm	ON-OFF	90 W
LQ3 Ex-50A	500 Nm	Modulating	90 W
LQ4 Ex-80	800 Nm	ON-OFF	120 W
LQ4 Ex-80A	800 Nm	Modulating	120 W
LQ4 Ex-110	1100 Nm	ON-OFF	180 W
LQ4 Ex-110A	1100 Nm	Modulating	180 W
LQ3Ex-50+125S	50 Nm	ON-OFF with spring return	45 W
LQ3Ex-50+140S	100 Nm	ON-OFF with spring return	45 W
LQ4Ex-80+160S	200 Nm	ON-OFF with spring return	80 W
LQ4Ex-80+190S	300 Nm	ON-OFF with spring return	80 W

“Ex” in the product type means explosion-proof product, not verified by DNV.

Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Type Approval documentation

Tests carried out

Applicable tests according to DNV Class Guideline CG0339, August 2021.

Marking of product

The products to be marked with:

- Model name
- Manufacturer name
- Serial number

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the 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