Certificate no.:
TAA00003R5

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Programmable Controller

with type designation(s)
KCx modules: KCA, KCD, KCR, KCC

issued to
Kwant Controls B.V.
Sneek, **Netherlands**

is found to comply with
DNV 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.

Location classes:

Temperature	**D**
Humidity	**B**
Vibration	**A**
EMC	**B**
Enclosure	**A / IP20**

Issued at **Høvik** on **2026-01-08**
This Certificate is valid until **2031-01-07**.
DNV local unit: **Netherlands CMC**

for **DNV**

Approval Engineer: **Sonali Marathe**

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 USD 300 000.

Product description

The type approval certificate covers following modules, tested and approved for nominal voltage 24V DC.

Module	Description	
KCA	CANopen slave device to interface via CANbus with analogue sensors and actuators	
KCD	CANopen slave device to interface via CANbus with digital signals, contacts, lamps, buzzers and relays	
KCR	CANopen master device to interface via CANbusses with other CANopen devices	
KCC	Control unit with a CAN interface to perform e.g. electric shaft functions	
	KCC1	Basic execution, one KCS board
	KCC2	Contains two separate KCS boards
	KCC3	Basic execution with an extra redundant CAN-bus interface. One KCS and one KCB board.
	KCC4	Contains two KCS-boards and one KCB board

Compass safe distance: 1000 mm

Manufactured by

Kwant Controls B.V.
Voltastraat 3, 8606 JW, Sneek,
Netherlands

Approval conditions

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 classification of ships Pt.4 Ch.9 Control and monitoring systems.

Product certificate

If specified in the Rules, ref. Pt.4 Ch.9 Sec.1, the control and monitoring system in which the above listed hardware is used shall be delivered with a product certificate. For each such delivery the certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. The test shall be done according to an approved test program. After certification the clause for software control will be put into force.

Software control

All changes in software are to be recorded as long as the system is in use on board. Documentation of major changes is to be forwarded to DNV for evaluation and approval before implemented on board. Certification of modified functionality may be required for the particular vessel.

Type Approval documentation

Tests carried out

Applicable tests according to Class Guideline DNV-CG-0339, August 2021
Compass safe distance was measured according to section 11.2 of IEC 60945 4th edition (2002).

Marking of product

The products to be marked with:
- manufacturer name
- model name
- serial number
- power supply ratings

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