

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Programmable Electronic System**with type designation(s)
CS1W-CRM21, CJ1W-CRM21, CRS1-RPT01

Issued to

Omron Corporation IAB Company
Kusatsu-City Shiga Pref, Japan

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft**Application :****Location classes:****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Temperature B****Humidity B****Vibration A****EMC A****Enclosure Required protection according to DNVGL Rules shall be provided upon installation onboard**Issued at **Busan** on **2017-06-05**This Certificate is valid until **2021-12-31**.for **DNV GL**DNV GL local station: **Kobe**Approval Engineer: **Eun Jin Lee**

Michael Jost Auf der Stroth
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

CompoNet Networks feature easy operation and installation in a component-level network connecting PLCs and on-site I/O. The PLC and CompoNet Slave Units cyclically exchange I/O information through a CompoNet Master Unit, refreshing I/O in sync with the PLC scan. Message communications can also be used from host computers or the CPU Unit of the PLC to read and write CompoNet Slave Unit data.

The system in this type approval certificate comprises of following:

Model/Type (*)	Description
CS1W-CRM21	CompoNet Master Unit
CJ1W-CRM21	CompoNet Master Unit
CRS1-RPT01	CompoNet Repeater Unit

(*) Type name may be followed by an "E" for export version, a "V" and number(s) for version identification and additional number(s) and/or letters.

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.

Type Approval documentation

Tests carried out

Applicable tests according to DNVGL Class Guidence DNVGL-CG-0339

Place of manufacture

1. Japan
Opron Corporation Industrial Automation Company Kusatsu Factory
2-2-1 Nishikusatsu, Kusatsu-shi, Shiga, 525-0035, Japan
2. Shanghai
OMRON(SHANGHAI) Co.,LTD.
789 JINJI RD JINQIAO EXPORT PROCESSING AREA PUDONG SHANGHAI 201206, CHINA

Periodical assessment

The scope of the retention/renewal survey 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 survey 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

Retention survey is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE