DNV·GL

Certificate No:
TAA00000BX

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Programmable Controller

with type designation(s)
NJ series Machine Automatio Controller

Issued to
Omron Corporation IAB Company
Kusatsu-City Shiga Pref, Japan

is found to comply with
DNV GL rules for classification – Ships and offshore units

Application :

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	**B**
Enclosure	**Required protection according to DNV GL Rules shall be provided upon installation onboard**

This Certificate is valid until **2021-03-08**.

Issued at **Busan** on **2016-03-09**

for **DNV GL**

DNV GL local station: **Kobe**

Approval Engineer: **Hee Jin Song**

Baeg Soon Choi
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.

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Job Id: **262.1-020630-1**
Certificate No: **TAA00000BX**

Product description

Uit Name	Type Name	
CPU Unit	NJ501 Series	NJ501-1500
		NJ501-1400
		NJ501-1300
		NJ501-1520
		NJ501-1420
		NJ501-1320
		NJ501-1340
		NJ501-4500
		NJ501-4400
		NJ501-4300
		NJ501-4310
		NJ501-4320
	NJ301 Series	NJ301-1200
		NJ301-1100
	NJ101 Series	NJ101-1000
		NJ101-9000
		NJ101-1020
		NJ101-9020
AC Power Supply Unit	NJ-PA3001	
DC Power Supply Unit	NJ-PD3001	

Notes:
1. Type name may be followed by additional letter(s) and/or number(s).
2. Above listed units are to be installed into the control panel with flame-retardant enclosure as flammability test is omitted.

Place of Manufacture:

1. Omron Corporation: CPU unit
2-2-1, Nishikusatsu, Kusatsu-Shi, Shiga, 525-0035, Japan

2. Omron (Shanghai) Co., Ltd: AC/DC power supply unit
No.789 Jinji Road, Jinqiao Export Processing District, Pudong New Area, Shanghai, China

Application/Limitation

The Type Approval covers hardware listed under Prodection description. When the hardware is used in applications to be classed by DNV GL, 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 GL Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Noise filter TAH-06-683 manufactured by Cosel Co., Ltd. or equivalent should be connected between the power terminals of NJ series and the power supply.

Type Approval documentation
Tests carried out

Applicable tests according to DNV GL Class Guideline 0339, November 2015.

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