

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Programmable Electronic System

with type designation(s)
Controller Micro830, Micro800 Module

Issued to

Rockwell Automation Asia Pacific Business Center Pte Ltd
Singapore, Singapore

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.

Temperature B

Humidity B

Vibration A

EMC B

Enclosure Required protection according to relevant rules shall be applied upon installation on board.

Issued at **Hamburg** on **2019-04-15**

This Certificate is valid until **2024-04-14**.

for **DNV GL**

DNV GL local station: **Certification of Materials - Singapore**

Approval Engineer: **Didier Girardin**

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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.



Product description

Micro830 10 10 Point Programmable Controller

2080-LC30-10QVB 24V discrete inputs, 24V sinking discrete outputs
2080-LC30-10QWB 24V discrete inputs, 240V relay outputs
2080-LC30-16AWB 120V discrete inputs, 240V relay outputs

Micro830 16 Point Programmable Controller

2080-LC30-16QVB 24V discrete inputs, 24V sinking discrete outputs
2080-LC30-16QWB 24V discrete inputs, 240V relay outputs

Micro830 24 Point Programmable Controller

2080-LC30-24QBB 24V discrete inputs, 24V sourcing discrete outputs
2080-LC30-24QVB 24V discrete inputs, 24V sinking discrete outputs
2080-LC30-24QWB 24V discrete inputs, 240V relay outputs

Micro830 48 Point Programmable Controller

2080-LC30-48AWB 120V discrete inputs, 240V relay outputs
2080-LC30-48QBB 24V discrete inputs, 24V sourcing discrete outputs
2080-LC30-48QVB 24V discrete inputs, 24V sinking discrete outputs
2080-LC30-48QWB 24V discrete inputs, 240V relay outputs

Firmware Version 10.xxx

Micro800 Module

2080-PS120-240VAC	Micro800	Micro800 Programmable Controller External AC Power Supply
2080-IF2	Micro800	Non-isolated Unipolar Analogue Input Plug-in Module
2080-IF4	Micro800	Non-isolated Unipolar Analogue Input Plug-in Module
2080-OF2	Micro800	Non-isolated Unipolar Analogue Output Plug-in Module
2080-MEMBAK-RTC	Micro800	Memory Backup and High Accuracy RTC Plug-In Module
2080-MEMBAK-RTC2	Micro800	Memory Backup and High Accuracy RTC Plug-In Module
2080-TRIMPOT6	Micro800	6-Channel Trim Pot Analogue Input Plug-In Module
2080-SERIALISOL	Micro800	RS232/485 Isolated Serial Port Plug-in Module
2080-TC2	Micro800	Non-isolated Thermocouple Plug-In Module
2080-RTD2	Micro800	Non-isolated RTD Plug-In Module
2080-IQ4	Micro800	12/24VDC, 4 Points, Sink, IEC3, Digital Input Plug-In Module
2080-OB4	Micro800	12/24VDC, 4 Points, Source Digital Output Plug-In Module
2080-OV4	Micro800	12/24VDC, 4 Points, Sink Digital Output Plug-In Module
2080-IQ4OB4	Micro800	12/24VDC, 4 Sink Inputs, IEC3, 4 Source Outputs, Digital Input and Output Plug-In Module
2080-IQ4OV4	Micro800	12/24VDC, 4 Sink Inputs, IEC3, 4 Sink Outputs, Digital Input and Output Plug-In Module
2080-OW4I	Micro800	Individually Isolated Relay Output Plug-In Module
2080-DNET20	Micro800	DeviceNet Plug-In Module

Application/Limitation

DC mains power shall be supplied by a Type Approved 24 Vdc instrument power supply

Products listed in Product description may also be sold with suffix K which denotes conformal coating

Type Approval documentation

Hidden

Place of manufacture

Approval conditions

The Type Approval covers hardware listed under Product 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 classification of ships Pt.4 Ch.9 Control and monitoring systems.



Job Id: **262.1-030894-1**
Certificate No: **TAA000029K**

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 GL for evaluation and approval before implemented on board. Certification of modified functionality may be required for the particular vessel.

Job Id: **262.1-030894-1**
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Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016

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