



CERTIFICATE NUMBER	23-00T2395447-1-PDA
EFFECTIVE DATE	03-Feb-2026
EXPIRY DATE	09-May-2028
ABS TECHNICAL OFFICE	Houston ESD

## CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

### **SCHNEIDER ELECTRIC AUTOMATION GMBH**

located at

**SCHNEIDERPLATZ 1, MARKTHEIDENFELD, Germany, 97828**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

**Product:** Programmable Logic Controller

**Model:** Modicon M241/M251

**Endorsements:**

**Tier:** 5 - Unit Certification Required

This Product Design Assessment (PDA) Certificate remains valid until 09/May/2028 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

*Soheni Haque*

Soheni Haque, Sr. Managing Principal Engineer

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

## SCHNEIDER ELECTRIC AUTOMATION GMBH

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### Tier: 5 - Unit Certification Required

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**Product:** Programmable Logic Controller

**Model:** Modicon M241/M251

**Endorsements:**

#### Intended Service:

Marine and Offshore applications - Monitoring and Control Systems acceptable for vessels with DPS, ACC & ACCU notation

#### Description:

Application: Control of simple motion/Control of control loops.

Controller type: TM241C24T (with serial links), TM241CE24T (with embedded Ethernet port and serial links), TM241CEC24T (with embedded Ethernet and CANopen ports, and serial links)

Inputs/Outputs: 24 logic inputs/outputs with removable screw terminal block (14 sink/source 24V inputs, inc. 8 high-speed inputs, 10 source transistor outputs, inc. 4 high-speed outputs)

Controller type: TM241C24U (with serial links), TM241CE24U (with embedded Ethernet port and serial links), TM241CEC24U (with embedded Ethernet and CANopen ports, and serial links)

Inputs/Outputs: 24 logic inputs/outputs with removable screw terminal block (14 sink/source 24V inputs, inc. 8 high-speed inputs, 10 sink transistor outputs, inc. 4 high-speed outputs)

Controller type: TM241C40T (with serial links), TM241CE40T (with embedded Ethernet port and serial links)

Inputs/Outputs: 40 logic inputs/outputs with removable screw terminal block (24 sink/source 24V inputs, inc. 8 high-speed inputs, 16 source transistor outputs, inc. 4 high-speed outputs)

Controller type: TM241C40U (with serial links), TM241CE40U (with embedded Ethernet port and serial links)

Inputs/Outputs: 40 logic inputs/outputs with removable screw terminal block (24 sink/source 24V inputs, inc. 8 high-speed inputs, 16 sink transistor outputs, inc. 4 high-speed outputs)

Controller type: TM241C24R (with serial links), TM241CE24R (with embedded Ethernet port and serial links), TM241CEC24R (with embedded Ethernet and CANopen ports, and serial links)

Inputs/Outputs: AC 100V-240V power supply, 24 logic inputs/outputs with removable screw terminal block (14 sink/source 24V inputs, inc. 8 high-speed inputs, 10 outputs, inc. 4 high-speed outputs and 6 relay outputs)

Controller type: TM241C40R (with serial links), TM241CE40R (with embedded Ethernet port and serial links)

Inputs/Outputs: AC 100V-240V power supply, 40 logic inputs/outputs with removable screw terminal block (24 sink/source 24V inputs, inc. 8 high-speed inputs, 16 outputs, inc. 4 high-speed outputs and 12 relay outputs)

I/O Cartridges and communication accessory type:

TMC4AI2, I/O Cartridge, 2 analog inputs, 0-10V/0-20mA/4-20mA

TMC4AQ2, I/O Cartridge, 2 analog outputs, 0-10V/0-20mA/4-20mA

TMC4TI2, I/O Cartridge, 2 Thermocouple or RTD input

TM4ES4, 4 ports Ethernet switch module,

TM3XTRA1, TM3 Transmitter with Ethernet

TM3XREC1, TM3 Receiver with Ethernet

TM4PDPS1, Profibus DP slave module

TMC4HOIS01, Cartridge for Hoisting application with 2 analog inputs

TMC4PACK01, Cartridge for Packaging application with 2 analog inputs

Application: Controlling modular machine on distributed architectures.

Controller type: TM251MESE or TM251MDESE

Embedded communication:

1) Ethernet link

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### Tier: 5 - Unit Certification Required

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Ethernet 1: 2 ports connected by a switch "Machine" or "Factory" (2 RJ 45 connectors)

Ethernet 2: 1 "fieldbus" Ethernet port (1 RJ 45 connector with Industrial Ethernet manager service (EtherNet/IP and TCP I/O Scanner)

2) CANopen link: ---

3) Serial link

1 serial link port (RJ 45) RS 232/RS 485 with +5 V supply

Controller type: TM251MESC

Embedded communication:

1) Ethernet link

Ethernet : 2 ports connected by a switch "Machine" or "Factory" (2 RJ 45 connectors)

2) CANopen link: 1 port for CANopen fieldbus (1 \* 9-way SUB-D connector) with CANopen (Master) and SAE J1939 Request Manager protocols

3) Serial link

1 serial link port (RJ 45) RS 232/RS 485 with +5 V supply

M241/M251 logic controllers are programmed with SoMachine software (please refer to [www.schneider-electric.com](http://www.schneider-electric.com)).

#### Rating:

24V DC, or 100V – 240V AC (TM241xxR models); Operating Ambient Temperature: 0-55°C

#### Service Restriction:

1. Unit Certification is not required for this product unless it is incorporated in a Category II or III System as defined in Table 1, section 4-9-3/7 of the ABS Marine Vessel Rules.

2. Deployment of modules onboard vessels requires mounting in suitably rated environmentally protected enclosures depending on the area of application. See Minimum Degrees of Protection: ABS Marine Vessel Rules, 4-8-3 Table 2; Offshore Unit Rules, 4-3-3/9.7.3 Table 1.

3. Not intended for equipment installed in the bridge and deck zone since radiated emission and conducted emission has only been carried out for equipment installed in the general power distribution zone.

4. Unless specially directed by the Administration, this approval is not to be construed as a substitute for flag Administration's approval.

#### Comments:

1. This approval covers hardware only.

2. Each configuration and external connection arrangement is to be specifically approved for each installation when incorporated in a Category II or III system. Additional documentation and testing requirements will be based on the specific application of use as defined in the rules.

3. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

4. Details of completed environmental tests and results are detailed in the documents section referenced below.

#### Notes/Drawing/Documentation:

Original Drawing List

See attached supporting file T2395447c2-TM

Supplemental Test Reports (FFE Reference)

201304-071\_M2xx step2 C2 Climatic, Version 2 (D0001576416)

201304-072\_M2xx step2 C2 Climatic, Version 2 (D0001576417)

#### Terms of Validity:

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**Tier: 5 - Unit Certification Required**

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**STANDARDS**

**ABS Rules:**

2023 Marine Vessel Rules: 1-1-4/7.7, 1-1-A3 & A4, 4-9-3 (Cat II) and 4-9-9/3 and 13;

2023 High-Speed Craft: 1-1-4/11.9, 1-1-A2 & A3, 4-7-8 (Cat II) and 4-7-9/15,

2023 Mobile Offshore Units: 1-1-4/9.7, 1-1-A2 & A3 and 4-3-4/5.

**National:**

N/A

**International:**

N/A

**Government:**

N/A

**EUMED:**

N/A

**OTHERS:**

IACS UR E10 (Rev.7 Oct. 2018 & Rev.8 Feb 2021)

IACS UR E22 (Rev.2 June 2016 Complete Revision)