



CERTIFICATE NUMBER
EFFECTIVE DATE
EXPIRY DATE
ABS TECHNICAL OFFICE

23-0356985-2-PDA
10-Sep-2026
11-May-2028
Houston ESD

CERTIFICATE OF Product Design Assessment

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

AXIOMATIC TECHNOLOGIES CORPORATION

located at

**1445 COURTNEYPARK DRIVE E., MISSISSAUGA, ON, Canada,
L5T 2E3**

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: Engine Monitoring System
Model: DIO I/O, RTD8, TC20
Endorsements:
Tier: 3 - Type Approved, unit certification not required

This Product Design Assessment (PDA) Certificate remains valid until 11/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, 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)

AXIOMATIC TECHNOLOGIES CORPORATION

1445 COURTNEYPARK DRIVE E.

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Telephone: 905-602-9270

Fax: 905-602-9279

Email: sales@axiomatic.com

Web: www.axiomatic.com

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Product: Engine Monitoring System

Model: DIO I/O, RTD8, TC20

Endorsements:

Intended Service:

Marine and Offshore Applications - Alarm & Monitoring System for Vessels with ACC, ACCU or ABCU Class notations.

Description:

DIO I/O Module: Discrete I/O Control P/N: AXDIO128-03, 676-1310 DIO Module, AX031800, AX031801, AX031800-XX, CATAX031800, CATAX031800B, CATAX031800C

RTD8: RTD Temperature Scanner: P/N: 606-7496, AX180300, AX180300-XX, CATAX180300, CATAX180300B, CATAX180301

TC20: Thermocouple (TC) Temperature Scanner: P/N: 234-1644, 605-1986, AX185000, AX185000-XX, AX185001, CATAX185000, 1006454

Rating:

DIO I/O:

Supply Voltage: 9 Vdc -32 Vdc(Nominal: 12 Vdc & 24 Vdc);

Up to 12 Inputs, 8 Outputs;

Operating Temperature: -40°C to 85°C (-40°F TO 185°F);

Enclosure: IP 57

RTD8:

Supply Voltage: 9 Vdc -32 Vdc(Nominal: 12 Vdc & 24 Vdc);

Inrush current not to exceed 800 mA;

Up to 8 Channels;

Operating Temperature: -40°C to 85°C (-40°F TO 185°F);

Enclosure: IP 57

TC20

Supply Voltage: 9 Vdc -32 Vdc(Nominal: 12 Vdc & 24 Vdc);

Up to 20 Channels;

Operating Temperature: -40°C to 85°C (-40°F TO 185°F);

Enclosure: IP 57

Service Restriction:

1. Unit Certification is not required for this product if certified as part of the main propulsion system and functional testing can be performed during engine shop testing.
2. The equipment is to be installed outside of rooms containing navigation and radio equipment, as it does not meet the "Bridge and Deck Zone" requirements for radiated and conducted emissions, and therefore may only be installed in the "General Power Distribution Zone" area.
3. Test and approval are for hardware only.

Comments:

1. The manufacturer has provided a declaration about the control of, or the lack of, asbestos in this product.
2. Axiomatic performed a cyber assessment, which confirmed that the referenced modules were of a low cyber risk and not subject to IACS E27 requirements at the component level.

Notes/Drawing/Documentation:

Supporting data from previous task WO0356985;

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Drawing No. AX031800-MD-C, DIO Module J1939, D2

Drawing No. AX031801-MD-C, DIO Module CANopen, D1

Drawing No. AX180300-MD-A, RTD Scanner 8-Channel, D3

Drawing No. AX185000-06-MD-A, 20 Channel Thermocouple J1939, D1

Drawing No. AX185000-MD-E, 20 Channel Thermocouple J1939, D1

Drawing No. AX185001-MD-A, 20 Channel Thermocouple CANopen, D1

Drawing No. CATAX031800B-MD-B, 605-1984 EC01 DIO Module, D1

Drawing No. CATAX180300B-MD-B, RTD Scanner 8-Channel, D2

Drawing No. CATAX185000-MD-B, 605-1986-02 20 Channel Thermocouple, J1939, D1

Drawing No. UMAX0318x0, 12 Discrete Input 8 Relay Output Controller with SAE J1939 - User Manual, 5.05

Drawing No. UMAX0318x1, 12 Discrete Input 8 Relay Output Controller with CANopen - User Manual, 1.03

Drawing No. UMAX180300, 8 Channel RTD Scanner SAE J1939 - User Manual, 1.00D

Drawing No. UMAX185000, 20 Channel Thermocouple Scanner with CAN SAE J1939 - User Manual, 5.03

Drawing No. UMAX185001, 20 Channel Thermocouple Scanner with CANopen - User Manual, 1.02

Drawing No. UMCATAX031800, Discrete I/O (DIO) Module, Model: 605-1984 EC01 - User Manual, 1.03

Drawing No. UMCATAX180300B, Resistive Temperature Detector (RTD) Module: 606-7496 EC01 - User Manual, 1.03

Drawing No. UMCATAX185000, Thermocouple (TC) Module, Model# 605-1896 EC01 - User Manual, 1.01

Drawing No. White Paper 2025, Axiomatic Controls Cybersecurity Assessment Report, 1.3

Identifying data from current task WO0661490;

Drawing No. UMCATAX031800C-03-17-2026, UMCATAX031800-C-03-17-2026, Revision: 03-17-2026, Pages: 20,

Drawing No. White Paper 2026-DIO-ABS, White Paper 2026-DIO-ABS, Revision: 06-16-2026, Pages: 8,

Drawing No. 26ATC116 EMC_final, 26ATC116 EMC.final, Revision: 03-07-2026, Pages: 28,

Drawing No. CATAX031800C_EC1Report_Final Release, CATAX031800C_EC1Report_Final Release, Revision: 04-13-2026, Pages: 35,

Drawing No. CATAX031800-MD-C, CATAX031800C-MD-C, Revision: 11-25-2025, Page: 1,

Drawing No. etr2502128-01A, etr2502128-01A, Revision: 12-26-2025, Pages: 50,

Drawing No. Illustration of G5Q-14 Relay, Illustration of G5Q-14, Revision: 08-01-2025, Page: 1,

Terms of Validity:

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STANDARDS

ABS Rules:

2026 Rules for Conditions of Classification, 1A-1-4/7.7, 1A-1-A3, and 1A-1-A4, which covers the following:

2026 Marine Vessel Rules: 4-9-3/Table 1 (Cat. II), 4-9-9/3, 4-9-9/13, 4-9-9/15 Table 1;

2026 Rules for Conditions of Classification, Offshore Units, and Structures 1B-1-4/9.7, 1B-1-A2, and 1B-1-A3, which covers the following:

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2026 Offshore Units Rules: 4-3-4/5;

National:

SAE J1939 dated 01 June 2012

International:

E247103-Vol1-UL dated June 30, 2022, Standard for Controllers for Use in Power Production, CAN/ULC 6200, 1st edition.

Government:

N/A

EUMED:

N/A

OTHERS:

N/A
