CERTIFICATE NUMBER	24-2519847-PDA
EFFECTIVE DATE	02-Apr-2024
EXPIRY DATE	01-Apr-2029
ABS TECHNICAL OFFICE	Houston ESD - Electrical

CERTIFICATE OF

Product Design Assessment

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

NEXUS CONTROLS LLC

located at

1800 NELSON ROAD, , LONGMONT,, CO, United States, 80501-6234

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 Control/Monitoring Unit**
Model:	**Mark VIe Compact Controls (151X1202YD10SA01, 151X1202YD20SA01, 151X1202YD30SA01 & 151X1202YD40SA01)**
Endorsements:	
Tier:	**2 - PDA Issued**

This Product Design Assessment (PDA) Certificate remains valid until 01/Apr/2029 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)

Sensitivity: Internal & Restricted

NEXUS CONTROLS LLC
1800 NELSON ROAD
LONGMONT, CO
United States 80501-6234
Telephone: +1(303) 678-2600
Fax:
Email: fred.ray@ge.com
Web: www.gevernova.com

Tier: 2 - PDA Issued

Product: **Programmable Control/Monitoring Unit**
Model: **Mark VIe Compact Controls (151X1202YD10SA01, 151X1202YD20SA01, 151X1202YD30SA01 & 151X1202YD40SA01)**
Endorsements:

Intended Service:
Marine and Offshore Application - skid-mounted I/O Modules for gas turbines for power generation or mechanical drive application (Centrifugal Compressor driven equipment). Not to be used for propulsion.

Description:
Compact skid-mounted I/O Modules for gas turbines.

Mark VIe Compact Controls Components:
Core Control Box: 151X1202YD10SA01
Safety Control Box: 151X1202YD20SA01
Staging Valve Box: 151X1202YD30SA01
DLE Valve Box: 151X1202YD40SA01

Rating:
Core Control Box: 151X1202YD10SA01:
Voltage: 240 V AC (50-60 Hz), 125 V DC, 240 V AC (Heater In), 240 V AC (Cooler In);
Power: 800 W (VAC/VDC), 400 W (Heater In), 135 W (Cooler In);

Safety Control Box: 151X1202YD20SA01
Voltage: 240 V AC (50/60 Hz), 125 V DC, 240 V AC (Heater In), 240 V AC (Cooler In);
Power: 400 W (VAC), 400 W (VDC), 300 W (Heater In), 135 W (Cooler In);

Staging Valve Box: 151X1202YD30SA01
Voltage: 240 V AC (50/60 Hz), 125 V DC, 240 V AC (Heater In), 240 V AC (Cooler In);
Power: 270 W (VAC), 270 W (VDC), 300 W (Heater In), 135 W (Cooler In);

DLE Valve Box: 151X1202YD40SA01
Voltage: 220/240 V AC (50/60 Hz), 110/125 V DC, 220 V AC (Heater In), 220V AC (Cooler In);
Power: 700 W (220 VAC), 45 W (240 VAC), 700 W (220 VDC), 45 W (125 VDC), 300 W (Heater In), 135 W (Cooler In);

Supply Voltage: 24/28 V DC,
Degree of Protection: IP 66;
Ambient Temperature: -40 °C to 50 °C;
Hazardous Area Classification: Zone 2 as per IEC/EN 60079-10-1;

Service Restriction:
Unit Certification is not required for this product. The complete finalized system (Turbine, Turbine Controls, etc) is to be Unit Certified at the final assembly.

1) Installation of the units, as per manufacturer's instructions.
2) Cables Connecting Wire Insulation Rating: 105 °C 300 V Minimum;
3) Not to be used for propulsion.
4) Test and Approval for hardware only. Each particular application/configuration is to be specifically approved on an ABS Classed Vessel/MODU by submitting, complete details (Assembly Drawings, Electrical Ratings, Wiring Schematics, etc.) for review.

NEXUS CONTROLS LLC
1800 NELSON ROAD
LONGMONT, CO
United States 80501-6234
Telephone: +1(303) 678-2600
Fax:
Email: fred.ray@ge.com
Web: www.gevernova.com

Tier: 2 - PDA Issued

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

Notes/Drawing/Documentation:
Drawing No. 151X1202YD10SA01_C, CORE CONTROL ASSEMBLY COMPACT CONTROL, Revision: C, Pages: 6
Drawing No. 151X1202YD11PC02_C, COMPACT CONTROLS ENCLOSURE CORE CONTROL, Revision: C, Pages: 9
Drawing No. 151X1202YD20SA01_C, SAFETY I/O ASSEMBLY COMPACT CONTROL, Revision: C, Pages: 6
Drawing No. 151X1202YD30SA01_B, STAGING ASSEMBLY COMPACT CONTROL, Revision: B, Pages: 6
Drawing No. 151X1202YD40SA01_B, DLE ENCLOSURE COMPACT CONTROL, Revision: B, Pages: 6
Drawing No. 23A308E Report, Box 1 PCLA Core Analog EMC Test Report, Revision: 1, Pages: 33
Drawing No. 23A309E Report, Box 4 Digital IO EMC Test Report, Revision: -, Pages: 29
Drawing No. 23A310E Report, Box 3 IO EMC Test Report, Revision: -, Pages: 28
Drawing No. 23A311E Report, Box 2 EMC Test Report, Revision: -, Pages: 26
Drawing No. 23A312E Report, Comm and RTD EMC Test Report, Revision: -, Pages: 25
Drawing No. DEMKO 12 ATEX 1114875X, ATEX Cert 1114875X, Revision: 15, Pages: 7
Drawing No. DEMKO 13 ATEX 1214780X, ATEX Cert 1214780X, Revision: 17, Pages: 9
Drawing No. DEMKO 18 ATEX 2032X, ATEX Cert 2032X, Revision: 7, Pages: 5
Drawing No. IECEx UL 21 0073X, IECEx Cert UL 21 0073X, Revision: 001, Pages: 7
Drawing No. IECEx_UL_21 006X, IECEx Cert UL_21 006X, Revision: 002, Pages: 15
Drawing No. IECEx_UL_21 0091X, IECEx Cert UL_21 0091X, Revision: 001, Pages: 9

Supporting Documents from previous task:
Drawing No. 151X1202YD10SA01_Core_Box_011 (1), 151X1202YD10SA01_Core_Box_011 (1), Revision: -
Drawing No. 151X1202YD10SA01_Core_Box_011 (2), 151X1202YD10SA01_Core_Box_011 (2), Revision: -
Drawing No. 151X1202YD10SA01_Core_Box_011 (3), 151X1202YD10SA01_Core_Box_011 (3), Revision: -
Drawing No. 151X1202YD10SA01_Core_Box_011 (4), 151X1202YD10SA01_Core_Box_011 (4), Revision: -
Drawing No. 151X1202YD10SA01_Core_Box_011 (5), 151X1202YD10SA01_Core_Box_011 (5), Revision: -
Drawing No. 151X1202YD20SA01_Safety_Box_009 (1), 151X1202YD20SA01_Safety_Box_009 (1), Revision: -
Drawing No. 151X1202YD20SA01_Safety_Box_009 (2), 151X1202YD20SA01_Safety_Box_009 (2), Revision: -
Drawing No. 151X1202YD20SA01_Safety_Box_009 (3), 151X1202YD20SA01_Safety_Box_009 (3), Revision: -
Drawing No. 151X1202YD20SA01_Safety_Box_009 (4), 151X1202YD20SA01_Safety_Box_009 (4), Revision: -,
Drawing No. 151X1202YD20SA01_Safety_Box_009 (5), 151X1202YD20SA01_Safety_Box_009 (5), Revision: -
Drawing No. 151X1202YD30SA01_010_1APR2015_5LEVEL (1), 151X1202YD30SA01_010_1APR2015_5LEVEL (1), Revision: -
Drawing No. 151X1202YD30SA01_010_1APR2015_5LEVEL (2), 151X1202YD30SA01_010_1APR2015_5LEVEL (2), Revision: -
Drawing No. 151X1202YD30SA01_010_1APR2015_5LEVEL (3), 151X1202YD30SA01_010_1APR2015_5LEVEL (3), Revision: -
Drawing No. 151X1202YD30SA01_010_1APR2015_5LEVEL (4), 151X1202YD30SA01_010_1APR2015_5LEVEL (4), Revision: -
Drawing No. 151X1202YD30SA01_010_1APR2015_5LEVEL (5), 151X1202YD30SA01_010_1APR2015_5LEVEL (5), Revision: -
Drawing No. 151X1202YD30SA01_010_1APR2015_5LEVEL (6), 151X1202YD30SA01_010_1APR2015_5LEVEL (6), Revision: -
Drawing No. 151X1202YD40SA01_008_1APR2015_5Level (1), 151X1202YD40SA01_008_1APR2015_5Level (1), Revision: -
Drawing No. 151X1202YD40SA01_008_1APR2015_5Level (2), 151X1202YD40SA01_008_1APR2015_5Level (2), Revision: -
Drawing No. 151X1202YD40SA01_008_1APR2015_5Level (3), 151X1202YD40SA01_008_1APR2015_5Level (3), Revision: -
Drawing No. 151X1202YD40SA01_008_1APR2015_5Level (4), 151X1202YD40SA01_008_1APR2015_5Level (4),

NEXUS CONTROLS LLC
1800 NELSON ROAD
LONGMONT, CO
United States 80501-6234
Telephone: +1(303) 678-2600
Fax:
Email: fred.ray@ge.com
Web: www.gevernova.com

Revision: -
Drawing No. 151X1202YD40SA01_008_1APR2015_5Level (5), 151X1202YD40SA01_008_1APR2015, Revision: -
Drawing No. 151X1202YD40SA01_008_1APR2015_5Level (6), 151X1202YD40SA01_008_1APR2015_5Level (6), Revision: -
Drawing No. 151X1202YD40SA01_008_1APR2015_5Level (7), 151X1202YD40SA01_008_1APR2015_5Level (7), Revision: -
Drawing No. 151X1202YD40SA01_008_1APR2015_5Level (8), 151X1202YD40SA01_008_1APR2015_5Level (8), Revision: -
Drawing No. 151x1202yd11pc02, 151x1202yd11pc02, Revision: -,Drawing No. 272B4541_A, 272B4541_A, Revision: -
Drawing No. 414204-00-04-R14-1179, 414204-00-04-R14-1179, Revision: -
Drawing No. ABS Test Plan (2-11-2013), ABS Test Plan (2-11-2013), Revision: -
Drawing No. ABS_TCF_Documents_Index, ABS_TCF_Documents_Index, Revision: -
Drawing No. Correspondence, Compact Controls ABS Certification, Revision: -
Drawing No. Correspondence, General Electric ltr T1187616, Revision: -
Drawing No. GEI-100811_CTM_Rev5, GEI-100811_CTM_Rev5, Revision: -
Drawing No. GE_CompactControl_092012_pdf [13, GE_CompactControl_092012_pdf [13, Revision: -
Drawing No. Power Variation Report, Power Variation Report, Revision: -
Drawing No. Vibration Report, Vibration Report, Revision: -Drawing No. TR11717, EMC Test Report, Revision: 1;
Drawing No. S0M6760464, Rev. 1, "Control System Functional Description"

Terms of Validity:
This Product Design Assessment (PDA) Certificate remains valid until 01/Apr/2029 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.

STANDARDS

ABS Rules:
Rules for Conditions of Classification, Part 1 - 2024 Marine Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:
Marine Vessels (2024): 4-8-3/1.11, 4-8-4/27.1, 4-9-9/13.1 and 4-9-9/Table 1

Rules for Conditions of Classification, 2024- Offshore Units and Structures 1-1-A2, 1-1-A3, which covers the following:
Mobile Offshore Units (2024): 4-3-1/15, 4-3-3/9.1.2, 4-3-4/5

National:
NA

International:
EN IEC 60079-0 :2018
IEC 60079-0: 2017
EN 60079-15:2010

NEXUS CONTROLS LLC
1800 NELSON ROAD
LONGMONT, CO
United States 80501-6234
Telephone: +1(303) 678-2600
Fax:
Email: fred.ray@ge.com
Web: www.gevernova.com

Tier: 2 - PDA Issued

IEC 60079-7:2017

Government:
NA

EUMED:
NA

OTHERS:
IACS UR E10, Rev. 8, 2022