Electronically published by ABS Singapore.
Reference T2313919, dated 12-OCT-2022.

CERTIFICATE NUMBER 22-2260114-PDA-DUP
EFFECTIVE DATE 12-October-2022
EXPIRATION DATE 26-May-2027
ABS TECHNICAL OFFICE Singapore Engineering Services

CERTIFICATE OF

Product Design Assessment

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

DELTA ELECTRONICS INDIA PRIVATE LIMITED – SEZ UNIT

located at

SY NO 16/1B2B PART AND 16/1B2A PART, PLOT NO 1 INDUSTRIAL PARK KURUBARAPALLI VILLAGE KRISHNAGIRI DIST, TAMIL NADU, INDIA, 635115

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 **Power Supply Unit**

Model **DRM-24V960W1PX(y)**

This Product Design Assessment (PDA) Certificate remains valid until 26-May-2027 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

Vibin Chandrabose, Senior 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

Electronically published by ABS Singapore.
Reference T2313919, dated 12-OCT-2022.

DELTA ELECTRONICS INDIA PRIVATE LIMITED - SEZ UNIT
SY NO 16/1B2B PART AND 16/1B2A PART
PLOT NO 1 INDUSTRIAL PARK KURUBARAPALLI VILLAGE KRISHNAGIRI DIST
India 635115
Telephone:
Fax:
Email:
Web:

Tier: 2 - PDA Issued

Product: **Power Supply Unit**
Model: **DRM-24V960W1PX(y)**
Endorsements:

Intended Service:
CliQ M DIN-rail mounting power supply units for automation systems on Ships and Offshore Units.

Description:
DIN-rail mounted power supply modules for installation in consoles and cabinets, located in general power distribution zones.

Rating:
Nominal Input Voltage: single-phase: 100-240VAC
Nominal Input Frequency: 50-60Hz
Nominal Output Voltage: 24VDC
Output Continuous Current: 40A
Degree of Protection: IP 20

Service Restriction:
Unit Certification is not required for this product.
If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments:
1. Safe area application only, not to be used in hazardous location.
2. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes/Drawing/Documentation:
SIQ Ljubljana Test Report No. T251-0536/21, DRM-24V960W1PX(y)_EMC report, dated 09-Aug-2021, Revision: 01, Pages: 18
Drawing No. DRM-24V960W1PN(y)_1, Product specification, Revision: 0, Pages: 3
Drawing No. DRM-24V960W1PN(y)_2, Schematic circuit, Revision: S1, Pages: 18
Delta Test Report No. DRM-24V960W1PN(y)_3, Environment test report from Delta (In-house testing) dated 14-Nov-2016, Revision: S2, Pages: 13
Drawing No. DRM-24V960W1PN(y)_4, Spec label, Revision: 0, Pages: 2
Drawing No. DRM-24V960W1PN(y)_5, Installation instruction, Revision: 0, Pages: 2
Drawing No. DRM-24V960W1PN(y)_6, Front label, Revision: 01, Pages: 3
Drawing No. DRM-24V960W1PN(y)_7, PCB Layout, Revision: 5, Pages: 29
Drawing No. DRM-24V960W1PN(y)_8, Physical drawing, Revision: 0, Pages: 2
Delta Test Report No. DRM-24V960W1PN(y)_9, ABS Surveyor Witness Test dated 26-Apr-2017, Revision: S4, Pages: 21
SIQ Ljubljana Test Report No. T211-0062/17, SIQ Environment test report for GL dated 14-Feb-2017, Revision: 0, Pages: 36
SIQ Ljubljana Test Report No. T251-0068/17, SIQ EMC test report, dated 01-Feb-2017, Revision: 0, Pages: 52

Terms of Validity:
This Product Design Assessment (PDA) Certificate remains valid until 26/May/2027 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.

Electronically published by ABS Singapore.
Reference T2313919, dated 12-OCT-2022.

DELTA ELECTRONICS INDIA PRIVATE LIMITED - SEZ UNIT
SY NO 16/1B2B PART AND 16/1B2A PART
PLOT NO 1 INDUSTRIAL PARK KURUBARAPALLI VILLAGE KRISHNAGIRI DIST
India 635115
Telephone:
Fax:
Email:
Web:

Tier: 2 - PDA Issued

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:
2022 Rules for Conditions of Classification 1-1-4/7.7, 1-1-A3 and A4, which covers the following:
2022 Rules for Building and Classing Marine Vessel Rules: 4-8-3/1.9, 4-8-3/1.11, 4-8-3/1.17, 4-9-2/5.3, 4-9-3/11.9, 4-9-9/7, 4-9-9/13, 4-9-9/Table 1

2022 Rules for Conditions of Classification - Offshore Units and Structures 1-1-4/9.7, 1-1-A2 and A3, which covers the following:
2022 Rules for Building and Classing Mobile Offshore Units: 4-3-1/11, 4-3-1/15

2022 Rules for Conditions of Classification - Light and High Speed Craft 1-1-4/11.9, 1-1-A2 and A3, which covers the following:
2022 Rules for Building and Classing High Speed Crafts: 4-6-1/9, 4-6-1/15, 4-6-1/17, 4-7-1/11.3, 4-7-8/9.3.2, 4-7-9/7, 4-7-9/15.1, 4-7-9/Table 9

National:
NA

International:
IACS UR E10 Test specification for type approval – Rev.7 Oct 2018

Government:
NA

EUMED:
NA

OTHERS:
NA

Electronically published by ABS Singapore.
Reference T2492045, dated 22-DEC-2023.

CERTIFICATE NUMBER	22-2260114-PDA-DUP
EFFECTIVE DATE	27-May-2022
EXPIRY DATE	26-May-2027
ABS TECHNICAL OFFICE	Singapore Engineering Services

CERTIFICATE OF

Product Design Assessment

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

DELTA ELECTRONICS (DONGGUAN) CO., LTD.

located at

NO. 33, PANTAO ROAD, SHIJIE TOWN, DONGGUAN, GUANGDONG, , China

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:	**Power Supply Unit**
Model:	**DRM-24V960W1PX(y)**
Endorsements:	
Tier:	**2 - PDA Issued**

This Product Design Assessment (PDA) Certificate remains valid until 26/May/2027 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

Guanying Wu,Engineer/Consultant

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Electronically published by ABS Singapore.
Reference T2492045, dated 22-DEC-2023.

DELTA ELECTRONICS (DONGGUAN) CO., LTD.
NO. 33, PANTAO ROAD, SHIJIE TOWN, DONGGUAN, GUANGDONG
China
Telephone: +86 769-8663-9008 Ext: 3785, 2095
Fax:
Email: PEAR.LI@deltaww.com
Web: www.deltaww.com

Tier: 2 - PDA Issued

Product: **Power Supply Unit**
Model: **DRM-24V960W1PX(y)**
Endorsements:

Intended Service:
CliQ M DIN-rail mounting power supply units for automation systems on Ships and Offshore Units.

Description:
DIN-rail mounted power supply modules for installation in consoles and cabinets, located in general power distribution zones.

Rating:
Nominal Input Voltage: single-phase: 100-240VAC
Nominal Input Frequency: 50-60Hz
Nominal Output Voltage: 24VDC
Output Continuous Current: 40A
Degree of Protection: IP 20

Service Restriction:
Unit Certification is not required for this product.
If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments:
1. Safe area application only, not to be used in hazardous location.
2. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes/Drawing/Documentation:
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SIQ Ljubljana Test Report No. T251-0068/17, SIQ EMC test report, dated 01-Feb-2017, Revision: 0, Pages: 52

Terms of Validity:
This Product Design Assessment (PDA) Certificate remains valid until 26/May/2027 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.

Electronically published by ABS Singapore.
Reference T2492045, dated 22-DEC-2023.

DELTA ELECTRONICS (DONGGUAN) CO., LTD.
NO. 33, PANTAO ROAD, SHIJIE TOWN, DONGGUAN, GUANGDONG
China
Telephone: +86 769-8663-9008 Ext: 3785, 2095
Fax:
Email: PEAR.LI@deltaww.com
Web: www.deltaww.com

Tier: 2 - PDA Issued

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.

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2022 Rules for Building and Classing Mobile Offshore Units: 4-3-1/11, 4-3-1/15

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2022 Rules for Building and Classing High Speed Crafts: 4-6-1/9, 4-6-1/15, 4-6-1/17, 4-7-1/11.3, 4-7-8/9.3.2, 4-7-9/7, 4-7-9/15.1, 4-7-9/Table 9

National:
NA

International:
IACS UR E10 Test specification for type approval – Rev.7 Oct 2018

Government:
NA

EUMED:
NA

OTHERS:
NA