



CERTIFICATE NUMBER	26-0692959-PDA-DUP
EFFECTIVE DATE	14-Sep-2026
EXPIRY DATE	09-Sep-2031
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-24V80W1PX(y), DRM-24V240W1PX(y), DRM-24V480W1PX(y)
Endorsements:
Tier: 3 - Type Approved, unit certification not required

This Product Design Assessment (PDA) Certificate remains valid until 09/Sep/2031 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
Guanying Wu, Engineer/Consultant

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)

DELTA ELECTRONICS (DONGGUAN) CO., LTD.

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China

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Fax:

Email: Pear.li@deltaww.com

Web: www.deltaww.com

Tier: 3 - Type Approved, unit certification not required

Product: Power Supply Unit

Model: DRM-24V80W1PX(y), DRM-24V240W1PX(y), DRM-24V480W1PX(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/110-300VDC

Nominal Input Frequency: 50-60Hz

Nominal Output Voltage: 24VDC

Output Continuous Current:

1. 3.4A at 24VDC for Model: DRM-24V80W1PX(y)

2. 10A at 24VDC for Model: DRM-24V240W1PX(y)

3. 20A at 24VDC for Model: DRM-24V480W1PX(y)

Degree of Protection: IP 20

Service Restriction:

1) Unit Certification is not required for the product covered in this certificate. However, unit certification in accordance with Marine Vessel Rules 4-9-3/Table 5, Marine Vessel Rules 4-9-9/15.7 Table 2, Marine Vessel Rules 4-9-14/19.1.6 is required for the system, where this equipment is part of Category II or III computer-based systems as described in Marine Vessel Rules 4-9-3/7.1 Table 1 or part of systems that falls within the scope of Marine Vessel Rules 4-9-13/5.

2) If the manufacturer or purchaser requests 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:

Drawing No. DRM-24V240W1PX(Y), ABS Witness For Prototype Environmental Testing, Revision: 00, Pages: 23, dated 31 August 2016

Drawing No. DRM-24V240W1PX(Y)_10, Delta Environment Test (In-House), Revision: S3, Pages: 14, dated 22 December 2015

Drawing No. DRM-24V240W1PX(Y)_2, Schematic Circuit, Revision: S2, Pages: 1

Drawing No. DRM-24V240W1PX(Y)_3, Mechanical Drawing, Revision: S0, Pages: 1

Drawing No. DRM-24V240W1PX(Y)_4, Label Drawing, Revision: S0, Pages: 1

Drawing No. DRM-24V240W1PX(Y)_5, PCB Layout, Revision: 00, Pages: 1

Drawing No. DRM-24V240W1PX(Y)_6, Insulator Drawing, Revision: 00, Pages: 1

Drawing No. DRM-24V240W1PX(Y)_7, Heat Sink Drawing, Revision: 00, Pages: 1

Drawing No. DRM-24V240W1PX(Y)_8.1, Instruction Manual - DECA, Revision: 01, Pages: 1

Drawing No. DRM-24V240W1PX(Y)_8.2, Instruction Manual - DINKLE, Revision: 01, Pages: 1

Drawing No. DRM-24V240W1PX(Y)_9, Electrical Functional Test (In-House), Revision: S3, Pages: 295, dated 20 November 2015

Drawing No. DRM-24V480W1PX(Y), ABS Witness For Prototype Environment Testing, Revision: 00, Pages: 23, dated 31 August 2016

Drawing No. DRM-24V480W1PX(Y)_10, Delta Environment Test (In-House), Revision: S3, Pages: 13, dated 04

DELTA ELECTRONICS (DONGGUAN) CO., LTD.

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Tier: 3 - Type Approved, unit certification not required

May 2016

Drawing No. DRM-24V480W1PX(Y)_2, Schematic Circuit, Revision: S2, Pages: 1

Drawing No. DRM-24V480W1PX(Y)_3, Mechanical Drawing, Revision: 00, Pages: 1

Drawing No. DRM-24V480W1PX(Y)_4, Label Drawing, Revision: 00, Pages: 1

Drawing No. DRM-24V480W1PX(Y)_5, PCB Layout, Revision: 00, Pages: 1

Drawing No. DRM-24V480W1PX(Y)_6, Insulator Drawing, Revision: 00, Pages: 1

Drawing No. DRM-24V480W1PX(Y)_7, Heat Sink Drawing, Revision: 00, Pages: 1

Drawing No. DRM-24V480W1PX(Y)_8.1, Instruction Manual - DINKLE, Revision: 00, Pages: 1

Drawing No. DRM-24V480W1PX(Y)_8.2, Instruction Manual - DECA, Revision: 00, Pages: 1

Drawing No. DRM-24V480W1PX(Y)_9, Electrical Functional Test (In-House), Revision: S3, Pages: 217, dated 17 February 2016

Drawing No. DRM-24V480W1PX(Y)_T211-0323/16, GL - Functional And Environment Test Report, Revision: 00, Pages: 23, dated 12 May 2016

Drawing No. DRM-24V480W1PX(Y)_T251-0526/16, GL - EMC Test Report, Revision: 00, Pages: 42, dated 12 May 2016

Drawing No. DRM-24V80W1PX(Y), ABS Witness For Prototype Environmental Testing, Revision: 00, Pages: 23, dated 21 August 2016

Drawing No. DRM-24V80W1PX(Y)_10, Delta Environment Test (In-House), Revision: S3, Pages: 11, dated 15 December 2015

Drawing No. DRM-24V80W1PX(Y)_2, Schematic Circuit, Revision: S2, Pages: 1

Drawing No. DRM-24V80W1PX(Y)_3, Mechanical Drawing, Revision: 00, Pages: 1

Drawing No. DRM-24V80W1PX(Y)_4, Label Drawing, Revision: 00, Pages: 1

Drawing No. DRM-24V80W1PX(Y)_5, PCB Layout, Revision: 00, Pages: 1

Drawing No. DRM-24V80W1PX(Y)_6, Heat Sink Drawing, Revision: 00, Pages: 1

Drawing No. DRM-24V80W1PX(Y)_8, Instruction Manual, Revision: 00, Pages: 1

Drawing No. DRM-24V80W1PX(Y)_9, Electrical Functional Test (In-House)1, Revision: S4, Pages: 237, dated 29 February 2016

Drawing No. DRM-24v80w1pxy And DRM-24v240w1pxy_T211-0504, GL - Function And Environment Test Report, Revision: 00, Pages: 30, dated 17 August 2015

Drawing No. DRM-24v80w1pxy And DRM-24v240w1pxy_T251-0568, GL - EMC Test Report, Revision: 00, Pages: 113, dated 12 August 2015

Drawing No. T251-0439/21 - DRM-24V480W1PX(y)_GL - EMC test report, Revision: 01, Pages: 21, dated 14 July 2021

Drawing No. T251-0435/21 - DRM-24V80W1PXy and DRM-24V240W1PXy_GL - EMC test report, Revision: 01, Pages: 30, dated 14 July 2021

Drawing No. DRM-24V80W1PX(Y)_1, Technical Datasheet, Revision: 00, Pages: 20

Drawing No. DRM-24V240W1PX(Y)_1, Technical Datasheet, Revision: 00, Pages: 20

Drawing No. DRM-24V480W1PX(Y)_1, Technical Datasheet, Revision: 00, Pages: 20

Terms of Validity:

This Product Design Assessment (PDA) Certificate remains valid until 09/Sep/2031 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).

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STANDARDS

DELTA ELECTRONICS (DONGGUAN) CO., LTD.

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Tier: 3 - Type Approved, unit certification not required

ABS Rules:

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

Rules for Building and Classing Marine Vessels 2026: 4-8-3/1.3, 4-8-3/1.7, 4-8-3/1.9, 4-8-3/1.11, 4-8-3/1.17, 4-9-9/13.1, 4-9-9/15.7 Table 1

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

Rules for Building and Classing Offshore Units 2026: 4-3-1/9, 4-3-1/11, 4-3-1/15, 4-3-1/17.1

ABS Rules for Conditions of Classification – Light and High Speed Craft (2026) – 1C-1-4/11.9, 1C-1-A2, 1C-1-A3, which cover the following:

Rules for Building and Classing High Speed-Craft 2026: 4-6-1/9, 4-6-1/11, 4-6-1/15, 4-6-1/17.1, 4-7-9/15.1

National:

NA

International:

IACS UR E10 Rev.10

Government:

NA

EUMED:

NA

OTHERS:

NA



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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-24V80W1PX(y), DRM-24V240W1PX(y), DRM-24V480W1PX(y)
Endorsements:
Tier: 3 - Type Approved, unit certification not required

This Product Design Assessment (PDA) Certificate remains valid until 09/Sep/2031 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).

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American Bureau Of Shipping

guanying

Guanying Wu, Engineer/Consultant

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DELTA ELECTRONICS INDIA PRIVATE LIMITED - SEZ UNIT

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Tier: 3 - Type Approved, unit certification not required

Product: Power Supply Unit
Model: DRM-24V80W1PX(y), DRM-24V240W1PX(y), DRM-24V480W1PX(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/110-300VDC

Nominal Input Frequency: 50-60Hz

Nominal Output Voltage: 24VDC

Output Continuous Current:

1. 3.4A at 24VDC for Model: DRM-24V80W1PX(y)

2. 10A at 24VDC for Model: DRM-24V240W1PX(y)

3. 20A at 24VDC for Model: DRM-24V480W1PX(y)

Degree of Protection: IP 20

Service Restriction:

1) Unit Certification is not required for the product covered in this certificate. However, unit certification in accordance with Marine Vessel Rules 4-9-3/Table 5, Marine Vessel Rules 4-9-9/15.7 Table 2, Marine Vessel Rules 4-9-14/19.1.6 is required for the system, where this equipment is part of Category II or III computer-based systems as described in Marine Vessel Rules 4-9-3/7.1 Table 1 or part of systems that falls within the scope of Marine Vessel Rules 4-9-13/5.

2) If the manufacturer or purchaser requests 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:

Drawing No. DRM-24V240W1PX(Y), ABS Witness For Prototype Environmental Testing, Revision: 00, Pages: 23, dated 31 August 2016

Drawing No. DRM-24V240W1PX(Y)_10, Delta Environment Test (In-House), Revision: S3, Pages: 14, dated 22 December 2015

Drawing No. DRM-24V240W1PX(Y)_2, Schematic Circuit, Revision: S2, Pages: 1

Drawing No. DRM-24V240W1PX(Y)_3, Mechanical Drawing, Revision: S0, Pages: 1

Drawing No. DRM-24V240W1PX(Y)_4, Label Drawing, Revision: S0, Pages: 1

Drawing No. DRM-24V240W1PX(Y)_5, PCB Layout, Revision: 00, Pages: 1

Drawing No. DRM-24V240W1PX(Y)_6, Insulator Drawing, Revision: 00, Pages: 1

Drawing No. DRM-24V240W1PX(Y)_7, Heat Sink Drawing, Revision: 00, Pages: 1

Drawing No. DRM-24V240W1PX(Y)_8.1, Instruction Manual - DECA, Revision: 01, Pages: 1

Drawing No. DRM-24V240W1PX(Y)_8.2, Instruction Manual - DINKLE, Revision: 01, Pages: 1

Drawing No. DRM-24V240W1PX(Y)_9, Electrical Functional Test (In-House), Revision: S3, Pages: 295, dated 20 November 2015

Drawing No. DRM-24V480W1PX(Y), ABS Witness For Prototype Environment Testing, Revision: 00, Pages: 23, dated 31 August 2016

DELTA ELECTRONICS INDIA PRIVATE LIMITED - SEZ UNIT

SY NO 16/1B2B PART AND 16/1B2A PART

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Tier: 3 - Type Approved, unit certification not required

Drawing No. DRM-24V480W1PX(Y)_10, Delta Environment Test (In-House), Revision: S3, Pages: 13, dated 04 May 2016

Drawing No. DRM-24V480W1PX(Y)_2, Schematic Circuit, Revision: S2, Pages: 1

Drawing No. DRM-24V480W1PX(Y)_3, Mechanical Drawing, Revision: 00, Pages: 1

Drawing No. DRM-24V480W1PX(Y)_4, Label Drawing, Revision: 00, Pages: 1

Drawing No. DRM-24V480W1PX(Y)_5, PCB Layout, Revision: 00, Pages: 1

Drawing No. DRM-24V480W1PX(Y)_6, Insulator Drawing, Revision: 00, Pages: 1

Drawing No. DRM-24V480W1PX(Y)_7, Heat Sink Drawing, Revision: 00, Pages: 1

Drawing No. DRM-24V480W1PX(Y)_8.1, Instruction Manual - DINKLE, Revision: 00, Pages: 1

Drawing No. DRM-24V480W1PX(Y)_8.2, Instruction Manual - DECA, Revision: 00, Pages: 1

Drawing No. DRM-24V480W1PX(Y)_9, Electrical Functional Test (In-House), Revision: S3, Pages: 217, dated 17 February 2016

Drawing No. DRM-24V480W1PX(Y)_T211-0323/16, GL - Functional And Environment Test Report, Revision: 00, Pages: 23, dated 12 May 2016

Drawing No. DRM-24V480W1PX(Y)_T251-0526/16, GL - EMC Test Report, Revision: 00, Pages: 42, dated 12 May 2016

Drawing No. DRM-24V80W1PX(Y), ABS Witness For Prototype Environmental Testing, Revision: 00, Pages: 23, dated 21 August 2016

Drawing No. DRM-24V80W1PX(Y)_10, Delta Environment Test (In-House), Revision: S3, Pages: 11, dated 15 December 2015

Drawing No. DRM-24V80W1PX(Y)_2, Schematic Circuit, Revision: S2, Pages: 1

Drawing No. DRM-24V80W1PX(Y)_3, Mechanical Drawing, Revision: 00, Pages: 1

Drawing No. DRM-24V80W1PX(Y)_4, Label Drawing, Revision: 00, Pages: 1

Drawing No. DRM-24V80W1PX(Y)_5, PCB Layout, Revision: 00, Pages: 1

Drawing No. DRM-24V80W1PX(Y)_6, Heat Sink Drawing, Revision: 00, Pages: 1

Drawing No. DRM-24V80W1PX(Y)_8, Instruction Manual, Revision: 00, Pages: 1

Drawing No. DRM-24V80W1PX(Y)_9, Electrical Functional Test (In-House)1, Revision: S4, Pages: 237, dated 29 February 2016

Drawing No. DRM-24v80w1pxy And DRM-24v240w1pxy_T211-0504, GL - Function And Environment Test Report, Revision: 00, Pages: 30, dated 17 August 2015

Drawing No. DRM-24v80w1pxy And DRM-24v240w1pxy_T251-0568, GL - EMC Test Report, Revision: 00, Pages: 113, dated 12 August 2015

Drawing No. T251-0439/21 - DRM-24V480W1PX(y)_GL - EMC test report, Revision: 01, Pages: 21, dated 14 July 2021

Drawing No. T251-0435/21 - DRM-24V80W1PXy and DRM-24V240W1PXy_GL - EMC test report, Revision: 01, Pages: 30, dated 14 July 2021

Drawing No. DRM-24V80W1PX(Y)_1, Technical Datasheet, Revision: 00, Pages: 20

Drawing No. DRM-24V240W1PX(Y)_1, Technical Datasheet, Revision: 00, Pages: 20

Drawing No. DRM-24V480W1PX(Y)_1, Technical Datasheet, Revision: 00, Pages: 20

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Web: www.deltaww.com

Tier: 3 - Type Approved, unit certification not required

STANDARDS

ABS Rules:

Rules for Conditions of Classification (2026) – 1A-1-4/7.7, 1A-1-A3, 1A-1-A4, which covers the following:
Rules for Building and Classing Marine Vessels 2026: 4-8-3/1.3, 4-8-3/1.7, 4-8-3/1.9, 4-8-3/1.11, 4-8-3/1.17, 4-9-9/13.1, 4-9-9/15.7 Table 1

Rules for Conditions of Classification – Offshore Units (2026) – 1B-1-4/9.7, 1B-1-A2, 1B-1-A3, which covers the following:
Rules for Building and Classing Offshore Units 2026: 4-3-1/9, 4-3-1/11, 4-3-1/15, 4-3-1/17.1

ABS Rules for Conditions of Classification – Light and High Speed Craft (2026) – 1C-1-4/11.9, 1C-1-A2, 1C-1-A3, which cover the following:
Rules for Building and Classing High Speed-Craft 2026: 4-6-1/9, 4-6-1/11, 4-6-1/15, 4-6-1/17.1, 4-7-9/15.1

National:

NA

International:

IACS UR E10 Rev.10

Government:

NA

EUMED:

NA

OTHERS:

NA