



# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAA000014E**  
Revision No:  
**6**

## This is to certify:

That the **DIN-Rail Power Supply**

with type designation(s)

**DRM-24V80W1PN(y), DRM-24V120W1PN(y), DRM-24V240W1PN(y), DRM-24V480W1PN(y), DRM-24V960W1PN(y),  
DRM-24V480W3PN(y), DRM-24V960W3PN(y)**

Issued to

**Delta Electronics (Thailand) Public Company Limited  
Samutprakarn, Thailand**

is found to comply with

**DNV rules for classification – Ships, offshore units, and high speed and light craft**

## Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

## Location classes:

<b>Temperature</b>	<b>B</b>
<b>Humidity</b>	<b>B</b>
<b>Vibration</b>	<b>A</b>
<b>EMC</b>	<b>A</b>
<b>Enclosure</b>	<b>A</b>

Issued at **Hamburg** on **2024-06-17**

This Certificate is valid until **2026-08-31**.

DNV local station: **Bangkok**

Approval Engineer: **Dariusz Lesniewski**



for **DNV**

Digitally Signed By: Papanuskas, Joannis  
Location: DNV SE Hamburg, Germany

**Joannis Papanuskas**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: TA 251

Revision: 2021-03

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## Product description

Model code DRM-24VxW1PN(y) 1-Phase:

- x : 80, 120, 240, 480, 960
- (y) : any capital letter A~Z (excluding I, L, O, Q) or any digit 2~9 or blank

Input Rating:

- AC 100-240V, 50-60Hz; 1.0A (80), 1.4A (120), 2.75A (240), 5.5A (480), 12A (960)
  - DC 110-300V\*; 0.8A (80), 1.25A (120), 2.37A (240), 5.0A (480)
- \*not for DRM-24V960W1PN(y)

Output Rating:

- Voltage: 24V DC nominal (adjustable 24...28V DC)
- Current: 3.4A (80), 5A (120), 10A (240), 20A (480), 40A (960) for voltage nominal

Model code: DRM-24VxW3PN(y) 3-Phase / 2-Phase:

- x : 480, 960
- (y) : any capital letter A~Z (excluding I, L, O, Q) or any digit 2~9 or blank

Input Rating:

- 3 x AC 400-500V, 50-60Hz; 0,95A (480), 1.7A (960)

Output Rating:

- Voltage: 24V DC nominal (adjustable 24...28V DC)
- Current: 20A (480), 40A (960)

All models:

Output current/power:

De-rating of the output current/power to be observed according to the manufacturer's specification

LED Signals / Output contact:

- Green LED 'DC OK'
- Red LED 'Overload'
- Output Relay Contact 'DC OK'  
(max. contact rating: 30V / 1A, resistive load)

Mounting: DIN-Rail

Degree of protection: IP 20

## Application/Limitation

De-rating of the output current/power to be observed according to the manufacturer's specification

Mounting in a separate metallic cabinet required for:

DRM-24V960W1PN(y), DRM-24V480W3PN(y) and DRM-24V960W3PN(y)

## Places of manufacture

Delta Electronics India Private Limited SEZ Unit

Plot No.1, Industrial Park, Kurubarapalli Village, Krishnagiri, Tamilnadu,  
635115, India

Delta Electronics (Dongguan) Company Limited

No.33, Pantao Road, Shijie Town, Dongguan City, Guangdong Province  
523308, P. R. China

## Type Approval documentation

Test Reports: SIQ No. T211-0117/15, SIQ No. T251-0224/15

Test Reports: SIQ No. T211-0504/15, SIQ No. T251-0568/15

Test Reports: SIQ No. T211-0323/16, SIQ No. T251-0526/16

Test Reports: SIQ No. T251-0068/17, SIQ No. T211-0062/17

Test Reports: SIQ No. T251-0473/19 M1 A1, SIQ No. T211-0356/19 A1

Test Reports: SIQ No. T251-0640/19 A1, SIQ No. T211-0660/19 A1

Test Reports: SIQ No. T223-0066/15, SIQ No. T223-0316/15 (acc. to IEC 60950-1)

Test Reports: SIQ No. T223-0244/15, SIQ No. T223-0535/15 (acc. to IEC 60950-1)

Test Report: SIQ No. T223-0303/16 (acc. to IEC 60950-1)

Test Report: SIQ No. T223-0026/17 (acc. to IEC 60950-1)

Test Report: SIQ No. T223-0217/19 (acc. to IEC 60950-1)  
Test Report: SIQ No. T223-0324/19 (acc. to IEC 60950-1)  
Test Reports: SIQ No. T251-0435/21, SIQ No. T251-0439/21  
Test Reports: SIQ No. T251-0412/21, SIQ No. T251-0440/21  
Test Reports: SIQ No. T251-0535/21, SIQ No. T251-0536/21  
Data Sheets, Construction Drawings; Circuit Diagrams; Installation Notes; Instruction Manuals  
Type approval assessment report issued at Guangzhou, China on 2024-01-23  
Type approval assessment report issued at Bangkok, Thailand on 2024-03-11  
Type approval assessment report issued at Kolkata, India on 2024-06-10

#### Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021.  
IEC 60950-1:2005 (Second Edition) + A1:2009 + A2:2013

#### Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings

#### Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE