

TYPE APPROVAL CERTIFICATE

This is to certify:

That the DC Power Supply

with type designation(s)
PRO MAX Series

Issued to

Weidmüller Interface GmbH & Co. KG
Detmold, Germany

is found to comply with
DNV GL rules for classification – Ships

Application :

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

Location classes:

Temperature	B
Humidity	B
Vibration	A
EMC	B
Enclosure	A

This Certificate is valid until **2020-04-04**.

Issued at **Hamburg** on **2016-10-12**

DNV GL local station: **Magdeburg**

for **DNV GL**

Approval Engineer: **Klaus-Peter Schröder**

Duy Nam Le
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.

Product description

DIN Rail Power Supplies with the following types

PRO MAX 480W 24V 20A (Rev. 01) [See also Certificate no. 61 934-14HH]

Nominal input voltage (Wide-range input): 100...240V AC
Voltage range: 85...277V AC
Frequency range: 45...65Hz
Nominal output voltage: 24V DC
Nominal output current: 20A @60°C, 15A @70°C

PRO MAX 480W 48V 10A (Rev. 01)

Nominal input voltage (wide-range input): 100...240V AC
Voltage range: 85...277V AC
Frequency range: 45...65Hz
Nominal output voltage: 48V DC
Nominal output current: 10A @60°C, 7.5A @70°C

PRO MAX3 480W 24V 20A (Rev. 01)

Nominal input voltage (wide-range input): 3x400...3x500V AC
Voltage range: 3x320...3x575V AC
Frequency range: 45...65Hz
Nominal output voltage: 24V DC
Nominal output current: 20A @60°C, 15A @70°C

PRO MAX 960W 24V 40A (Rev. 01)

Nominal input voltage (Wide-range input): 100...240V AC
Voltage range: 85...277V AC
Frequency range: 45...65Hz
Nominal output voltage: 24V DC
Nominal output current: 40A @60°C, 30A @70°C

PRO MAX 960W 48V 20A (Rev. 01)

Nominal input voltage (Wide-range input): 100...240V AC
Voltage range: 85...277V AC
Frequency range: 45...65Hz
Nominal output voltage: 48V DC
Nominal output current: 20A @60°C, 15A @70°C

PRO MAX3 960W 24V 40A (Rev. 01)

Nominal input voltage (wide-range input): 3x400...3x500V AC
Voltage range: 3x320...3x575V AC
Frequency range: 45...65Hz
Nominal output voltage: 24V DC
Nominal output current: 40A @60°C, 30A @70°C

PRO MAX3 240W 24V 10A (Rev. 01)

Nominal input voltage (wide-range input): 3x400...3x500V AC
Voltage range: 3x320...3x575V AC
Frequency range: 45...65Hz
Nominal output voltage: 24V DC
Nominal output current: 10A @60°C, 7.5A @70°C

PRO MAX3 120W 24V 5A (Rev. 02)

Nominal input voltage (wide-range input): 3x400...3x500V AC
Voltage range: 3x320...3x575V AC
Frequency range: 45...65Hz
Nominal output voltage: 24V DC

Nominal output current: 5A @60°C, 3.75A @70°C

PRO MAX 70W 5V 14A (Rev. 02)

Nominal input voltage (Wide-range input): 100...240V AC
Voltage range: 85...277V AC
Frequency range: 45...65Hz
Nominal output voltage: 5V DC
Nominal output current: 14A @60°C, 10.5A @70°C

PRO MAX 72W 12V 6A (Rev. 02)

Nominal input voltage (Wide-range input): 100...240V AC
Voltage range: 85...277V AC
Frequency range: 45...65Hz
Nominal output voltage: 12V DC
Nominal output current: 6A @60°C, 4.5A @70°C

PRO MAX 72W 24V 3A (Rev. 02)

Nominal input voltage (Wide-range input): 100...240V AC
Voltage range: 85...277V AC
Frequency range: 45...65Hz
Nominal output voltage: 24V DC
Nominal output current: 3A @60°C, 2.25A @70°C

PRO MAX 120W 12V 10A (Rev. 02)

Nominal input voltage (Wide-range input): 100...240V AC
Voltage range: 85...277V AC
Frequency range: 45...65Hz
Nominal output voltage: 12V DC
Nominal output current: 10A @60°C, 7.5A @70°C

PRO MAX 120W 24V 5A (Rev. 02)

Nominal input voltage (Wide-range input): 100...240V AC
Voltage range: 85...277V AC
Frequency range: 45...65Hz
Nominal output voltage: 24V DC
Nominal output current: 5A @60°C, 3.75A @70°C

PRO MAX 180W 24V 7.5A (Rev. 01)

Nominal input voltage (Wide-range input): 100...240V AC
Voltage range: 85...277V AC
Frequency range: 45...65Hz
Nominal output voltage: 24V DC
Nominal output current: 7.5A @60°C, 5.625A @70°C

PRO MAX 240W 24V 10A (Rev. 01)

Nominal input voltage (Wide-range input): 100...240V AC
Voltage range: 85...277V AC
Frequency range: 45...65Hz
Nominal output voltage: 24V DC
Nominal output current: 10A @60°C, 7.5A @70°C

PRO MAX 240W 48V 5A (Rev. 01)

Nominal input voltage (Wide-range input): 100...240V AC
Voltage range: 85...277V AC
Frequency range: 45...65Hz
Nominal output voltage: 48V DC
Nominal output current: 5A @60°C, 3.75A @70°C

LED indicator: LED green/red-operation
Fastening: DIN-Rail mounting TS35
Housing material: Metal
Output voltage (depending on the type):
5V DC +/-1% (adjustable 4.5...7V DC),
12V DC +/-1% (adjustable 10...15V DC),
24V DC +/-1% (adjustable 22.5...29.5V DC),
48V DC +/-1% (adjustable 30...56V DC)

Application/Limitation

The Type Approval covers hardware listed under Product description.
When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL RU SHIP Pt.4 Ch.9 Sec. 1.
Customer needs to use suitable external protection.

Type Approval documentation

Tests carried out

Applicable tests according to Class Guideline DNVGL-CG-0339, Edition November 2015.

Marking of product

The products to be marked with:

- manufacturer name
- device name/type
- serial number
- revision.

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 at renewal and at least once in the period of the validity of this certificate.

END OF CERTIFICATE