



CERTIFICATE NUMBER	20-2023827-PDA
EFFECTIVE DATE	04-Sep-2020
EXPIRY DATE	03-Sep-2025
ABS TECHNICAL OFFICE	Rio de Janeiro Engineering - Machinery

## CERTIFICATE OF Product Design Assessment

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

**WEIDMUELLER INTERFACE GMBH & CO. KG**

located at

**KLINGENBERGSTRASSE 16, D-32758 DETMOLD, Germany**

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 PRO TOP3**

This Product Design Assessment (PDA) Certificate remains valid until 03/Sep/2025 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

*João Claudio Machado*

Joao C. Bastos Machado, 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)

**WEIDMUELLER INTERFACE GMBH & CO. KG**

KLINGENBERGSTRASSE 16

D-32758 DETMOLD

Germany

Telephone: +49 5231 14-292445

Fax: +49 5231 14-252445

Email: Franz-Josef.Hegener@weidmueller.de

Web: www.weidmueller.de

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**Product: Power Supply Unit**

**Model: PRO TOP3**

**Intended Service:**

Power supply units for installation in consoles and cabinets, located in general power distribution zones, in the bridge or in the deck zone.

**Description:**

Power supply units with wide input ranges:

PRO TOP3 120W 24V 5A

PRO TOP3 240W 24V 10A

PRO TOP3 480W 24V 20A

PRO TOP3 960W 24V 40A

PRO TOP3 480W 48V 10A

PRO TOP3 960W 48V 20A

PRO TOP3 120W 24V 5A CO

PRO TOP3 240W 24V 10A CO

PRO TOP3 480W 24V 20A CO

PRO TOP3 480W 48V 10A CO

PRO TOP3 960W 24V 40A CO

PRO TOP3 960W 36V 26,6A CO

PRO TOP3 960W 48V 20A CO

Accessories:

PRO COM CAN OPEN

PRO COM CAN OPEN EX

PRO TOP BRACKETS

Communication interface (optional): PRO COM CAN OPEN (Ex).

Protection against internal short circuits due to integrated ORing-MOSFET technology.

Direct parallel connection for redundancy or power increase (up to 10 power supply units).

DIP switches for selection of operating modes:

- S/P – single/parallel operation

- C/S – continuous/shut-off operation

Mounting:

- DIN mounting rail

- Fixed mounting by use of additional brackets (accessories)

**Rating:**

Nominal input voltage: 3x 400 ... 500 V AC (50 / 60 Hz) / 450 ... 500 V DC

Nominal voltage range: 3x320 ... 575 V AC or 2 x360 ... 575 V AC (45 ... 65Hz) / 450 ... 800V DC

Nominal output voltage: 24, 36, 48 V DC (depending on model), adjustable

Nominal output current: 5, 10, 20, 26.6, 40 A (depending on model)

Status relay: 30 V AC / DC, 1 A

I/O connection: 0V / 24V

Operating Temperature:

-40 ... +70 °C for CO devices

-25 ... +70 °C for non CO devices

Storage Temperature: -40 ... +85 °C

Degree of protection: IP20

**Service Restriction:**

1. Unit Certification is required for this product by the user where it is used for Category II or III services as described in Section 4-9-3/Table 1 of the 2020 Marine Vessels Rules. Otherwise, Unit Certification is not required.

2. Vibration 4G application: fixed mounting only.

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

**Notes/Drawing/Documentation:**

Drawing No. 2504740000\_01\_09-2019\_IS\_PRO\_TOP3\_120W\_24V\_5A, 2504740000\_01\_09-2019\_IS\_PRO\_TOP3\_120W\_24V\_5A, Revision: -, Pages: -  
Drawing No. 2504750000\_01\_09-2019\_IS\_PRO\_TOP3\_240W\_24V\_10A, 2504750000\_01\_09-2019\_IS\_PRO\_TOP3\_240W\_24V\_10A, Revision: -, Pages: -  
Drawing No. 2504760000\_01\_09-2019\_IS\_PRO\_TOP3\_480W\_24V\_20A, 2504760000\_01\_09-2019\_IS\_PRO\_TOP3\_480W\_24V\_20A, Revision: -, Pages: -  
Drawing No. 2504770000\_01\_09-2019\_IS\_PRO\_TOP3\_960W\_24V\_40A, 2504770000\_01\_09-2019\_IS\_PRO\_TOP3\_960W\_24V\_40A, Revision: -, Pages: -  
Drawing No. 2504780000\_01\_09-2019\_IS\_PRO\_TOP3\_480W\_48V\_10A, 2504780000\_01\_09-2019\_IS\_PRO\_TOP3\_480W\_48V\_10A, Revision: -, Pages: -  
Drawing No. 2504790000\_01\_09-2019\_IS\_PRO\_TOP3\_960W\_48V\_20A, 2504790000\_01\_09-2019\_IS\_PRO\_TOP3\_960W\_48V\_20A, Revision: -, Pages: -  
Drawing No. 2679810000\_01\_09-2019\_IS\_PRO\_TOP3\_120W\_24V\_5A\_CO, 2679810000\_01\_09-2019\_IS\_PRO\_TOP3\_120W\_24V\_5A\_CO, Revision: -, Pages: -  
Drawing No. 2679820000\_01\_09-2019\_IS\_PRO\_TOP3\_240W\_24V\_10A\_CO, 2679820000\_01\_09-2019\_IS\_PRO\_TOP3\_240W\_24V\_10A\_CO, Revision: -, Pages: -  
Drawing No. 2679830000\_01\_09-2019\_IS\_PRO\_TOP3\_480W\_24V\_20A\_CO, 2679830000\_01\_09-2019\_IS\_PRO\_TOP3\_480W\_24V\_20A\_CO, Revision: -, Pages: -  
Drawing No. 2679850000\_01\_09-2019\_IS\_PRO\_TOP3\_960W\_36V\_26,6A\_CO, 2679850000\_01\_09-2019\_IS\_PRO\_TOP3\_960W\_36V\_26,6A\_CO, Revision: -, Pages: -  
Drawing No. 2679860000\_01\_09-2019\_IS\_PRO\_TOP3\_480W\_48V\_10A\_CO, 2679860000\_01\_09-2019\_IS\_PRO\_TOP3\_480W\_48V\_10A\_CO, Revision: -, Pages: -  
Drawing No. 2679870000\_01\_09-2019\_IS\_PRO\_TOP3\_960W\_48V\_20A\_CO, 2679870000\_01\_09-2019\_IS\_PRO\_TOP3\_960W\_48V\_20A\_CO, Revision: -, Pages: -  
Drawing No. A19-008-WT 3ph EN, A19-008-WT 3ph EN, Revision: -, Pages: -  
Drawing No. E258476-VOL1-SEC77-Description, E258476-VOL1-SEC77-Description, Revision: -, Pages: -  
Drawing No. E258476-VOL1-SEC78-Description, E258476-VOL1-SEC78-Description, Revision: -, Pages: -  
Drawing No. E258476-VOL1-SEC79-Description, E258476-VOL1-SEC79-Description, Revision: -, Pages: -  
Drawing No. E258476-VOL1-SEC80-Description, E258476-VOL1-SEC80-Description, Revision: -, Pages: -  
Drawing No. FS\_9573861\_EN\_PROTop-COMM35-System\_01\_02, FS\_9573861\_EN\_PROTop-COMM35-System\_01\_02, Revision: -, Pages: -  
Drawing No. Klassifizierungsbericht EN 45545-2 - PA66-6-GF20 und GF30 FR, Klassifizierungsbericht EN 45545-2 - PA66-6-GF20 und GF30 FR, Revision: -, Pages: -  
Drawing No. Klassifizierungsbericht\_P, Klassifizierungsbericht\_P, Revision: -, Pages: -  
Drawing No. LAB22660E, LAB22660E, Revision: -, Pages: -  
Drawing No. LAB22931E - 6GHz - PRO TOP3.pdf, LAB22931E - 6GHz - PRO TOP3, Revision: 1, Pages: 1  
Drawing No. LPP-Shipbuilding-PRO TOP 3p\_MG\_30042019, LPP-Shipbuilding-PRO TOP 3p\_MG\_30042019, Revision: -, Pages: -  
Drawing No. PRO TOP3-Docu - ABS - 2020-02-21, PRO TOP3-Docu - ABS - 2020-02-21, Revision: 1, Pages: 1  
Drawing No. PRO TOP3-Docu - ABS - 2020-02-21, PRO TOP3-Docu - ABS - 2020-02-21, Revision: -, Pages: 1  
Drawing No. PRO TOP3\_maritim, PRO TOP3\_maritim, Revision: -, Pages: -  
Drawing No. PROtop\_Versioning\_Rules, PROtop\_Versioning\_Rules, Revision: -, Pages: -  
Drawing No. Software design and R&D flow chart 20190116, Software design and R&D flow chart 20190116, Revision: -, Pages: -  
Drawing No. SoftwareCodingGuidelines\_10663078\_EN\_PROTop-COMM35-SYSTEM, SoftwareCodingGuidelines, Revision: -, Pages: -

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Drawing No. Software\_Configuration\_Management\_Procedures\_SCMP\_10661044\_EN\_PROtop-COMM35-SYSTEM, Software\_Configuration\_Management\_Procedures\_SCMP\_10661044\_EN\_PROtop-COMM35-SYSTEM, Revision: -, Pages: -

Drawing No. TR1908020101weidmullerPROTOP3 v04\_signed, TR1908020101weidmullerPROTOP3 v04\_signed, Revision: -, Pages: -

Drawing No. TR1911040602weidmullerPROTOP3 vibration test report-V02\_signed, TR1911040602weidmullerPROTOP3 vibration test report-V02\_signed, Revision: -, Pages: -

Drawing No. Terminals\_PROTOP3, Terminals\_PROTOP3, Revision: -, Pages: -

Drawing No. Test\_Setups\_Shipbuilding\_Test\_PROtop3\_V\_1\_2\_14032019, Test\_Setups\_Shipbuilding\_Test\_PROtop3\_V\_1\_2\_14032019, Revision: -, Pages: -

Drawing No. Zertifikat EN 45545-2\_WELLAMID 6600-PA66-HWV0CP\_R22-R23\_2017-07-17, Zertifikat EN 45545-2\_WELLAMID 6600-PA66-HWV0CP\_R22-R23\_2017-07-17, Revision: -, Pages: -

Drawing No. Zertifikat EN 45545-2\_WELLAMID 6600-PA66-HWV0CP\_R24\_2017-07-17.pdf, Zertifikat EN 45545-2\_WELLAMID 6600-PA66-HWV0CP\_R24\_2017-07-17, Revision: 1, Pages: 1

Drawing No. Zertifikat EN 45545-2\_WELLAMID 6600-PA66-HWV0CP\_R24\_2017-07-17.pdf, Zertifikat EN 45545-2\_WELLAMID 6600-PA66-HWV0CP\_R24\_2017-07-17, Revision: -, Pages: 1

Drawing No. railway-certificate\_NFF-approval-I3-F1 Zenite\_6140L\_BK020, railway-certificate\_NFF-approval-I3-F1 Zenite\_6140L\_BK020, Revision: -, Pages: -

**Terms of Validity:**

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**STANDARDS**

**ABS Rules:**

Rules for Conditions of Classification (2020): 1-1-4/7.7, 1-1-A3 & 1-1-A4

Marine Vessels Rules (2020): 4-8-3/1.7, 4-8-3/1.9, 4-8-3/1.11.1, 4-8-3/1.13, 4-8-3/1.17, 4-8-3/13, 4-8-4/27.5, 4-9-9/13.1, 4-9-9/Table 1

**National:**

NA

**International:**

NA

**Government:**

NA

**EUMED:**

NA

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**OTHERS:**

NA