



Product Service



(1) Type Examination Certificate

(2) Equipment or Protective Systems Intended for Use in
Potentially Explosive Atmospheres – Directive 2014/34/EU

(3) Type Examination Certificate Number:

TPS 18 ATEX 033299 0434 X Rev. 03

(4) Equipment or Protective System: Switching Power Supply –
Type: PRO TOP1 480W 24V 20A EX, PRO TOP1 480W 48V 10A EX

(5) Manufacturer: Weidmüller Interface GmbH & Co. KG

(6) Address: Klingenbergstr. 26, 32758 Detmold, GERMANY

(7) This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) TÜV SÜD Product Service GmbH certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports with no. 64.105.18.02249.01, 64.105.18.02249.02, 64.105.18.02249.03 and 64.105.18.02249.04.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 EN 60079-7:2015+A1:2018 EN 60079-15:2010

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:



II 3G Ex ec nC IIC T4 Gc

-40°C ≤ T_{amb} ≤ +70°C

Certification Body

München, 04.04.2023

Ing. Frank Zhu, MSc.

:

Frank Zhu

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Doc. Name: Temp-ExNBG-TPS-Type-Cert Rev. 02

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(13)

Schedule

(14)

Type Examination Certificate no.

TPS 18 ATEX 033299 0434 X Rev. 03



Product Service

Certificate History

Revision:	Description:	Report no.:	Issue Date:
Rev. 00	First issue.	64.105.18.02249.01	10.12.2018
Rev. 01	Revised "Description of equipment" and "Document list"	64.105.18.02249.02	03.04.2020
Rev.02	Updated standard version and Revised "Special Condition of Use"	64.105.18.02249.03	03.24.2021
Rev.03	Updated "Technical data" and "Special conditions for safe use".	64.105.18.02249.04	04.04.2023

(15) Description of equipment:

The Switching Power Supply is Category 3 equipment.

The Ex marking is: Ex ec nC IIC T4 Gc.

The equipment is protected by Ex 'ec' and the relay inside is protected by Ex 'nC' sealed device. It's a well performance AC-DC module with one-phase input and single output. It has functions such as output over-current protection, output overvoltage protection, output short circuit protection, and parallel connection and so on, with well combined regulation and high efficiency. The requirements are valid for "Single Device" and the "Single Device together with COM communication module (Model: PRO COM CAN OPEN EX)".

Transient protection is integrated in the equipment.

See the user instructions for further details.

Model designation:

PRO	TOP1	480W	24V	20A	EX
	↑	↑	↑	↑	
	I	II	III	IV	

I – Number of input phase

1: Single phase

3: Three phase

II – Rated output Power

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III – Rated output voltage (DC)

IV – Rated output current (DC)

Model difference:

There are two models: PRO TOP1 480W 24V 20A EX, PRO TOP1 480W 48V 10A EX.

They are different in output voltage and output current.

Technical data:

Rated voltage	Input: 100-240V a.c. or 120-340V d.c. Output: 24V d.c., 48V d.c.
Rated current	PRO TOP1 480W 24V 20A EX: input 6A max., output: 20A PRO TOP1 480W 48V 10A EX: input 6A max., output: 10A
Rated power	240W
Frequency	50/60 Hz
Operating temperature	-40°C to +70°C

Warning label:

N/A

Installation instruction:

See installation instructions provided by the manufacturer and part of this certification.

See also (17) Special conditions for safe use.

(16) Test report(s): 64.105.18.02249.04

Routine tests:

100% routine test must be done by manufacturer.

Dielectric strength test:

1. 1500V a.c./1min or 2100V d.c./1min between input terminal and enclosure.

2. 500V a.c./1min or 700V d.c./1min between output terminal and enclosure.

3. For DC input test, 2550 V d.c./1min between input and output terminal of insulated windings shall also be operated.

Note: Alternatively, a test can be carried out at 1,2 times the test voltage, but maintained

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for at least 100 ms.

Document List:

File no.:	Description:	Pages:	Rev:	Date:
A1114Ex	PRO TOP1 480W series construction drawing	1	V07-00	2018-10-23
A1113ExV05A	PRO TOP1 480W 24V 20A EX circuit diagram	5	V05A	2018-10-30
A1114ExV04A	PRO TOP1 480W 48V 10A EX circuit diagram	5	V04A	2018-10-30
3 66249	PRO COM CAN OPEN EX	1	01	2018-02-14
66249	Drawing for coating areas of PRO COM CAN OPEN EX	1	01	2018-09-11
3 63555	PCBA PROTOP-COMM35	5	0	2017-11-16
4 63555	PCBA PROTOP-COMM35	2	0	2017-11-16
-	CDF of PRO TOP1 480W series	13	-	2018-11-12
2623590000/02/01-2022	User manual for PRO TOP1 480W 24V 20A EX	4	V02	2023-02-22
2623620000/02/01-2022	User manual for PRO TOP1 480W 48V 10A EX	4	V02	2023-02-22
-	Specification of PRO TOP1 480W 24V 20A EX	16	V00	2018-07-02
-	Specification of PRO TOP1 480W 48V 10A EX	16	V00	2018-06-15
WI-EN-002 for A1113Ex	PRO TOP1 480W 24V 20A EX working instruction of coating	15	02	2018-11-31
WI-EN-002 for A1114Ex	PRO TOP1 480W 48V 10A EX working instruction of coating	14	02	2018-11-31

A copy of the full documentation is kept confidentially at TÜV SÜD.

(17)

Special conditions for safe use:

1. The equipment shall only be used in an area of at least pollution degree 2, as defined in EN 60664-1.
2. The equipment shall be installed in an enclosure that provides a minimum ingress protection of IP 54 in accordance with EN 60079-0.
3. The installation must be installed according to the requirements of EN 60079-14: latest version (or its National equivalent standard).

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4. The ambient temperature (T_{amb}), as specified above, has to be seen as the temperature of the surrounding atmosphere where the equipment is installed at (=Operating temperature).
5. Power derating off 2.5%/K is required when ambient temperature between +60°C and +70°C.
6. Consult manufacturer's operating instructions for derating information when input voltage decreases from 100-85V a.c. or 120-80V d.c. or when output with 130% max. load.
7. Consult manufacturer's operating instructions for adjustable output. Adjustment of the potentiometer is allowed only when explosive atmosphere is not present.

(18) Essential health and safety requirements:

Assured by compliance with standards set out in (9).

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Doc. Name: Temp. ExNBG-TPS-Typo-Cert-Rev. 02

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