

(1) **Certificate of Conformity**

(2) Equipment and protective systems intended for use in potentially explosive atmospheres – **Directive 2014/34/EU**

(3) Certificate Number

EPS 20 ATEX 1 191 X

Revision 1

(4) Equipment: Power Supply (built-in):
TIB 080-112EX, TIB 080-124EX, TIB 080-148EX, TIB 120-112EX, TIB 120-124EX,
TIB 120-148EX, TIB 240-124EX, TIB 240-148EX, TIB 480-124EX, TIB 480-148EX,
TIB 240-124SP/EX, TIB 480-124SP/EX

(5) Manufacturer: Traco Power Solutions Ltd.

(6) Address: Whitemill Industrial Estate,
Whitemill Road Wexford, Y35 YH66,
Ireland

(7) This equipment and any acceptable variation thereto are specified in the annex to this Certificate of Conformity and the documentation therein referred to.

(8) Bureau Veritas Consumer Products Services Germany GmbH certifies based on a voluntary assessment that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II of the Directive 2014/34/EU. The examination and test results are recorded in the confidential documentation under the reference number 20TH0357.

(9) Compliance with the essential health and safety requirements has been assured by compliance with:

EN IEC 60079-0:2018

EN 60079-15:2010

EN IEC 60079-7:2015 + A1:2018

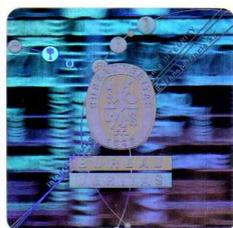
EN IEC 60079-15:2019

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

(11) This Certificate of Conformity relates only to the design and the construction of the specified equipment in accordance with Directive 2014/34/EU. Further requirements of this Directive apply to the manufacture of this equipment and its placing on the market. Those requirements are not covered by this certificate.

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

 II 3G Ex ec nC IIC T3/T4 Gc



Certification department of explosion protection

Tuerkheim, 2022-07-28

Ulrich Feike

Certificates without signature and seal are void. This certificate is allowed to be distributed only if not modified. Extracts or modifications must be authorized by Bureau Veritas Consumer Products Services Germany GmbH.

(13)

Annex

(14) **Certificate of Conformity EPS 20 ATEX 1 191 X**

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(15) Description of equipment:

The TIB EX family of next generation DIN rail mounted power supplies feature high efficiency operation of up to 90% - 95% enabling a slim design with alternative side-mounting for flat panels (DC OK indicator on both front and side panel).

These products are certified to UL Hazloc Class 1 / Div 2, and ATEX (EN IEC 60079-0, EN 60079-7, EN (IEC) 60079-15) for operation in hazardous locations.

This convection cooled power supplies have a -40 °C to +60 °C full load operating temperature range. 150% peak power for up to 4 seconds which is ideal for stepper motors, solenoids or actuators.

The TIB EX series has an important Back Power Immunity feature that helps protect against shutdown or malfunction with loads such as inductors and decelerating motors that can feed voltage back to the power supply. Outputs are radio-interference-suppressed to impede radiation at long output lines which reduces the common mode current to within limits of telecommunication ports.

The series operate with a high-power factor of up to 99% which also minimizes inrush current. Additional qualifications include IEC/EN/UL 60950-1, UL 508 and CB Report with EMC compliance to IEC/EN 61000-6-2 and IEC/EN 61000-6-3. Further additional qualifications of the power supplies series are listed under IEC/EN/UL61010-1, including IEC/EN/UL 61010-2-201.

Revision 1: Update to current version of standards used. Update of ExTR to current version. Minor editorial changes to manufacturer's documents. New type label. No tests performed.

Electrical data:

<p><u>TIB 080-112EX</u> Input: AC 100–240V 2–0.9 A 45–65Hz DC 100–250V 1.0 – 0.39A Output: DC 12V 6.7A Derate linearly above +60 °C at a rate of 2%/°C Ambient temperature range: -40 °C to +70 °C</p>	<p><u>TIB 080-124EX</u> Input: AC 100–240V 2–0.9A 45–65Hz DC 100–250V 1.0–0.39A Output: DC 24V 3.4A Derate linearly above +60 °C at a rate of 2%/°C Ambient temperature range: -40 °C to +70 °C</p>
<p><u>TIB 080-148EX</u> Input: AC 100–240V 2–0.9A 45–65Hz DC 100–250V 1.0–0.39A Output: DC 48V 1.7A Derate linearly above +60 °C at a rate of 2%/°C Ambient temperature range: -40 °C to +70 °C</p>	<p><u>TIB 120-112EX</u> Input: AC 100–240V 1.5–0.78A 45–65Hz DC 100–250V 1.40–0.56A Output: DC 12V 10A Derate linearly above +60 °C at a rate of 2%/°C Ambient temperature range: -40 °C to +70 °C</p>
<p><u>TIB 120-124EX</u> Input: AC 100–240V 1.5–0.78A 45–65Hz DC 100–250V 1.40–0.56A Output: DC 24V 5A Derate linearly above +60 °C at a rate of 2%/°C Ambient temperature range: -40 °C to +70 °C</p>	<p><u>TIB 120-148EX</u> Input: AC 100–240V 1.5–0.78A 45–65Hz DC 100–250V 1.40–0.56A Output: DC 48V 2.5A Derate linearly above +60 °C at a rate of 2%/°C Ambient temperature range: -40 °C to +70 °C</p>

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Electrical data: (continued)

<p><u>TIB 240-124EX</u> Input: AC 100–240V 2.89–1.27A 45–65Hz DC 100–250V 2.85–1.10A Output: DC 24V 10A Derate linearly above +60 °C at a rate of 2%/°C Ambient temperature range: -40 °C to +70 °C</p>	<p><u>TIB 240-148EX</u> Input: AC 100–240V 2.89–1.27A 45–65Hz DC 100–250V 2.85–1.10A Output: DC 48V 5A Derate linearly above +60 °C at a rate of 2%/°C Ambient temperature range: -40 °C to +70 °C</p>
<p><u>TIB 480-124Ex</u> Input: AC 100–240V 5.8–2.5A 45–65Hz DC 100–250V 5.65–2.20A Output: DC 24V 20A Derate linearly above +60 °C at a rate of 2%/°C Derate linearly above +55 °C at a rate of 1.7%/°C (Vin: 100VDC - 350VDC) Ambient temperature range: -40 °C to +70 °C</p>	<p><u>TIB 480-148EX</u> Input: AC 100–240V 5.8– 2.5A 45–65Hz DC 100–250V 5.65–2.20A Output: DC 48V 10A Derate linearly above +55 °C at a rate of 1.4%/°C (Vin: 85–132V) Derate linearly above +60 °C at a rate of 2%/°C (Vin: 132–264V) Derate linearly above +55 °C at a rate of 1.7%/°C. (Vin: 110VDC - 350VDC) Ambient temperature range: -40 °C to +70 °C</p>
<p><u>TIB 240-124SP/EX</u> Input: AC 100–240V 2.89–1.27A 45–65Hz DC 100–250V 2.85–1.10A Output: DC 24V 10A Derate linearly above +60 °C at a rate of 2%/°C Ambient temperature range: -40 °C to +70 °C</p>	<p><u>TIB 480-124SP/EX</u> Input: AC 100–240V 5.8–2.5A 45–65Hz DC 100–250V 5.65–2.20A Output: DC 24V 20A Derate linearly above +60 °C at a rate of 2%/°C Derate linearly above +55 °C at a rate of 1.7%/°C (Vin: 100VDC - 350VDC) Ambient temperature range: -40 °C to +70 °C</p>

(16) Reference number: 20TH0357

(17) Special conditions for safe use:

- The equipment shall be installed in an enclosure that provides a minimum ingress protection of IP54 in accordance with EN IEC 60079-0 and EN (IEC) 60079-15.
- The equipment shall only be used in an area of not more than pollution degree 2, as defined in EN 60664-1.
- Do not operate voltage adjustment unless the area is known to be non-hazardous.
- PE conductor must be connected to apparatus (input terminal).
- Ambient temperature range is $-40\text{ °C} < T_{\text{amb}} < +70\text{ °C}$; derating conditions must be considered. Temperature classification T3 / T4 depending on model and input voltage. For details refer to user manual.



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(18) Essential health and safety requirements:

Met by compliance with standards.

Certification department of explosion protection

Tuerkheim, 2022-07-28



Ulrich Felke