(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 0**

(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, TIB 480-124SP

(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 schedule to this Certificate of Conformity and the documents 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:

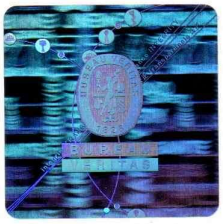
EN IEC 60079-0:2018 **EN IEC 60079-7:2015+A1:2018** **EN 60079-15:2010**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule 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 and supply of this equipment. Those requirements are not covered by this certificate.

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

II 3G Ex ec nC IIC T4 Gc



Certification department of explosion protection

H. Schaffer

Hamburg, 2021-04-15

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(13) # Annexe

(14) **Certificate of Conformity EPS 20 ATEX 1 191 X** **Revision 0**

(15) Description of equipment:

The TIB EX family of next generation of 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 certified to UL Hazloc Class 1 / Div 2, and ATEX (EN 60079-0, EN 60079-7. EN 600079-15) for operation in hazardous locations.

These 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 shut down 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.

Electrical data:

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

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Electrical data: (continued)

TIB 120-124EX Input: 100 – 240 V AC | 1.5 – 0.78 A | 45 – 65 Hz 100 – 250 V DC | 1.40 – 0.56 A Output: 24 V DC | 5 A Derate linearly above +60°C at a rate of 2%/°C Ambient temperature range: -40 °C to +70 °C	TIB 120-148EX Input: 100 – 240 V AC | 1.5 – 0.78 A | 45 – 65 Hz 100 – 250 V DC | 1.40 – 0.56 A Output: 48 V DC | 2.5 A Derate linearly above +60°C at a rate of 2%/°C Ambient temperature range: -40 °C to +70 °C
TIB 240-124EX Input: 100 – 240 V AC | 2.89 – 1.27 A | 45 – 65 Hz 100 – 250 V DC | 2.85 – 1.10 A Output: 24 V DC | 10 A Derate linearly above +60°C at a rate of 2%/°C Ambient temperature range: -40 °C to +70 °C	TIB 240-148EX Input: 100 – 240 V AC | 2.89 – 1.27 A | 45 – 65 Hz 100 – 250 V DC | 2.85 – 1.10 A Output: 48 V DC | 5 A Derate linearly above +60°C at a rate of 2%/°C Ambient temperature range: -40 °C to +70 °C
TIB 480-124EX Input: 100 – 240 V AC | 5.8 – 2.5 A | 45 – 65 Hz 100 – 250 V DC | 2.85 – 1.10 A Output: 24 V DC | 20 A Derate linearly above +60°C at a rate of 2%/°C Ambient temperature range: -40 °C to +70 °C	TIB 480-148EX Input: 100 – 240 V AC | 5.8 – 2.5 A | 45 – 65 Hz 100 – 250 V DC | 5.65 – 2.20 A Output: 48 V DC | 10 A Derate linearly above +55 °C at a rate of 1.4%/°C (Vin: 85 V – 132 V) Derate linearly above +60 °C at a rate of 2%/°C (Vin: 132 V – 264 V) Ambient temperature range: -40 °C to +70 °C
TIB 240-124SP Input: 100 – 240 V AC | 2.89 – 1.27 A | 45 – 65 Hz 100 – 250 V DC | 5.65 – 2.20 A Output: 24 V DC | 10 A Derate linearly above +60°C at a rate of 2%/°C Ambient temperature range: -40 °C to +70 °C	TIB 480-124SP Input: 100 – 240 V AC | 5.8 – 2.5 A | 45 – 65 Hz 100 – 250 V DC | 5.65 – 2.20 A Output: 24 V DC | 20 A Derate linearly above +60°C at a rate of 2%/°C Ambient temperature range: -40 °C to +70 °C

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(16) Reference number: 20TH0357

(17) Schedule of Limitations:

- The equipment shall be installed in an enclosure that provides a minimum ingress protection of IP54 in accordance with EN 60079-0 and EN 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 °C < T_{amb} < +70 °C; following de-rating conditions must be considered:

All models, except TIB 480-148EX:

- linear derating of 2%/°C above +60 °C,

Only TIB 480-148EX:

- linear derating of 1.4%/°C above +55 °C for input voltage range of 100 V a.c. - 132 V a.c.
- linear derating of 2%/°C above +60 °C for input voltage range of 132 V a.c. - 240 V a.c.
- Power supply is suitable for following temperature classes: T4

All models, expect TIB 480-124EX & TIB 480-124SP:

- temperature class T3 for input voltage range of 100 V a.c – 216 V a.c
- temperature class T4 for input voltage of 240 V a.c ±10%.

(18) Essential health and safety requirements:

Met by standards.

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