

- Compact metal case with screw terminal block
- Universal input 85-264 VAC
- Convection cooled (no-fan)
- High efficiency up to 85%
- Compliance to EN 61000-3-2
- Short circuit, overvoltage and overload protection
- IEC/EN/UL 62368-1 safety approvals
- 3 year product warranty



UL 62368-1 IEC 62368-1

The TXLN series is a family of encased power supplies designed for a wide range of cost critical applications. With a low profile metal case and screw terminal block connection, they are easy to install in any equipment. These power supplies have universal input and comply with European EMC standards and the Low Voltage Directive (LVD).

| Models       |                      |                                     |                        |                    |
|--------------|----------------------|-------------------------------------|------------------------|--------------------|
| Order Code   | Output Power<br>max. | Output Voltage<br>nom. (adjustable) | Output Current<br>max. | Efficiency<br>typ. |
| TXLN 018-103 | 10 W                 | 3.3 VDC (3.0 - 3.6 VDC)             | 3'000 mA               | 73 %               |
| TXLN 018-105 | 15 W                 | 5 VDC (4.5 - 5.5 VDC)               | 3'000 mA               | 78 %               |
| TXLN 018-112 | 18 W                 | 12 VDC (10.8 - 13.2 VDC)            | 1'500 mA               | 83 %               |
| TXLN 018-115 |                      | 15 VDC (13.5 - 16.5 VDC)            | 1'200 mA               | 84 %               |
| TXLN 018-124 |                      | 24 VDC (21.6 - 26.4 VDC)            | 750 mA                 | 85 %               |

## Input Specifications

|                        |                                          |                                                                                                            |
|------------------------|------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Input Voltage          | - AC Range                               | Operational Range: <b>85 - 264 VAC</b> (Full Range)<br>Rated Range: <b>100 - 240 VAC</b> (Full Range)      |
|                        | - DC Range                               | Operational Range: <b>120 - 375 VDC</b> (Designed for, no certification)<br>Polarity: <b>irrelevant</b>    |
| Input Frequency        |                                          | Operational Range: <b>47 - 63 Hz</b><br>Certified: <b>50/60 Hz</b>                                         |
|                        |                                          |                                                                                                            |
| Input Current          | - Full Load & $V_{in} = 115 \text{ VAC}$ | <b>500 mA max.</b>                                                                                         |
| Power Consumption      | - No load & $V_{in} = 230 \text{ VAC}$   | <b>150 mW max.</b> (Ready to meet ErP directive)                                                           |
| Input Inrush Current   | - At 230 VAC                             | <b>50 A max.</b>                                                                                           |
|                        | - At 115 VAC                             | <b>30 A max.</b>                                                                                           |
| Input Protection       |                                          | <b>T 2 A / 250 VAC</b> (Internal Fuse)                                                                     |
| Recommended Input Fuse |                                          | <b>2'000 mA</b> (slow blow)<br>(The need of an external fuse has to be assessed in the final application.) |

## Output Specifications

|                                        |                                           |                                                                                                       |
|----------------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Output Voltage Adjustment              |                                           | <b>±10%</b> (By trim potentiometer)<br>Output power must not exceed rated power!                      |
| Voltage Set Accuracy                   |                                           | <b>±3% max.</b> (3.3 Vout model)<br><b>±2% max.</b> (5 Vout model)<br><b>±1% max.</b> (other models)  |
| Regulation                             | - Input Variation ( $V_{min} - V_{max}$ ) | <b>1.5% max.</b> (3.3 Vout model)<br><b>1% max.</b> (5 Vout model)<br><b>0.5% max.</b> (other models) |
|                                        | - Load Variation (0 - 100%)               | <b>3% max.</b> (3.3 Vout model)<br><b>2% max.</b> (5 Vout model)<br><b>1% max.</b> (other models)     |
|                                        |                                           |                                                                                                       |
|                                        |                                           |                                                                                                       |
| Ripple and Noise<br>(20 MHz Bandwidth) | 3.3 VDC model:                            | <b>80 mVp-p max.</b> (w/ 0.1 $\mu\text{F}$    47 $\mu\text{F}$ )                                      |
|                                        | 5 VDC model:                              | <b>80 mVp-p max.</b> (w/ 0.1 $\mu\text{F}$    47 $\mu\text{F}$ )                                      |
|                                        | 12 VDC model:                             | <b>120 mVp-p max.</b> (w/ 0.1 $\mu\text{F}$    47 $\mu\text{F}$ )                                     |
|                                        | 15 VDC model:                             | <b>150 mVp-p max.</b> (w/ 0.1 $\mu\text{F}$    47 $\mu\text{F}$ )                                     |
|                                        | 24 VDC model:                             | <b>200 mVp-p max.</b> (w/ 0.1 $\mu\text{F}$    47 $\mu\text{F}$ )                                     |
| Minimum Load                           |                                           | <b>Not required</b>                                                                                   |
| Temperature Coefficient                |                                           | <b>±0.03 %/K max.</b>                                                                                 |
| Hold-up Time                           | - At 230 VAC                              | <b>60 ms min.</b>                                                                                     |
|                                        | - At 115 VAC                              | <b>16 ms min.</b>                                                                                     |
| Start-up Time                          | - At 230 VAC                              | <b>1'000 ms max.</b>                                                                                  |
|                                        | - At 115 VAC                              | <b>1'000 ms max.</b>                                                                                  |
| Short Circuit Protection               |                                           | <b>Continuous, Automatic recovery</b>                                                                 |
| Output Current Limitation              |                                           | <b>105% typ. of Iout max.</b>                                                                         |
| Overvoltage Protection                 |                                           | <b>115 - 140% of Vout nom.</b>                                                                        |

## Safety Specifications

|                       |                             |                                                                                              |
|-----------------------|-----------------------------|----------------------------------------------------------------------------------------------|
| Safety Standards      | - IT / Multimedia Equipment | <b>EN 62368-1</b><br><b>IEC 62368-1</b><br><b>UL 62368-1</b>                                 |
|                       | - Certification Documents   | <a href="http://www.tracopower.com/overview/txln018">www.tracopower.com/overview/txln018</a> |
| Protection Class      |                             | <b>Class I</b> (Prepared): <b>Connection to PE</b>                                           |
| Pollution Degree      |                             | <b>PD 2</b>                                                                                  |
| Over Voltage Category |                             | <b>OVC II</b>                                                                                |

All specifications valid at nominal voltage, resistive full load and +25°C after warm-up time, unless otherwise stated.

## EMC Specifications

|               |                                  |                                                     |
|---------------|----------------------------------|-----------------------------------------------------|
| EMI Emissions | - Conducted Emissions            | EN 55032 class B (internal filter)                  |
|               | - Radiated Emissions             | EN 55032 class B (internal filter)                  |
|               | - Harmonic Current Emissions     | EN 61000-3-2, class A                               |
|               | - Voltage Fluctuations & Flicker | EN 61000-3-3                                        |
| EMS Immunity  | - Electrostatic Discharge        | EN 55024 (IT Equipment)                             |
|               |                                  | EN 55035 (Multimedia)                               |
|               |                                  | Air: EN 61000-4-2, $\pm 8$ kV, perf. criteria A     |
|               |                                  | Contact: EN 61000-4-2, $\pm 4$ kV, perf. criteria A |
|               | - RF Electromagnetic Field       | EN 61000-4-3, 3 V/m, perf. criteria A               |
|               |                                  | EN 61000-4-4, $\pm 1$ kV, perf. criteria A          |
|               |                                  | L to L: EN 61000-4-5, $\pm 1$ kV, perf. criteria A  |
|               | - EFT (Burst) / Surge            | L to PE: EN 61000-4-5, $\pm 2$ kV, perf. criteria A |
|               |                                  | EN 61000-4-6, 3 Vrms, perf. criteria A              |
|               |                                  | Continuous: EN 61000-4-8, 3 A/m, perf. criteria A   |
|               |                                  | 230 VAC / 50 Hz: EN 61000-4-11                      |
|               | - Conducted RF Disturbances      | 30%, 25 periods, perf. criteria A                   |
|               | - PF Magnetic Field              | >95%, 0.5 periods, perf. criteria A                 |
|               | - Voltage Dips & Interruptions   | >95%, 250 periods, perf. criteria C                 |

## General Specifications

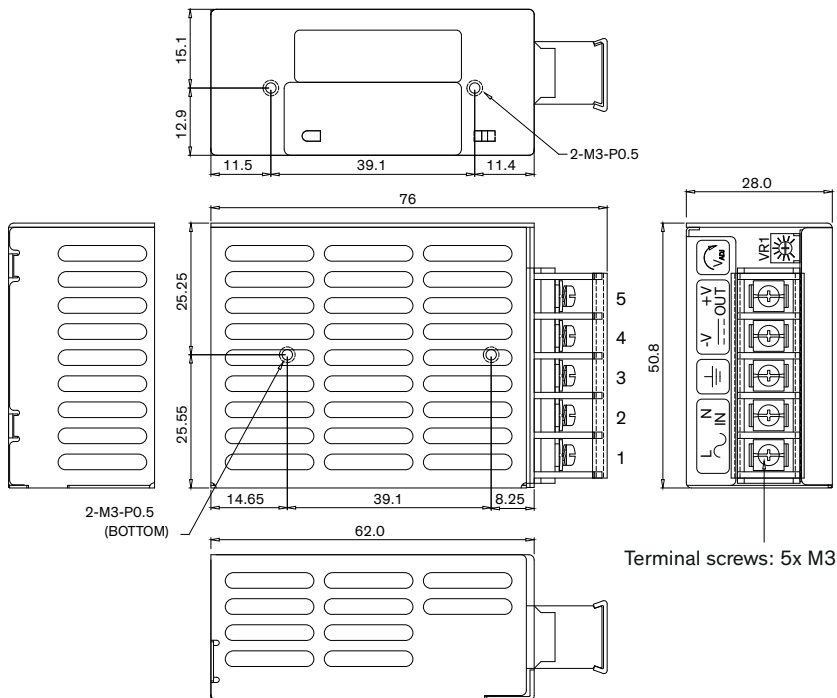
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|---------------------------------|---------------------------------|------------------------------------------------------------------------------------------------------------------|
| Relative Humidity               |                                 | 90% max. (non condensing)                                                                                        |
| Temperature Ranges              | - Operating Temperature         | -20°C to +70°C                                                                                                   |
|                                 | - Storage Temperature           | -40°C to +85°C                                                                                                   |
| Power Derating                  | - High Temperature              | 2.5 %/K above 50°C                                                                                               |
|                                 | - Low Input Voltage             | 0.67 %/V below 100 VAC                                                                                           |
| See application note:           |                                 | <a href="http://www.tracopower.com/overview/txln018">www.tracopower.com/overview/txln018</a>                     |
| Cooling System                  |                                 | Natural convection (20 LFM)                                                                                      |
| Altitude During Operation       |                                 | 2'000 m max.                                                                                                     |
| Switching Frequency             |                                 | 90 - 110 kHz (PWM)                                                                                               |
| Insulation System               |                                 | Reinforced Insulation                                                                                            |
| Isolation Test Voltage          | - Input to Output, 60 s         | 3'000 VAC                                                                                                        |
|                                 | - Input to Case or PE, 60 s     | 1'800 VAC                                                                                                        |
|                                 | - Output to Case or PE, 60 s    | 500 VAC                                                                                                          |
| Isolation Resistance            | - Input to Output, 500 VDC      | 100 M $\Omega$ min.                                                                                              |
| Isolation Capacitance           | - Input to Output, 100 kHz, 1 V | 10'000 pF max.                                                                                                   |
| Leakage Current<br>(at 264 VAC) | - Earth Leakage Current         | 500 $\mu$ A max.                                                                                                 |
| Distance Through Isolation      |                                 | 6 mm                                                                                                             |
| Reliability                     | - Calculated MTBF               | 626'000 h (MIL-HDBK-217F, ground benign)                                                                         |
| Housing Material                |                                 | Aluminum                                                                                                         |
| Housing Type                    |                                 | Metal Case                                                                                                       |
| Mounting Type                   |                                 | Chassis Mount                                                                                                    |
| Connection Type                 |                                 | Screw Terminal                                                                                                   |
| Weight                          |                                 | 130 g                                                                                                            |
| Status Indicator                |                                 | Indicated by green LED                                                                                           |
| Environmental Compliance        | - REACH Declaration             | <a href="http://www.tracopower.com/info/reach-declaration.pdf">www.tracopower.com/info/reach-declaration.pdf</a> |
|                                 |                                 | REACH SVHC list compliant                                                                                        |
|                                 |                                 | REACH Annex XVII compliant                                                                                       |
|                                 | - RoHS Declaration              | <a href="http://www.tracopower.com/info/rohs-declaration.pdf">www.tracopower.com/info/rohs-declaration.pdf</a>   |
|                                 |                                 | Exemptions: No Exemptions                                                                                        |

## Supporting Documents

|                                          |                                                                                              |
|------------------------------------------|----------------------------------------------------------------------------------------------|
| Overview Link (for additional Documents) | <a href="http://www.tracopower.com/overview/txln018">www.tracopower.com/overview/txln018</a> |
|------------------------------------------|----------------------------------------------------------------------------------------------|

All specifications valid at nominal voltage, resistive full load and +25°C after warm-up time, unless otherwise stated.

## Outline Dimensions



| Screw Terminal |          |
|----------------|----------|
| Pin            | Function |
| 1              | AC (L)   |
| 2              | AC (N)   |
| 3              | PE       |
| 4              | -Vout    |
| 5              | +Vout    |

Dimensions in mm

Tolerances:

0-8:  $\pm 0.2$

8-25:  $\pm 0.3$

25-80:  $\pm 0.5$

Mounting screws

Max. screw penetration depth: 4.0

Max. screw locked torque: 0.8 Nm