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TRACO POWER

AC/DC Power Supply

TXLN 035 Series, 35 Watt

- **Compact metal case with screw terminal block**
- **Universal input 88-264 VAC**
- **Convection cooled (no-fan)**
- **High efficiency up to 86%**
- **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	Output 1		Output 2		Efficiency
		Vnom	Imax	Vnom	Imax	
TXLN 035-103	30 W	3.3 VDC	9'000 mA			74 %
TXLN 035-105	35 W	5 VDC	7'000 mA			79 %
TXLN 035-112		12 VDC	3'000 mA			82 %
TXLN 035-115		15 VDC	2'400 mA			84 %
TXLN 035-124		24 VDC	1'500 mA			85 %
TXLN 035-148	38 W	48 VDC	800 mA			86 %
TXLN 035-212	35 W	+5 VDC	4'000 mA	+12 VDC	2'500 mA	79 %
TXLN 035-215		+5 VDC	4'000 mA	+24 VDC	1'300 mA	79 %
TXLN 035-22M2		+12 VDC	3'000 mA	−12 VDC	1'500 mA	83 %
TXLN 035-23M3		+15 VDC	2'400 mA	−15 VDC	1'500 mA	84 %

Options

on demand (backorder with MOQ non stocking item)	- Optional model with 7.5 VDC / 4'700 mA - Optional model with 30 VDC / 1'200 mA

Note - Total output power must not exceed rated power.

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Input Specifications

Input Voltage	- AC Range	Operational Range:	**88 - 264 VAC** (Full Range)
		Rated Range:	**100 - 240 VAC** (Full Range)
	- DC Range	Operational Range:	**125 - 375 VDC** (Designed for, no certification)
		Polarity:	**irrelevant**
Input Frequency		Operational Range:	**47 - 63 Hz**
		Certified:	**50/60 Hz**
Input Current	- Full Load & Vin = 115 VAC		**1'000 mA max.**
Power Consumption	- No load & Vin = 230 VAC		**500 mW max.**
Input Inrush Current	- At 230 VAC		**50 A max.**
	- At 115 VAC		**30 A max.**
Input Protection			**T 2 A / 250 VAC** (Internal Fuse)
Recommended Input Fuse			**2'000 mA** (slow blow) (The need of an external fuse has to be assessed in the final application.)

Output Specifications

Output Voltage Adjustment			**±10%** (single output models only) (By trim potentiometer) Output power must not exceed rated power!
Voltage Set Accuracy			**±3% max.** (3.3 Vout model) **±2% max.** (5 Vout model) **±1% max.** (other single output models) **±2% / ±5% max.** (5/12 and 5/24 Vout models) **±1% / ±5% max.** (other dual output models)
Regulation	- Input Variation (Vmin - Vmax)	single output models:	**1.5% max.** (3.3 Vout model) **1.0% max.** (5 Vout model) **0.5% max.** (other single output models)
		dual output models:	**0.5% max.** (Output 1, 12/-12 and 15/-15 Vout) **1.0% max.** (Output 1, 5/12 and 5/24 Vout) **2.5% max** (Output 2)
	- Load Variation (0 - 100%)	single output models:	**3% max.** (3.3 Vout model) **2% max.** (5 Vout model) **1% max** (other single output models)
		dual output models:	**2% max.** (Output 1) **5% max.** (Output 2)
Ripple and Noise (20 MHz Bandwidth)	- single output	3.3 VDC model:	**70 mVp-p max.** (w/ 0.1 µF || 47 µF)
		5 VDC model:	**70 mVp-p max.** (w/ 0.1 µF || 47 µF)
		7.5 VDC model:	**80 mVp-p max.** (w/ 0.1 µF || 47 µF)
		12 VDC model:	**120 mVp-p max.** (w/ 0.1 µF || 47 µF)
		15 VDC model:	**150 mVp-p max.** (w/ 0.1 µF || 47 µF)
		24 VDC model:	**150 mVp-p max.** (w/ 0.1 µF || 47 µF)
		30 VDC model:	**200 mVp-p max.** (w/ 0.1 µF || 47 µF)
		48 VDC model:	**200 mVp-p max.** (w/ 0.1 µF || 47 µF)
	- dual output	5 / 12 VDC model:	**70 / 120 mVp-p max.** (w/ 0.1 µF || 47 µF)
		5 / 24 VDC model:	**70 / 240 mVp-p max.** (w/ 0.1 µF || 47 µF)
		12 / -12 VDC model:	**120 / 120 mVp-p max.** (w/ 0.1 µF || 47 µF)
		15 / -15 VDC model:	**150 / 150 mVp-p max.** (w/ 0.1 µF || 47 µF)

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

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Minimum Load	- single output	3.3 VDC model:	0 % of Iout max.
		5 VDC model:	0 % of Iout max.
		7.5 VDC model:	0 % of Iout max.
		12 VDC model:	0 % of Iout max.
		15 VDC model:	0 % of Iout max.
		24 VDC model:	0 % of Iout max.
		30 VDC model:	0 % of Iout max.
		48 VDC model:	0 % of Iout max.
	- dual output	5 / 12 VDC model:	7.5 % of Iout max.
		5 / 24 VDC model:	7.5 % of Iout max.
		12 / -12 VDC model:	10 % of Iout max.
		15 / -15 VDC model:	12.5 % of Iout max.
			(dual output models: minimum load is required only on Output 1)
Temperature Coefficient			±0.03 %/K max.
Hold-up Time	- At 230 VAC		40 ms min.
	- At 115 VAC		20 ms min.
Start-up Time	- At 230 VAC		1'000 ms max.
	- At 115 VAC		1'000 ms max.
Short Circuit Protection			Continuous, Automatic recovery
Output Current Limitation			105 - 150% of Iout max.
Overvoltage Protection			115 - 140% of Vout nom. (only Output 1)

Safety Specifications

Safety Standards	- IT / Multimedia Equipment	EN 62368-1 IEC 62368-1 UL 62368-1
	- Certification Documents	www.tracopower.com/overview/txln035
Protection Class		Class I (Prepared): Connection to PE
Pollution Degree		PD 2
Over Voltage Category		OVC II

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			EN 55024 (IT Equipment) EN 55035 (Multimedia)
	- Electrostatic Discharge	Air:	EN 61000-4-2, ±8 kV, perf. criteria A
		Contact:	EN 61000-4-2, ±4 kV, perf. criteria A
	- RF Electromagnetic Field		EN 61000-4-3, 3 V/m, perf. criteria A
	- EFT (Burst) / Surge		EN 61000-4-4, ±1 kV, perf. criteria A
		L to L:	EN 61000-4-5, ±1 kV, perf. criteria A
		L to PE:	EN 61000-4-5, ±2 kV, perf. criteria A
	- Conducted RF Disturbances		EN 61000-4-6, 3 Vrms, perf. criteria A
	- PF Magnetic Field	Continuous:	EN 61000-4-8, 3 A/m, perf. criteria A
	- Voltage Dips & Interruptions	230 VAC / 50 Hz:	EN 61000-4-11 30%, 25 periods, perf. criteria A >95%, 0.5 periods, perf. criteria A >95%, 250 periods, perf. criteria C

General Specifications

Relative Humidity	90% max. (non condensing)

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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	0.83 %/V below 100 VAC
	See application note:	www.tracopower.com/overview/txln035
Cooling System		Natural convection (20 LFM)
Altitude During Operation		2'000 m max.
Switching Frequency		58 - 72 kHz (PWM)
Insulation System		Reinforced Insulation
Working Voltage (rated)		275 VAC
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 MΩ min.
Isolation Capacitance	- Input to Output, 100 kHz, 1 V	20'000 pF max.
Leakage Current (at 264 VAC)	- Earth Leakage Current	1000 µA max.
Distance Through Isolation		6 mm
Reliability	- Calculated MTBF	400'000 h (single output models) 340'000 h (dual output models)) (MIL-HDBK-217F, ground benign)
Housing Material		Aluminum
Housing Type		Metal Case
Mounting Type		Chassis Mount
Connection Type		Screw Terminal
Weight	- single output	340 g
	- dual output	350 g
Status Indicator		Indicated by green LED
Environmental Compliance	- REACH Declaration	www.tracopower.com/info/reach-declaration.pdf REACH SVHC list compliant REACH Annex XVII compliant
	- RoHS Declaration	www.tracopower.com/info/rohs-declaration.pdf Exemptions: 7a, 7c-I (RoHS exemptions refer to the component concentration only, not to the overall concentration in the product (O5A rule). The SCIP number is provided on request.)

Supporting Documents

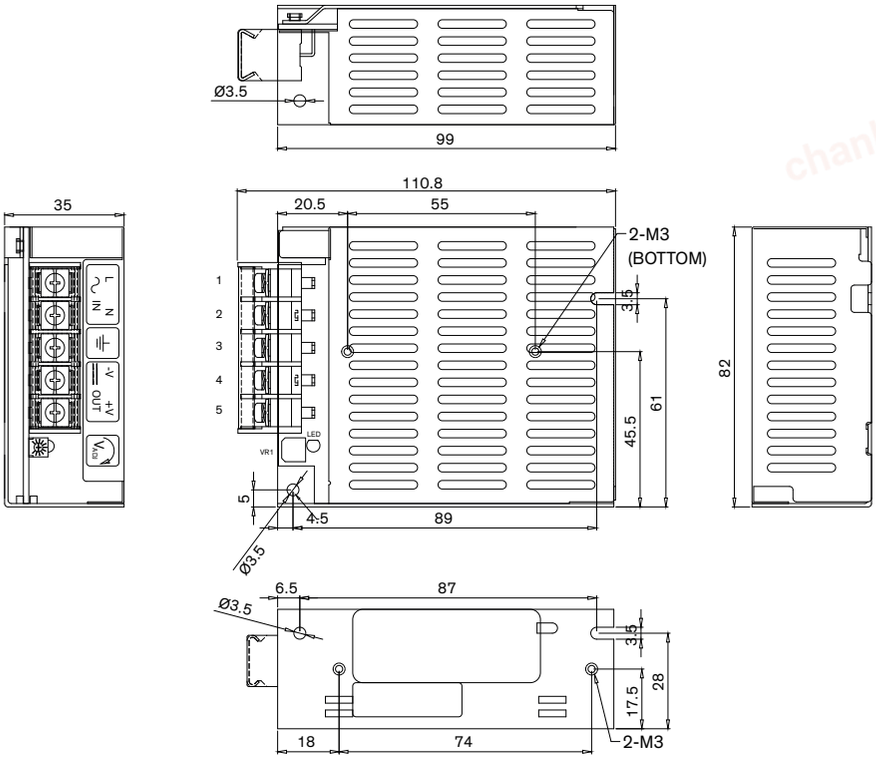
Overview Link (for additional Documents)	www.tracopower.com/overview/txln035

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Outline Dimensions

Single Output Models



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

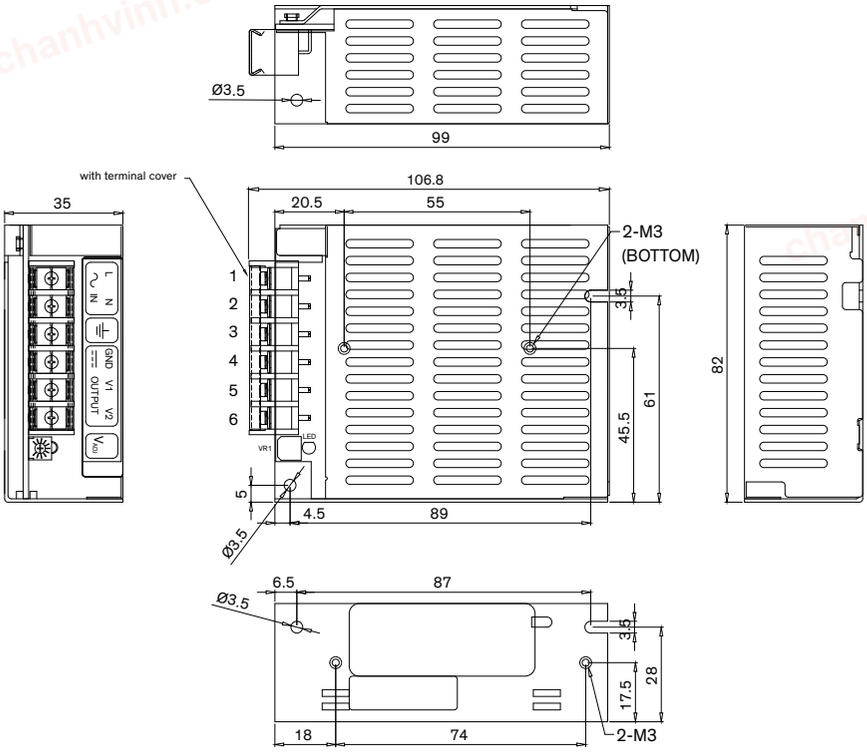
Dimensions in mm
Tolerances:
0-8: ±0.2
8-25: ±0.3
25-80: ±0.5
80-250: ±0.8

Mounting screws
Max. screw penetration depth: 4.5
Max. screw locked torque: 0.8 Nm

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Dual Output Models



Screw Terminal	
Pin	**Function**
1	AC (L)
2	AC (N)
3	PE
4	GND
5	Output 1
6	Output 2

Dimensions in mm
Tolerances:
0-8: ±0.2
8-25: ±0.3
25-80: ±0.5
80-250: ±0.8

Mounting screws
Max. screw penetration depth: 4.5
Max. screw locked torque: 0.8 Nm

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