

Input Specifications

Input Voltage	- AC Range	Operational Range: 90 - 305 VAC (Full Range) Rated Range: 100 - 277 VAC (Full Range)
	- DC Range	Operational Range: 100 - 430 VDC Certified Range: 100 - 250 VDC Polarity: irrelevant (The rated range refers to 62368-1. For 60335-1 certification the rated input voltage is 100 - 240 VAC and DC input is not permitted.)
Input Frequency		Operational Range: 47 - 440 Hz Certified: 50/60 Hz
Input Current	- Full Load & Vin = 230 VAC - Full Load & Vin = 115 VAC	600 mA max. 1'000 mA max.
Power Consumption	- No load & Vin = 230 VAC - No load & Vin = 115 VAC	100 mW max. (Ready to meet ErP directive) 100 mW max.
Input Inrush Current	- At 230 VAC - At 115 VAC	90 A max. 45 A max.
Recommended Input Fuse		2'500 mA (slow blow) (The need of an external fuse has to be assessed in the final application.)

Output Specifications

Voltage Set Accuracy		±2% max.
Regulation	- Input Variation (Vmin - Vmax)	2% max.
	- Load Variation (0 - 100%)	2.5% max.
Ripple and Noise (20 MHz Bandwidth)	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:	240 mVp-p max. (w/ 0.1 µF // 47 µF)
Capacitive Load	12 VDC model:	3'500 µF max.
	15 VDC model:	3'000 µF max.
	24 VDC model:	2'200 µF max.
Minimum Load		Not required
Temperature Coefficient		±0.05 %/K max.
Hold-up Time	- At 230 VAC	10 ms min.
Start-up Time	- At 230 VAC	130 ms max.
	- At 115 VAC	130 ms max.
Short Circuit Protection		Continuous, Automatic recovery
Output Current Limitation		130 - 215% of Iout max.
Overvoltage Protection		105 - 145% of Vout nom. (By Zener diode)
Transient Response	- Response Deviation	2% typ. / 3% max. (50% to 75% Load Step)
	- Response Time	500 µs max. (50% to 75% Load Step)

Safety Specifications

Safety Standards	- IT / Multimedia Equipment	EN 62368-1 IEC 62368-1 UL 62368-1
	- Household	EN 60335-1 IEC 60335-1
	- Power Transformers	IEC 61558-1 IEC 61558-2-16
	- Certification Documents	www.tracopower.com/overview/tmpw50
Protection Class		Class I & II (Prepared): Reinforced Insulation
Pollution Degree		PD 2
Over Voltage Category		OVC II

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)
	- 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
	- Conducted RF Disturbances	EN 61000-4-6, 3 Vrms, perf. criteria A
	- PF Magnetic Field	Continuous: EN 61000-4-8, 1 A/m, perf. criteria A
	- Voltage Dips & Interruptions	230 VAC / 50 Hz: EN 61000-4-11
		30%, 25 periods, perf. criteria A
		>95%, 250 periods, perf. criteria B
		115 VAC / 60 Hz: EN 61000-4-11
		30%, 25 periods, perf. criteria A
		>95%, 250 periods, perf. criteria B

General Specifications

Relative Humidity		95% max. (non condensing)
Temperature Ranges	- Operating Temperature	-40°C to +70°C
	- Storage Temperature	-40°C to +85°C
Power Derating	- High Temperature	2.5 %/K above 50°C
	- Low Input Voltage	2 %/V below 100 VAC
Cooling System		Natural convection (20 LFM)
Altitude During Operation		5'000 m max. (acc. IEC 62368-1)
		2'000 m max. (acc. IEC 60335-1)
Switching Frequency		55 - 90 kHz (PWM, PFM)
Insulation System		Reinforced Insulation
Working Voltage (rated)		342 VAC
Isolation Test Voltage	- Input to Output, 60 s	4'000 VAC
Leakage Current	- Touch Current	250 μ A max.
Reliability	- Calculated MTBF	300'000 h (MIL-HDBK-217F, ground benign)
Washing Process		Not allowed
Environment	- Vibration	IEC 60068-2-6
	- Mechanical Shock	2 g, 3 axis, 60 min, 10-500 Hz, 10 min/cycle IEC 60068-2-27
Housing Material		Plastic resin (UL 94 V-0 rated)
Potting Material		Silicone (UL 94 V-0 rated) (Hermetical sealed structure, dust-proof only non water-proof)
Pin Material		Brass
Pin Surface Plating		Tin (120 μ m min.), matte
Housing Type		Plastic Case
Mounting Type		PCB Mount
Connection Type		THD (Through-Hole Device)
Weight		158 g

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

Environmental Compliance - REACH Declaration

www.tracopower.com/info/reach-declaration.pdf

REACH SVHC list compliant

REACH Annex XVII compliant

www.tracopower.com/info/rohs-declaration.pdf

Exemptions: 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.)

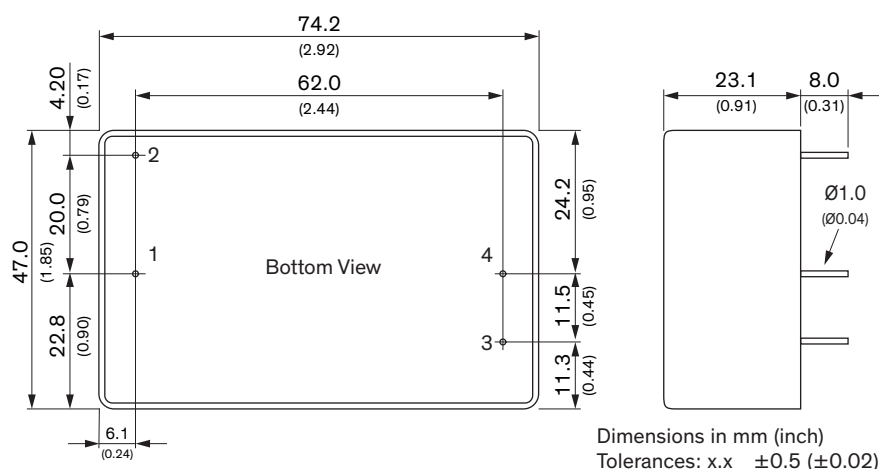
- RoHS Declaration

Supporting Documents

Overview Link (for additional Documents)

www.tracopower.com/overview/tmpw50

Outline Dimensions



Pinout	
Pin	Function
1	AC IN (N)
2	AC IN (L)
3	-Vout
4	+Vout