

- High power density in low profile case, module depth < 55 mm
- Suitable for mounting in domestic installation panels
- Very high efficiency and low standby power -> compliance to ECO-Standard
- Low output ripples and spikes
- Suitable for household appliance and industrial application
- For distributed power
- Operating temperature range: -25°C to +70°C
- UL 508 listed
- 3-year product warranty



This new DIN-Rail mounting power supplies are designed for industrial and residential applications. They are lower cost than the existing TBL range, with similar electrical specifications. Additionally, they fully comply to the new standby power and efficiency requirements (ECO Standard). They are intended for connecting as class II devices, so the safety earth connection is not required. They are mountable in flat racks due to their small dimensions in depth. Their dimensions comply to the DIN 43880 standard.

Models				
Order Code	Output Power max.	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TBLC 75-112	72 W	12 VDC (12.0 - 16.0 VDC)	6'000 mA	89 %
TBLC 75-124	75 W	24 VDC (24.0 - 28.0 VDC)	3'100 mA	89 %

Input Specifications

Input Voltage		85 - 264 VAC (Full Range)
Input Frequency		47 - 63 Hz
Power Consumption	- At no load	500 mW max. (Ready to meet ErP directive)
Input Inrush Current	- At 230 VAC	50 A max.
	- At 115 VAC	25 A max.
Recommended Input Fuse		(The need of an external fuse has to be assessed in the final application.)

Output Specifications

Output Voltage Adjustment		12 VDC model: 12.0 - 16.0 VDC
		24 VDC model: 24.0 - 28.0 VDC (By trim potentiometer) Output power must not exceed rated power!
Voltage Set Accuracy		±0.5% max.
Regulation	- Input Variation (Vmin - Vmax)	0.3% max.
	- Load Variation (10 - 90%)	0.3% max.
Ripple and Noise (20 MHz Bandwidth)		50 mVp-p max.
Minimum Load		Not required
Temperature Coefficient		±0.02 %/K max.
Hold-up Time	- At 230 VAC	60 ms min.
	- At 115 VAC	15 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 70 - 90% of Iout nom. (12 Vout model) 120 - 200% of Iout nom. (24 Vout model)
Overload Protection		Constant Current Mode
Output Current Limitation		105 - 130% of Iout max.
Overvoltage Protection		125 - 150% of Vout nom.
Transient Response	- Peak Variation	350 mV max. (10% to 90% Load Step)
	- Response Time	1'750 µs typ. (10% to 90% Load Step)

Safety Specifications

Safety Standards	- IT / Multimedia Equipment	EN 60950-1 IEC 60950-1 UL 60950-1
	- Industrial Control Equipment	UL 508
	- Household	EN 60335-1 IEC 60335-1
	- Machines Equipment	EN 60204
	- Power Installation	EN 50178
	- Measurement, Control & Lab.	EN 61010-1 EN 61010-2-201 IEC 61010-1 IEC 61010-2-201
	- Power Transformers	EN 61558-2-8 EN 61558-2-16
	- Converter System	EN 62477 IEC 62477
	- Certification Documents	www.tracopower.com/overview/tbhc75
	Protection Class	Class I & II (Prepared): Reinforced Insulation
Class 2 Power Units		UL 1310
		NEC Class 2 (24 Vout model only)

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

Pollution Degree	PD 2
Over Voltage Category	OVC II

EMC Specifications

EMI Emissions		EN 61000-6-3 (Generic Residential) EN 61204-3 (Low Voltage Power Supplies)
- Conducted Emissions		EN 55011 class B (internal filter) EN 55014-1 (internal filter)
- Radiated Emissions		EN 55032 class B (internal filter) EN 55011 class B (internal filter) EN 55014-1 (internal filter) EN 55032 class B (internal filter)
- Harmonic Current Emissions		EN 61000-3-2, class A
EMS Immunity		EN 61000-6-2 (Generic Industrial) EN 61204-3 (Low Voltage Power Supplies)
- Electrostatic Discharge		Air: EN 61000-4-2, ± 8 kV, perf. criteria B Contact: EN 61000-4-2, ± 4 kV, perf. criteria B EN 61000-4-3, 10 V/m, perf. criteria A EN 61000-4-4, ± 2 kV, perf. criteria B
- RF Electromagnetic Field		L to L: EN 61000-4-5, ± 1 kV, perf. criteria B L to PE: EN 61000-4-5, ± 2 kV, perf. criteria B
- EFT (Burst) / Surge		EN 61000-4-6, 10 Vrms, perf. criteria A EN 61000-4-8, 30 A/m, perf. criteria A
- Conducted RF Disturbances		Continuous: EN 61000-4-8, 30 A/m, perf. criteria A
- PF Magnetic Field		230 VAC / 50 Hz: EN 61000-4-11 30%, 25 periods, perf. criteria A 60%, 10 periods, perf. criteria B >95%, 1 period, perf. criteria A
- Voltage Dips & Interruptions		115 VAC / 60 Hz: EN 61000-4-11 30%, 25 periods, perf. criteria B 60%, 10 periods, perf. criteria B >95%, 0.5 periods, perf. criteria A >95%, 1 period, perf. criteria B
- Voltage Sag Immunity		SEMI F47, criteria A

General Specifications

Relative Humidity		95% max. (non condensing)
Temperature Ranges	- Operating Temperature	-25°C to +70°C
	- Case Temperature	+70°C max.
	- Storage Temperature	-40°C to +85°C
Power Derating	- High Temperature	2.5 %/K above 55°C
	- Low Input Voltage	2 %/V below 100 VAC
Cooling System		Natural convection (20 LFM)
Altitude During Operation		4'800 m max. (Lower altitude required for IEC61558-1 & 60335 of 3000 m)
Switching Frequency		80 - 100 kHz (PWM)
Insulation System		Reinforced Insulation
Isolation Test Voltage	- Input to Output, 60 s	3'000 VAC
Creepage	- Input to Output	6.4 mm min.
Clearance	- Input to Output	6.4 mm min.
Leakage Current	- Touch Current	250 μ A max.
Reliability	- Calculated MTBF	1'900'000 h (IEC 61709)
Environment	- Vibration	IEC 60068-2-6 2 g, 3 axis, sine sweep, 3x60 min, 10-150 Hz
	- Mechanical Shock	IEC 60068-2-27 30 g, 3 axis, half sine, 11 ms
Case Ingress Protection		IP 20 (acc. IEC 60529)
Housing Material		Plastic (UL 94 V-2 rated)

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

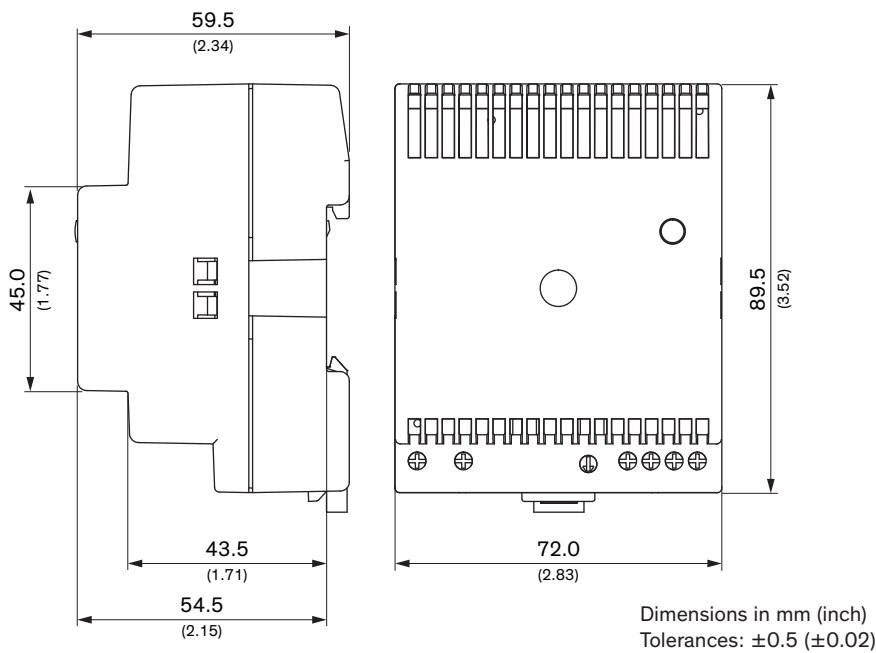
Connection Type	Screw Terminal
Mounting	- DIN Rail For DIN-rails as per EN 50022 (snap-on with self locking spring) (included)
Weight	220 g
Thermal Impedance	1.89 K/W
Status Indicator	Indicated by green LED
Environmental Compliance	- REACH Declaration www.tracopower.com/info/reach-declaration.pdf REACH SVHC list compliant REACH Annex XVII compliant
	- RoHS Declaration www.tracopower.com/info/rohs-declaration.pdf Exemptions: 6a, 6c, 7a, 7c-I, 7c-II (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/tbhc75

Outline Dimensions



Wiring		
Description	Wire size	Torque
AC Input all models: L, N only (2 pin terminal)	AWG 20 - 14 0.5 - 2.5 mm ² max.	0.5 Nm
DC Output double terminal	AWG 20 - 14 0.5 - 2.5 mm ² max.	0.5 Nm