

Short Circuit Protection		Continuous, automatic recovery
Overvoltage Protection		125 - 140% of Vout nom. (only Output 1)
Transient Response	- Response Deviation	3% max. (50% to 75% Load Step) (Output 1)
	- Response Time	600 $\mu$ s typ. (50% to 75% Load Step) (Output 1)

### Safety Specifications

Safety Standards	- Medical Equipment	EN 60601-1 IEC 60601-1 ANSI/AAMI ES 60601-1 2 x MOPP (Means Of Patient Protection) <a href="http://www.tracopower.com/overview/tpp40">www.tracopower.com/overview/tpp40</a>
	- Certification Documents	
Protection Class		Class I Prepared: Connection to PE Class II Prepared: Reinforced Insulation
Pollution Degree		PD 2: Office or Laboratory Environments
Over Voltage Category		OVC II

### EMC Specifications

EMC Emission	- Conducted Emissions	EN 60601-1-2 edition 4 (Medical Devices) EN 55011 class B (internal filter) EN 55032 class B (internal filter) FCC Part 18, class B
	- Radiated Emissions	EN 55011 class B (internal filter) EN 55032 class B (internal filter) FCC Part 18, class B
	- Harmonic Current Emissions	EN 61000-3-2, class A
	- Voltage Fluctuations & Flicker	EN 61000-3-3
EMC Immunity	- Electrostatic Discharge	EN 60601-1-2 edition 4 (Medical Devices) Air: EN 61000-4-2, $\pm$ 15 kV, perf. criteria A Contact: EN 61000-4-2, $\pm$ 8 kV, perf. criteria A
	- RF Electromagnetic Field	EN 61000-4-3, 20 V/m, perf. criteria A
	- EFT (Burst)	EN 61000-4-4, $\pm$ 2 kV, perf. criteria A
	- Surge	L to L: EN 61000-4-5, $\pm$ 1 kV, perf. criteria A L to PE: EN 61000-4-5, $\pm$ 2 kV, perf. criteria A
	- Conducted RF Disturbances	EN 61000-4-6, 20 Vrms, perf. criteria A
	- PF Magnetic Field	EN 61000-4-8, 30 A/m, perf. criteria A
	- Voltage Dips & Interruptions	230 VAC / 50 Hz: EN 61000-4-11 30%, perf. criteria A, 25 periods >95%, perf. criteria A, 0.5 periods >95%, perf. criteria A, 1 period >95%, perf. criteria B, 250 periods
		115 VAC / 60 Hz: EN 61000-4-11 30%, 25 periods, perf. criteria A >95%, 0.5 periods, perf. criteria A >95%, 1 period, perf. criteria A >95%, 250 periods, perf. criteria B

### General Specifications

Relative Humidity		95% max. (non condensing)
Temperature Ranges	- Operating Temperature	-40°C to +85°C
	- Storage Temperature	-40°C to +85°C
Power Derating	- High Temperature	see application note <a href="http://www.tracopower.com/overview/tpp40">www.tracopower.com/overview/tpp40</a>
Cooling system		Natural convection (no internal fan, 20 LFM)
Altitude during Operation		5000 m max.

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

Switching Frequency		50 - 140 kHz (PWM) (Output 1) 750 kHz typ. (PWM) (Output 2) 510 kHz typ. (PWM) (Output 3)
Insulation System		Reinforced Insulation
Working Voltage (rated)		258 VAC
Isolation Test Voltage	- Input to Output, 60 s - Input to Case or PE, 60 s - Output to Case or PE, 60 s	5'657 VDC 3'535 VDC 3'535 VDC
Isolation Resistance	- Input to Output, 500 VDC	100 MOhm min.
Leakage Current (at 264 VAC)	- Touch Current	75 µA max.
Creepage		8 mm min.
Clearance		8 mm min.
Reliability	- Calculated MTBF	3'000'000 h (acc. to MIL-HDBK-217F) 3'000'000 h for single output models 1'700'000 h for multi output models)
Environment	- Vibration  - Mechanical Shock	IEC 60068-2-6 3 axis, sine sweep, 10 - 55 Hz, 1 g, 1 oct/min IEC 60068-2-27 3 axis, 10 g half sine, 11 ms shock 20 g (3 directions each 3 times)
Housing Material		Aluminium
Connection Type		Screw Terminal
Weight	- single output - dual output - triple output	169 g 216 g 216 g
Environmental Compliance	- Reach - RoHS	<a href="http://www.tracopower.com/info/reach-declaration.pdf">www.tracopower.com/info/reach-declaration.pdf</a> <a href="http://www.tracopower.com/info/rohs-declaration.pdf">www.tracopower.com/info/rohs-declaration.pdf</a>

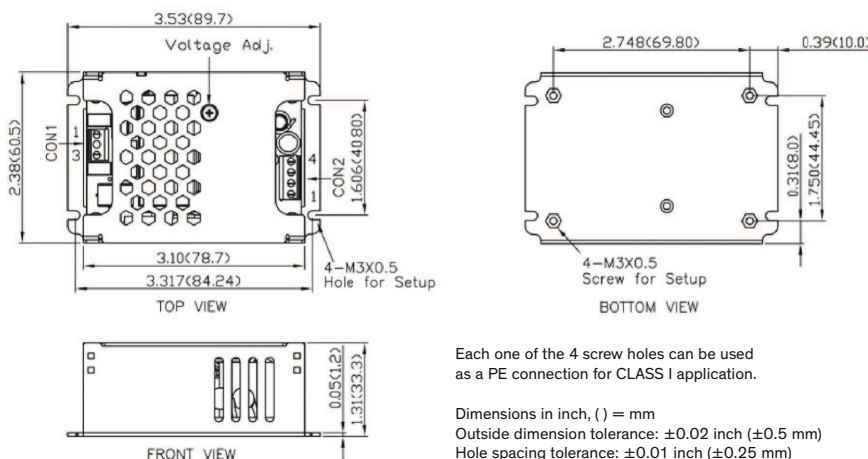
### Supporting Documents

Overview Link (for additional Documents)

[www.tracopower.com/overview/tpp40](http://www.tracopower.com/overview/tpp40)

### Outline Dimensions

#### Single Output Models



#### Screw Terminal

Input (CON1)		Output (CON2)	
Pin	Function	Pin*	Function
1	Line	1,2	-Vout
3	Neutral	3,4	+Vout

\*Terminal rated for 10 A max.  
(at higher current connection has to be split)

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