

T14-1PSP

The T14-1PSP is a power supply converter intended for use with the T14-1LW (or T14-1LH) Transport Hearing Loop Driver. It allows these hearing loop driver units to be used with 115 / 230 V AC mains supplies in static applications such as station concourses and platforms by providing a suitable 24 V DC supply to the loop driver.

The power supply is intended for mounting near to the T14-1 unit on standard DIN rail systems, e.g. inside equipment enclosures.

A 'ready relay' contact is provided if power supply monitoring is required.



Compliance

Meets all relevant standards and norms to permit CE marking. The T14-1PSP is suitable for installation more than 3m from the centreline of railway tracks, and will meet the requirements of EN50121-4 outside the '3m zone' when installed according to the instructions for use.

Specification parameters:

Parameter	Conditions	Nominal / Rated	Min	Max	Units
Environmental					
Ambient temperature	Nominal Input Voltage		-40	+71	C
Derating	Nominal Input Voltage, from +61 to +71 C			2.5	% / C
Storage temperature	Non-operational		-40	+85	C
Relative Humidity	Nominal Input V & Output I		20	95	% RH
MTBF	To Bellcore Issue 6 @40 C, GB	423,000			hours
Altitude	To IEC 60068-2-13			4 850	M
Protection Degree		IP 20			

Parameter	Conditions	Nominal / Rated	Min	Max	Units
Power ready relay contact					
Contact closure threshold	Rising output V		17.6	19.4	V DC
Contact rating				60 0.3	V DC A
Electrical Isolation	Contact to Functional Ground		500		V DC

Parameter	Conditions	Nominal / Rated	Min	Max	Units
Internal / Operational Details					
Switching Frequency		40			kHz

Specification parameters:

Parameter	Conditions	Nominal / Rated	Min	Max	Units
Power Input					
Input Voltage	Auto-selects range	115 230	90 180	132 264	V AC V AC
Input frequency		50-60	47	63	Hz
Input current	Input 115 V AC, rated output I	4.0			A
	Input 230 V AC, rated output I	1.55			A
Rated current	Input 90 V AC, rated output I	5.4			A
	Input 180 V AC, rated output I	2.2			A
Inrush current	Input 115 V AC			30	A
	Input 230 V AC			60	A
Power Dissipation	Input V: 230 V AC, Output I: Nominal			35	W
Isolation Voltage	Input to output		3 000 4 242		V AC V DC
Isolation Voltage	Input to Functional Ground		1 500 2 121		V AC V DC
Isolation Resistance	Input to output @ 500 V DC		100		MOhms
Leakage current	Input to output Input to Functional Ground			0.25 35	mA mA
Input fuse	Internal	T6.3A/250 VAC			
Input Connection	3-pole screw terminals (L, N, E)		24 0.2	10 4.0	AWG mm ²
Input connector max torque				9	pound-inches
Surge protection	Varistor	IEC 61000-4-5			

Parameter	Conditions	Nominal / Rated	Min	Max	Units
Power Output					
Output Voltage		24			V DC
Output Current	Nominal Input Voltage			10	A
Output Power	Rated Continuous loading			240	W
Output Accuracy	Nominal Input V & Output I		0	1	%
Output Regulation	across line and load variation	+/- 1.5			%
Overload protection	Nominal Input Voltage		120	145	%
Overvoltage protection	Nominal Input Voltage, 80% Rated Output Current		30	33	V DC
Hold-up time	Input V: 115 / 230 V AC		25 / 30		ms
Isolation Voltage	Output to Functional Ground		500 710		V AC V DC
			24 0.2	10 4.0	AWG mm ²
Output Connection	6-pole screw terminals (24V,+24V, 0v, 0v, RdyA, RdyB)		24 0.2	10 4.0	AWG mm ²
Output connector max torque				5.5	pound-inches
Turn-on time	Nominal Input V & Output I plus 7000 uF load			1 000 1 500	ms ms
Capacitive load	Nominal Input V & Output I			7 000	uF
Efficiency	Nominal Input V & Output I, 10% to 100% load		80	90	%

Parameter	Conditions	Nominal / Rated	Min	Max	Units
Physical					
Dimensions		L 124.5 W 85.5 D 123.6			mm mm mm
Product Weight		1380			g
Packaged Weight		1500			g
Cooling	Free air convection 25mm space recommended on all sides				
Installation position	Vertical possible derating in other directions				
Pollution degree		2			

Compliance:

UL/cUL: UL 508 listed, UL 60950-1 recognised, ISA 12.12.01 (class 1, Division 2, Groups A, B, C, D)

TUV: EN 60950-1, EN 61558-1, EN 61558-2-16 (meets EN 60204-1)

CE: EN 55022 class B, EN 55024, EN 50121-4 * (outside the 3m zone)

CCC: GB4943.1, GB9254, GB17625.1

* Compliance derived from other CE compliance standards & values declared/reported. See compliance documents for full details of all declared compliances.

