

## ADSL Transformer

## P3931

### Features

- \* Low Cost
- \* Low Distortion
- \* IEC 950, UL 1950 and EN 60950 Certified
- \* UL Recognized Component
- \* BAPT Certified
- \* Supplementary Insulation
- \* Industry Standard Footprint
- \* Directly replaces C1571, ATS-428

### Applications

- \* Conexant Access Runner
- \* ADSL over POTS

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### DESCRIPTION

P3931 is a low distortion transformer for Conexant Access Runner ADSL over POTS applications.

P3931 is certified to safety standards IEC 950, EN 60950 and UL 1950 for supplementary insulation, 250V working voltage. P3931 is a UL Recognized Component and is supported by an IEC CB Test Certificate and BAPT Certificate.

The safety system yields very low transformer parasitics, ensuring that P3931 exhibits excellent frequency response and balance; in combination with its good harmonic distortion performance, P3931 is ideally suited to low cost yet demanding ADSL applications.



to Electronic Techniques  
(Anglia) Limited

**SPECIFICATIONS****Electrical**

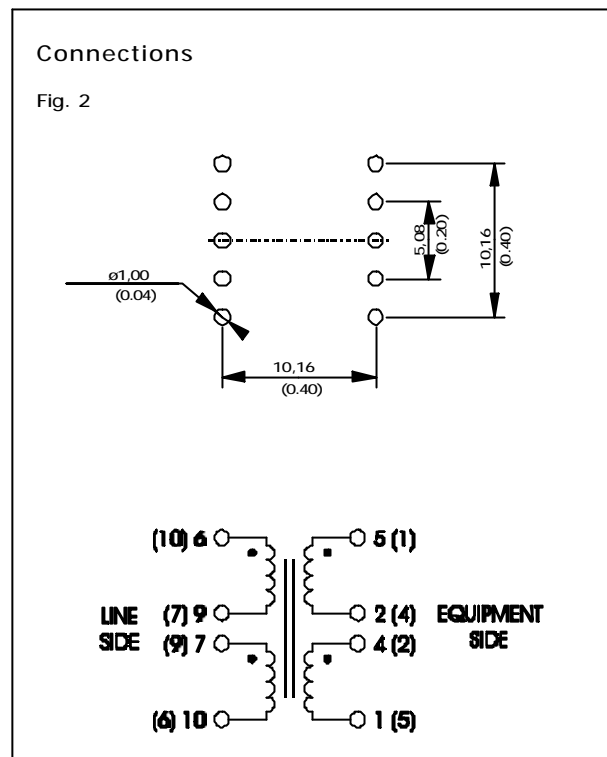
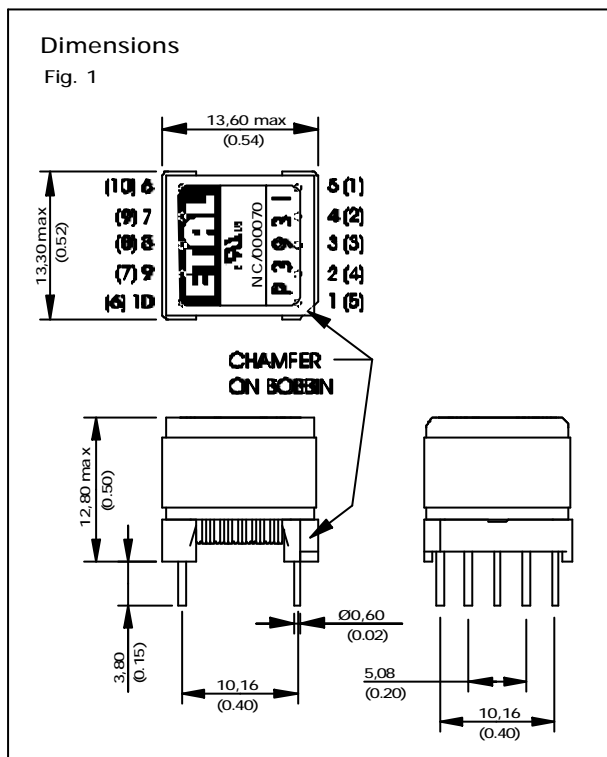
Typical values at T = 25°C, unless otherwise stated.

Parameter	Conditions	Min	Typ	Max	Units
Inductance	10kHz 100mV 6-10 (link 7-9)	760	800	840	µH
Leakage inductance	100kHz, 100mV, 6-9 (link 7-9; link 1, 2, 4, 5)	-	-	12	µH
Interwinding capacitance	100kHz 100mV 5-6 (link 1, 2, 4, 5; link 6, 7, 9, 10)	-	-	30	pF
DC resistance	1-4; 2-5 6-9; 7-10	- -	0.25 0.54	- -	Ω Ω
Turns ratio	6-10 : 5-1 (link 7-9; link 2-4)	3.30	3.33	3.37	-
Voltage isolation <sup>(1)</sup>	50Hz DC (1, 2, 4, 5 : 6, 7, 9, 10)	2.12 3.0	- -	- -	kVrms kV
Operating range: Functional Storage	Ambient temperature	-40 -40	- -	+85 +85	°C °C

**Notes**

1. Components are 100% tested at 3.25kV DC.

## CONSTRUCTION



Dimensions shown are in millimetres (inches).

Terminal references in parentheses denote alternative customer designation.

## SAFETY

Constructed in accordance with IEC 950:1991, supplementary insulation, 250V maximum working voltage, flammability class V-0.

Installation requirements should be observed whereby a minimum of 1.0mm creepage and 1.5mm clearance is maintained between the ferrite core and accessible conductive parts in the host equipment.

## ABSOLUTE MAXIMUM RATINGS

(Ratings of components independent of circuit).

Short term isolation voltage (1s)	2.12kVrms, 3.0kVDC
Storage temperature	-40°C to +85°C
Terminal temperature (10s)	260°C

**CERTIFICATION**

Certified by BSI to IEC 950:1991/A4:1996 (IECCB Test Certificate No. GB518W) sub-clauses 1.5, 1.5.1, 1.5.3, 2.2, 2.2.2, 2.2.3, 2.2.4, 2.9.2, 2.9.3, 2.9.4, 4.4, 4.4.3.2 (class V-0) and 5.3 for a maximum working voltage of 250Vrms, nominal mains supply voltage not exceeding 300Vrms and a maximum operating temperature of +85°C in Pollution Degree 2 environments, supplementary insulation, clearance greater than 2.0mm, creepage greater than 2.5mm, distance through solid insulation greater than 0.4mm.

Recognized under the Component Recognition Program of Underwriters Laboratories Inc. to US and Canadian requirements CAN/CSA C22.2 No. 950-95/UL1950, Third Edition, including revisions through to revision date March 1, 1998, based on Fourth Amendment of IEC 950, Second Edition, maximum working voltage 250Vrms, Pollution Degree 2, supplementary insulation.

UL File number E203175  
Certified by BAPT to EN 60950.  
BAPT Certificate NC/000070.

Additionally, Profec Technologies certifies all transformers as providing voltage isolation of 2.12kVrms, 3kV DC minimum. All shipments are supported by a Certificate of Conformity to current applicable safety standards.

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FM 25326

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