

**ISDN S<sub>0</sub> INTERFACE MODULE****P3020****Features**

- \* S<sub>0</sub> interface pair and common-mode choke in a single module
- \* Extremely small size - 11mm profile
- \* ITU-T I.430 compliant: excellent pulse shape
- \* Supplementary insulation
- \* Vacuum encapsulated
- \* IEC 950, EN 60950 and EN 41003 certified
- \* CSA NRTL/C Certificate of Compliance

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**DESCRIPTION**

P3020 is an integrated line interface module for the S<sub>0</sub> interface, containing the three wound components necessary to interface the ISDN chipset to the telephone line.

Designed for safety-critical applications, P3020 features high voltage isolation in a very small through-pin package with a maximum seated height of 11mm, ideally suited to high component density packaging.

P3020 has signal transformers with 2:1CT ratio suitable for Siemens PEB 2085, PEB 2086, PSB 2186 and AMD AM 79C30A.

The safety system yields low leakage inductance and coupling capacitance, giving excellent transmission performance, enabling the P3020 comfortably to meet the ITU-T I.430 basic rate requirements.

P3020 is certified to safety standards IEC 950, EN 60950 and EN 41003 for supplementary insulation, 250V working voltage. P3020 is supported by an IEC CB Test Certificate and a CSA certificate of Compliance.

## SPECIFICATION

### Electrical

At T = 25°C. The convention used in this datasheet is that 'primary' windings are on the line side and 'secondary' windings are on the IC side.

Parameter	Conditions	Min	Typ	Max	Units
<b>Transformers:</b>					
Turns ratio		-	2.00	-	-
Primary Inductance	2kHz 100mV	23	44	-	mH
	10kHz 100mV	23	33	-	mH
	20kHz 100mV	22	31	-	mH
Leakage Inductance	10kHz	-	4	12	µH
Shunt Loss	2kHz 100mV	-	6	-	kΩ
	10kHz 100mV	20	-	-	kΩ
DC resistance	Primary	-	2.6	-	Ω
	Secondary	-	3.8	-	Ω
Interwinding capacitance		-	25	-	pF
<b>Quad Choke:</b>					
Inductance of winding	10kHz	-	5	-	mH
	100kHz	-	3.8	-	mH
	1MHz	-	2.5	-	mH
Leakage inductance	10kHz	-	500	-	nH
DC resistance	Per winding	-	1	-	Ω
Interwinding Capacitance		-	20	-	pF
<b>Module:</b>					
Voltage isolation	50Hz	3.88	-	-	kVrms
	DC	5.5	-	-	kV
Operating range:	Functional	0	-	+70	°C
	Storage	-40	-	+125	°C

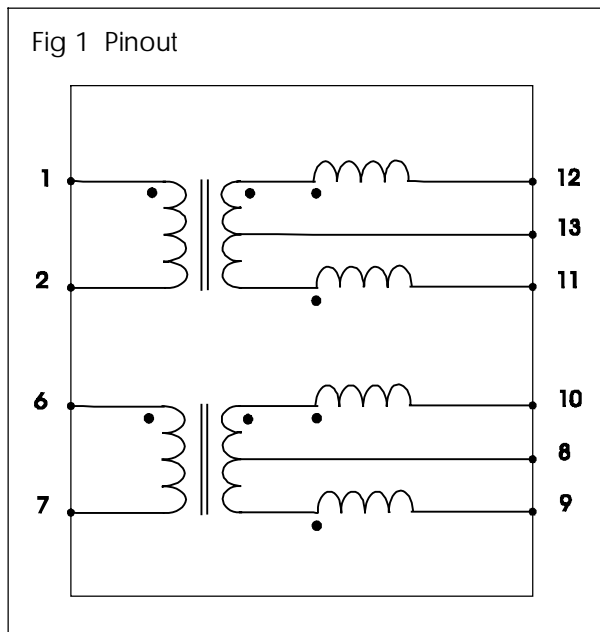
### Notes:

Pulse Shape: Meets the requirements of ITU-T I.430 with 50Ω and 400Ω loads.

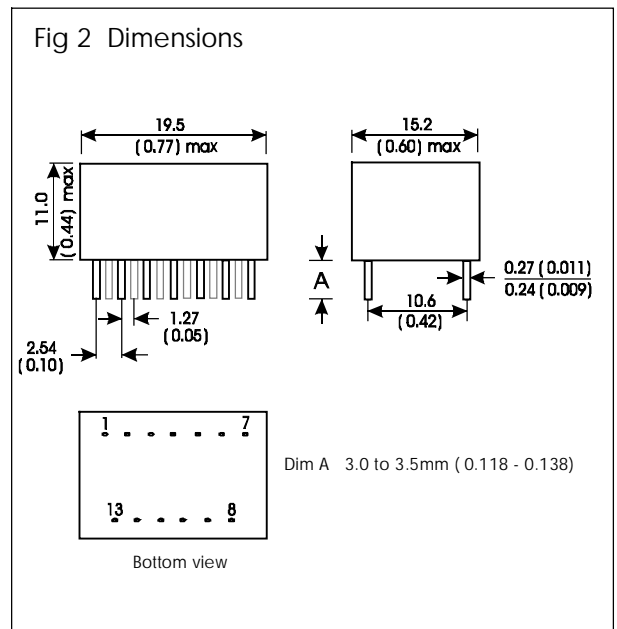
Input Impedance: Meets the requirements of I.430 over the range 2kHz to 1MHz

DC Imbalance: Meets the requirements of I.430 with 1mA of direct current imbalance in the centre-tapped line windings.

## SPECIFICATION



## DIMENSIONS



Dimensions are in millimetres (inches) - not to scale.  
Geometric centres of outline and pin grid coincide within a tolerance circle of 0.6mmØ.

Please contact Profec Technologies for variants having different turns ratio, with/without choke, overvoltage protection, etc.

## SAFETY

Construction meets or exceeds requirements of IEC 950:1991, EN 60950:1992 (BS7002:1992), supplementary insulation, 250V maximum working voltage, flammability class V-0.

## ABSOLUTE MAXIMUM RATINGS

(Ratings of components independent of circuit).

Short term isolation voltage (2s)	4.6kVrms 6.5kVDC
DC current, primary terminals	100mA
Storage temperature	-40°C to +125°C
Lead temperature, 10s	260°C

**CERTIFICATION**

Certified by BSI to IEC 950:1991/A4:1996 (IEC CB Test Certificate No. GB541W) sub-clauses 2.2.2, 2.9.2, 2.9.3, 2.9.4, 2.9.6, 2.9.7, 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 +70°C in Pollution Degree 3 environment, supplementary insulation.

CAN/CSA C22.2 No.950-95/UL1950, certified by CSA, 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.

CSA Certificate of Compliance 1107696 (Master Contract 188107).

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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