Low- Profile, V.34 Compatible Telephone Line Interfaces

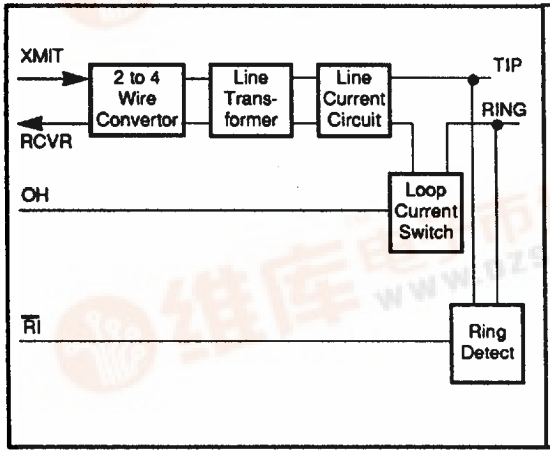
Description

The XE0017 and XE0018 are low-profile, high-performance FCC Part 68 compliant telephone interface modules. Both models comply with the technical requirements of V.34 for data transmission at 28,800 bps. The XE0017 provides an internal 2-4 wire convertor to separate transmit and receive signals. The XE0017 and XE0018 operate from a single +5 volt supply and fit in a 0.30 inch high package. The XE0017 was specifically designed to be compatible with Rockwell Socket Modems.

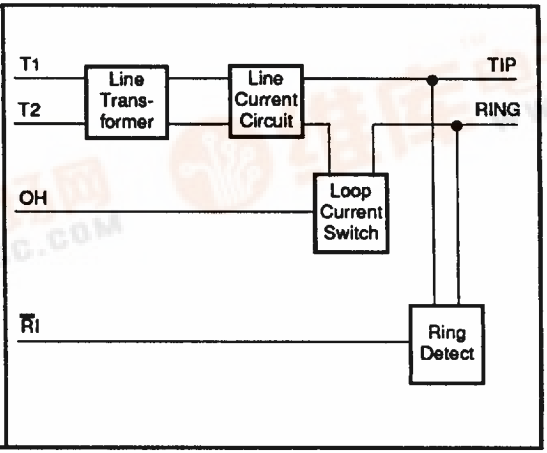
Features

* Small Size:
  0.95 inch by 0.925 inch by 0.30 inches;
* FCC Part 68 Compliant;
* V.34 compatibility;
* Compatible with Rockwell's Socket Modems;
* XE0017 includes a 2 to 4 Wire Converter;
* Ring Detection;
* Single +5V Operation;
* Hookswitch Control
* Extended Temperature Range available
* UL Recognized

XE0017 BLOCK DIAGRAM



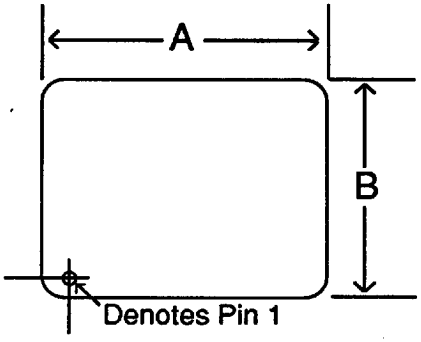
XE0018 BLOCK DIAGRAM

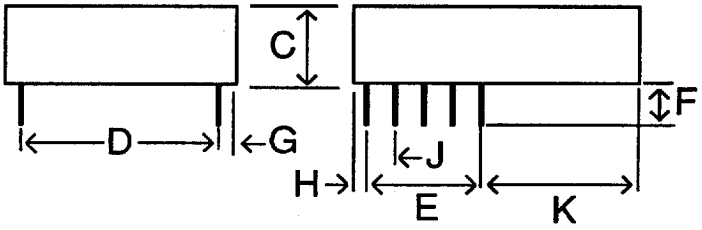


XE0017 & XE0018 Mechanical Specifications

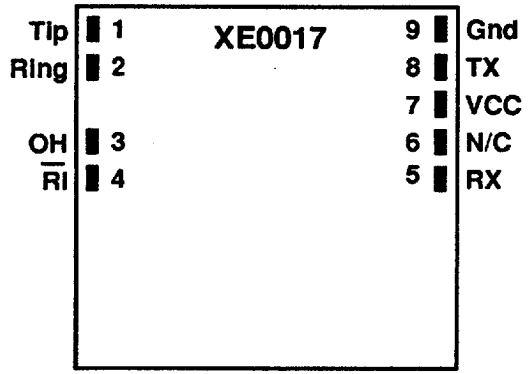
	Inches		Millimeters	
Dim	Min	Max	Min	Max
A	0.930	0.970	23.62	24.64
B	0.905	0.945	22.99	24.00
C	0.290	0.310	7.37	7.87
D	0.790	0.810	20.07	20.57
E	0.390	0.410	9.91	10.41
F	0.150	0.200	3.81	5.08
G	0.065	0.085	1.65	2.16
H	0.065	0.085	1.65	2.16
J	0.090	0.110	2.29	2.79
K	0.475	0.495	12.06	12.57

Pins are .010 by .020 inches. All Pins are tin-plated for solderability.

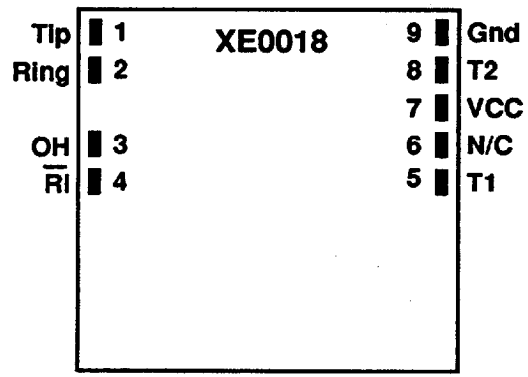




XE0017 Pin Configuration



XE0018 Pin Configuration



Pin Descriptions

PIN	NAME	Model	DESCRIPTION
1	Ring	Both	Ring connection to the phone line (RJ11 Pin 4). The Ring pin has 1500 volts isolation from the rest of the circuitry. This isolation must be preserved throughout the system. The XE0017 and XE0018 are not polarity sensitive.
2	Tip	Both	Tip Connection to the phone line (RJ11 Pin 3). The Tip pin has 1500 volts isolation from the rest of the circuitry. This isolation must be preserved throughout the system.
3	OH	Both	Hookswitch relay control. A high on OH closes the internal relay and connects the equipment to the telephone line.
4	RI	Both	Ring Indicate, output, active low, TTL, indicates a ring is present on the telephone line. RI provides a square wave representation of the ring present at Tip and Ring.
5	RX	XE0017	RX provides the analog output signal from the 2-4 wire convertor of the XE0017. RX uses a 2.5 volt reference signal and therefore must be capacitively coupled to host equipment which uses a ground reference.
5	T1	XE0018	T1 connects to the secondary side of the telephone line transformer inside the XE0018.
6	N/C	Both	No Connection
7	VCC	Both	+5 Volt power source
8	TX	XE0017	TX provides the analog input signal to the 2-4 wire convertor of the XE0017. TX uses a 2.5 volt reference signal and therefore must be capacitively coupled to host equipment which uses a ground reference.
8	T2	XE0018	T2 connects directly to the secondary side of the telephone line transformer within the XE0018.
9	GND	Both	Ground

XE0017 & XE0018 Electrical Specifications

(Vcc=+5v ±10%, Ta=0 to 70 deg C)

Parameter	Conditions	Min	Typ	Max	Units
Power Supply Current	XE0017 Off-hook		10	15	mA
	XE0017 On-hook		0.6	1.5	mA
Power Supply Current	XE0018 Off-hook		6	10	mA
	XE0018 On-hook		0.5	1.0	mA
XE0017 Tx Insertion loss	600 Ohm Impedance, 1800 Hz	6.0	6.5	7.0	dB
XE0017 Rx Insertion loss	600 Ohm Impedance, 1800 Hz	-0.50	0	0.50	dB
XE0018 Tx Insertion loss	600 Ohm Impedance, 1800 Hz	1.7	2.7	3.7	dB
XE0018 Rx Insertion loss	600 Ohm Impedance, 1800 Hz	1.7	2.7	3.7	dB
Matching Impedance	Input to T1 and T2 XE0018 only	330	340	350	ohms
Line Impedance	At 1800 Hz	540	600	660	ohms
XE0017 Transhybrid Loss	600 Ohm Impedance, 1800 Hz	18	23		dB
Total Harmonic Distortion	600 Ohm Impedance, 1800 Hz	-72	-76		dB
Ring Detect Sensitivity	Min. AC voltage between Tip & Ring Type B ringer	38		150	Vrms
Ring Indicate Output	Ring Voltage on Tip & Ring		0.2	0.5	Volts
Hook-Switch Control Voltage	ON: (off-hook)	2.0	3.0		Volts
	OFF: (on-hook)		0.2	0.5	Volts
Loop Current Switch Control Current			0.3	0.5	mA
Loop Current	Off-Hook current draw from Telephone Line	20		100	mA