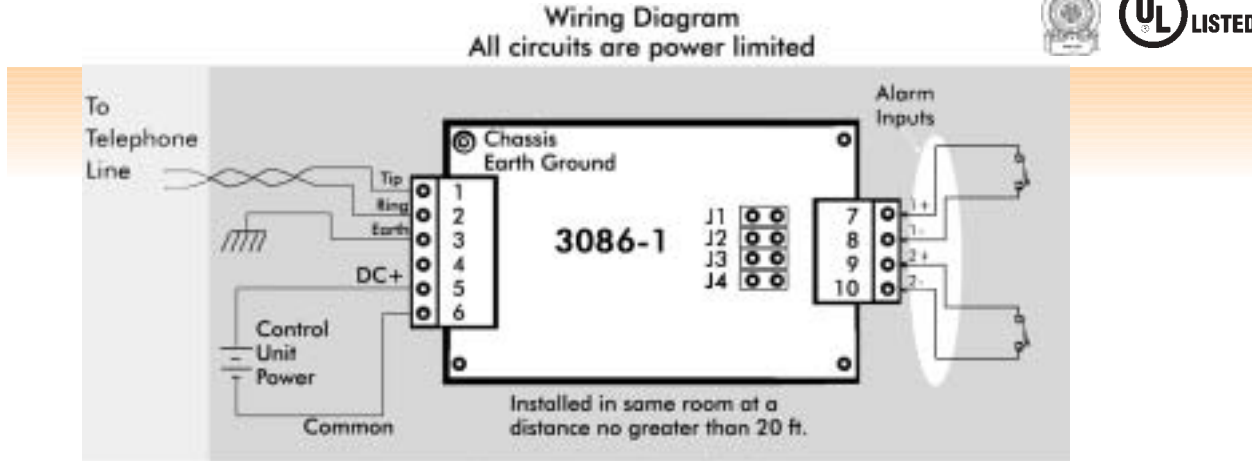


**3086-1 TTM-REL
 Tones Transmitter Module
 Dry Contact Inputs**



Notes: 1) Use 18 AWG UL-listed wire.

General

3086-1 TTM (Tones Transmitter Module) accepts dry contact inputs and transmits tones. This manual describes the installation of the TTM. The 3086-1 TTM is intended for connection to a dry contact circuit of a control unit at the protected premises having compatible ratings.

Installation

Connect the positive side of a 10-30 VDC Class 2 or Class 3 power limited source of supply to pin 5, and the negative side to pin 6. Note that pin 6 is not an earth ground.

Connect pins 1 and 2 to a 600 ohm telephone line. These lines are electrically isolated from the main circuit of the TTM. These pins are interchangeable. Pin 3 is the earth ground. Connect either this pin or the conductive mounting hole to an earth ground.

Pins 7, 8, 9, and 10 are the contact inputs. For Alarm 1, J1 is to be installed for a normally open input and J2 for normally closed. For Alarm 2, install J3 for normally open and J4 for normally closed. Make unused inputs normally open.

TTM-1 boards are shipped with both inputs set for normally open contacts; J1 and J3 are installed.

3086-1 Pin description			
Pin #	Name	Type	Description
1	Tip	Output	Connects to one side of the telephone line
2	Ring	Output	Connects to the other side of the telephone line
3	Earth	Input	Earth ground
4			No connection
5	DC+	Input	Positive 10 - 30 volts DC power input
6	Common	Input	Negative DC power input
7	Alarm1 +	Input	First zone RP input (dry contact input)
8	Alarm1 -	Input	First zone RP input (common)
9	Alarm2 +	Input	Second zone RP input (dry contact input)
10	Alarm2 -	Input	Second zone RP input (common)

Jumper instructions		
J1	J2	Alarm1 Input
✓		Normally open
	✓	Normally closed
J3	J4	Alarm2 Input
✓		Normally open
	✓	Normally closed

Keltron develops and manufactures secure, reliable, UL-listed fire and security alarm response management systems and components for the municipal and proprietary life safety markets. Products include radio fire alarm, coded fire alarm and high-line security systems, digital alarm receivers, universally compatible fire alarm control panel networking solutions and a full line of alarm annunciators. For more information, visit www.keltroncorp.com or contact us at 781-894-8710, or info@keltroncorp.com.

INTERFACE REQUIREMENTS

Contacts monitored by the 3086-1 are connected between the input of a 5 volt powered CMOS gate and circuit common. A 22K pullup to +5 is also connected to the input. Therefore, the contacts must have an open circuit shunt resistance greater than 100,000 ohms and a short circuit resistance less than 2000 ohms.

SUPERVISION

The TTM-1 is supervised in that a loss of power will cause a loss of communicator signal just as if the line were cut. A possible compromise attempt will result in a Trouble condition, which should be treated as an Alarm condition. When used for police connect basic line security, the cover of the conduit box must be tamper switch protected.

Please note that, if Normally Closed contacts are used, loss of connection to a contact causes the same result as having the contact opened, i.e. the TTM-1 transmits an Alarm tone.

3086-1 SPECIFICATIONS

Connection	Terminal lugs	Capacity	Two contacts
Min supply Voltage	10	Communication medium	Two wire Telco - 2000 series or Twisted Pair direct line, 3000 series phone line compatible unit also available
Max Supply Voltage	30	Communication method	Freq. Mod.
Supply Current	7.5mA @ 12v DC	Frequency range	600Hz-1700Hz
Dry contact (input)		Environmental	
Number of inputs	2	Operating temperature	0 to 49 degrees C
Number of wires	4	Storage temperature	-25 to 70 degrees C
Minumum Current	0.25 mA	Relative Humidity	Non-condensing 20 to 85%
Tone (output)		Dimensions (L x W x H)	
Level	-6dB (0 dBm = 1mW)	3086-1 (PC board)	4.0" x 2.5" x 1.0"
Impedance	600 ohms	TBX1 (enclosure)	5.0" x 4.7" x 1.7"
Other features	Isolation and lightning protection	Weight	
States	Open (pulled to +5) Closed (tied to common)	3086-1 (PC board)	0.13 lb
Input supervision	Refer to text	TBX1 (enclosure)	0.52 lb

NOTES:

1. TTM-1 unit is comprised of a TBX1 Enclosure and a 95M3086-1 Printed Circuit Board
2. TTM-1 is compatible with TRM Receiver Module.
3. Conduit connection is required. The U.L.listed conduit boxes are:

Hoffman
 A-SE6x6x4 (screw cover)
 A-SE6x6x3 (hinged cover)

Wiegmann
 SC664 (screw cover)
 A663 (hinged cover)

