Telsar®

3-Function Digital Key Controls

U.S. and World Patents Pending
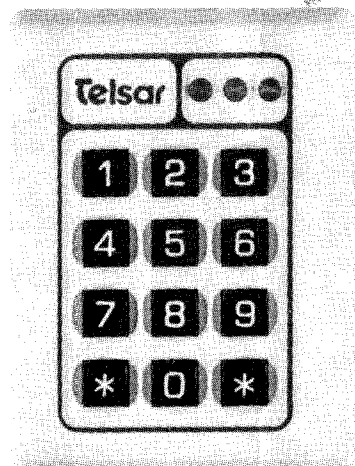
Models T-3
T-3B
T-3S

Installation Instructions

Telsar®

digital key pad

Hook-Up Diagram To Popular Alarm Panels

Telsar — All Models

(C) WHITE/BLACK
(NC) WHITE/VIOLET
(NO) WHITE/YELLOW

INTERIOR OR
ZONE PROTECTIVE
CIRCUITS

	PANELS	RED	BLACK	R/W	R/W	ORANGE	BROWN	BLUE	GREEN	WHITE	VIOLET	YELLOW	MODE
ADEMCO	221/229	4	1	3	11	12	11	9	10	11	X	10	MOMENTARY
ADEMCO	330/331/332	18	17	7	6	8	9	11	12	9	X	10	MOMENTARY
ADEMCO	330R/332R/340R	9	10	21	20	17	16	13	14	16	X	15	MOMENTARY
ADEMCO	1023/1024/1026	14	20	7	8	20	(Tie)*	20	POST	10	(Tie)*	11	LATCHING
ARITECH	704	+	−	9	10					11	12	X	LATCHING
ARITECH	724	+	−	6	11	10	11			11	X	12	MOMENTARY
DII	DSS-51/52	16	15	1	3	9	10	9	8	11	X	12	MOMENTARY
F.B.I.	642 U.L. F.M.	23	24	9	10	27	25	26	25	25	X	28	MOMENTARY
F.B.I.	675 U.L. F.M.	12	6			11	10	8	7	10	X	9	MOMENTARY
F.B.I.	600/650	13	14	15	4	24	15	21	15	15	X	16	MOMENTARY
F.B.I.	1230	20	15	19	12	21	14	13	12	12	X	11	MOMENTARY
F.B.I.	1270	12	10	19	12	21	14	13	12	12	X	11	MOMENTARY
F.B.I.	1290	16	15	7	8	21	7	17	7	6	X	7	MOMENTARY
F.B.I.	XL1215	9	20	10	9	23	9	22	9	9	X	8	MOMENTARY
FRANKLIN	12-B	+	(−)	0	EM	(−)	RL	(−)	GL	(−)	X	GL	MOMENTARY
MINI CONTROLLER	MC-3	5	6	X	X	X	X	X	X	3	X	4	LATCHING
MINI CONTROLLER	MC-4	10	11	9	10	7	5	6	5	4	X	5	MOMENTARY
MINI CONTROLLER	MC-5	10	11	9	10	7	5	6	5	4	X	5	MOMENTARY
MINI CONTROLLER	MC-6	13	14	12	11	8	6	7	6	5	X	6	MOMENTARY
MINI CONTROLLER	MC-7	21	22	6	7	12	9	11	9	9	X	10	MOMENTARY
	MPI-23	2	1			1	3	10		3	X		LATCHING
MOOSE	MPI-25	5	4	7	6	9	7	E	7or5	5	X	8	MOMENTARY
MOOSE	MPI-26	15	16	14	15	11	15	12	15	15	X	13	MOMENTARY
NAPCO	CCI-4	14	10	9	16	(Tie)*	14	6	14	10	8	(Tie)*	LATCHING
NAPCO	CCI-5	22	24	7	15	11	15	10	15	12	X	15	MOMENTARY
NAPCO	CCI-6	18	20	19	20	15	24	13	24	11	X	24	MOMENTARY
NAPCO	CCI-7	26	27	16	17	3	1	2	1	1	X	4	MOMENTARY
PRO	31415	3	4			10	8	11	8	8	X	9	MOMENTARY
PRO	422/430/432/435	6	5			18	20	17	20	20	X	19	MOMENTARY

Telsar®

TELSAR digital key pad uses time-proven solid-state electronics to provide a reliable keyless combination for security applications, from arming/disarming alarm systems to operating door-strikes, and control equipment.

TELSAR is particularly well suited to residential and commercial installations where key control is a problem—TELSAR's attractive design gives the "touch of class" to your security system.

How TELSAR Works.

To operate TELSAR, you must enter a four-digit code in correct sequence. If you push a wrong number or enter the code out of sequence, TELSAR will automatically nullify the entry, and you must re-enter the correct code. This wrong number lockout feature virtually eliminates the possibility of someone gaining access by randomly pushing numbers. TELSAR will also automatically "lock-out" if code entry is not completed within ten seconds. Should an intruder try to remove or defeat TELSAR, a built-in tamper switch will automatically trip the alarm system.

Another security feature is TELSAR's more than 5000 easy-to-change combinations — change codes in seconds in the field; without disconnecting any input wiring. There are no parts to buy, no special tools required.

TELSAR's arm/disarm output is programmable for momentary or latch. Standard model outputs are arm/disarm and emergency panic.

TELSAR's new 3-function models provide arm/disarm, interior shunt and emergency/panic outputs. These functions allow arming of perimeter circuits (doors, windows, etc.) while at the same time arm or disarm of interior protective circuits (mats, passive IR, etc.); thus providing free movement within the premises while still maintaining perimeter security.

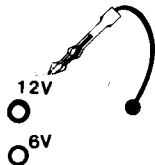**Perimeter Arm/disarm**

Interior Shunt

Emergency Panic

Inside Telsar's P.C. Board

INPUT VOLTAGE

TELSAR comes factory set for 12 VDC operation. For 6 volt operation, insert connector pin from 12V to 6V hole position on P.C. Board.

12V

6V

ARM-DISARM FUNCTION
MOMENTARY OR LATCH MODE OUTPUT

TELSAR comes factory set for momentary operation. For Latch mode operation, insert connector pin from Mom. To Latch hole position on P.C. Board.

Note: When in Latch mode press code to "Latch On" - press code to "Latch Off"

Latch

Mom

Momentary
Time Adjust

Tamper Switch
(N.O.)

Input
Lead wires

Coded White
Jumper pins

Connector Holes

Model T-3   P.C. Board

✶✶EMERGENCY/PANIC KEYS (N.O.)

TELSAR comes factory set for Emergency/Panic operation by pressing both Asterisk (✶✶) keys simultaneously. To delete or remove this feature cut J-1 Jumper. Cutting J-1 thus removes Emergency/Panic while maintaining Tamper Switch feature.

Emergency/Panic is N.O. and requires simultaneous operation of ✶ & ✶keys

Installation

Model T-3

TELSAR is easy to install. All wiring connections are color coded and you can use the enclosure as a handy mounting template. Here's all you do:

Surface Mount Units

1. Insert screwdriver blade into slot at bottom of housing to unlatch housing from backplate.

2. Using backplate as template, mark locations of mounting screws and input wiring hole on mounting surface. (NOTE: For concrete or other hard-to-drill mounting surfaces, **TELSAR** can be mounted by adhesive, such as fast-cure epoxy, contact cement, etc. rather than screws. It will be necessary however, to notch the **TELSAR** housing to allow for wire passage.)

3. Drill 3/8 in. diameter hole in mounting surface for input wiring feed through. Drill holes for four mounting screws. Size of these holes will depend on type of mounting hardware used (wood or metal screws, toggle bolts, etc.), and this will depend on the type of mounting surface.

4. Snake hook-up wires from alarm system Control Panel to **TELSAR** mounting location and pull through wire passage hole. Continue wires through hole in **TELSAR** backplate, sliding backplate up wires to mounting surface and aligning with screw holes.

5. Mount backplate by inserting screws into upper and lower mounting holes and tightening securely.
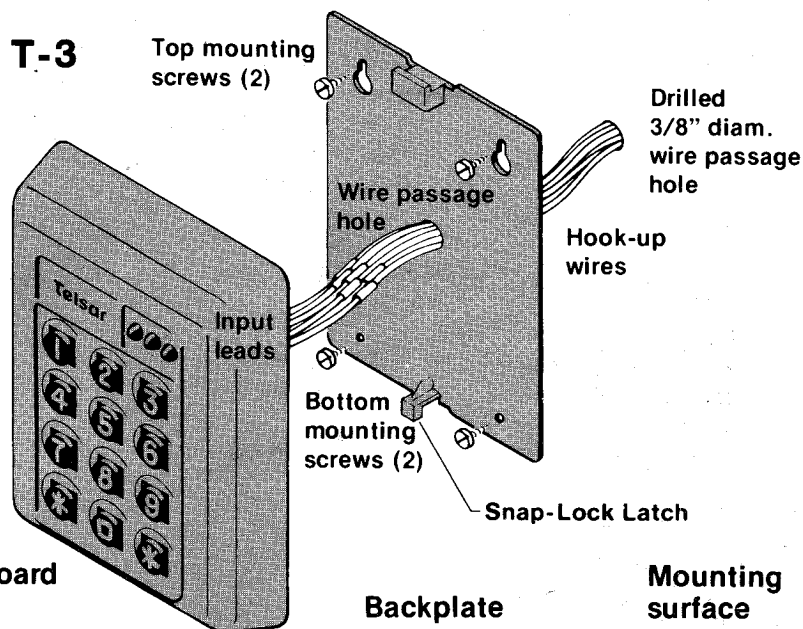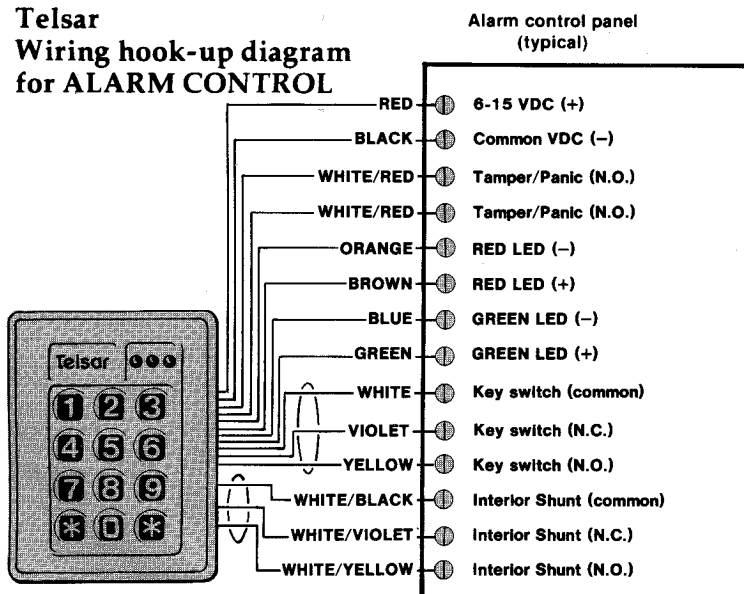
Flush Mount Units

1. Flush Mount units are mounted with enclosed Template and fasteners. Template is used to mark cut-out areas and hole locations for mounting.

2. Flush Unit **do not** utilize Tamper switch.

IMPORTANT: On surface units, check tamper/emergency output wiring to ensure that tamper is normally open (N.O.) after installation.

Typical Hookup

Telsar
Wiring hook-up diagram
for ALARM CONTROL

Telsar wire	Alarm control panel (typical)
RED	6-15 VDC (+)
BLACK	Common VDC (−)
WHITE/RED	Tamper/Panic (N.O.)
WHITE/RED	Tamper/Panic (N.O.)
ORANGE	RED LED (−)
BROWN	RED LED (+)
BLUE	GREEN LED (−)
GREEN	GREEN LED (+)
WHITE	Key switch (common)
VIOLET	Key switch (N.C.)
YELLOW	Key switch (N.O.)
WHITE/BLACK	Interior Shunt (common)
WHITE/VIOLET	Interior Shunt (N.C.)
WHITE/YELLOW	Interior Shunt (N.O.)

6. **Wiring Hook-up**

   Connect TELSAR input lead wires as follows:
   - Red to positive 6 to 15 VDC power source (panel power OK)
   - Black to negative or DC common
   - White with red stripe (two wires) to panic/tamper circuit (normally open)
   - Green to green LED (positive)
   - Blue to green LED (negative)
   - Orange to red LED (negative)
   - Brown to red LED (positive)

   Arm/Disarm relay output
   - White to relay common
   - Yellow to N.O. relay contacts
   - Violet to N.C. relay contacts

   Interior zone relay output
   - White/Black to relay common
   - White/Yellow to N.O. relay contacts
   - White/Violet to N.C. relay contacts

   NOTE: You do not have to connect all input leads. For example, you may only need to use one of the relay contacts, or you may not wish to use all LEDS.

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7. Set **TELSAR** codes as instructed. (Remember, code can be changed any time after mounting simply by dismounting unit and rearranging plug-in order of jumper pins. There's no need to disconnect input wiring.)

   Carefully push input wires back into mounting surface.

On surface unit (T-3) carefully snap on cover unit. On Flush Units mount faceplate to surface with enclosed fasteners. Test for proper operations of all functions including tamper switch if used.

LED Wiring

TELSAR comes with three light emitting diodes (one red, one green, one yellow). Use these LEDs to indicate alarm system status. Red LED can be used to indicate alarm system armed or disarmed. Green LED may be used to show condition of protective circuit. (doors, windows, etc. open or closed). Both Red and Green LED are independently wired (one for + voltage and one wire for − voltage). If your alarm panel permits, you may reduce number of hook-up wires by using a common (−) or (+) for both LEDs.

Yellow LED is for interior shunt indication. Whenever interior shunt relay is de-energized yellow LED will be off. When relay is energized (by operation of 2-digit code) yellow LED indication will be on.

Red and green LEDs have current-limiting resistors and operate 6 to 15 VDC (observe polarity).

TELSAR's new Fresnel Lens LEDs provide a lifetime of bright and non-glare indication.

How to Set Code

Your TELSAR is field programmable. That means you can change codes quickly and easily, without having to disconnect the unit and take it into the shop. All you need is a screwdriver to remove TELSAR housing from its mounting.

The TELSAR code is determined by the order in which the coded white jumper pins are plugged into the first four connector holes (labeled "A" through "D") in the unit's PC board (see photo). There are 9 coded white jumper pins, one for keys 1-9 push button numbers on the TELSAR keyboard. Keyboard number is printed on TELSAR's PC board directly adjacent to coded white jumper pin wire connection on PC board.

To set the code:

1. Select a four-digit code combination. This can be any sequence of four DIFFERENT digits (digits 1 through 9 only). You CANNOT REPEAT DIGITS because there is only one white jumper pin for each of the 9 programmable push buttons on the keyboard. (Example: The code 4623 can be used, but not the code 4642 because the number 4 is repeated.)

   Keys * and * are used for Emergency/Panic. Key "0" is the first digit of interior shunt code.

2. Unplug the nine coded white jumper pins from the PC board by grasping each pin individually and pulling end directly out of the connector hole (see drawing).

3. Take coded white jumper pin corresponding to the first digit in your code and plug it into the PC board connector hole labeled "A".

4. Repeat step 3 for remaining three digits of the code-inserting pin for second digit of code into connector hole "B", third-digit pin into hole "C", and fourth digit pin into hole "D". (Example: For the code 4623, #4 white jumper pin would go to hole "A", #6 white jumper pin to hole "B", #2 white jumper pin to hole "C", and #3 white jumper pin to hole "D".)

5. Plug remaining five white jumper pins into remaining five (unlabeled) connector holes. These five pins can go in any order. All white pins must be plugged into connector holes, otherwise your TELSAR will not operate.

6. **Interior shunt code (two digits only) is the key "0" and the last digit of primary code. Example: If your primary code is 4326 for arming and disarming your system, the shunt code is 06.**

7. TELSAR comes factory set for Emergency/Panic operation by pressing both Asterisk (**) keys simultaneously. To delete or remove this feature cut J-1 Jumper. Cutting J-1 thus removes Emergency/Panic while maintaining Tamper Switch feature.

8. **NOTE: Fast arming or disarm of both Perimeter and Interior functions as accomplished by pressing "0" plus complete 4-digit perimeter code.**

To change the code:

   Simply remove TELSAR from its mounting backplate and repeat the above procedure, using a different sequence of white jumper pins in the four connector holes ("A" through "D").
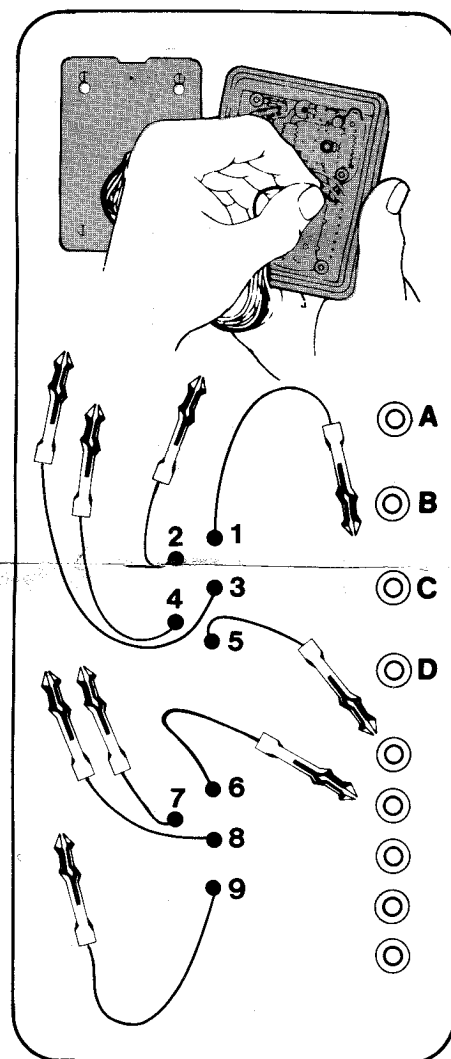
THREE FUNCTION OUTPUTS

TELSAR Models T-3, T-3B and T-3S have three separate outputs.

1. Arm/Disarm Relay Output - Arm/Disarm relay output operated by 4 digit code is user programmable. Relay out is SPDT and operates either momentary or latch. This relay output is used to operate primary alarm system by arming or disarming or resetting the alarm control unit.

2. Interior Shunt Relay - Interior shunt relay operated by 2-digit code, keys "0" and last digit of Arm/Disarm code. Output relay is SPDT latch only (latch on/latch off). This interior relay can be used to shunt in and out interior protection devices such as pressure mats or motion detectors. Operation of interior shunt relay will be indicated by TELSAR yellow LED. When LED is on, relay is activated. When LED is off, relay is inactive.

3. Emergency-Panic-Keys *&* are factory set emergency buttons. Emergency-panic is normally open (N.O.) and requires simultaneous pressing of keys *&*. Keys *&* are not available for code programming. Emergency-panic output may be connected to 24-hour panic or silent alarm input of alarm system control. Both Emergency/Panic keys and Tamper Switch are in parallel on white/red wires.