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KD-90
Alphanumeric Keypad

- ■ **Telephone Style Keypad with Five Special Function Keys**
- ■ **Two-Line 24-Character Alphanumeric Display**
- ■ **Tamper Switch**
- ■ **Keypad Night-Light**
- ■ **Audible and Tactile Feedback from Key Operation**
- ■ **Status LED Indicators**
- ■ **Unique Synchronized Audio Output**

During the development of the 21st SENTRY, Linear established several goals for the system, as well as for each individual device. For the KD-90 alphanumeric keypad these goals include ease of operation, ease of programming as well as attractive appearance.

The Linear KD-90 alphanumeric keypad is the focal point for system operation. Since one hardwired keypad is required in each 21st SENTRY system, either the KD-90 or the K-90 keypads can be used to meet this requirement. Programming is done from the KD-90 in the "installer mode" of operation. All system control is initiated by the KD-90.

The Linear KD-90 features a telephone style keypad, five special function keys, system status LED indicators and a two-line, 24-character alphanumeric display. Three of the special function keys provided initiate the fire, emergency, and panic/police alarm sequences. The remaining two special function keys allow the user to bypass individual transmitters, and interrogate the system for the status of individual sensor locations. The system status LED indicators provide general indications for alarm, open, bypass, low battery, tamper,

supervisory, power on and trouble. The two 24-character displays allow for complete customization of individual sensor locations. A typical display after an alarm will be as follows: "LEVEL 4 Sensor 16," "Johnny's Bedroom Window" will be indicated on line two. In addition the red "alarm" LED will illuminate.

A unique feature of the 21st SENTRY system is the built-in synchronized audio loop. Siren, high/low, and warble tones can be generated and transmitted to each KD-90 keypad. These tones are selected for transmission during the programming sequence. Upon receipt of an alarm condition, the appropriate tone will automatically be sent to each hardwire keypad in perfect unison.

Installation of the Linear KD-90 is a snap. A plastic mounting plate is supplied with the keypad. The plate can be mounted to either a single-gang, two-gang, or three-gang electrical box. Once the mounting plate has been secured, the KD-90 keypad can be snapped into position. Four #22 gauge wires are required to interconnect the keypad. All wiring is terminated via a keyed, plug-in connector. A total of four KD-90 keypads can be incorporated into the system. The maximum wire length from the KD-90 keypad to the CP-90 control is 500 feet.

Cosmetics have not been compromised on the Linear KD-90 keypad. A clean, neat and balanced look gives the KD-90 a pleasing appearance. A cool gray color scheme has been selected to match today's most popular interior colors.

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General Specifications

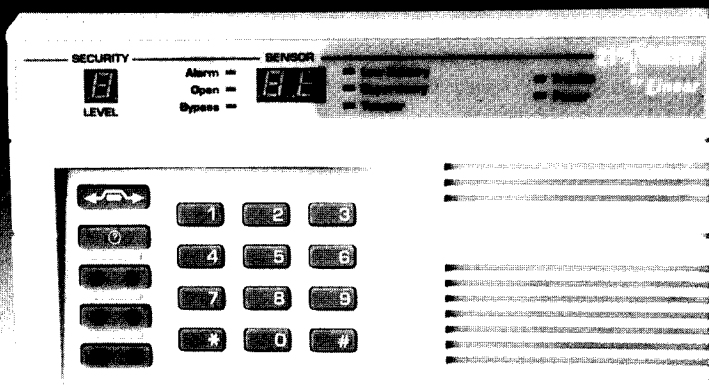|	
Operating Voltage:	12 VDC from CP-90 control panel
Operating Current:	
Standby	40 mA
Operating	150 mA
Wiring	Four (4) #22 gauge conductors
Maximum Wire Length:	500 feet
Color:	Light Gray
Material:	High Impact, flame retardant, ABS plastic
Size:	8.25 x 4.5 x 1.5 inches
	(209.6 x 114.3 x 38 mm)
Mounting:	Mounts to standard 1-gang, 2-gang or 3-gang box
Keypad:	
Arm/Disarm	12-key telephone style keypad
Special Function	Status and Bypass keys
Special Alarm	Fire, Medical and Panic keys
Maximum per System:	Eight including up to four (4) hardwire units
Minimum per System:	One hardwire keypad required
Memory	EEPROM retains system programming and arm/disarm status during total power failure
Transient Protection	Six (6) stage lightning and transient protection with four layer PC board technology
Operating Temp.	32 to 120 degrees F (0 to 50 degrees C)

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K-90
WIRED KEYPAD

- **Telephone Style Keypad with Five Special Function Keys**

- **Tamper Switch**

- **Keypad Night Light**

- **Audible and Tactile Feedback from Key Operation**

- **Numeric Status Display**

- **Unique Synchronized Audio Output**

When developing a new wireless/hard wire system, Linear established several goals for the entire system as well as distinct goals for each device. For the Linear K-90 wired keypad these goals include ease of operation, ease of programming, as well as an attractive appearance.

The Linear K-90 keypad is the focal point for system operation. One K-90 keypad is required in each 21st Sentry system. System programming is done from the K-90 in the "installer mode" of operation. All system control is initiated by the K-90.

The Linear K-90 features a telephone style keypad, five special function keys, system status 7-segment LED readouts, synchronized audio outputs, and a downlight for illumination at night. The keypad features superior tactile feel with all entries verified by an audio output, as well as a visual readout on the 7-segment LED displays. Three of the special function keys provided initiate fire, emergency, and panic/police alarm sequences. The other two special function keys allow the user to bypass individual transmitters, and interrogate the system for status on sensor conditions.

A unique feature is the built-in synchronized audio loop. The 21st Sentry has the capability of generating

siren, high/low and warble tones and transmitting them to the K-90 keypad. These tones can be selected for transmission during the 21st Sentry programming sequence. Upon receipt of an alarm condition, the appropriate tone will automatically be sent to each K-90 keypad. Since K-90 keypads are individually addressable, the installer can customize the light intensity and speaker volume at each keypad location.

During the installation procedure the K-90 keypad is used to program all 21st Sentry functions. A simple, straightforward entry sequence allows the installer to program each sensor's exact location, use, and level of security within the system. Even the audible keystroke verification level can be adjusted for each K-90 in the system. The 21st Sentry's built-in digital communicator is also programmed by the installer from the K-90 keypad. Audible and visual verification is provided from the K-90 keypad for each sensor entry, each keypad command, as well as each communicator programming step.

The end user has similar conveniences. All user entries are visually and audibly annunciated to verify correctness. For example, if the user selects security level 4, the unit will visually indicate the selection on the security level 7-segment display and audibly indicate the selection by beeping four times. For night operation, Linear has added a night light which is activated whenever any key is pressed.

Installation of the Linear K-90 keypad is a snap. A plastic mounting plate is supplied with the keypad. The plate can be mounted to either a single-gang, two-gang, or three-gang electrical box. Once the mounting plate has been secured, the K-90 keypad can be snapped into position. Four #22 gauge wires are required to interconnect the

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K-90 keypad to the 21st Sentry control panel. All wiring is terminated via a keyed, plug-in connector. A total of four K-90 wired keypads can be incorporated into the 21st Sentry system. The maximum wire length from the K-90 keypad to the 21st Sentry control panel is 500 feet.

Cosmetics have not been compromised on the Linear K-90 keypad. A clean, neat and balanced look gives the K-90 a pleasing appearance. A cool gray color scheme has been picked to match today's most popular interior colors.

Inside the package the K-90 wired keypad uses the latest in microprocessor technology to assure complete reliability. All communications between the K-90 and the 21st Sentry are accomplished via a custom 4-wire interface.

General Specifications:

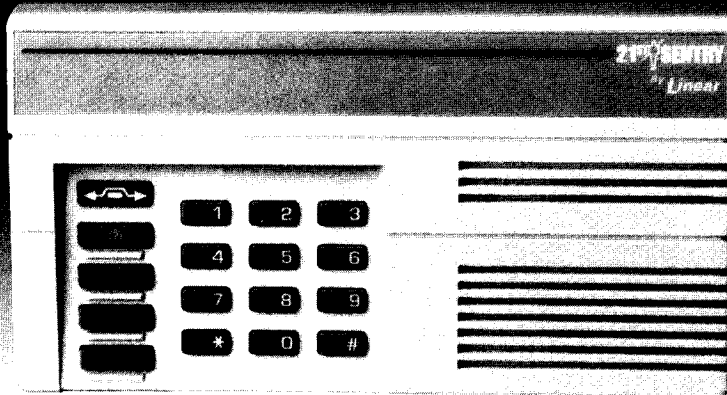|		
Operating Voltage:		12VDC from CP-90 control panel
Operating Current:		
	Standby:	40 ma
	Operating:	150 ma
Size:		8.25" Long x 4.5" Wide x 1.5" High (209mm x 114mm x 38mm)
Mounting:		Mounts to standard 1-gang, 2-gang, or 3-gang box
Operating Temperature:		32 to 120 degrees F (0 to 49 degrees C)
Wiring:		Four #22 gauge conductors
Maximum Wire Length:		500 feet
Maximum per System:		Four
Minimum per System:		One
Certification:		FCC for computing devices
Special Function Keys:		Sensor Bypass System Interrogation Fire Personal Emergency Police, Panic
Indicators:		
	Security Level:	One 7-segment display
	Sensor ID:	Two 7-segment displays
	Sensor Status:	Individual LED indicators Alarm, Open, Bypass, Low Battery, Tamper, Supervisory Power, Trouble

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TK-90
WIRELESS KEYPAD

- ■ **Fully Supervised**
- ■ **Telephone Style Keypad with Five Special Function Switches**
- ■ **Tamper Switch**
- ■ **Test Switch**
- ■ **Keypad Night Light**
- ■ **Audible and Tactile Feedback from Key Operation**
- ■ **Factory Programmed**
- ■ **Local Low Battery Indication**
- ■ **Supplied with Batteries**

Wireless keypads have always been limited in their functional capabilities within a security system. As part of the 21st Sentry development program, Linear set out to establish a new standard for a wireless keypad. Linear established four design goals for the TK-90 wireless keypad: increased reliability, improved versatility, superior range, and attractive styling. The TK-90 wireless keypad more than meets these design goals.

Reliability is achieved by development of a transmission technique which includes over 16,000,000 factory programmed codes. Consider Linear's all-new SX transmission format which provides more information with a shorter total transmission time. Cost effective, AA cell batteries are supplied with the TK-90 keypad. Life expectancy—three years. The keypad provides positive tactile feel, and verification of each keystroke entry is accomplished via an audible tone. The complete command is also audibly verified upon completion of the entry sequence at the hard wire keypad.

Most wireless keypads allow you to arm and disarm the system, and, perhaps, place either an emergency call or a panic alarm. The TK-90 wireless keypad allows you far greater versatility. With the TK-90 it is possible to perform all of the functions found on the Linear K-90 hard wire keypad with the exception of system programming and system status. You can arm the system to any of its seven security levels. You can bypass sensors, and place fire, emergency and panic alarms.

Range is a most critical factor. With the SX format 3,500 feet of line of sight range is the standard, not the exception, when the TK-90 is connected to the 21st Sentry control panel.

Installation of the Linear TK-90 is a snap. A plastic mounting plate is supplied with the keypad. The plate can be mounted to either a single-gang, two-gang or three-gang electrical box. Once the mounting plate is secured, The TK-90 can be snapped into place. A maximum of seven TK-90 wireless keypads can be incorporated into a 21st Sentry system.

Cosmetics have not been compromised on the Linear TK-90 wireless keypad. A clean, neat and balanced look gives the TK-90 a pleasing appearance. The cool gray color scheme has been selected to match today's most popular interior colors.

Linear's TK-90 wireless keypad. Combining reliability, versatility, range, ease of installation in an attractive, state-of-the-art RF transmitting device. Designed and built with the latest in microprocessor based technology. Randomly coded with one of over 16,000,000 codes. Transmission optimized to provide maximum FCC allowable RF output power.

General Specifications:

Size:	8.25" Long x 4.5" Wide x 1.5" High (209mm x 114mm x 38mm)
Mounting:	Mounts to standard 1-gang, 2-gang or 3-gang box
Power:	Four AA Alkaline batteries (supplied with unit)
Battery Life:	Up to 3 Years
Operating Temperature:	32 to 113 degrees F (0 to 45 degrees C)
Frequency:	303.875 MHz ±125 KHz
Measured Range:	3500 feet with CP-90 Control Panel
Number of Codes:	16,777,216
Code Setting Method:	Factory programmed
Certification:	FCC

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