D.K.P. I

1998 User/ Installer Guide

Select Entry Systems

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1.0   THE DKP SERIES

The Select Engineered Systems digital key pad series are microprocessor based access control devices which (depending on model) will store from 1 to 65,000 access codes. The DKP operates in a stand alone configuration requiring only power for operation. Programming of numbers and timers are performed on the units' key pad in conjunction with internal switches.

An optional special order printer may be used with the system for recording all access attempts used whether valid or invalid. A report of valid numbers and the four programmable time delays may also be printed.

The three models differ by the amount of numbers that may be stored and the number of digits required for a valid code.

1.1   MODEL TYPES

MODEL	STORAGE	DIGITS	VALID CODE NUMBER RANGE
DKP-3	1000	3	000 - 999
DKP-4	10,000	4	0000 - 9999
DKP-5	65,000	5	00000 - 64999

1.2   STANDARD FEATURES

All models include a DOOR AJAR alarm input which will close the alarm relay contacts if the door is held open for a time longer than the programmed time.

An AUX ALARM input is available to close the alarm relay contacts if the wired circuit is broken (opened).

The HOSTAGE ALARM will close the alarm relay contacts if a " * " is pressed during the input of a valid access code. The " * " cannot be inserted after the entire code is entered.

The unit has two relay outputs. The control output relay provides a contact closure to control an external device. The alarm relay provides a contact closure to any auxiliary device, such as an alarm panel.

1.3   PROGRAM TIMER RANGES

ALARM TIME   10 TO 990 SECONDS.

ENTRY TIME   1 TO 99 SECONDS.

AJAR TIME   1 TO 99 SECONDS.

LOCKOUT TIME   1 TO 99 SECONDS.

1.4   USE OF DEVICE

Entering any valid code will close the contacts on the output control relay and turn on the green open light for the programmed length of time. If the optional printer is connected, a Code Valid message will be printed along with the code number used.

Entering an invalid code will send a Code Invalid message along with the code number used to the optional printer. If three invalid codes in a row are entered, the DKP will enter a LOCKOUT mode for the programmed length of time. During this LOCKOUT TIME the DKP will ignore all key pad entries, the red busy light will blink on and off and a THIRD INVALID CODE message will be printed on the optional printer.

After the door is opened, and if an external N/C contact is connected to the door ajar input, the DKP will sense the opening of the door and immediately turn off the output relay, and the green open light. If the door is held open longer than the programmed AJAR TIME, the red busy light will turn on and a DOOR AJAR alarm message will be printed on the optional printer. When the door is closed, a DOOR AJAR RESET message will be printed on the optional printer.

If the AUX ALARM input is active (has not been shunted) the ALARM relay contacts will be closed for the programmed length of time, and the red busy light will turn on. The AUX ALARM message will be printed on the optional printer. When the aux input is reset, AUX ALARM RESET will be printed on the optional printer. The only way to reset the aux input is to close the input and wait for the alarm time to time out.

1.5   ENVIRONMENTAL CONSIDERATIONS

Indoor or Outdoor? The standard DKP housing is suitable for outdoor installations. For indoor installations on dry-wall type surfaces, contact SES about the optional dry-wall ring mount (OPTDRM).

An optional pedestal mount for curb, street, or slab mounting is also available (PST2).

1.6   ELECTRICAL CONSIDERATIONS

Power? The DKP uses 12 volt ac 50/60 Hz. @ 300 ma. A 12 vac transformer is supplied with each purchase, or the installer may elect to provide his own 12 volt 300 ma. DC supply. HOWEVER, AC TRANSFORMER AND DC SUPPLY CAN **NOT** BE USED AT THE SAME TIME.

Ground? The DKP unit must be connected to a good earth ground with at least # 16 ga. stranded wire.A **GOOD EARTH GROUND MUST** be connected to the DKPs' metal door enclosure (using the ground screw), and any shields from the optional printer cables. This wire MUST be a minimum of 16 ga. and must be connected to a ground rod or cold water pipe.

Cable? Power is 2 conductor 18 ga. up to 500 feet. Printer cable is Belden 8760 or equivalent. Ground is # 16 ga. or larger gauge.

Relay capabilities? 48 volts AC or DC at 1/2 amp. N.O. contacts are on the control output relay for controlling devices. The alarm relay power handling capability is also 48 volts AC or DC at 1/2 amp.

Door Ajar? This signal will terminate the remainder of the door open time left when this normally closed signal is opened. The DKP is shipped with this signal disabled (shunted). To enable this capability, turn switch 4 off (See pg. 4).

Aux Alarm? Any time this normally closed signal is opened, the alarm relay contacts will close. The DKP is shipped with this signal disabled (shunted). To enable this capability, turn switch 3 off (See pg. 4).

Printer? An optional printer with built in time and date clock calendar is available as an option (PRTDKP). This is a special order item.

More than 1 DKP? As many as 6 DKPs' can be connected to a printer by using the optional Multiplexer (DKP-M).

Can I use my own printer? An optional RS-232 converter is available for some serial printers, although SES will only support Okidata Microline 172 printers.

Gate controllers? Some solid state gate controllers react to the over voltage protection devices used on all SES products. The symptom is an intermittent gate open condition. If this occurs, add an external relay, controlled by the DKP output relay contacts to your gate system to help isolate the contacts going to your solid state controller.

Heavy weather considerations? While the DKP front door is well gasketed, if driving rains or snow are a problem, a keypad cover (KCS, or KCR) is available from SES as an accessory.

2.0   UNPACKING THE DIGITAL KEYPAD

The DKP requires 12 vac 50/60 Hz. for power (To power the DKP only). The DKP comes with a steel back box, the PC board mounted to the door, a 12 volt 20 va transformer, and this manual.

```
THIS SIDE SWITCH = ON ──────┐        ┌── THIS SIDE SWITCH = OFF

  7  RESET ───────────────┐
 ┌ 6  MEMORY SIZE ───────┐
 └ 5  MEMORY SIZE ───────┘
   4  SHUNT AJAR INPUT ───────────
   3  SHUNT AUX ALARM INPUT ──────                GROUND WIRE
   2  SET TIMERS ─────────────
   1  SET ACCESS CODES ───────────

      DKP3 = 5 ON,  6 OFF
      DKP4 = 5 ON,  6 OFF                 MEMORY CHIP
      DKP5 = 5 OFF, 6 ON                  (CONTAINS ACCESS CODES
                                          AND TIMER SETTINGS)

NOTE: DO NOT CHANGE FACTORY
      SETTING OR CODES WILL          111
      BE LOST.                 123456789012
                              oooooooooooo

      CONNECTIONS      1   12 VDC + OR 12 VAC
                       2   12 VDC - OR 12 VAC
                       3   CONTROL RELAY  N/O
                       4   CONTROL RELAY  N/O
                       5   ALARM RELAY    N/O
                       6   ALARM RELAY    N/O
                       7   AJAR INPUT N/C (SWITCHED SIDE)
                       8   AJAR INPUT N/C (COMMON SIDE)
                       9   AUX ALARM INPUT N/C (SWITCHED SIDE)
                      10   AUX ALARM INPUT N/C (COMMON SIDE)
                      11   PRINTER DATA + (20 MA. CURRENT LOOP)
                      12   PRINTER DATA - (20 MA. CURRENT LOOP)
```

The 12 pin connector at the bottom of the DKP is removable for ease of installation and servicing.

2.1   PROGRAMMING THE DKP

Programming of information into the unit is done in two modes. Mode one, switch number 1 (turned to ON), is used to add or delete access codes. Mode two, switch number 2 (turned to ON), is used to change the programmable time delays. (See page 4).

In mode one, a report of all valid numbers may be printed on the optional printer. In mode two, a report of all programmable times may be printed.

2.2   VALIDATING OR VOIDING ACCESS CODES.

1) Using the key, open the front door.
2) Push switch 1 "on" (See page 4).
3) Close the front door.
4) Press the digits of the access code desired.

If you wish to make that code valid, then push: " 1 ".
If you wish to remove (void) that code, then push: " 0 ".

EXAMPLE (for a DKP4):   CODE DESIRED   "1234"
CODE VALID   "1234 1"
CODE VOID   "1234 0"

Continue to add or remove as many codes as you wish. As each key is pressed, the red busy light will blink briefly. This verifies that the key pressed has made contact. After a code is made void or valid (a 0 or a 1), the busy light will go out. This shows that it is ready for the next code. If a mistake is made at any point (up to validating or voiding a code), pressing the # key will clear the entry, much like a pocket calculator.

If the optional printer is connected and you wish to print a report of all valid access codes, simultaneously press the "*" & "#" on the front keypad.

5) After all access code programming is completed, open the door again and turn switch 1 off.
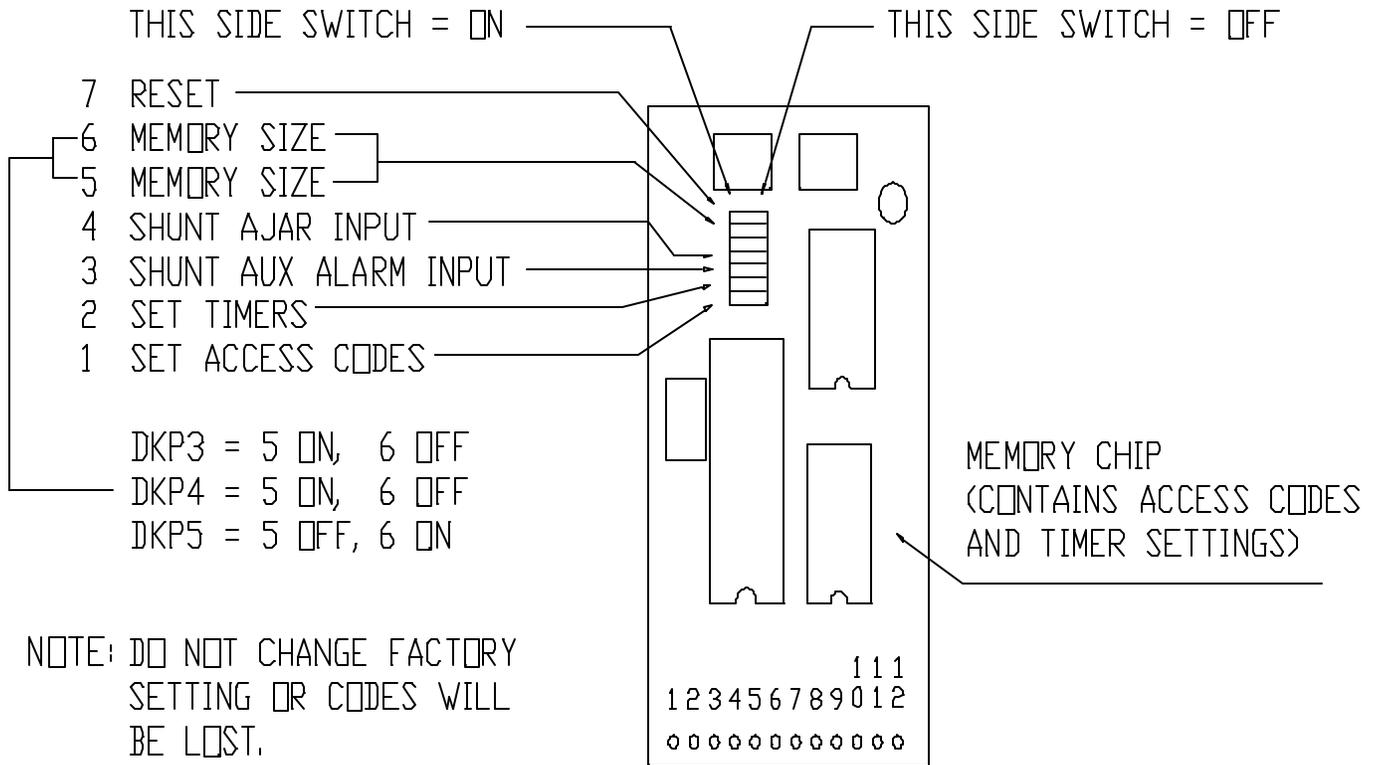6) Re-lock front door with key.

2.3   OPTIONAL PRINTER MESSAGES

On the optional printer you will see:
Status report
Valid codes:
nnnnn
nnnnn
nnnnn
End of Report

NOTE: "nnnnn" are the programmed valid codes.

When the program mode is entered, (switch 1 turned on) a "Prog codes entered" message will be printed. The "Prog mode exited" message will be printed when you leave the program mode by turning switch 1 off.

```
THIS SIDE SWITCH = ON ─────────         ───────── THIS SIDE SWITCH = OFF

  7  RESET ───────────────────────┐
 ┌6  MEMORY SIZE ─────────────────┐│
 └5  MEMORY SIZE ───────────────┐ ││
  4  SHUNT AJAR INPUT ─────────┐ │ ││
  3  SHUNT AUX ALARM INPUT ───┐│ │ ││
  2  SET TIMERS ──────────────┤│ │ ││
  1  SET ACCESS CODES ────────┤│ │ ││
                                                    MEMORY CHIP
     DKP3 = 5 ON,  6 OFF                            (CONTAINS ACCESS CODES
     DKP4 = 5 ON,  6 OFF                            AND TIMER SETTINGS)
     DKP5 = 5 OFF, 6 ON


NOTE: DO NOT CHANGE FACTORY
      SETTING OR CODES WILL              111
      BE LOST.                   12345678901 2
                                 o o o o o o o o o o o
```

2.4   PROGRAMMING DELAY TIMES.

There are four timers that may be programmed in the field by the user.

ALARM TIME is the time the unit is in the ALARM STATE and the alarm relay and red busy light is on.

ENTRY TIME is the time the output relay contacts are closed and green open light is on.

AJAR TIME is the time allowed for the door to remain open without an AJAR alarm.

LOCKOUT TIME is the time during which the DKP ignores all keypad inputs after 3 invalid codes are entered. The red busy light will blink on and off during this time.

To program delay times set switch 2 to the "on" position.

NOTE: "ALARM TIME" IS IN 10'S OF SECONDS WHILE THE OTHERS ARE IN 1 SECOND INCREMENTS.

ALARM TIME press "0 nn" where nn is in 10 second increments.
                            (ex. 002 = 20 seconds alarm time)
ENTRY TIME press "1 nn" where nn is in 1 second increments.
                            (ex. 110 = 10 seconds door open time)
AJAR TIME press   "2 nn" where nn is in 1 second increments.
                            (ex. 205 = 5 seconds ajar time)
LOCKOUT TIME press   "3 nn" where nn is in 1 second increments.
                            (ex. 330 = 30 seconds lockout time)

        Timers may be set (entered) in any order and you may change any timer without changing the other timers. At the beginning of any programming sequence, the red busy light will turn on and blink briefly after each key is pressed. After the third key is pressed, the busy light will go out.

If 00 is entered in the ALARM TIME position, the ALARM TIME will be 2 hours.

If 00 is entered for any other timers, there will be no time. 0 equals 0 seconds.

All SES DKP units leave the factory in this configuration:

001   Alarm time   = 10 seconds
105   Entry time   = 5 seconds
205   Ajar time   = 5 seconds
305   Lockout time = 5 seconds

        To exit this mode push switch 2 to off and return to normal operation.
(See page 6).

2.5   OPTIONAL PRINTER TIMER MESSAGES

        If the optional printer is connected, simultaneously pressing the "*" & "#" on the keypad will generate a report of the programmed times.

On the optional printer you will see:
Status report
Alarm time: nnn SEC.
Entry time: nn SEC.
Ajar time: nn SEC.
Lockout time: nn SEC.
End of Report

NOTE: "nn" are the programmed times.

When the program timer mode is entered, (switch 2 turned on) a "Program timers" message will be printed.

"Prog mode exited" message will be printed when you leave the program timers mode (switch 2 turned off).

2.6   ERASING MEMORY

If it should become necessary to erase all memory locations, use the following procedure:

1) Open the front door with the key.

2) Push switch 2 "on" (See page 6).

3) Close the front door.

4) Simultaneously press the " * ", " # ", & " 1 " keys.

5) Wait at least 2 minutes for DKP3 and DKP4. (DKP5 takes a little longer). The red busy light will be on.

6) Open the front door again.

7) Push switch 2 "off".

8) Push (the reset) switch 7 "on".

9) Push switch 7 "off" (this restores operation of the system).

10) Re-Program all timers.

11) Close door and re-lock with key.

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NOTE: AFTER MEMORY ERASURE ALL TIMERS WILL DEFAULT TO THESE VALU

055	**Alarm time=**	**550 seconds**
155	**Entry time=**	**55 seconds**
255	**Ajar time =**	**55 seconds**
355	**Lockout time =**	**55 seconds**

TIMERS MUST BE RE-PROGRAMMED
****

3.0 OPTIONAL ACCESSORIES HOOKUP DIAGRAM

CONNECTIONS

1 12 VDC + OR 12 VAC
2 12 VDC − OR 12 VAC
3 CONTROL RELAY   N/O
4 CONTROL RELAY   N/O
5 ALARM RELAY   N/O
6 ALARM RELAY   N/O
7 AJAR INPUT N/C (SWITCHED SIDE)
8 AJAR INPUT N/C (COMMON SIDE)
9 AUX ALARM INPUT N/C (SWITCHED SIDE)
10 AUX ALARM INPUT N/C (COMMON SIDE)
11 PRINTER DATA + (20 MA. CURRENT LOOP)
12 PRINTER DATA − (20 MA. CURRENT LOOP)
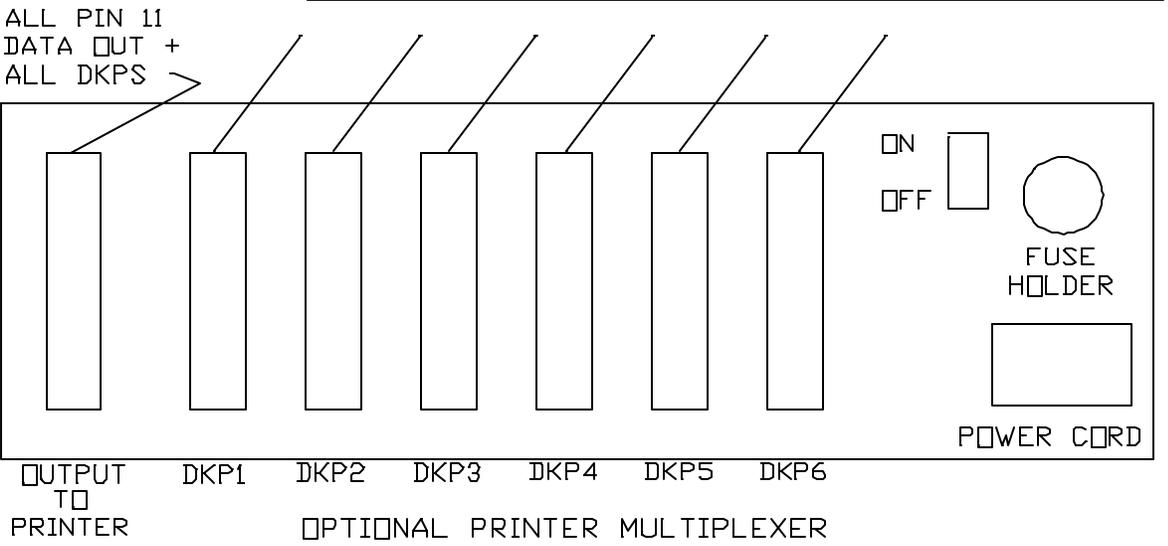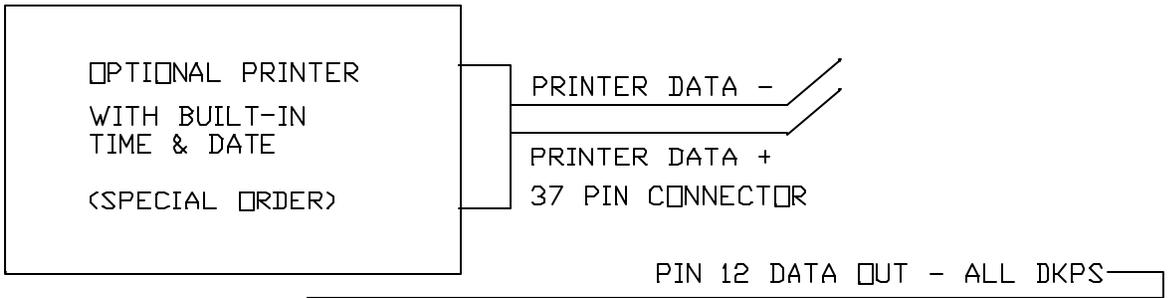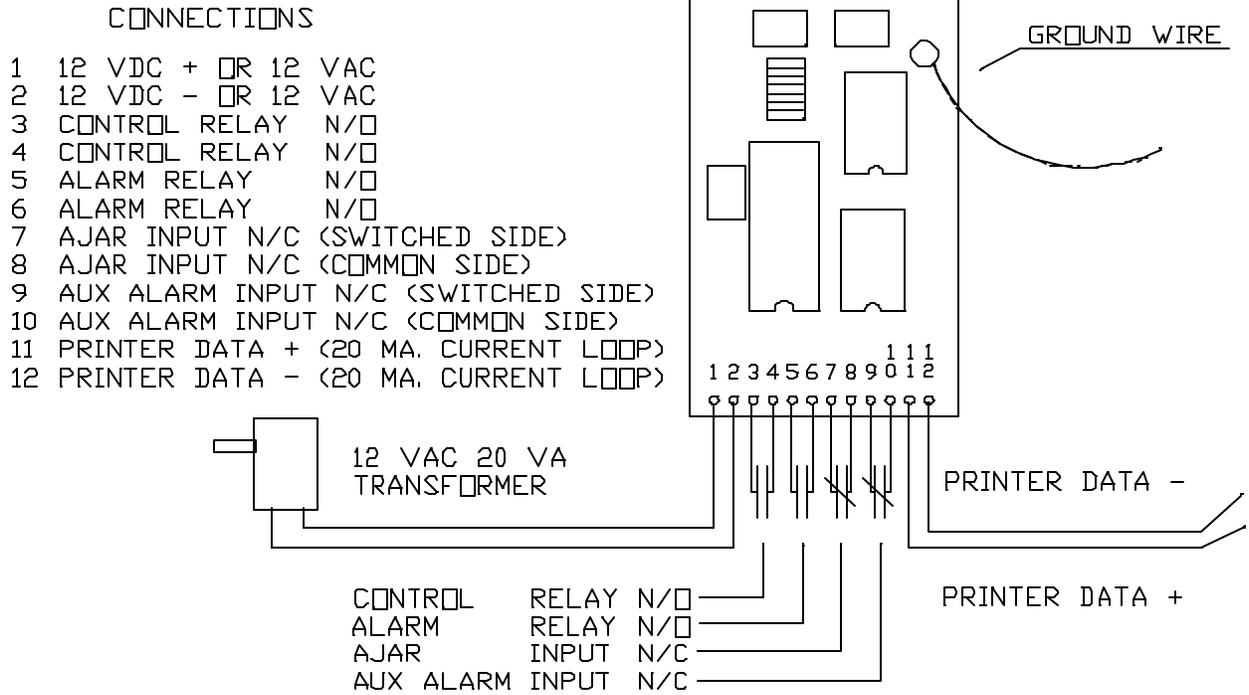
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