DTI Security
A DIVISION OF DATURA INTERNATIONAL, INC.

1034 Kiel Court, Sunnyvale, California 94086
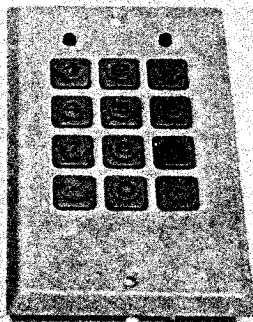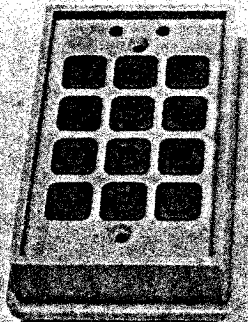Phone (408) 744-1200, Outside California Phone (800) 538-8488
Telex 172032

DCU-12
CODED PUSHBUTTON
REMOTE STATION

DCU-12

DCU-12F

GENERAL

The DCU-12 Coded Pushbutton Remote Station provides keyless operation for many security applications. It replaces conventional mechanical key switches in applications ranging from the arming and disarming of a security system to operation of electric door releases. The DCU-12 is a surface mounted unit (DCU-12F is flush mount) that installs in minutes and includes a built-in Tamper Switch and a Dual Button Keyboard Panic Switch or Call Button. Two LED indicators are installed and can be serviced in the field if required.

The 4-digit operating code of the DCU-12 can be easily programmed by inserting the code jumpers located on the rear of the circuit board. The 4-digit, non-repeating combination sequence used in the DCU-12 provides 5,040 possible codes.

The DCU-12 utilizes a transistor switch to provide a momentary closure between the White and Black leads when the proper combination is entered. A unique design feature of the DCU-12 allows the unit to draw its operating power through the same two wires that are used for the switching function. By adding the DLR-12 Latching Relay Module, an alternate-action isolated-contact closure can be obtained. The DMR-12 Relay Adapter can be used when a momentary isolated contact switching of any alarm circuit is required.

STANDARD FEATURES

- Low Power Consumption
- Low Pressure Keyboard
- Proven Reliability
- Low Price
- Complete station includes 12-digit keyboard, dual panic pushbuttons, built-in tamper, two LED indicators

SPECIFICATIONS

Input Voltage: 6 to 18 VDC

Power Consumption:
Less than 2 mA (standby)

Output:
Solid state switch (overload protected); momentary closure approximately 1 second (or 7 seconds if jumper is cut) each time correct code is entered

Indicators:
Two (2) LED's with 820 ohm current-limiting resistors; electrically isolated

Tamper Switch:
"Normally Open" and "Normally Closed" outputs are provided

Dual Panic Buttons:
Keyboard "Dot" pushbuttons are normally open switches connected in series; both pushbuttons must be simultaneously depressed to trigger the panic circuit

Keyboard:
12 buttons, 0 through 9, with two extra buttons; living hinge key with tactile feel feedback

Code Combinations:
5,040 (4-digit codes, non-repeating numbers); memory clears if combination is not completed within reset time limit (5 sec)

Code Change:
Easily field programmable using code jumpers located on the circuit board.

Size and Weight:
DCU-12 is 4 7/8" x 3 1/2" x 1 1/8" Thick, 7 ounces;
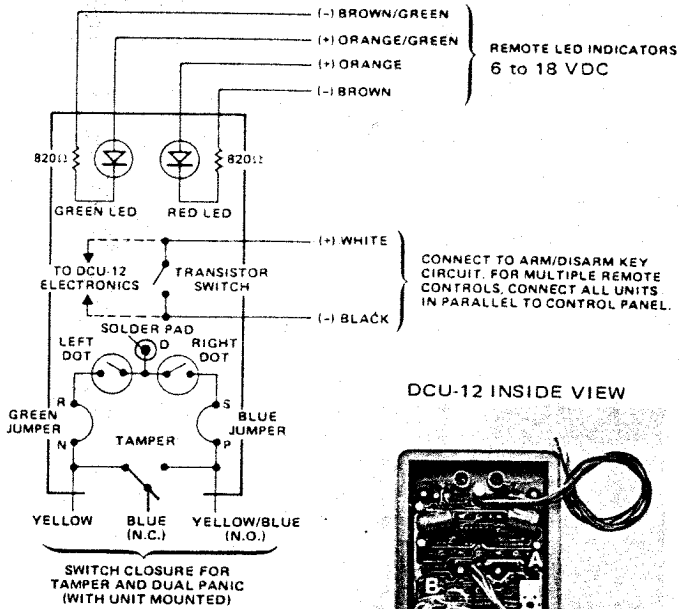DCU-12F is 5 3/4" x 3 1/2" x 5/16" Thick, 10 ounces

Mounting:
Surface or flush mount; mounting holes line up with utility box mounting tabs on surface mount version only
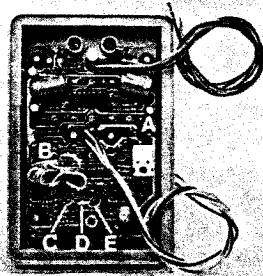
Case Material:
DCU-12, high impact ABS, beige color; DCU-12F, metal, beige color

HOOK-UP SCHEMATIC

(-) BROWN/GREEN
(+) ORANGE/GREEN
(+) ORANGE
(-) BROWN

REMOTE LED INDICATORS
6 to 18 VDC

820Ω   820Ω

GREEN LED   RED LED

TO DCU-12
ELECTRONICS   TRANSISTOR
SWITCH

(+) WHITE

CONNECT TO ARM/DISARM KEY
CIRCUIT. FOR MULTIPLE REMOTE
CONTROLS, CONNECT ALL UNITS
IN PARALLEL TO CONTROL PANEL.

(-) BLACK

SOLDER PAD

LEFT   D   RIGHT
DOT   DOT

R   S

GREEN   BLUE
JUMPER   JUMPER

N   P

TAMPER

YELLOW   BLUE   YELLOW/BLUE
          (N.C.)   (N.O.)
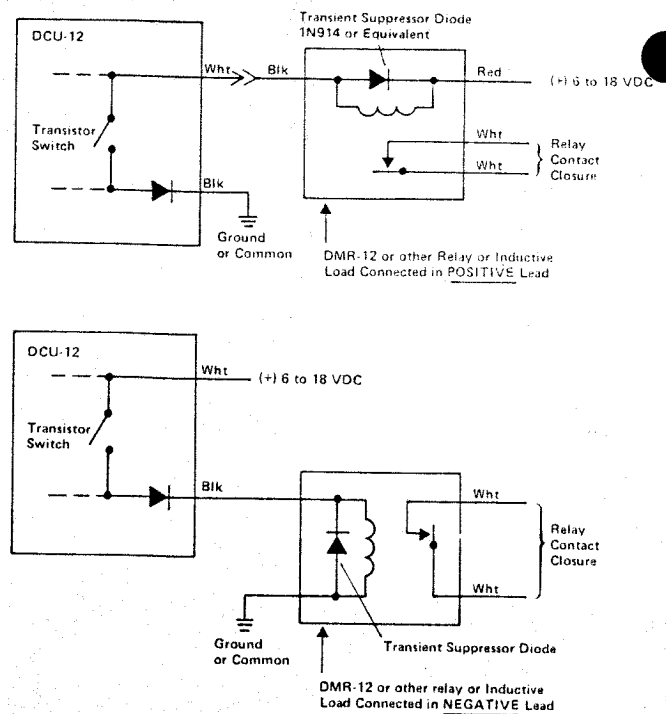
SWITCH CLOSURE FOR
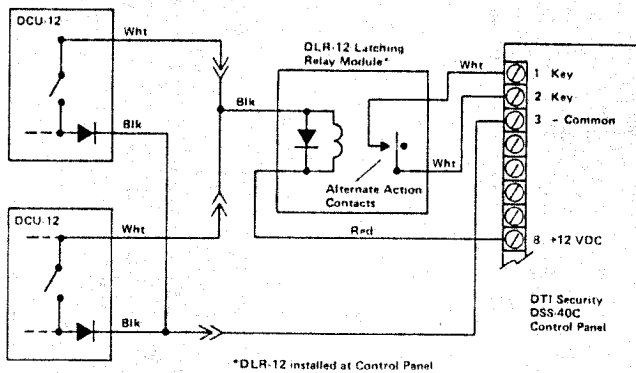TAMPER AND DUAL PANIC
(WITH UNIT MOUNTED)

DCU-12 INSIDE VIEW

A = Brown 2-position Jumper Socket
B = Code Programming Jumpers
C = Blue Jumper
D = Yellow Jumper (cut for 7 sec.)
E = Green Jumper

HOOK-UP USING EXTERNAL RELAY

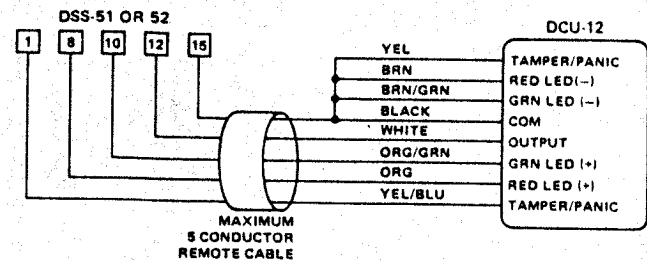DCU-12

Transient Suppressor Diode
1N914 or Equivalent

Wht   Blk   Red   (+) 6 to 18 VDC

Transistor
Switch

Wht   Relay
Wht   Contact
       Closure

Blk

Ground
or Common

DMR-12 or other Relay or Inductive
Load Connected in POSITIVE Lead

DCU-12

Wht   (+) 6 to 18 VDC

Transistor
Switch

Blk

Wht   Relay
       Contact
       Closure
Wht

Ground
or Common

Transient Suppressor Diode

DMR-12 or other relay or Inductive
Load Connected in NEGATIVE Lead

DCU-12 FOR SHUNT KEY OPERATION

DCU-12   Wht

DLR-12 Latching
Relay Module*

Wht   1 Key
       2 Key
Blk   3 - Common

Alternate Action
Contacts   Wht

DCU-12   Wht

Red

Blk   8 +12 VDC

DTI Security
DSS-40C
Control Panel

*DLR-12 installed at Control Panel

DCU-12 TO DSS-51/52

DSS-51 OR 52

1   8   10   12   15

DCU-12

YEL	TAMPER/PANIC
BRN	RED LED(−)
BRN/GRN	GRN LED (−)
BLACK	COM
WHITE	OUTPUT
ORG/GRN	GRN LED (+)
ORG	RED LED (+)
YEL/BLU	TAMPER/PANIC

MAXIMUM
5 CONDUCTOR
REMOTE CABLE

NOTE: BECAUSE OF THE EXCLUSIVE DESIGN OF THE DCU-12, INSTALLATION
REQUIRES ONLY 5 WIRES OR LESS.

ADDITIONAL DCU-12's CAN BE ADDED IN PARALLEL TO THE DSS-51 OR
DSS-52.

ORDERING INFORMATION:

DCU-12:
Standard unit (momentary output), self-contained, includes tamper
switch, dual panic feature, keyboard and logic in surface-mount
housing (includes DCK-8 Code Key)

DCU-12F:
Same as above but flush-mount unit

DMR-12:
Optional heavy-duty relay, 2-Amp contacts

DLR-12:
Optional latching module; alternate action output

DISTRIBUTED BY:

GENERAL HOOK-UP INSTRUCTIONS

1. POWER AND CONTROL SWITCHING — WHITE AND BLACK LEADS

The white and black leads provide the momentary switching functions to arm or disarm a burglar alarm control. They also provide the DCU-12 with 6 to 18 VDC operating power. Connect the WHITE (+) and the BLACK (-) to the control panel key circuit terminals; OBSERVE POLARITY. Entering the correct 4-digit operating code will initiate the momentary switch closure to alternately arm or disarm the control panel. Any number of DCU-12s can be added in parallel to allow multiple remote stations. If 3 or more DCU-12s are connected to a DSS-51/52, use external DMR-12 relay due to interaction of DCU-12s. For control panels that require On/Off "Shunt Key" type of key closure or electrically isolated contact closure for operation, connect the DLR-12 or DMR-12 as shown in Fig. 4 or 5.

2. MOMENTARY SWITCH CLOSURE TIMING SELECTION — YELLOW JUMPER WIRE

The DCU-12 can provide either a 1 or 7 second switch closure. Units are shipped from the factory with the timing set at 1 second. If a longer timed closure is required, cut the yellow jumper wire shown in Figure 3 to provide the 7 second closure. See Figure 3.

3. REVERSE POLARITY PROTECTION — TWO POSITION BROWN JUMPER SOCKET

For some solid state control panel inputs or where a long wire run between the DCU-12 and the control panel causes excessive voltage loss, a jumper wire (yellow wire provided in package) must be inserted into the BROWN two-position socket. See Figure 3. NOTE: With this jumper wire inserted, DC polarity reversal protection is defeated. Be careful to observe proper polarity. White lead (+), Black lead (-). IMPORTANT INSTALLATION REMINDER: Never test the DCU-12 by connecting the white and black leads directly to a high current power supply or battery without first including a current limiting load such as a relay or current limited LED in series with either lead.

THE ENCLOSED LOOSE YELLOW 1" JUMPER MUST BE INSERTED INTO THE BROWN SOCKET WHEN THE DCU-12 IS USED WITH DSS-51/52.

4. RED AND GREEN LED INDICATOR — ORANGE AND BROWN LEADS (RED), ORG/GRN AND BRN/GRN LEADS (GRN)

The Red and Green LED (LIGHT EMITTING DIODE) indicators are electrically separate from any other DCU-12 function. See Figure 3. Each LED has an 820-ohm current limiting resistor included inside the DCU-12. The LEDs operate over a voltage range from 6 to 18 VDC.

### 5. TAMPER AND DUAL-PANIC SWITCHES — YELLOW, YELLOW/BLUE AND BLUE LEADS

The normal connection of the Tamper Switch is "normally open" when the DCU-12 is mounted. A "normally closed" tamper switch contact is also provided for special installations. Connect between the blue and yellow wires for N/C tamper applications. If a "normally closed" contact is not desired, it is recommended that this wire be cut and removed. The Dual-Panic feature is also part of the "normally open" tamper switch and uses the same two leads. The yellow and yellow/blue leads are typically connected to the 24 hr. normally open circuit (Panic circuit)of a control panel. Either removing the DCU-12 from its mounted position or by depressing both "DOT" pushbuttons simultaneously will provide a switch closure to trigger the 24 hr. normally open circuit. To test the Dual-Panic feature before mounting the DCU-12 the tamper spring must be depressed manually. The Dual-Panic pushbuttons can also be used as a guard "call button" or local annunciator signaling button.

6. DUAL-PANIC OPTIONS — BLUE AND GREEN WIRES

The Dual-Panic pushbuttons can be electrically isolated from the tamper switch for a particular application by cutting the Blue or Green jumpers and then soldering pigtail leads to the appropriate side of these jumpers (see Figure 3).

DCU-12 HOOK-UP USING EXTERNAL RELAY — FIGURE 4

DCU-12 HOOK-UP SCHEMATIC — FIGURE 3
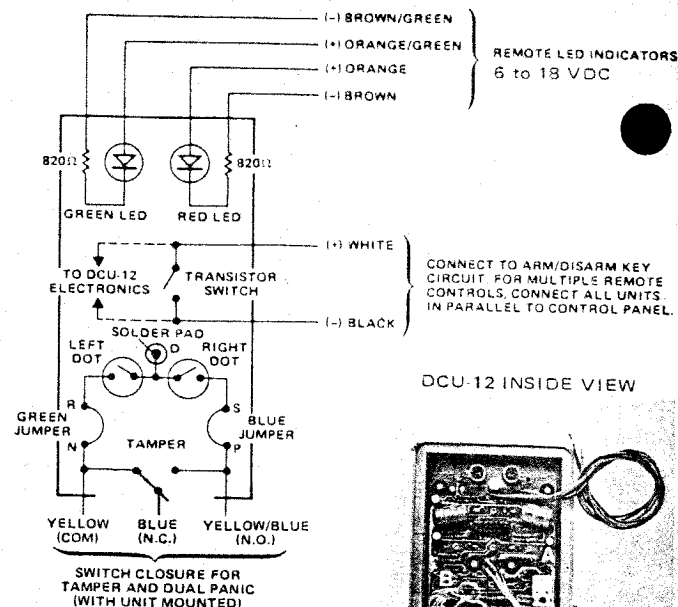
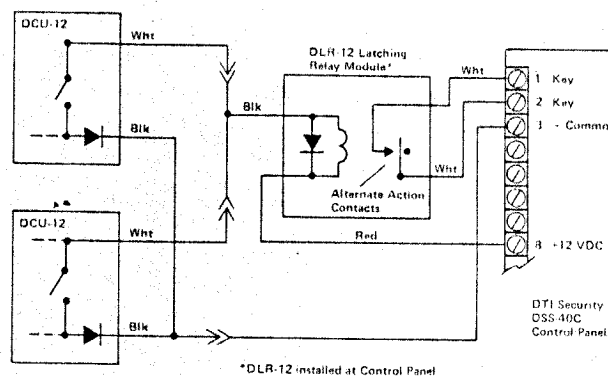DCU-12 INSIDE VIEW
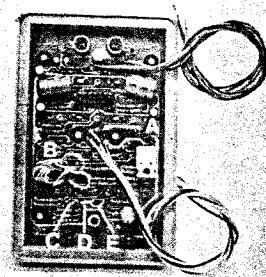
A = Brown 2-position Jumper Socket
B = Code Programming Jumpers
C = Blue Jumper
D = Yellow Jumper (cut for 7 sec.)
E = Green Jumper

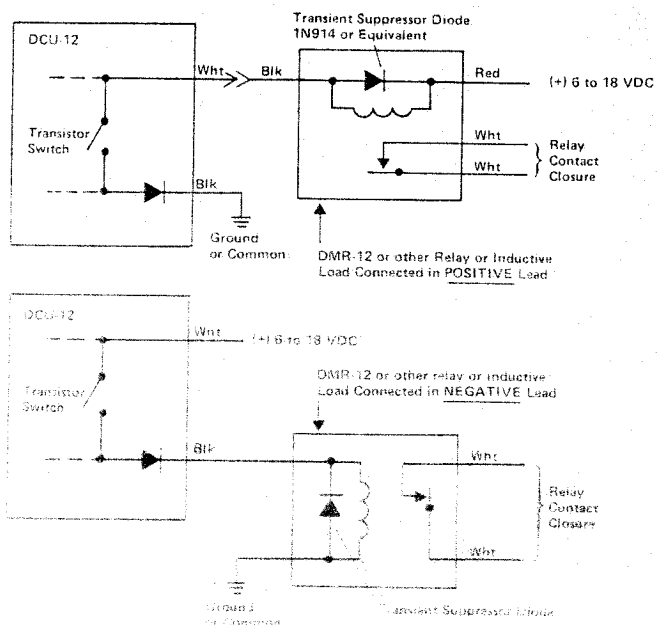## DCU-12 HOOK-UP TO TYPICAL "SHUNT KEY" TYPE INSTALLATION (USING DLR-12 LATCHING RELAY MODULE) — FIGURE 5
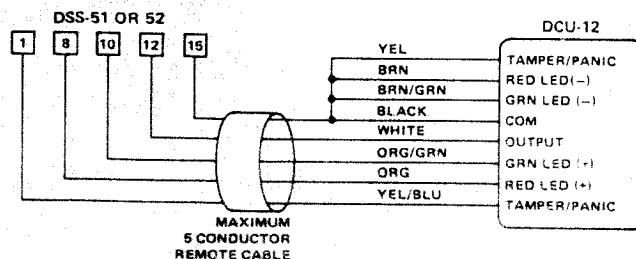

*DLR-12 installed at Control Panel

DTI SECURITY DSS-51, DSS-52 HOOK-UP WITH TAMPER, DUAL PANIC, SENSOR STATUS, AND ARMED STATUS LED INDICATORS — FIGURE 6

NOTE: BECAUSE OF THE EXCLUSIVE DESIGN OF THE DCU-12, INSTALLATION REQUIRES ONLY 5 WIRES OR LESS.

ADDITIONAL DCU-12's CAN BE ADDED IN PARALLEL TO THE DSS-51 OR DSS-52.

IMPORTANT

When using the DCU-12 to operate an inductive load e.g. Relay, Door Strike Release, etc., a Transient Suppressor diode should be connected across the coil as shown in Figure 4 and 5. Check relay coil for proper voltage.

OPERATION

To operate the DCU-12, momentarily press each numbered push-button in the proper sequence which corresponds to the correct 4-digit code.

IMPORTANT SECURITY FEATURE — Once entry of the correct code has been started, *the combination must be completed within 5 seconds. If for some reason the user does not* enter the code within the proper time period, the DCU-12 will reset and the correct code must be completely re-entered again to operate the unit.

Any wrong digit entry, incorrect code sequence, or simultaneous entry will also reset the logic and the correct code must again be entered before the unit will operate.

USING THE DUAL PUSHBUTTONS FOR KEYBOARD PANIC OR CALL BUTTON: Depressing both of the keyboard "DOT" pushbuttons simultaneously will provide a contact closure which can be used to trigger an Emergency or Annunciator signal.

PROGRAMMING THE CODE

Remove the rear cover on the DCU-12 and locate the programming jumpers. See Figure 3 for jumper location.

CARE MUST BE TAKEN WHEN PROGRAMMING THE CODE. EXCESSIVE FLEXING OF THE JUMPER WIRES MAY CAUSE BREAKAGE.

1. Insert wires corresponding to keyboard number into 10-way sockets to select desired code (see Figure 1).
2. Be sure ... don't fall out when re-placing th... k on the DCU-12.

NOTE: Be su... insert all unused wires into "R" sockets for proper operation.

FIGURE 1

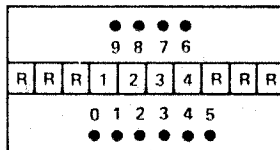|									
			•	•	•	•			
			9	8	7	6			
R	R	R	1	2	3	4	R	R	R
			0	1	2	3	4	5	
			•	•	•	•	•	•	

R = Reset
1 = 1st No.
2 = 2nd No.
3 = 3rd No.
4 = 4th No.
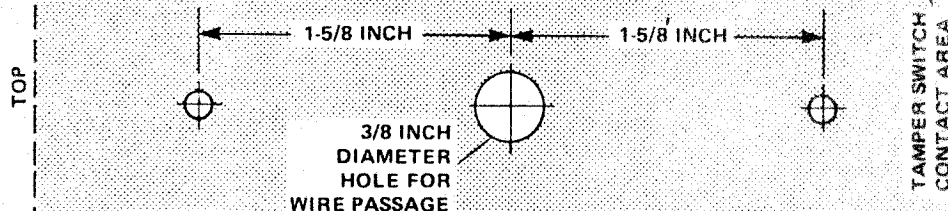
PROGRAMMING EXAMPLE: CODE #2468
1. Insert wire 2 into socket #1
2. Insert wire 4 into socket #2
3. Insert wire 6 into socket #3
4. Insert wire 8 into socket #4
5. Insert rest of wires into sockets R (ONE jumper wire per "R" socket)

MOUNTING

The DCU-12 can be mounted to any solid surface by using two number 6 FLAT HEAD wood or machine screws. The mounting holes are positioned to allow installation of the DCU-12 over a standard electrical outlet box. DO NOT OVER-TIGHTEN MOUNTING SCREWS.

TOP

◄—— 1-5/8 INCH ——► ◄—— 1-5/8 INCH ——►

3/8 INCH DIAMETER HOLE FOR WIRE PASSAGE

TAMPER SWITCH CONTACT AREA

Do not expose the DCU-12 to any direct water contact or high humidity. To clean the unit, use soap and water only — avoid getting water behind pushbuttons. If a stronger cleaner is required, test a small area on the side of the unit before cleaning faceplate.

DCU-12 H... ING OUTLINE

SPECIFICATIONS

Input Voltage: 6 to 18 VDC

Power Consumption: Less than 2mA (continuous at 12 VDC)

Output: Solid state switch (overload protected); momentary closure each time correct code is entered (approx. 1 or 7 seconds) jumper selectable

Indicators: 1 Red & Green LED (current limited with 820 ohms)

Tamper Switch: Built-in; "Normally Open" or "Normally Closed"

Dual Panic Buttons: Keyboard "Dot" pushbuttons are "Normally Open"; switches connected in series

Keyboard: 12 buttons, 0 thru 9, with two extra buttons; "living hinge" keys have tactile feel

Code Combinations: 5,040 (4-digit codes, non-repeating numbers); memory clears if code is not entered within reset limit of 5 seconds

Code Change: Field programmable with jumpers

Size: DCU-12 4 7/8" X 3 1/2" X 1 1/8", 7 oz; DCU-12F 5 3/4" X 3 1/2" X 5/16" deep, 10 oz.

Temperature Limits: –18°C to 55°C (0°F to 131°F); outdoor use not recommended

Mounting: Surface mount, DCU-12; flushmount, DCU-12F

Case Material: DCU-12, ABS plastic; DCU-12F painted metal; beige color

LIMITED WARRANTY

COMBINATION

DTI Security
A DIVISION OF DATURA INTERNATIONAL, INC.

OPERATING AND INSTALLATION MANUAL

The DCU-12 Coded Pushbutton Remote Station provides keyless operation for many security applications. It replaces the conventional mechanical key switch in applications ranging from arming and disarming of a security system to operation of electric door strike releases. The DCU-12 is a surface mount unit (DCU-12F is flushmount) that installs in minutes and includes a built-in Tamper Switch and a Dual Button Keyboard Panic Switch or Call Button. Two LED indicators are installed and can be serviced in the field if required.

The 4-digit operating code of the DCU-12 is easily changed by programming the Code Jumpers located on the board. The 4-digit combination sequence used in the DCU-12 provides 5,040 possible codes.

The DCU-12 utilizes a transistor switch to provide a momentary closure between the White and Black leads when the proper combination is entered. A unique design feature of the DCU-12 allows the unit to draw its operating power through the same two wires that are used for the switching function. By adding the DLR-12 Latching Relay Module, an alternate action isolated closure can be obtained. The DMR-12 Relay Adapter can be used when a momentary isolated contact switching of any alarm circuit is required.