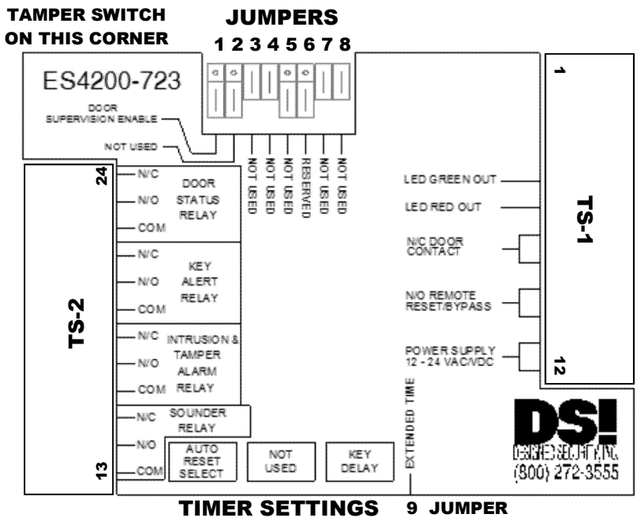
## COMPONENT LOCATION DIAGRAM



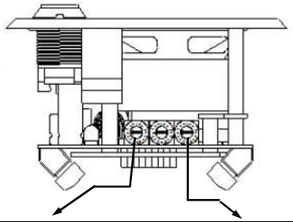

| JUMPER | CONFIGURES |
|---|---|
| **1 Door Supervision** (Part of Tamper circuit) | **TS1-7&8 Door Input** |
| **2 Voltage Sense Mode** (Senses Lock Voltage as Valid User Input) | **Not Used Jumper MUST be OFF** |
| **3 Shunt Contact Mode** (Senses Dry Contact as Valid User Input) | **Not Used Jumper MUST be ON** |
| **4 Intrusion Detect Enable** (Explained on reverse) | **Jumper MUST be ON** |
| **5 Shunt Recycle Enable** (Explained on reverse) | **Jumper MUST be ON** |
| **6 RESERVED** (Factory Diagnostic) | **Factory Use Only Leave Jumper OFF** |
| **7 & 8 Shunt Delay Timer** (Set same as Lock Time) | **Not Used Jumpers MUST be ON** |
| **9 Extended Time** | **Select Ext. Key Delay Time 03-90 Min.** |
| **10 Horn Volume** | **No Adjustment 75db Only** |

**TAMPER CIRCUIT - Alarm is not reset with key.**

- **TAMPER SWITCH -** Switch is located on stand-off under spring steel actuator. (**Cut cable tie to Enable switch**)
- **DOOR SUPERVISION -** Enable with Jumper 1. Requires resistors on Door Switch. (Schematic on reverse)

**INS4200-723 170806**

# TIMER SETTINGS TABLE




| SET | KEY ALERT TIME SELECT (Extended Key Time Jumper) | | AUTO RESET TIME SELECT |
|---|---|---|---|
| | NORMAL Jumper OFF | EXTENDED Jumper ON | |
| 0 | 0 Sec | 3 Min | 0 Sec |
| 1 | 3 Sec | 3.5 Min | 3 Sec |
| 2 | 5 Sec | 4 Min | 5 Sec |
| 3 | 7 Sec | 4.5 Min | 7 Sec |
| 4 | 10 Sec | 5 Min | 10 Sec |
| 5 | 12 Sec | 6 Min | 12 Sec |
| 6 | 15 Sec | 7 Min | 15 Sec |
| 7 | 20 Sec | 8 Min | 20 Sec |
| 8 | 25 Sec | 9 Min | 30 Sec |
| 9 | 30 Sec | 10 Min | 45 Sec |
| A | 35 Sec | 20 Min | 1 Min |
| B | 45 Sec | 30 Min | 2 Min |
| C | 1 Min | 40 Min | 3 Min |
| D | 1.5 Min | 50 Min | 4 Min |
| E | 2 Min | 60 Min | 5 Min |
| F | 2.5 Min | 90 Min | MANUAL |

**ELECTRICAL SPECIFICATIONS**

| | VOLTS | AMPS | N/O | N/C |
|---|---|---|---|---|
| Power | 12-24 VAC/DC | 250mA | N/A | |
| Voltage Sense | 12-24 VAC/DC | 15mA | | |
| Shunt Input | Dry Contact | | Jumper Selectable | |
| Bypass Input | Dry Contact | | √ | |
| Door Input | Dry Contact | | | √ |
| Output Relays | Dry Contact | 1 Amp@ 30 VDC | √ | √ |

**MECHANICAL SPECIFICATIONS**

- The ES4200-723 mounts flush in a 3.5" deep, 2-Gang electrical switch box.

## *TROUBLESHOOTING TIPS*

- **Horn won't Reset** - Verify Tamper Switch is closed; Verify Door Supervision Jumper is correct for application; if Door Supervision is enabled verify Door Contact Resistors are installed as per Step 1.
- **LED always Green** - Normal condition when Disarmed by Key or Bypass input. Check Key Alert Timer setting (Key Alert Time can be set up to 90 minutes if Extended Time jumper is On)
- **Alarm when Door Opens** - Verify that Key or Bypass input is in Disarm Mode. (Disarm Mode - Key turned to horizontal, or Bypass input shorted)
- **Clicking Output Relays** - Verify Jumper 6 (Reserved) is OFF.

## OPERATION

### VALID ACCESS / PROPPED DOOR OPERATION

**ARMED STATE** - Red LED (Green if Intrusion Detect is Off)
**VALID USER INPUT** - Key or Bypass Input to Disarm mode
LED - Changes to Green, Key Alert Time begins
DOOR - Opened by user, Key Alert Time stops
DOOR - Closed by user, Key Alert Time begins
(*door may open only once more without new Disarm*)
KEY or BYPASS - Made normal (Armed), or
**KEY ALERT TIMER** - expires, Disarm mode still exists,
AUDIBLE WARNING - Beeps to alert user locally
LED - Flashes Green
KEY ALERT STATUS - Output changes state
**KEY ALERT CONDITION** (beeping) continues until Key and Bypass are made normal, or
**KEY or BYPASS** - Made normal - Armed State
LED - Red
DOOR - Closed
KEY ALERT STATUS - Output normal

### INTRUSION OPERATION

**ARMED STATE** - Red LED
DOOR Opened by invalid entry
LED - Flashes Red
AUDIBLE - Constant tone, Auto Reset Timer begins
OUTPUT - Intrusion/Tamper Alarm relay toggles
**DOOR CLOSED**
LED - Flashes for duration of AR Time
AUDIBLE - Continues for duration of AR Time
OUTPUT - Changed for duration of AR Time
**REARM** - After AR time expires OR by Manual reset
LED - Red (Armed State)

### TAMPER OPERATION

**ARMED STATE** - Red LED (Door Supervision Enabled)
**TAMPER** (Door circuit open/shorted, or if unit is removed from wall)
LED - Flashing Red
AUDIBLE - Constant tone
OUTPUT - Intrusion/Tamper Alarm relay toggles
**RESET** - Door normal, and Tamper switch closed
LED - Red (Armed State)

## FUNCTIONAL DESCRIPTION

### INPUTS

The inputs are located on Terminal Strip –1 and include:

- **Door** - a Closed Loop (N/C) Dry Contact which opens when the monitored door opens. See Step 1.
- **Bypass** - Connect to a N/O Dry Contact from a remote location to bypass the unit. See Step 7.
- **Power** - 12 to 24 VAC/DC @ 250 mA. The terminals are not polarity sensitive. See Step 5

### TIMERS

- **Key Alert Time** - Door Closed and Key or Bypass has unit disarmed. 0-2.5 min. in standard mode, 3 - 90 min. in Extended mode (selected by Jumper 9).
- **Auto Reset** - "Alarm" Time - 0-5 min. and Manual Reset. Constant Intrusion/Tamper Alarm Audible sounds during this time.

### OUTPUTS

- **Remote LED** - (located on TS-1) Output for a remote Bi-color LED, output follows LED on Face Plate.
- **Door Contact Status** - follows the Door Contact Input, regardless of alarm or bypass condition.
- **Key Alert Status** - changes state after Key Alert Time expires, Door is closed, and Key or Bypass is in Disarm mode.
- **Intrusion/Tamper Alarm Status** - changes state during an Intrusion or Tamper Alarm condition.
- **Sounder Relay** - follows Sounder state.

*Output contacts change state when power is lost.*

### OTHER FEATURES

- **Door Supervision** - See Step 1.
- **Intrusion Detect** - See Step 2.
- **Extended Key Time -** See Step 4.

### OPTIONAL ACCESSORIES

ES440 Pushbutton; ES450 Key Switch; ES600 Annunciator

Custom Remote Key Bypass with Sounder

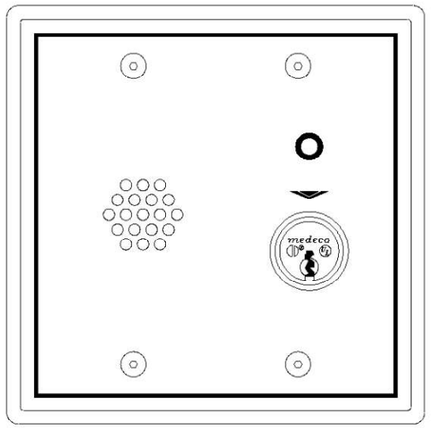

800 272 3555
Fax 512 321 9181
*DESIGNED SECURITY INC*
1402 Hawthorne St., Bastrop, Texas 78602
www.dsigo.com
Email: dsi@dsigo.com

**FOR TROUBLE-FREE INSTALLATION, VERIFY EACH SETTING & VERIFY ANY UNUSED FEATURES ARE SET CORRECTLY FOR YOUR APPLICATION**

DSI
DESIGNED SECURITY, INC.
*A Detex Company*

# ES4200-723
## *SERVICE DOOR ALARM INSTALL INSTRUCTIONS*

**FOLLOW THE STEP BY STEP CONFIGURATION FOR EASY**



**ES4200-723**

**The DEFAULT SETUP is for Service Entrances.**

- This unit may be connected to power and a closed-loop Door Input and be ready to work immediately for the Default application.

**Timer Setting Defaults:** (Step 4)
- Key Alert Time 5 seconds;
- Auto Reset Time 5 seconds

**See text for Feature Description and Setup info.**

**TERMS USED IN THIS INSTRUCTION**

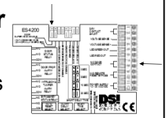
**N/C DOOR CONTACT** - is a "closed-loop" circuit which goes open when the door is opened.

**DMA** - Door Management Alarm (i.e.: ES4200 series)

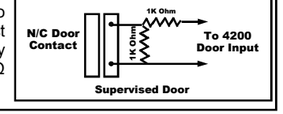
**STEP BY STEP** **Jumpers:** *ON= short 2 pins; OFF= one pin only.*

## 1 DOOR , SUPERVISION, AND TAMPER

- Connect N/C **Door Contact** to TS1 7&8.
- If resistors are installed for **Door Supervision**:
  - A) place Jumper 1 ON and put resistors at door switch as shown in diagram.
  - B) **If unused**, leave Jumper **OFF** and use a closed-loop Door Switch circuit.

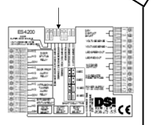


***DOOR SUPERVISION EXPLAINED***
Door Supervision allows the ES4200 to monitor the circuit from the Door Contact for open or shorted wires which may indicate tampering. (via two 1KΩ resistors installed as shown)




- **Tamper Alarm** (cannot be reset or bypassed)
  - A) To Enable feature cut cable tie on Tamper Switch located on standoff (Component Location on reverse).

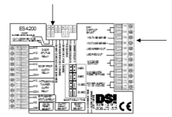
## 2 INTRUSION DETECTION



**NOT USED IN THIS MODEL**

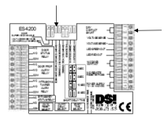
## 3 ACCESS CONTROL

- **VOLTAGE SENSE**



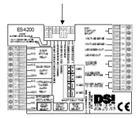
**NOT USED IN THIS MODEL**

- **SHUNT INPUT**



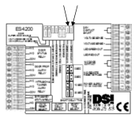
**NOT USED IN THIS MODEL**

- **SHUNT RECYCLE**



**NOT USED IN THIS MODEL**

## 4 TIMER SETTINGS *SEE TABLE ON REVERSE*



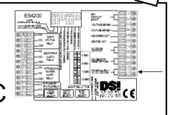
- **KEY ALERT TIMER** begins after a Key or Bypass input and ***if door is CLOSED*** the timer counts down the time for User to Rearm (by restoring the Key or Bypass Input to normal). Timer cancels when system is in Armed Mode.

**NOTE:** Key Alert Alarm (beeping) will continue until Key is removed or Bypass is make normal and system is Armed.

- **AUTO RESET TIME SELECT** is the minimum time the Horn, LED and Relays are on following an Intrusion or Tamper alarm condition.

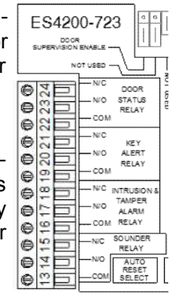
**NOTE:** Alarm will continue for as long as the door is open.
- A) Turn the dial to **SET** Timer (0 seconds to 5 minutes, or Manual).

## 5 POWER



- **POWER** - Connect 12-24 VAC/DC to TS1 11&12. Not polarity sensitive.

## 6 OUTPUTS (FORM-C)




- **DOOR STATUS RELAY** TS2-22,23,24 changes state when the Door Input changes. Used to monitor changes in Door Contact status.
- **KEY ALERT RELAY** TS2-19,20,21 changes state when a door is closed after being disarmed with Key or Bypass Input and Key Alert Timer has expired.
- **FORCED DOOR/TAMPER ALARM RELAY** TS2-16,17,18 changes state when a door is forced or a tamper condition exists (Door Supervision/Tamper Switch).
- **SOUNDER RELAY** TS2-13,14,15 follows the state of the Horn. Changes whenever Horn is on

**ADDITIONAL OUTPUT INFORMATION**
- Each of the Output functions offers the availability of monitoring a Normally Open or a Normally Closed Dry contact.
- Each contact's state will change to follow the status of the monitored function.
- To combine multiple outputs, connect N/O contacts in parallel, or N/C contacts in series. See diagrams at right. The use of any/all Outputs is optional.

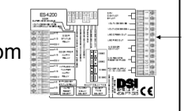
To Monitoring Equip.

To Monitoring Equip.

- DSI's ES600 (4/8/12) Zone Annunciator series, and Custom Annunciator Panels, offer a turn-key solution for remote monitoring. (such as Security, Nursing, or Management stations, etc.)
- If Power is removed from the ES4200, each contact in it's normal state (powered), will change state. Example: Door Status will appear as if the door has been opened; Alarm and Bypass contacts will appear as if an alarm or bypass condition exists.

## 7 ADDITIONAL FEATURES

- **BYPASS** TS1 (9&10) input, to N/O contact to remotely Bypass or Reset the unit.



- **REMOTE LED** to TS1 (5&6). (from DSI ES450 with Bi-color LED)
- **HORN VOLUME** - 75db

****COMPONENT LOCATION INFO ON REVERSE****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