

# DE5700

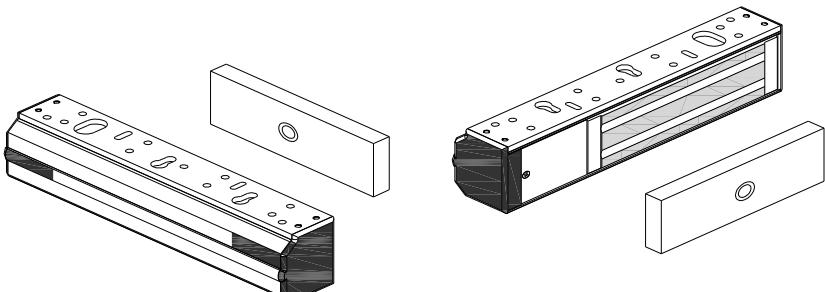
## Delayed Egress Electromagnetic Lock



## Introduction

DE5700 series is a specialized electromagnetic lock equipped with an “Early Warning Alarm Function” intended for use as “A Security Door Lock” which capable of detecting early intruders before the attempted break-in. DE5700 series also works as a “Delay Egress Functions” when installed in “Emergency Delayed Exit Door” application. DE5700 series can be switched manually between Early Warning Alarm function and Emergency Delayed Exit Door function by a Dip Switch (Dip 5) built inside the lock body. DE5700 series is operated in 12VDC/24VDC, and has a holding force of 550~580Kg. DE5700-S has a built-in Sounder, DE5700-V has a built-in Voice Module, and both DE5700-SC and DE5700-VC has a built-in Sounder/Voice Module and Camera.

## Specification

SPECIFICATION	DE5700/DE5700-S/DE5700-V/DE5700-SC/DE5700-VC
Illustration	 <p>Standard appearance of DE5700 series</p>
Certifications	 <p>BS465: The product has been tested under British Standard for a 4 hours fire testing.</p>
Fail Safe	Power to lock
Lock Body Dimension	DE5700 - 274L x 73W x 53H (mm) DE5700-S/DE5700-V - 299L x 73W x 53H (mm) DE5700-SC/DE5700-VC - 355L x 73W x 53H (mm)
Armature Plate Dimension	189L x 60W x 54H (mm)
Lock Operating Voltage	12/24VDC ±10%
Lock Operating Current	520mA/12VDC; 250mA/24VDC
Lock Holding Force	Up to 550~580Kg
Weight	DE5700 - 4.5Kg DE5700-S/DE5700-V - 6.0Kg DE5700-SC/DE5700-VC - 6.5Kg

Output Signals	<b>Local Alarm Output</b> SPDT Relay, 120VAC 1A, 30VDC 2A (C/NC/NO) <b>Remote Alarm Output</b> DPDT Relay, 120VAC 1A, 30VDC 2A (C/NC/NO x2)
Operating Temp	-10°C ~60°C
Operating Humidity	0~95% (non-condensing)
Light Panel	Red/Green/Off and the speed of blinking indicating the status
Color CCD Camera	<b>DE5700-SC/DE5700-VC only:</b> Image Sensor: 1/3" Sharp CCD TV System: NTSC Pixels: 510H x 492V Horizontal Resolution: 420 TV Lines Minimum Illumination: 0.8LUX/F1.2 Video Out: 1.0V <sub>p-p</sub> , 75ohm, BNC and RCA Connectors Sync System: Internal Power: 12VDC internally supplied
Surface Finish	Anodized Aluminium housing Zinc plated for anti-corrosion
Residual Magnetism	Less than 2Kg. No Spring Rebound Mechanism on the armature plate is required to overcome the residual magnetism
Standard Packing	4pcs/carton

## Advantage Table

MODEL	DE5700 series
Long Stripe Indicator	 <p>The long stripe indicator allows user to observe the status of the lock easily</p>
Built-in Voice Module	Clear warnings to direct the user on certain security/emergency situations
Built-in Camera	Built-in Camera feature assists the security guard to identify any personnel who trigger the warning on the locked door. This video output could be connected with DVR for recording purpose

## **Delay Egress Function**

During normal operation, when an external force of 15lb is applied on the locked door leaf, the system will start the exit sequences and enter the Nuisance Delay Period (can be set for 0, 1, 2 or 3 seconds from the provided dip switches). During this period, pulsing sound will be activated from the built-in sounder and the Local Alarm Relay will be energized, giving warnings to the personnel who is pushing against the locked door. However, the lock is designed to revert back to its normal operation if the pressure on the door leaf is removed within the Nuisance Delay Period.

Once the Nuisance Delay Period has expired due to the external pressure greater than 15lb is continuously applied on the locked door, the Release Delay Period begins. During the Release Delay Period (can be set for 15 or 30 seconds), the Remote Alarm Relay will be de-energized and the Local Alarm Sounder will go from pulsing to steady sound to indicate the locked door will be released automatically until the Release Delay Period expires. Once the Release Delay Period has expired, the lock is released, and both Local Alarm Sounder and Local Alarm Relay will stop/be de-energized immediately.

Once the lock is released, Reset Switch Input from OPEN to CLOSE resets the system to its normal condition. The Remote Alarm Relay is energized when the door is relocked (The system can only be reset after the Release Delay Period expires).

NOTE 1: DE5700 is the basic model, and it **DOES NOT** equip with sounder or camera.

NOTE 2: DE5700-V/DE5700-VC is equipped with Voice Module which replaces the sounder feature as described above. The Voice Module has an option of English/Spanish/French selectable languages.

### **DE5700-V/DE5700-VC**

DE5700-V and DE5700-VC has a built-in Voice Alarm feature inside the lock body. This feature replaces the sounder to provide a more understandable warning/instruction to the personnel when operating the door. There are four pre-recorded voice as shown below:

Voice I: Unauthorized personnel prohibited  
(Max. 4 second period for Voice I)

Voice II: The emergency exit system has been activated, the door will unlock in a moment  
(Max. 8 second period for Voice II)

Voice III: The door is now unlocked, please exit  
(Max. 8 second period for Voice III)

Voice IV: Illegal intruder. The security alarm is activated. Security personnel has been alerted and would arrive momentarily  
(Max. 10 second period for Voice IV)

Voice Module is optional

“Force to Open” can only be turned off by switching off the system power.

After “Exit Switch to Open” is expired, system is restored to the normal condition.

## Delay Egress System Status

System Status	Light Panel	Local Sounder (DE5700-S and DE5700-SC)	Voice (DE5700-V and DE5700-VC)	Local Alarm Relay	Remote Alarm Relay
Door Open	Red	OFF	OFF	OFF	OFF
Lock Secured	Green (blinks every 5 seconds)	OFF	OFF	OFF	ON
Nuisance Delay Period	Red (fast blinks)	Pulse Sound	Voice I	ON	ON
Release Delay Period	Red (slow blinks)	Steady Sound	Voice II	ON	OFF
Lock Release	Red/Green (blinking alternatively)	OFF	Voice III	OFF	OFF
Force To Open	Red (fast blinks)	Pulse Sound	Voice IV	ON	OFF
Exit Switch To Open	Red	OFF	Voice III	OFF	OFF

## Dip Switch Setting For Delay Egress Functions

Nuisance Delay Dip Switch 2&3



0 Sec.



1 Sec.



2 Sec.



3 Sec.

Factory setting: Nuisance Delay set at 3 seconds (DIP switch 2: OFF, and DIP switch 3: OFF)

Release Delay Dip Switch 1



15 Sec.



30 Sec.

Factory setting: Release Delay at 15 seconds (DIP Switch 1: ON)

BOCA Relock Dip Switch 4



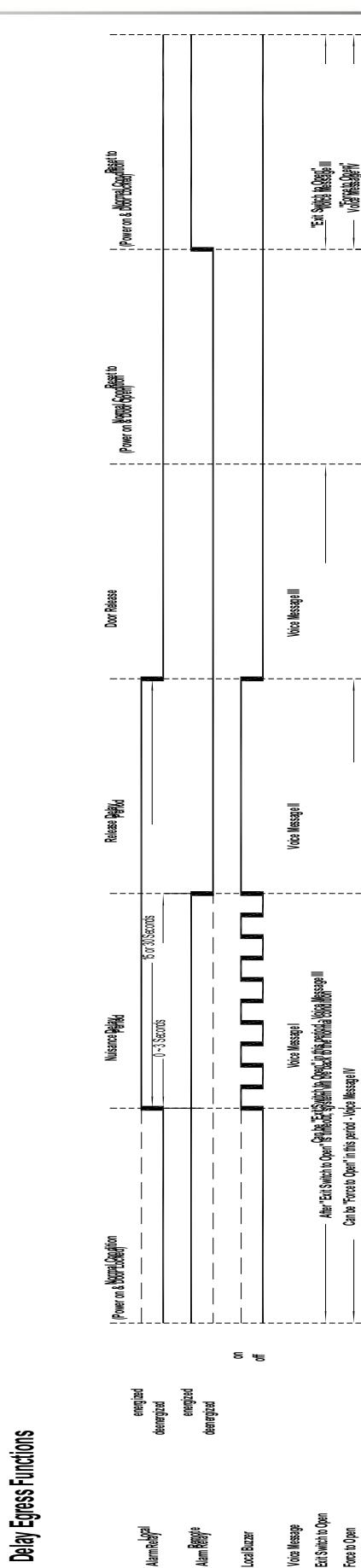
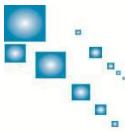
Non BOCA



BOCA

Factory setting: BOCA Disabled (DIP switch 4: ON)

BOCA Relock: After the Release Delay expires, the door unlocks and opens, the door switch changes state and remains open. When the door recloses, a relock delay of 30 seconds begins. If the door has not been open again during the 30 seconds period, the door will relock. If the door has been open again during the 30 seconds period, the relock count will start all over again. The relock time count will not start until the door is closed.



## Early Warning Alarm Functions

In the normal condition, when the door is locked, the local sounder remains off, the Local Alarm Relay remain de-energized, and the Remote Alarm Relay is energized.

The system will start the alarm sequences by having an external force of 15lb or more pushing against on the locked door leaf, and the system will enter the Nuisance Delay Period (can be set manually for 0, 2, 4, or 6 seconds). During the Nuisance Delay Period, the Local Alarm Sounder will activated and generate pulsing warning sound, and the Local Alarm Relay will be energized.

Once the Nuisance Delay Period has expired (i.e continuously having the force pushing against the locked door), the Remote Alarm Period begins. The Remote Alarm Period can be set for 0, 15, 30 seconds or infinity, the Remote Alarm Relay will be de-energized, and the Local Sounder will generate a steady flat sound within this period.

Once the Remote Alarm Period has expired, both Local Alarm Sounder and the Local Alarm Relay will be de-energized, and the Remote Alarm Relay will be energized. System will be reset to the normal condition when the Reset Switch Input is CLOSE.

NOTE 1: If the Remote Alarm Period is set to infinity, it is impossible to have Remote Alarm Period expired

NOTE 2: System can be reset only after Remote Alarm Period is expired

NOTE 3: For infinity setting, reset is functional only after Remote Alarm Period reaches 90 seconds

NOTE 4: DE5700 is the basic model, and it **DOES NOT** equip with sounder or camera.

NOTE 5: DE5700-V/DE5700-VC is equipped with Voice Module which replaces the sounder feature as described above. The Voice Module has an option of English/Spanish/French selectable languages.

### **DE5700-V/DE5700-VC**

DE5700-V and DE5700-VC has a built-in Voice Alarm feature inside the lock body. This feature replaces the sounder to provide a more understandable warning/instruction to the personnel when operating the door. There are four pre-recorded voice as shown below:

Voice I: Unauthorized personnel prohibited  
(Max. 4 second period for Voice I)

Voice III: The door is now unlocked, please exit  
(Max. 8 second period for Voice III)

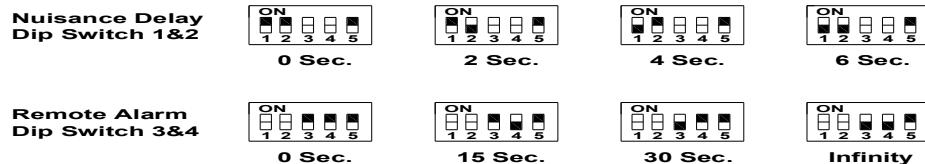
Voice IV: Illegal intruder. The security alarm is activated. Security personnel has been alerted and would arrive momentarily  
(Max. 10 second period for Voice IV)

Voice Module is optional  
“Force to Open” can only be turned off by switching off the system power.  
After “Exit Switch to Open” is expired, system is restored to the normal condition.

## Early Warning Alarm System Status

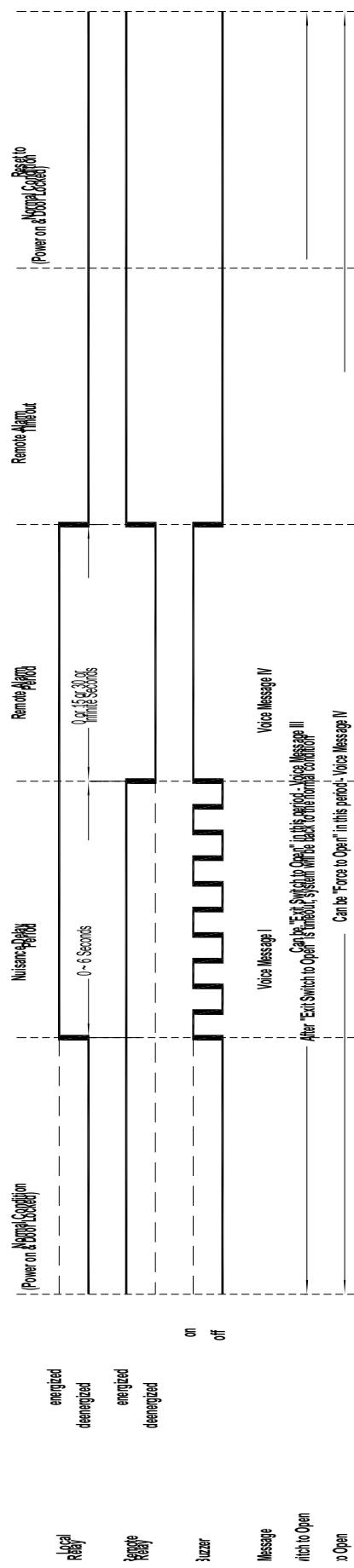
System Status	Light Panel	Local Sounder (DE5700-S and DE5700-SC)	Voice (DE5700-V and DE5700-VC)	Local Alarm Relay	Remote Alarm Relay
Door Open	Red	OFF	OFF	OFF	OFF
Lock Secured	Green (blinks every 5 seconds)	OFF	OFF	OFF	ON
Nuisance Delay Period	Red (fast blinks)	Pulse Sound	Voice I	ON	ON
Remote Alarm Period	Red (slow blinks)	Steady Sound	Voice IV	ON	OFF
Remote Alarm Expires	Red/Green (blinking alternatively)	OFF	OFF	OFF	ON
Force To Open	Red (fast blinks)	Pulse Sound	Voice IV	ON	OFF
Exit Switch To Open	Red	OFF	Voice III	OFF	OFF

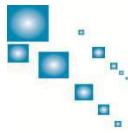
## Dip Switch Setting For Security Door Lock





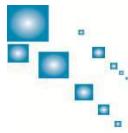
## My Warning Alarm Functions



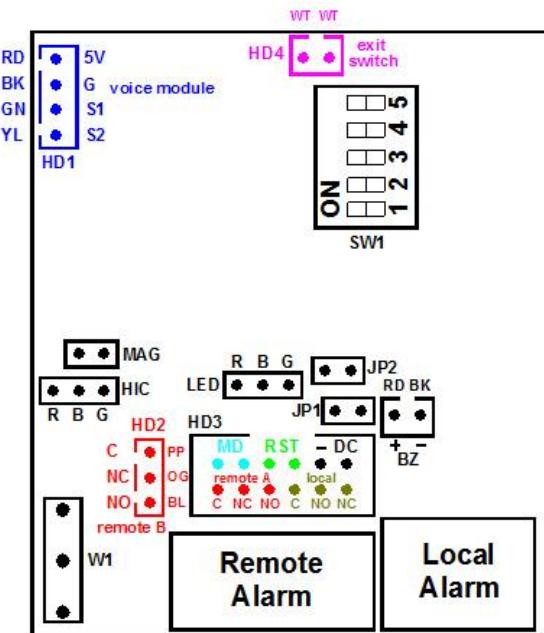


## Power Requirements

Items	DESCRIPTIONS
Power Consumption	12VDC – Max. 0.52A (with all relay on, no sounder) 24VDC – Max. 0.25A (with all relay on, no sounder)
Output Relays	<b>Local Alarm Output</b> Form C: 1A 120VAC, 2A 30VDC <b>Remote Alarm Output</b> 2 Form C: 1A 120VAC, 2A 30VDC
Wiring	12/24VDC Power Input – 2 wires, Red/Black Local Alarm Relay Output – 3 terminals Remote Alarm Relay Output – 2 x 3 terminals Reset Input – 2 terminals Motion Detector Input – 2 terminals Voice Control Output – 4 wires, Red/Black/Green/Yellow Request to Exit Input – 2 wires, White/White 9VDC/max. 1A Power Output – 2 terminals 9VDC/max. 100mA Output to sounder – 2 wires Blue/Red



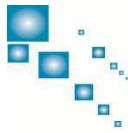
## Settings and Wiring



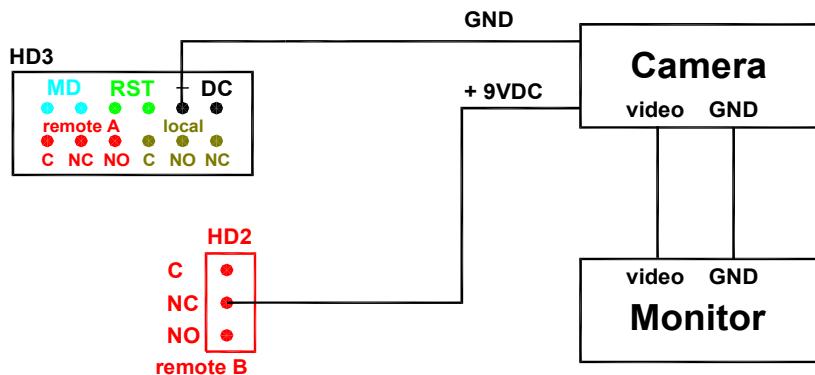
BZ: 9VDC output to Sounder  
 MAG: connect to magnet  
 HIC: connect to Hall IC  
 LED: connect to bi-color LED  
 W1: connect to micro switch  
 JP1: short to connect 9VDC to C on remote B  
 JP2: open to enable low voltage detection; short to disable low voltage detection

### Functions

TERMINALS	DESCRIPTIONS
Motion Detector Input (MD on HD3)	Normally Open, these two wire inputs are used for Delay Egress Function. The system will start the delay sequences only when these two inputs are shorted.
Voice Control Output (S2, S1, G, 5V on HD1)	Four wire outputs to control Voice Module.
Request to Exit Input (EXIT on HD4)	Normally Open, the lock will release for 5 seconds when these two wire inputs are momentarily shorted, and will release all the time as long as these two wire inputs are shorted.
Reset Switch Input (RST on HD3)	Reset Switch Input from OPEN to CLOSE will reset the system back to the normal condition.
9VDC Power Output	System provides 9VDC/max. 1A output on HD2 NC when JP1 is short.
Low Voltage Detection	To release the lock when system detects 9VDC low voltage.
Remote Alarm Relay "off"	Remote Alarm Relay is off only when lock is released or when lock is going to be released or when lock might be forced to be released.



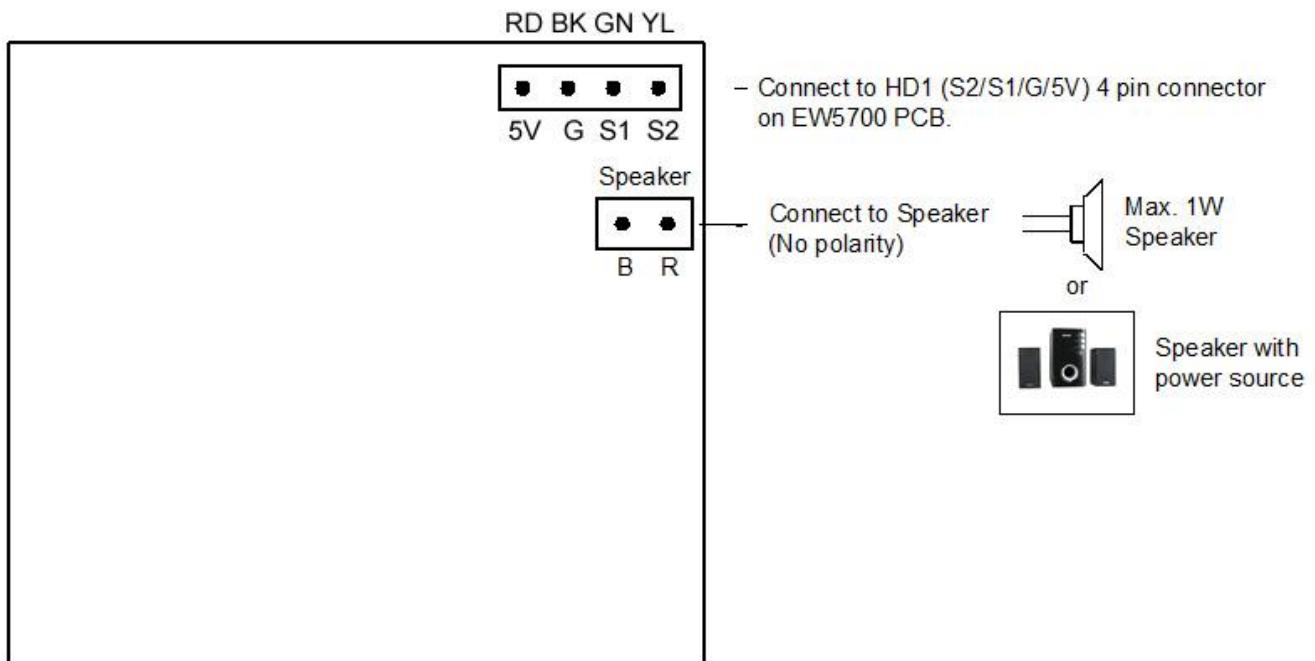
## Camera Wiring Diagram

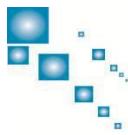


**Note:**

1. System can provides one + 9VDC output on HD2 NC if JP1 on the PCB is short.
2. Please short JP1 and connect Camera positive terminal to HD2 NC.

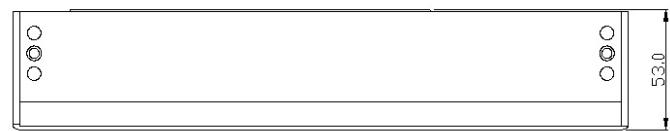
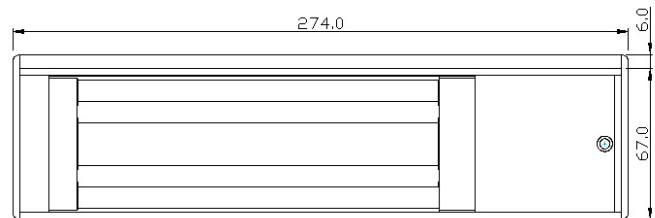
## Voice Module



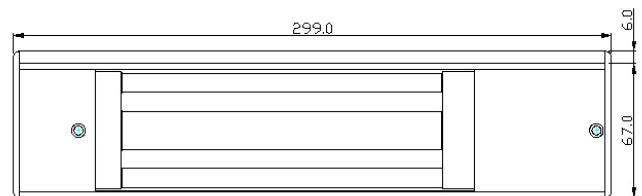


## DE5700 Series Dimensions

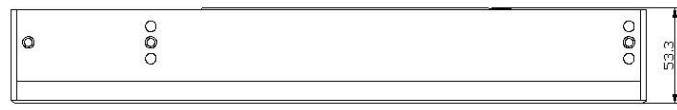
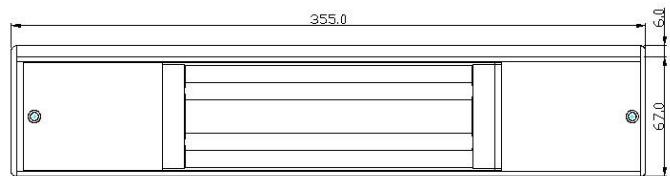
### DE5700



### DE5700-S/DE5700-V



### DE5700-SC/DE5700-VC



## **DE5700 Series Models and Accessories**

<b>DE5700 SERIES</b>	<b>MODEL NUMBER</b>	<b>DESCRIPTION</b>
Models	DE5700	Delayed Egress EM lock without Sounder/Voice Module/Camera
	DE5700-S	DE5700 with Sounder
	DE5700-V	DE5700 with Voice Module
	DE5700-SC	DE5700 with Sounder and Camera
	DE5700-VC	DE5700 with Voice Module and Camera