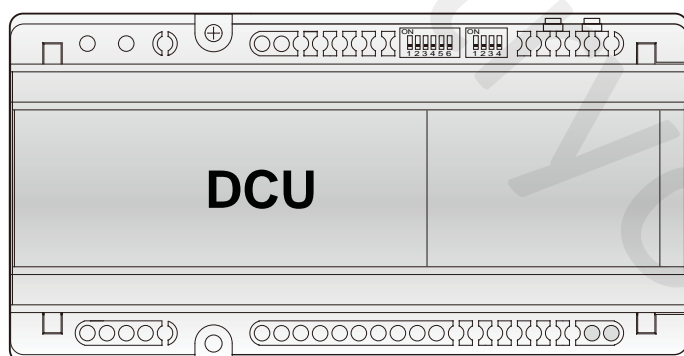


# DCU unit

## User Manual



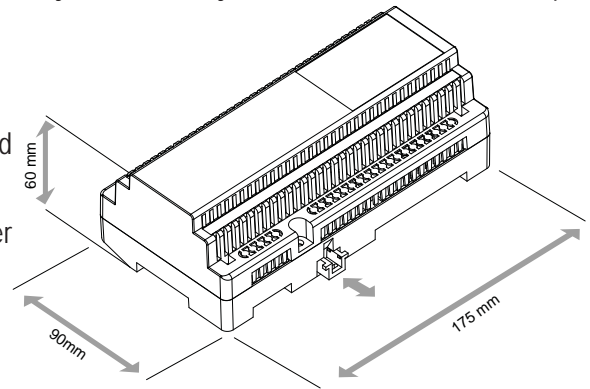
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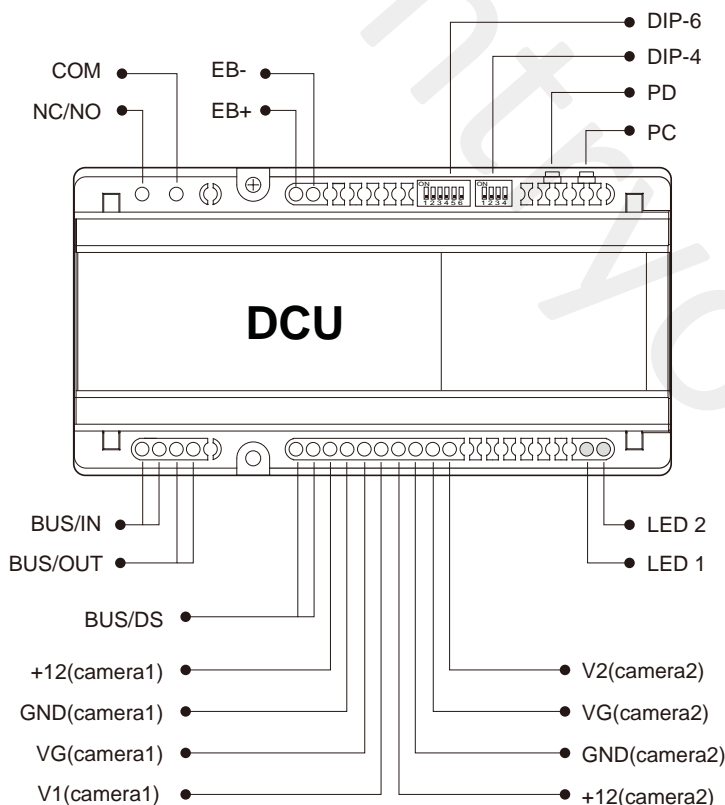
# DCU - User Manual

The DCU unit is a Multi function device designed for the 2 wire video entry systems to connect 2 CCTV cameras and control light or lock (one light and one lock can be supported in the system, and they must be connected to two separate DCU's).

- Supply power to the Camera directly.
- Two different lock control mode: Normally Closed Mode and Normally Open Mode.
- Two different light control mode: Delay Mode and Trigger Mode, and light-on-by-calling function is available.
- Unlock time or Light delay time set by DIP switches.
- Can be linked up to 3 units to control up to 6 Cameras.



## 1. Terminal Descriptions



- **COM:** Contact relay Common terminal
- **NC/NO:** Contact relay Normally-Closed / Normally-Opened terminal
- **EB+, EB-:** Contact activate button
- **DIP-6:** Main DIP switches
- **DIP-4:** Switches for Lock/Light control
- **PC:** Repeated Code Checking, if there are repeated Code setting on all the DCUs and Door panels, the LED1 and LED 2 will flash for 10 seconds
- **PD:** Video test button, press this button, the Door panel will call the Monitor with User Code 01, and output the Video from Camera 1.
- **BUS/IN, BUS/OUT:** Connect to the Bus Line
- **BUS/DS:** Connect to Door panel
- **LED1:** Lock/Light indicator
- **LED2:** Power/Video signal indicator
- **+12:** Power+ for CCTV camera
- **GND:** Power- for CCTV camera
- **VG:** Video Ground for CCTV camera
- **V1, V2:** Video Core for CCTV camera

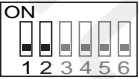











## 2. Specifications

- **Power Consumption:** 0.25W in standby, 0.5 W in acting
- **NC/NO, COM exchange contact:** 250V ac 7A
- **Monostable relay activation time:** adjustable from 1 second to 10 minutes  $\pm 5\%$
- **Working temperature:**  $-5^{\circ}\text{C}$   $+45^{\circ}\text{C}$
- **CCTV Power Output 1:** 12V 500mA
- **CCTV Power Output 2:** 12V 500mA
- **Input Frequency:** 47~63 Hz
- **Leakage Current:**  $>2\text{mA}$  / 240Vac

### 3. DIP switches settings



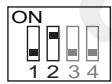

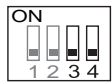

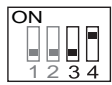

**DIP-6 settings:** The DIP-6 switches are for DCU Code and Camera control settings.

- **DCU Code:** A unique identification of the device (range from 1~3), it has the same Code level as the door panel. Total of 4 door panels or 3 DCUs (plus one door panel) can be installed in one system; for example, if 2 DCUs are installed, a maximum 2 door panels can be installed to the system.
- **Bit-1 and Bit-2:** DCU Code setting. Note that the DCU can not be set to Master(Bit-1 = Bit-2 = **OFF**). Only one door panel can be set to Master.
- **Bit-3:** Light control mode / Unlock mode setting:
  - » When control a light, set to **ON** to enable the light-on-by-calling function: the light will automatically turn on when the visitor calls from the door panel; set to **OFF** to disable this function;
  - » When controlling a lock, set to **ON** to select Normally Closed unlock mode, set to **OFF** to select Normally Open unlock mode.
- **Bit-4:** Camera quantity setting. If connecting 1 CCTV camera, set to **ON**; set to **OFF** for 2 CCTV cameras. Multiple DCU must be used when more than 2 CCTV cameras are to be connected.
- **Bit-5 and Bit-6:** Switching time between the 2 CCTV cameras (if connected 2 cameras), this setting become invalid when only one CCTV camera is connected.

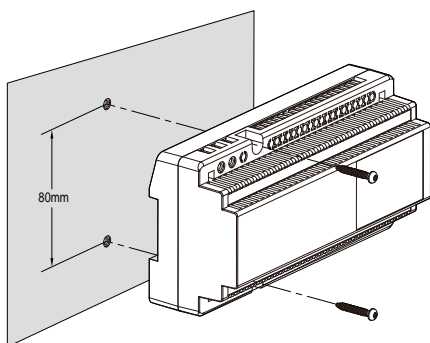
Bit definition	Bit state	Function Descriptions
Bit-1 and bit-2 DCU Code setting		Invalid for DCU.
		set to the First DCU.
		set to the Second DCU.
		set to the Third DCU.
Bit-3 Light control or unlock mode setting		1. When connect a light, disable light-on-by-calling; 2. When connect a lock, select Normally Open mode.
		1. When connect a light, enable light-on-by-calling; 2. When connect a lock, select Normally Closed mode.
Bit-4 Camera quantity setting		Connect 2 CCTV cameras to this DCU.
		Connect only one CCTV camera to this DCU.
Bit-5 and bit-6 Switching time setting		Switching time = 5 second.
		Switching time = 10 seconds.
		Switching time = 15 seconds.
		Switching time = 20 seconds.

**DIP-4 settings:** The DIP-4 switches are for Light / Lock control settings.

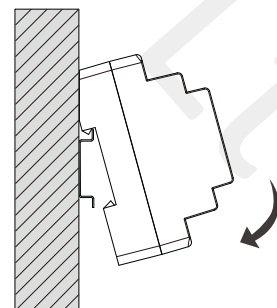
- Bit-1 and Bit-2: Control Mode setting. There are four different settings
  - » When no light or lock connected, set Bit-1 = Bit-2 = OFF;
  - » When connect a electronic lock, set Bit-1 = ON, Bit-2 = OFF;
  - » When connect a light, and use the Delay Mode, set Bit-1 = OFF, Bit-2 = ON;
  - » When connect a light, and use the Trigger Mode, set Bit-1 = ON, Bit-2 = ON.
- Delay Mode and Trigger Mode:
  - » Delay Mode: the light will automatically turn off after a specified period of time (can be set to 1, 3, 5 or 10 minutes by the Bit-3 and Bit-4 switches);
  - » Trigger Mode, the light will be turned on and off manually by the Light Button or the screen.
- Bit-3 and Bit-4: Light delay time or Unlock time setting.
  - » When connect a light, 1, 3, 5 or 10 minutes delay time can be chosen, this setting will be invalid when the Control Mode is set to Trigger Mode(Bit-1 = ON, Bit-2 = ON).
  - » When connect a lock, 1, 3, 5 or 10 seconds unlock time can be shosen.

Bit definition	Bit state	Function Descriptions
Bit-1 and bit-2 Control Mode setting		Do not control any light or lock.
		lock control.
		light control with Delay Mode.
		light control with Trigger Mode.
Bit-3 and Bit-4 Light Delay time or Unlock time setting		10 minutes light delay time or 10 seconds unlock time
		5 minutes light delay time or 5 seconds unlock time
		3 minutes light delay time or 3 seconds unlock time
		1 minutes light delay time or 1 seconds unlock time

## 4. Mounting

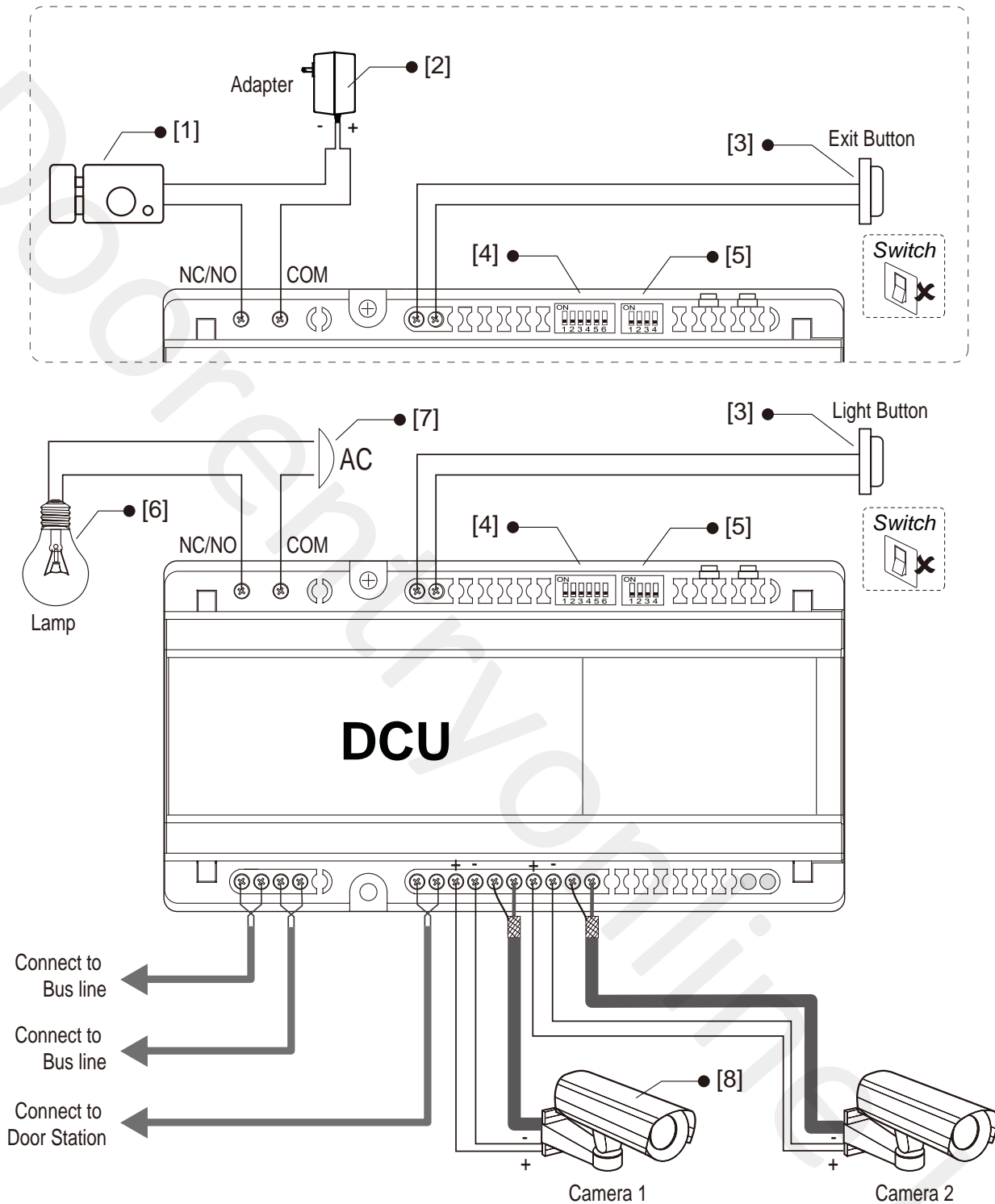


Mounting method 1: Direct mounting. use two screws to fix the DCU on the wall Directly



Mounting method 2: DIN rail mounting. Slot the DCU on the DIN rail.

## 5. Terminal Connections



**[1]** When connecting a lock release, set Bit-1 = ON, Bit-2 = OFF on DIP-4 to select lock control. If the lock is a Power-on-to-Unlock type, set Bit-3 = OFF on the DIP-6 to select Normally Open mode), set Bit-3 = ON to select Normally Closed mode when connecting a Power-Off-to-Unlock type.

**[2]** Please use the correct power supply for the lock.

**[3]** Please connect with an exit button, do not connect with a switch.

**[4]** DIP-6 switches, must be set correctly.

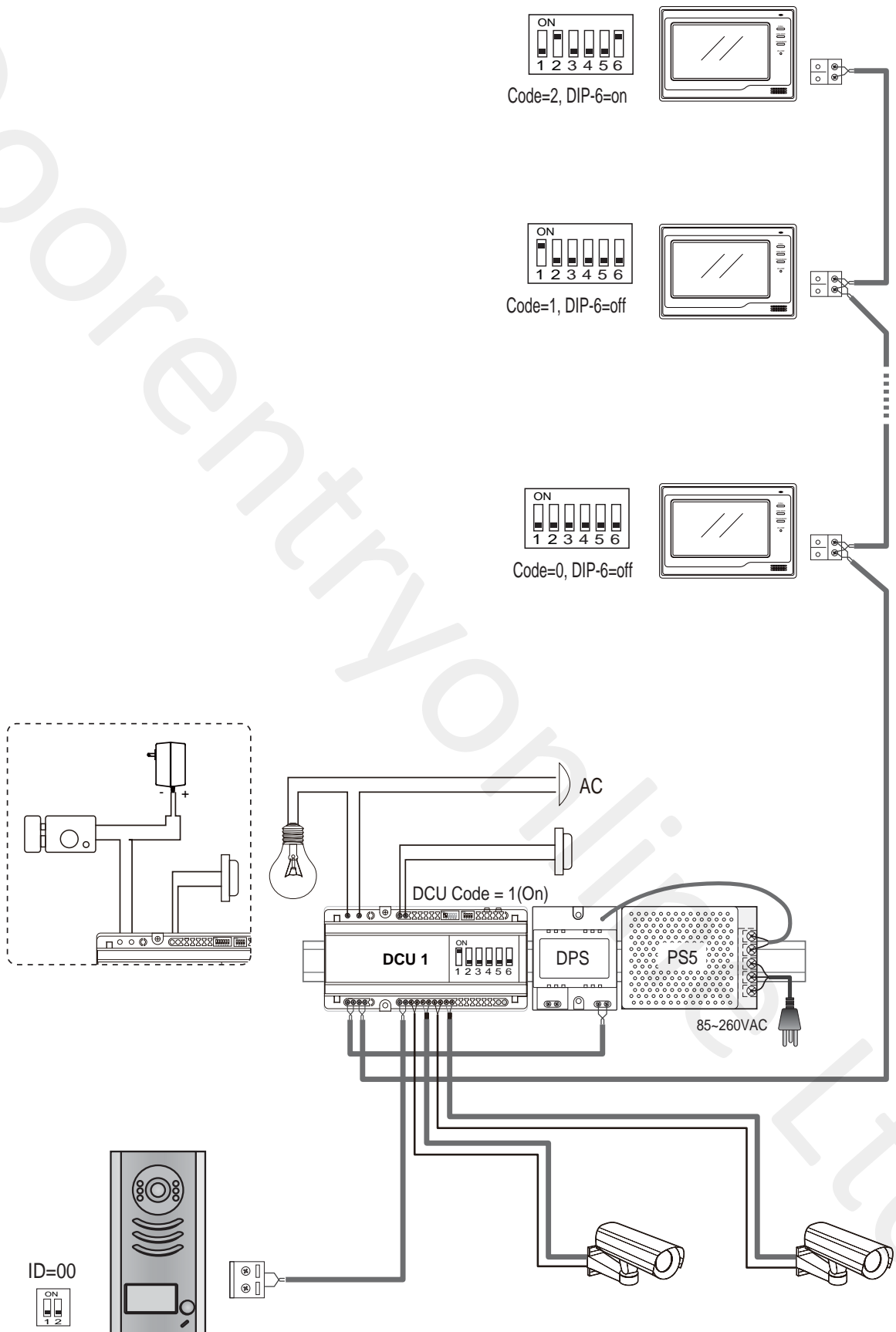
**[5]** DIP-4 switches, must be set correctly.

**[6]** When connecting a light, set Bit-1 = OFF, Bit-2 = ON or Bit-1 = ON, Bit-2 = ON on DIP-4 to select one of the light control modes.

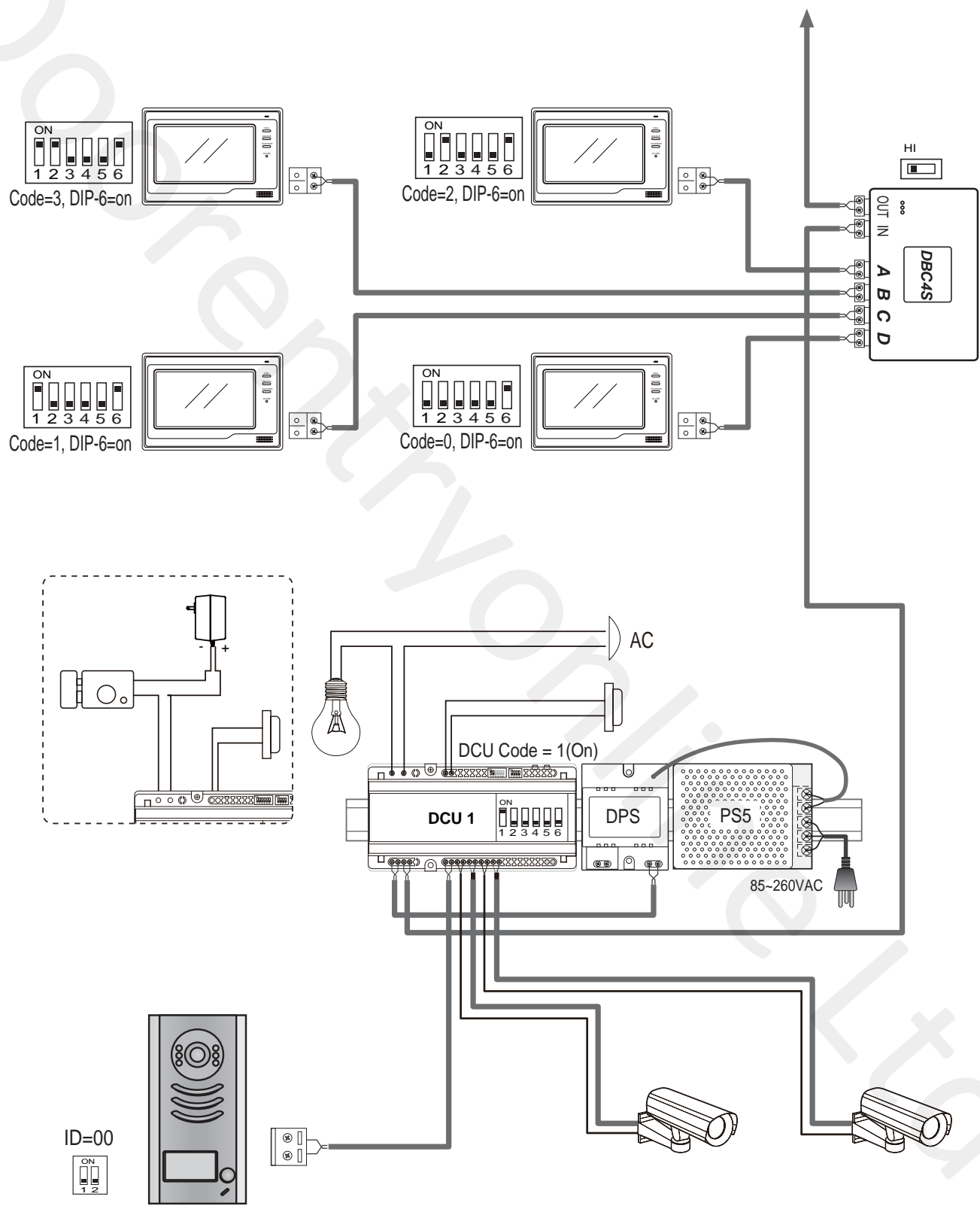
**[7]** Connect to AC electricity from 100~250V.

**[8]** CCTV camera, the rated power of the camera must be less than 12V 500mA.

## 6. Basic IN-OUT Connection

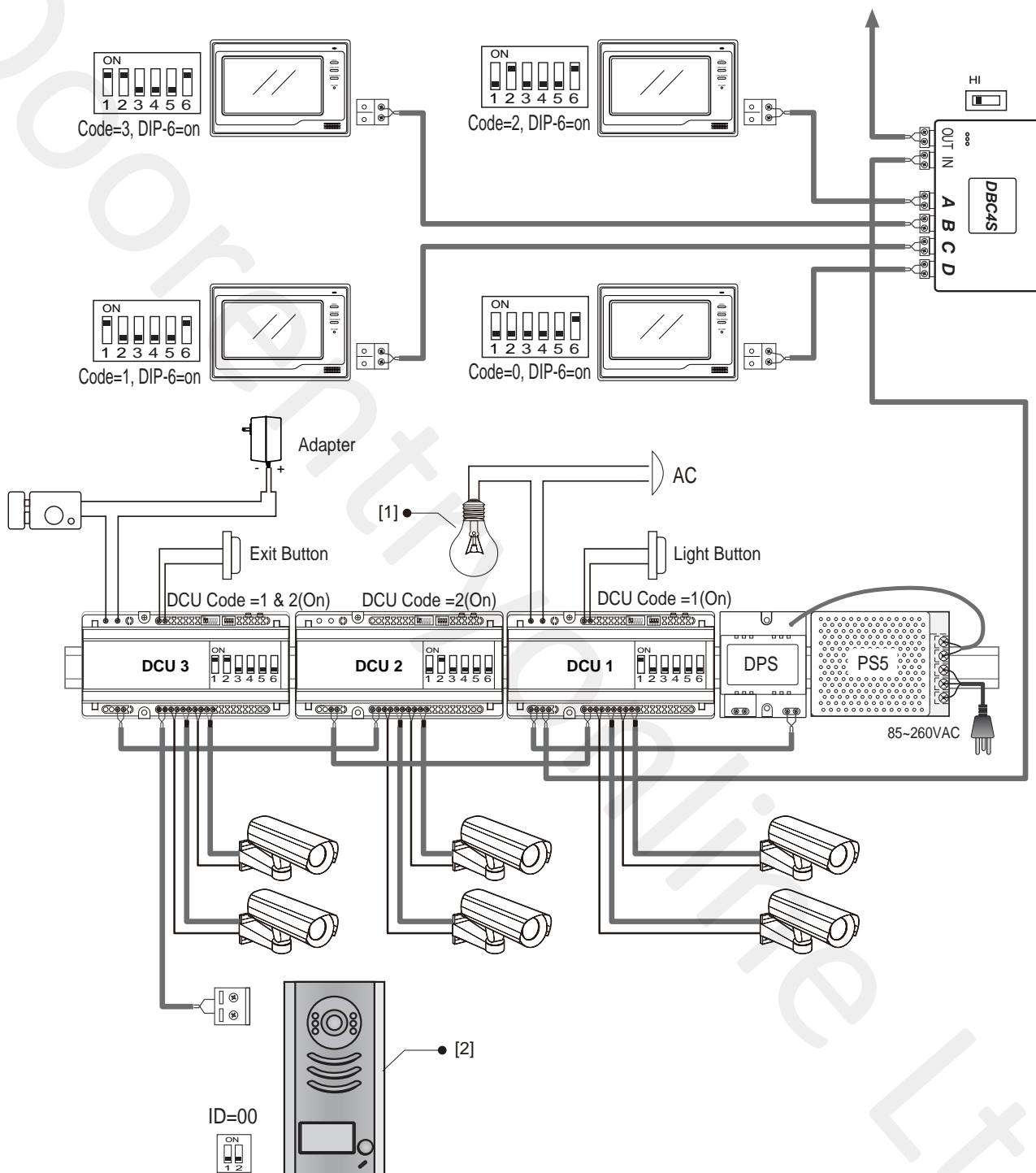


# 7. Star topology Connection





## 8. One Door Panel and Three DCU Connection

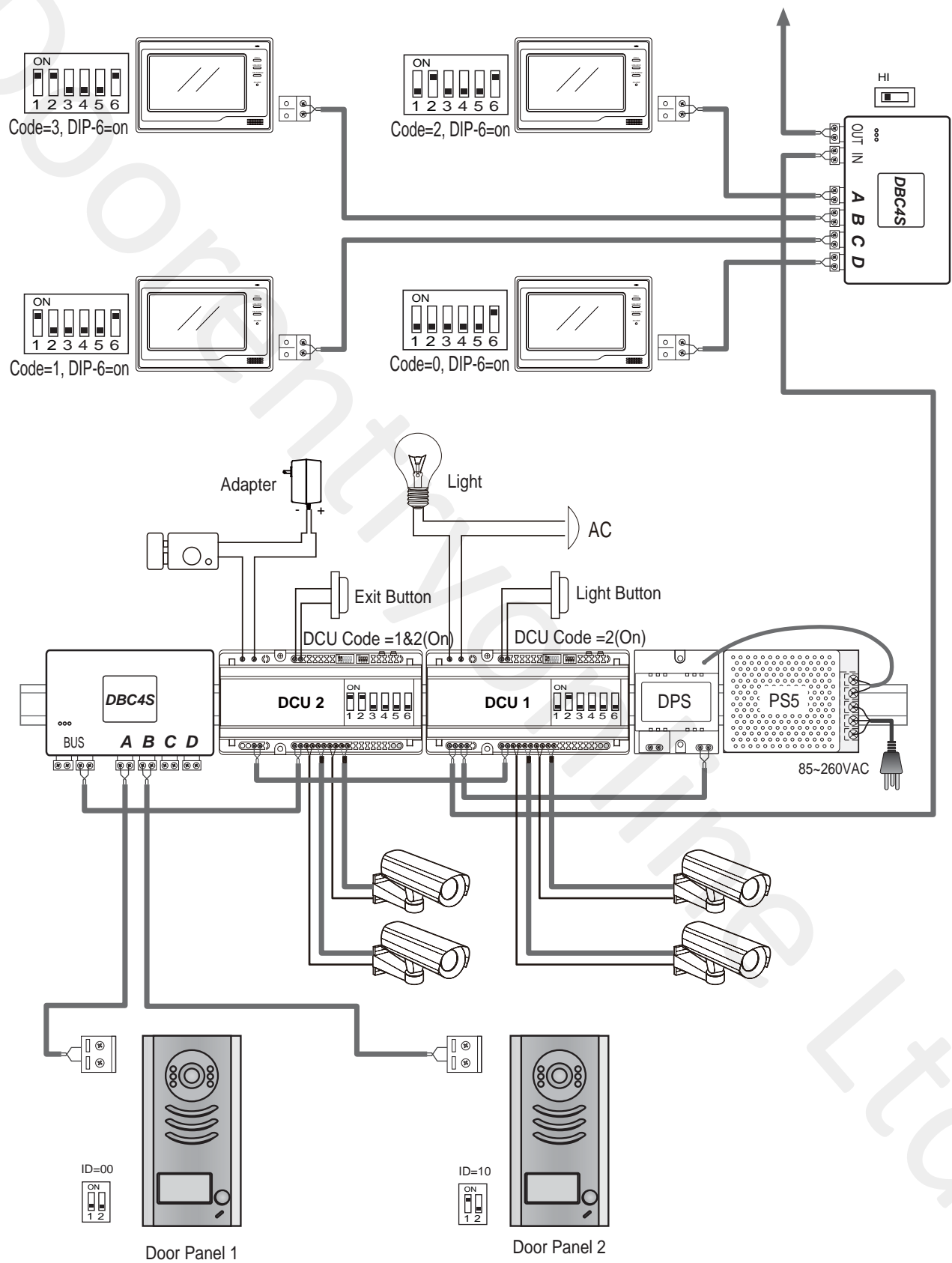


**[1]** Only one DCU can be connected with a lock or light in the system.

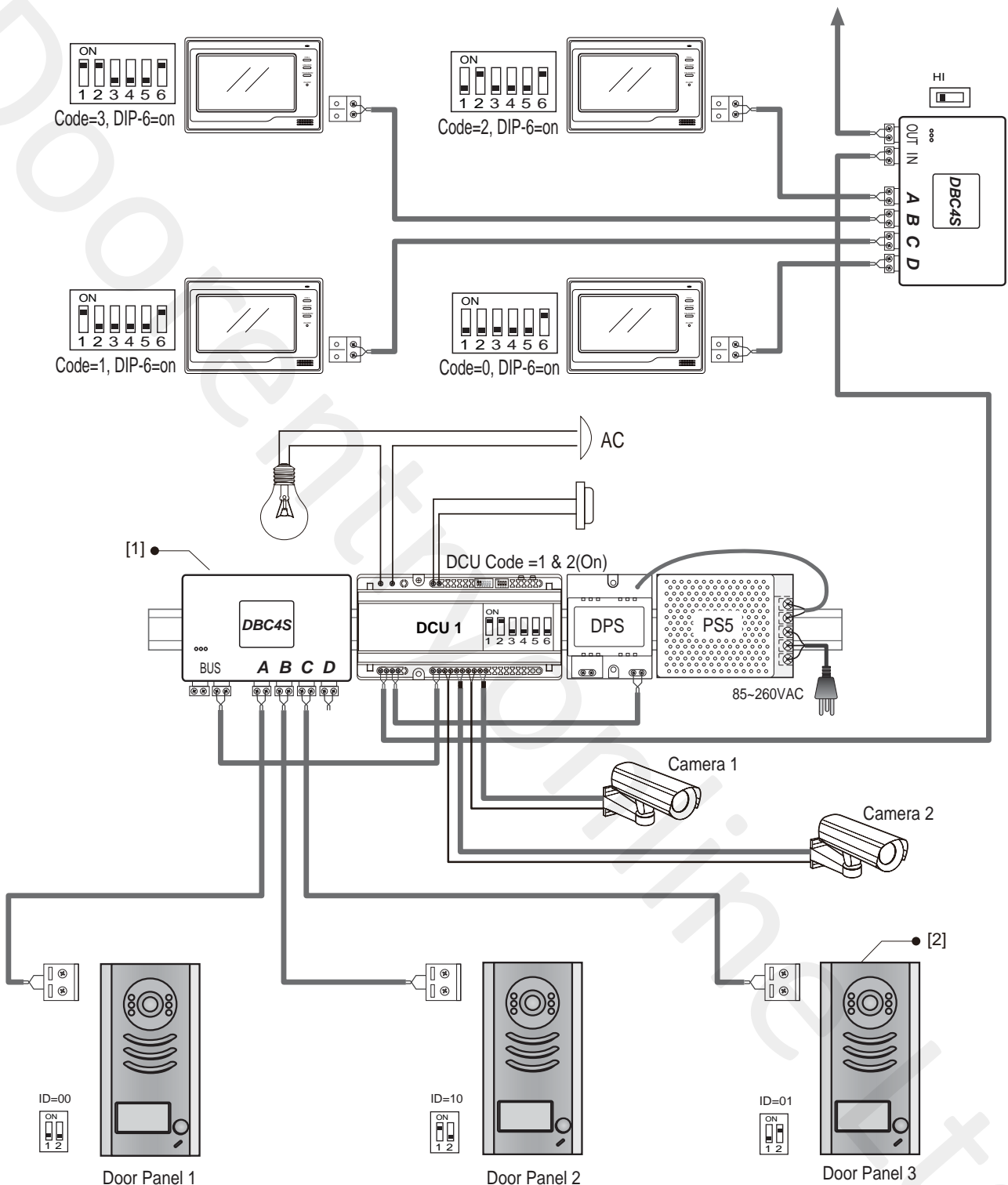
**[2]** Only one door panel can be connected when using

3 DCU units, and the door panel must be connected to the DCU which is the furthest from the DPS unit. The door panel must be set to Master (ID=00)

## 9. Two Door Panels and Two DCU connection



## 10. Three Door Panels and One DCU Connection



[1] Extending Door Panels with a DBC4S unit

[2] Maximum of 3 Door Panels can be connected when using one DCU unit

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