

# PRO-DC4 INSTALLATION & SETUP GUIDE

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**CAME**   
**ENTROTEC**

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## INSTALLATION SPECIFICATION

It is the responsibility of the installer to follow CAME Entrotec's installation and cable specification as well as ALL relevant wiring regulations. Failure to comply with CAME Entrotec's installation and cable specification may result in erratic operation of equipment and could invalidate any warranty.

Installations must comply with the following applicable standards:

- **BS 7671:** Requirements for electrical installations. IET Wiring Regulations 18th Edition.
- **The Electricity at Work Regulations 1989**
- **ANSI/TIA-568.0-D:** Generic Telecommunications Cabling for Customer Premises.
- **ANSI/TIA-568.1-D:** Commercial Building Telecommunications Cabling Standard.

IET Wiring Regulations 18th Edition: Regulation 444 (MEASURES AGAINST ELECTROMAGNETIC DISTURBANCES) imposes requirements for segregation of circuits.

IET Wiring Regulations 18th Edition: Regulation 528 (PROXIMITY TO WIRING SYSTEMS TO OTHER SERVICES) imposes requirements for segregation of door entry / access control circuits (Band I), 230VAC mains circuits (Band II) and other higher voltage circuits.

IET Wiring Regulations 18th Edition: Regulations 541 and 542 impose requirements for earthing and bonding conductors. Ensure ALL metalwork is bonded to the buildings earth, this includes call panels, exit switches, cabinets and metal conduit. Ring terminals and earth points are provided on call panels and cabinets to terminate earth cables, ensure these connections are made.

### **WARNING - ISOLATION OF ELECTRICAL EQUIPMENT**

In compliance with **The Electricity at Work Regulations 1989**, electrical equipment should be made dead to prevent danger while work is carried out on or near that equipment. No person shall be engaged in any work activity on or so near any live conductor.

## WARRANTY AND SUPPORT

CAME Entrotec systems are renowned for their reliability and have a 2-year warranty on all CAME Entrotec manufactured products as standard. This warranty does not cover water damage, vandalism, mains electrical faults, lightning strikes, damage caused by miswiring or cable faults.

CAME Entrotec offer complimentary training courses and telephone support:  
**01506 886 235** - 9am to 5pm Mon-Fri.  
**technicalsupport@entrotec.co.uk**

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# 1 CABLE SPECIFICATION

The cabling system is based on Unshielded Twisted Pair **Category 5e** (Cat5e) or **Category 6** (Cat6). The cable must be **annealed pure copper**, meeting or exceeding the requirements defined in the standard ANSI/TIA 568 C.2.

Failure to comply with this cable specification may result in erratic operation of equipment.

The specification below shows the minimum cable requirements, allow for extra cabling if redundancy is required.

	Connection	Cable
<b>A</b>	Door controller to each call panel:	2x Cat5e or Cat6.
<b>B</b>	Lock Relay to locks:	2x 1.5mm <sup>2</sup> multi-stranded flex or singles (route through any exit/fire switch or break glass for fail safe operation).
<b>C</b>	Lock Relay to exit switch:	1 Pair UTP (2 cores), Cat5e or Cat6.
<b>D</b>	Lock Relay to fire switch:	1 Pair UTP (2 cores), Cat5e or Cat6.

## 1.1 TYPICAL CONFIGURATION

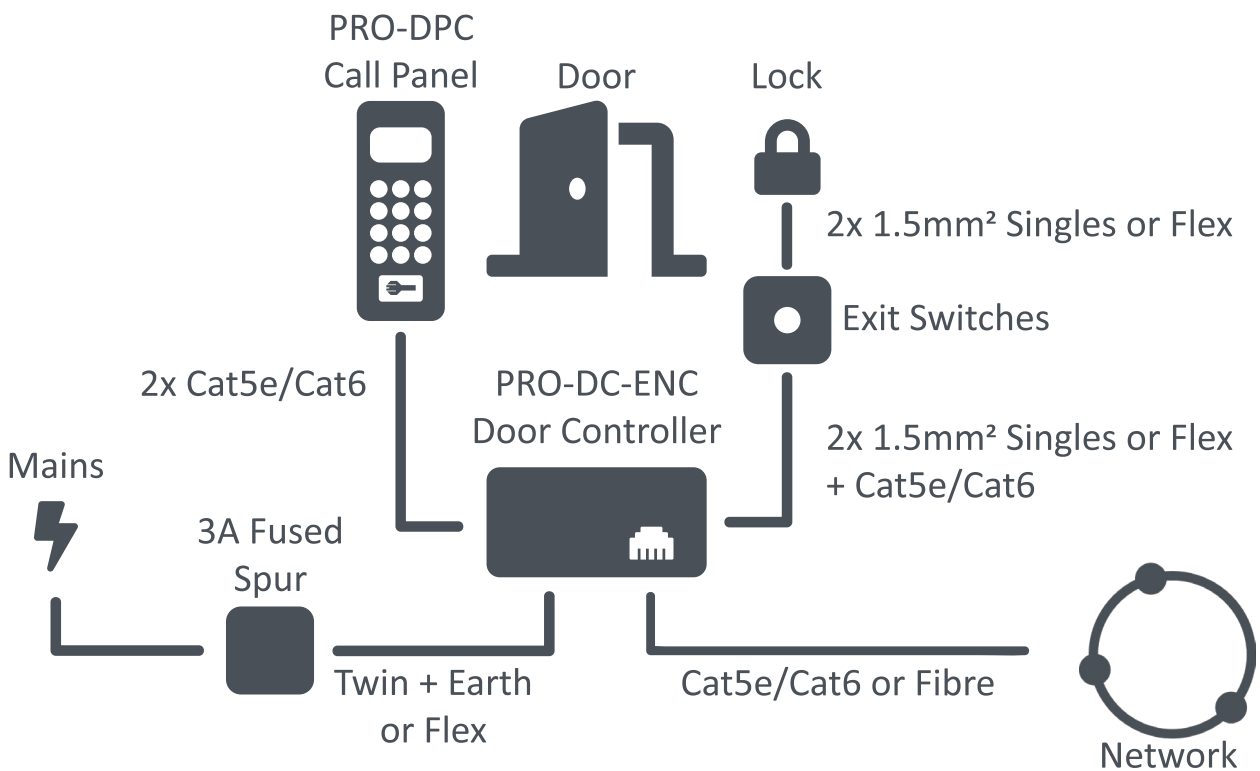


FIGURE 1-1

### **i** NOTE

For setup of the Call Panel refer to the PRO-DP\* Installation Guide.

## 2 OVERVIEW

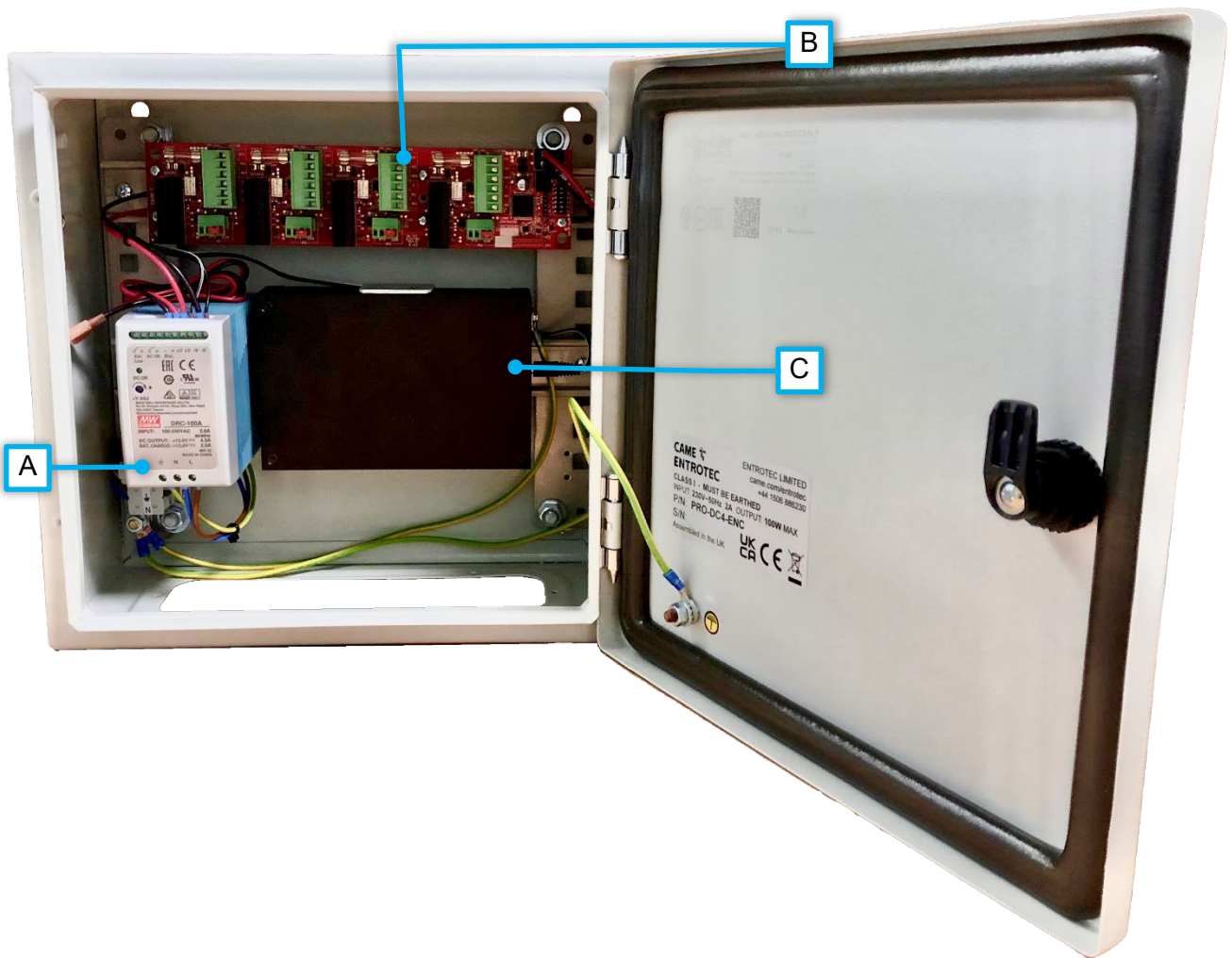


FIGURE 2-1

	Item	Connection Detail
<b>A</b>	Power Supply Unit (PSU)	Section 3 - Page 6
<b>B</b>	Secure Lock Relay	Section 4 - Page 7
<b>C</b>	Network Switch	Section 5.2 - Page 9

### 3 POWER SUPPLY

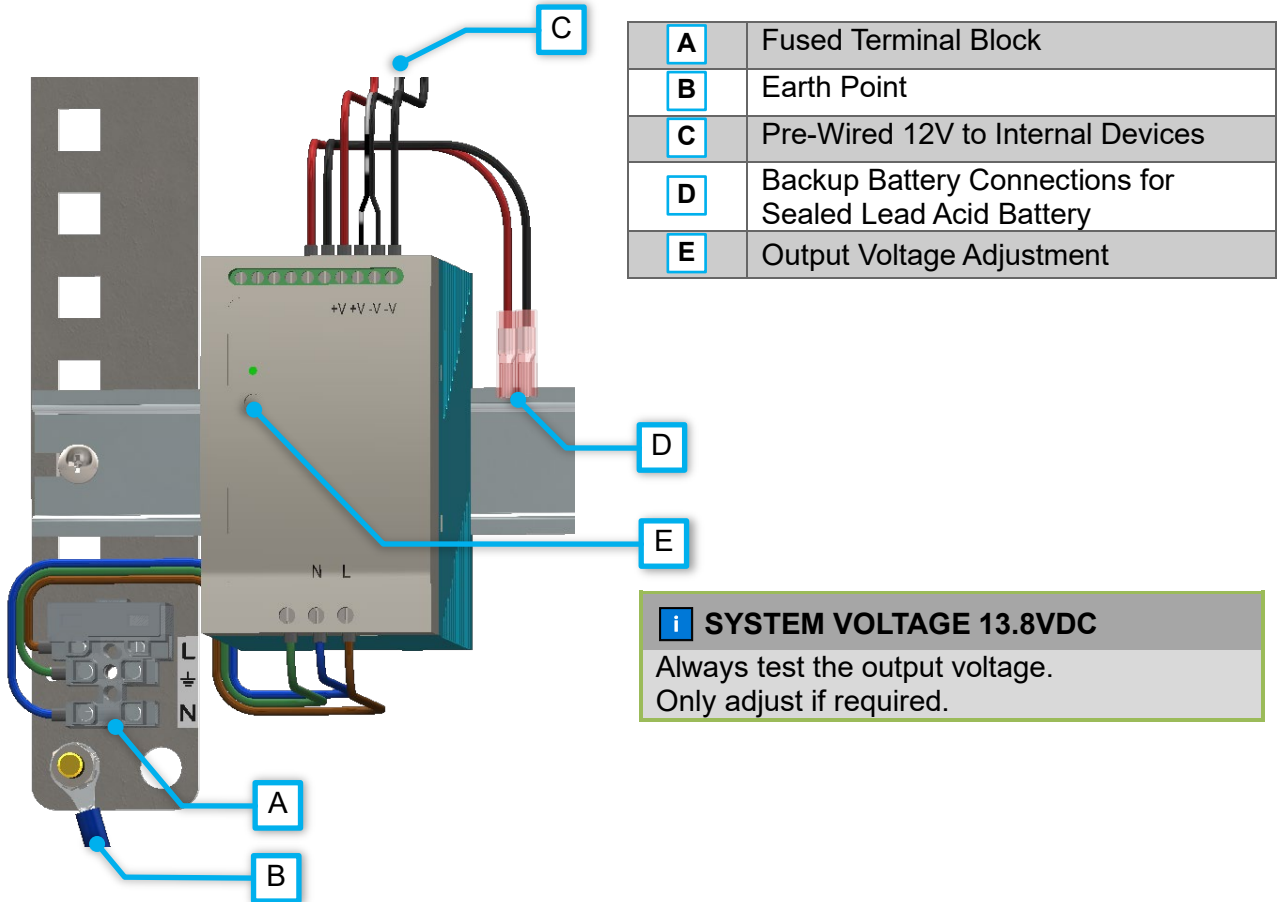


FIGURE 3

#### 3.1 MAINS SUPPLY CONNECTIONS

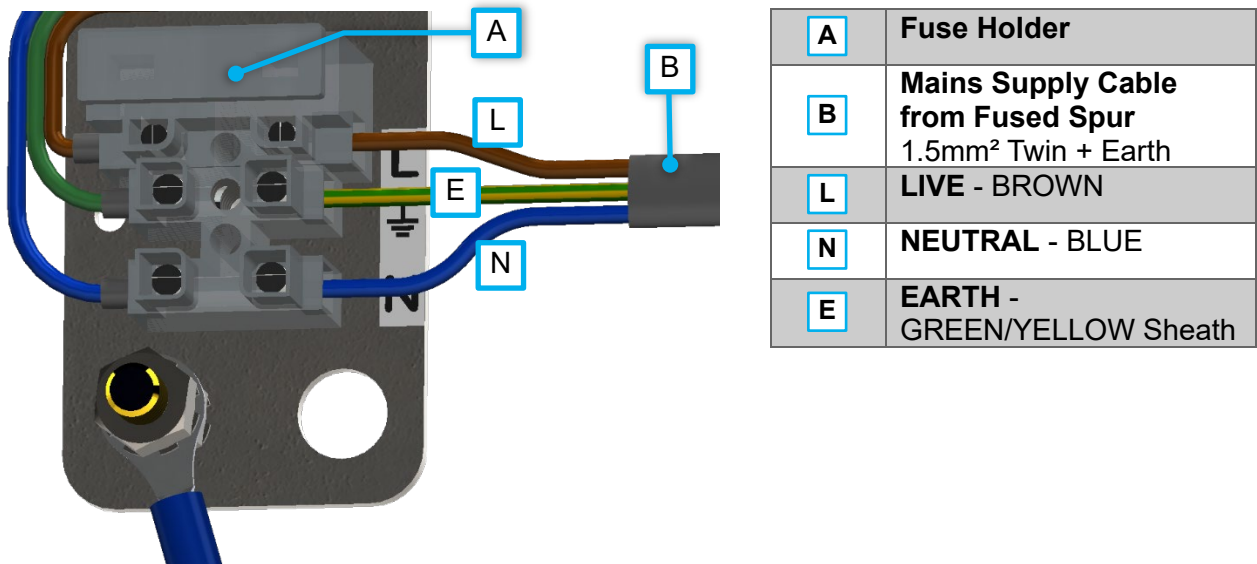


FIGURE 3-1

**⚠ WARNING**

Isolate mains supply before connecting.

# 4 SECURE LOCK RELAY

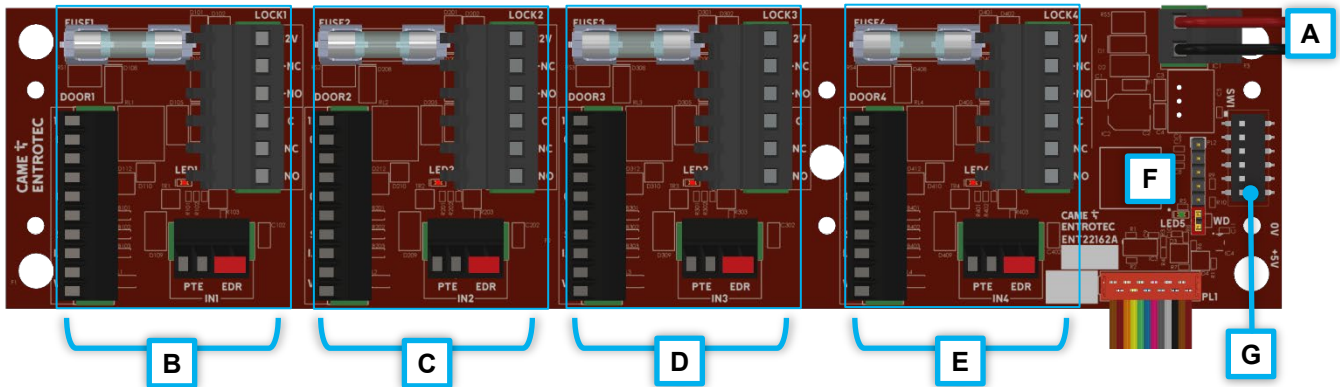


FIGURE 4 - SLR WITH FACTORY FITTED CONNECTIONS

<b>A</b>	DC IN - Power Input
<b>B</b>	Channel 1
<b>C</b>	Channel 2
<b>D</b>	Channel 3
<b>E</b>	Channel 4
<b>F</b>	PL2 - Watchdog Link (bottom pins) and Heartbeat LED
<b>G</b>	SW1 - RS485 Address + Options

## 4.1 INPUT + EXIT SWITCH CONNECTIONS

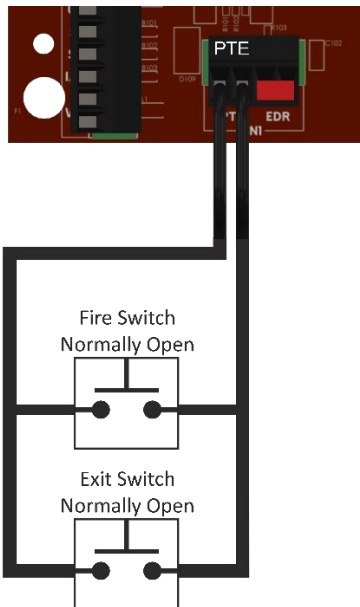


FIGURE 4-1

For double pole push to exit / fire switches with fail open locks, see section 4.2.

## 4.2 FAIL OPEN LOCK CONNECTION

Connection for fail open locks (power to hold), e.g. magnetic locks.

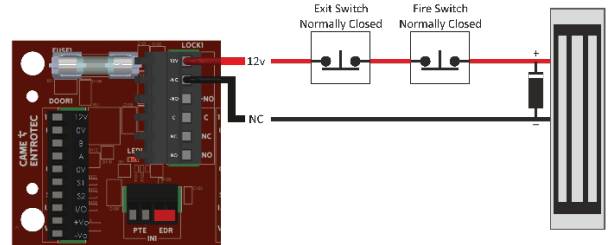


FIGURE 4-2

## 4.3 FAIL CLOSED LOCK CONNECTION

Connection for fail closed locks (power to release), e.g. electric strike.

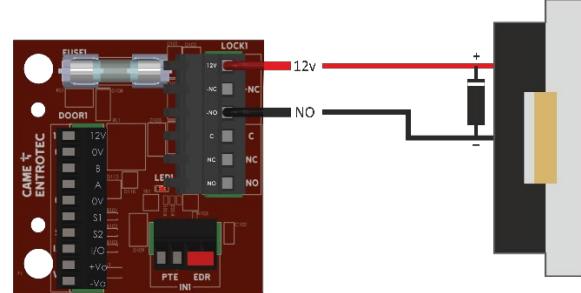


FIGURE 4-3

## 4.4 EMERGENCY DOOR RELEASE

For fail-safe door release operation, remove EDR link and connect a Volt-free Normally Closed circuit (open-circuit to unlock).

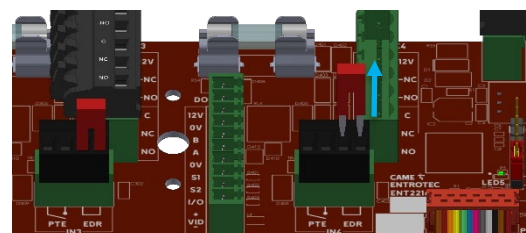


FIGURE 4-4 – E.G. FIRE ALARM DROPOUT APPLICATIONS



## 4.5 LOCK SUPPRESSION

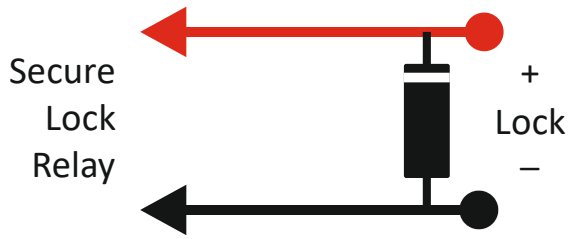


FIGURE 4-5 - 1N4007 DIODE FITTED AT LOCK

CAME Entrotec recommend locks with built in suppression. If such a lock is not being used it is **ESSENTIAL** to fit suitable suppression, as close to the lock as possible. This prevents back EMF and spikes from damaging equipment and causing erratic operation.

### ⚠ WARNING

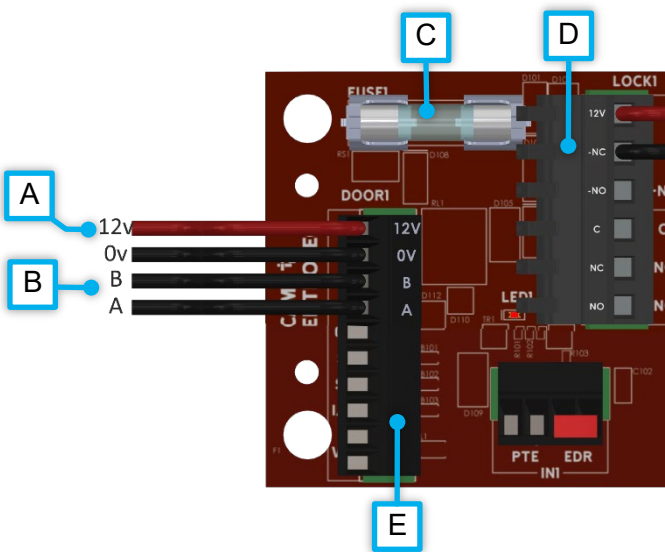
Failure to fit adequate suppression may invalidate any warranty.

### i SUITABLE SUPPRESSION

CAME Entrotec supply 1N4007 diodes.

## 5 CALL PANEL CONNECTIONS

### 5.1 CONNECTIONS FROM SLR



<b>A</b>	12VDC Connections to Call Panel 12v, 0v
<b>B</b>	RS485 Data to Call Panel
<b>C</b>	<b>FS1-FS4</b> - Call Panel Supply Fuses (1.25 Amp Fast Acting)
<b>D</b>	<b>LOCK1-4</b> - Not Used
<b>E</b>	<b>DOOR1-4</b> - Call Panel Connections

FIGURE 5-1



**5.2 CONNECTIONS AT PANEL**



FIGURE 5-2

	Connection	Cable Type	Detail
<b>A</b>	RS485 from Call Panel Splitter	1x Cat5e or Cat6	1 Pair UTP - RS485A + RS485B
<b>B</b>	12VDC from Call Panel Splitter		1 Pair UTP - 12v (White) 2 Pair UTP - 0v (Black)
<b>C</b>	Ethernet to Network Switch	1x Cat5e or Cat6	RJ45 - T568B

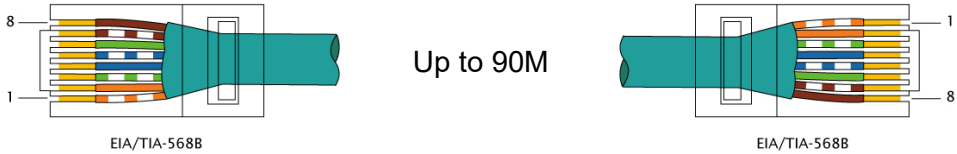


FIGURE 5-3 - EIA/TIA-568B COLOUR CODE

# 6 PAIRING SECURE LOCK RELAY WITH CALL PANEL

## 6.1 CONFIRM DOOR NO. OF CALL PANEL

- i. Connect a laptop or PC to the same network as the Call Panel.
- ii. Use a web browser and enter the IP address of the Call Panel in to the address bar.
- iii. Login to the call panel using the username **admin** and the device admin password.
- iv. Navigate to Local Settings > Basic.
- v. Check the **Door No.** - each Call Panel on a block should have a unique number.

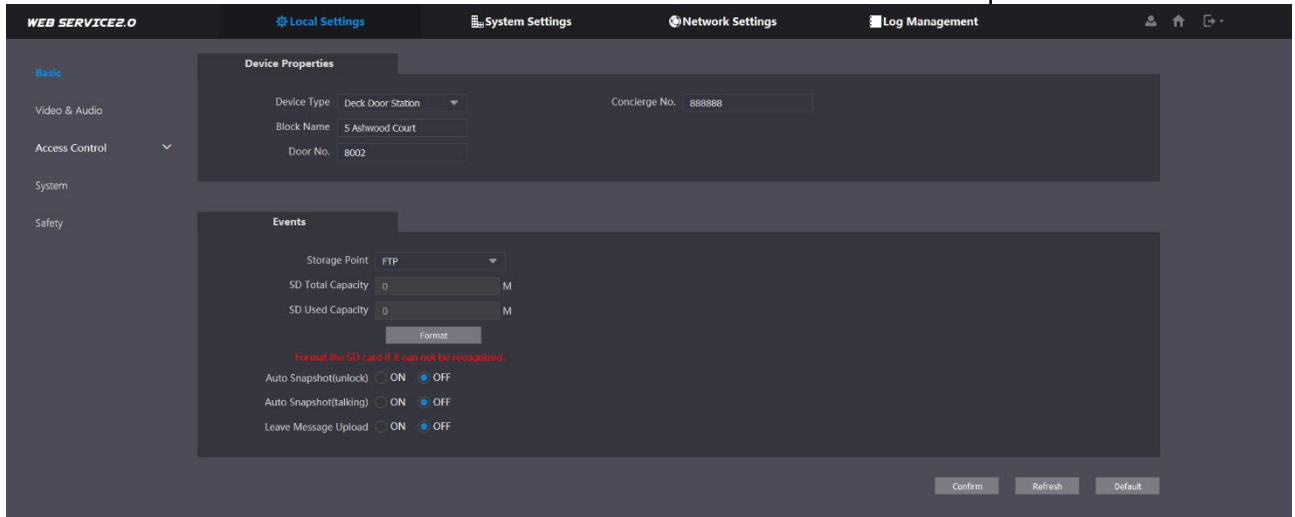
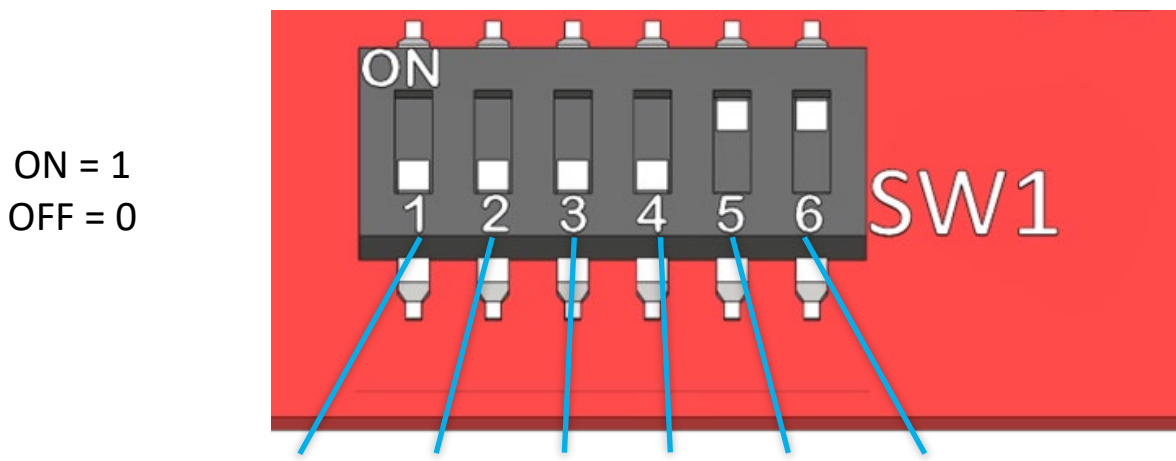


FIGURE 6-1

## 6.2 SECURE LOCK RELAY RS485 ADDRESS

- The Secure Lock Relay has connections for up to 4 doors and must have the RS485 address corresponding to the last 2 digits within the Door No. of the associated Call Panels.
- The RS485 address must correspond to the address of the 1<sup>st</sup> Call Panel, then the subsequent Call Panels Door No. are incremented. E.g.
  - 4 Doors numbered 8001-8004 = RS485 address 1.
  - 4 Doors numbered 8105-8109 = RS485 address 5.
- SW1 Switches 1-4 set the binary address (0-15).



Switch	1	2	3	4	Always ON	Always ON
Binary Value	1	2	4	8	-	-
Address 0	0	0	0	0	-	-
Address 1	1	0	0	0	-	-
Address 3	1	1	0	0	-	-
Address 7	1	1	1	0	-	-
Address 15	1	1	1	1	-	-

FIGURE 6-2 - BINARY ADDRESS TABLE

## 7 DEVICE LIST

IP Address	Block ID	SIP ID	Type	Description
192.168.1.111	1	8001	Call Panel	Ashwood Court, Front Door

# CAME ENTROTEC

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