

2-Wire Video Intercom System

Technical Manual

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LOOK-C DOOR SURVEILLANCE

Door Entry Security

2 WIRE DOOR VIDEO INTERCOM SYSTEM

Latest in home door intercom innovation. Intelligent twin wire system that helps in creating a quick, simple and economical installation. System setup is easy via the comprehensive yet simple menu system. With design and style to suit today's modern home decors.

- No Polarity, twisted pair, easily to wire solution. Use CAT5 or twin core drop cable.
- One common power supply to all type solution. PC6 will run 6 units, more use PS524.
- Supports from 1 to a Max. of 16 Monitors connected in one system (Use DBC4S)
- Expanding a system to multiple door station cameras with DBC4S (Up to 4 max.)
- Each door camera can control 2 locks. Door locks are an optional extra (EL971)
- All 2-Wire H2 products are compatible. All operate on the same twisted pair wire.



2 Wire - 1 Door - 1 Monitor

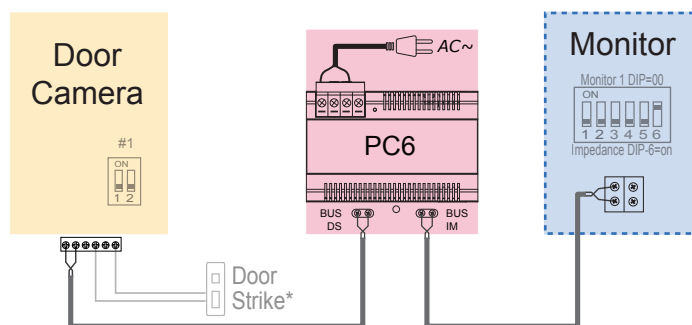
MINIMUM SYSTEM WITH PC6

The simplest setup involves a Monitor, a Door Station Camera and a Bus Power Supply (PC6). Two wire setup as follows:

- No Polarity, twisted pair, easily to wire solution
- Use CAT5 or twin core drop cable or equivalent
- Cable distances can be up to 100M Total (CAT5)
- One common power supply to all type solution (PC6)
- PC6 is a Mains 240Vac power to 24Vdc injector 1.2A
- The door camera can control a door strike*
- Door Strike connections may vary to that shown*
- System is expandable with additional components

*Further information available, see Door Strike Info

- Monitors: 1
- Door Camera: 1
- Power Source: PC6
- Dip Switches: Default
- Menu Settings: Default



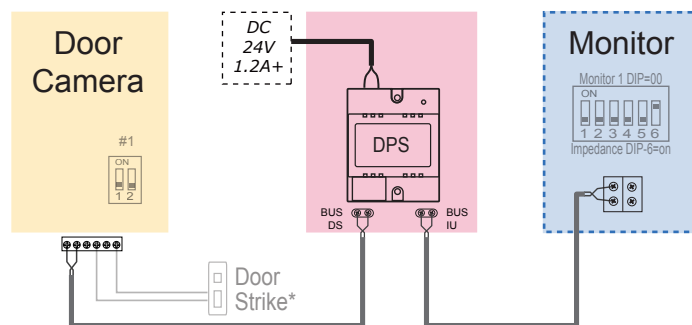
MINIMUM SYSTEM WITH DPS

The simplest setup involves a Monitor, a Door Station Camera and a Bus Power INJECTOR (DPS) and Requires 24-28Vdc.

- No Polarity, twisted pair, easily to wire solution
- Use CAT5 or twin core drop cable or equivalent
- Cable distances can be up to 100M Total (CAT5)
- One common power supply to all type solution (DPS)
- DPS is an injector that requires an external power source
- Requires 24Vdc to 28Vdc with 1A for this minimal system
- Each door camera can control a door strike*
- Door Strike connections may vary to that shown*
- System is expandable with additional components

*Further information available, see Door Strike Info

- Monitors: 1
- Door Camera: 1
- Power Source: DPS
- Dip Switches: Default
- Menu Settings: Default



2 Wire - 1 Door - 4 Monitors

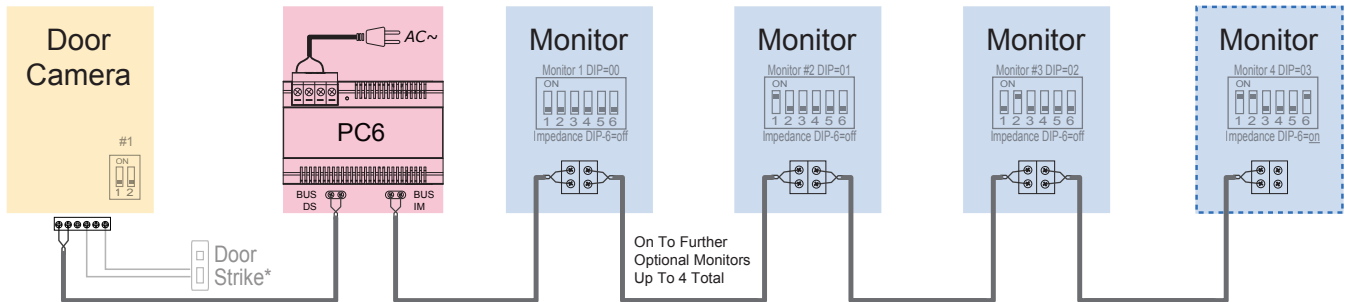
EXPANDED SYSTEM WITH DAISY CHAIN

System can be simply expanded to include 1 to up to 4 monitors using the existing PC6 power solution and extending the cable in a daisy chain, up to a maximum of 100 metres cable (CAT5).

- No Polarity, twisted pair, easily to wire solution. Use CAT5 or twin core drop cable or equivalent
- Cable distance can be up to 100M total when using CAT5 cable (from camera to last monitor)
- One common power supply to all type solution (Use PC6 Mains Power or DPS Power Injector)
- Connect multiple monitors from 2 to 4 on the one Bus with PC6 Power and a Door Camera
- Monitor DIP Switches need setting. Monitor Menu needs setting for Master/Slave (See manual)

Multiple monitors need to be identified for the system to operate. This is done by changing DIP Switch settings (1-16). See DIP settings.

In this configuration, all monitors impedance switches need to be set to OFF, except the end (last) monitor's impedance is set to ON.



*Further information available, see Door Strike Info

EXPANDED SYSTEM WITH STAR WIRING

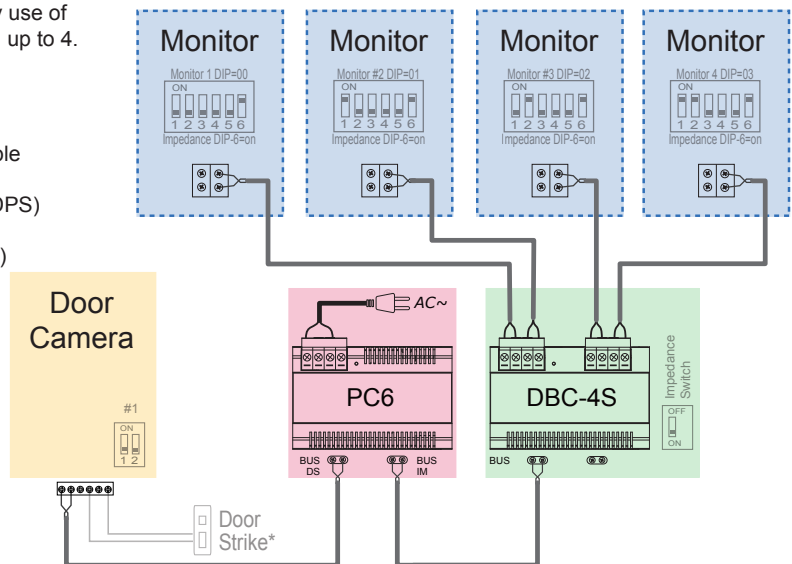
An alternative wiring system radiating from a single point by use of the DBC-4S Bus Splitter. Allows adding additional monitors, up to 4.

- DBC-4S Splitter for a Star Wiring alternative
- No Polarity, twisted pair, easily to wire solution.
- Use CAT5 or twin core drop cable or equivalent
- Cable distance can be up to 100M when using CAT5 cable from the Door Camera to the furthest of the monitors
- One common power supply to all type solution (PC6 or DPS)
- Monitor DIP Switches need setting. Monitor Menu needs setting for Master/Slave (See Monitor Instruction Manual)

*Further information available, see Door Strike Info

Multiple monitors need to be identified for the system to operate. This is done by changing DIP Switch settings (1-16). See DIP settings.

In this configuration, all the monitors are at the end of each Bus so their impedance switches need to be set to ON



2 Wire - 4 Doors - 1 Monitor

EXPANDED SYSTEM WITH STAR WIRING

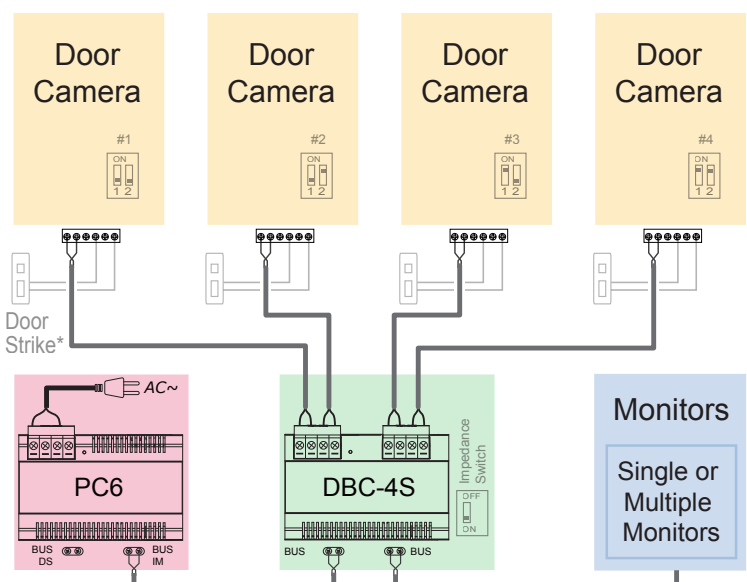
Up to four cameras can be connected to a system with the addition of a DBC-4S Bus Splitter. Each Camera Station can control a door by use of a Door strike. PC6 Power Injector is sufficient to run ALL Door Cameras plus up to four monitors.

- DBC-4S Splitter for expanding to extra Door Cameras
- DBC-4S Supports Two to Four Door Camera Stations
- Allows view and control of each Door Camera & Door strike
- Auto switches the monitor to the appropriate camera
- Cameras are internally terminated, so no Impedance switch to set and Daisy-chain wiring is not available for cameras.
- Cable distance can be up to 100M from Camera to Monitor
- PC6 has enough power to supply more Monitors in a further expanded system (See above) [†]
- Each door camera can control a door strike*
- Door Strike connections may vary to that shown*

*Further information available, see Door Strike Info

Multiple cameras need to be identified for the system to operate. This is done by changing DIP Switch settings (1-4). See DIP settings.

In this configuration, only one monitor is shown. Further monitors can be added, see multi-monitor configurations for further information.



LOOK-C DOOR SURVEILLANCE

2 Wire - 4 Doors - 16 Monitors

EXPANDED SYSTEM MAXIMUM

An example of the maximum expansion of a system.

This layout demonstrates the best configuration for low noise pictures, dependable operation with good distance of cable runs using CAT5 or drop cable.

When designing a large layout of a Look-C Door Intercom, you can use this topology of a full system and then remove any camera or monitor not required.

The Master Bus (dotted line) is Daisy-Chain wired to each of the DBC-4S Bus Splitters, which in turn are Star-Wired to each unit on a branch Bus.

Up to sixteen Monitors can be added to a system.

This is the maximum amount of monitors identified on a system by the monitor ID (See DIP Switches).

A maximum of four cameras can be connected to a system with the addition of a DBC-4S Bus Splitter. Each Camera Station can control a Door strike.

To power this system requires an external 24V 5 Amp High Current Power supply and DPS Power Injector.

See each units instruction manual for further details.

- DBC-4S Splitter for expanding to extra Monitors
- Supports up to a maximum of 16 Monitors
- Each Monitor can intercom with any other Monitor
- DBC-4S Splitter for expanding to extra Door Cameras
- Supports Two to Four Door Camera Stations
- Allows view and control of each Door Camera
- Auto switches the monitor to the appropriate camera
- Each door camera can control a door strike*
- Door Strike connections may vary to that shown*
- No Polarity, twisted pair, easily to wire solution.
- Use CAT5 or twin core drop cable or equivalent
- Cable distance can be up to 100M from the Camera
- DPS Injector requires a 24V 5 Amp Power Pack

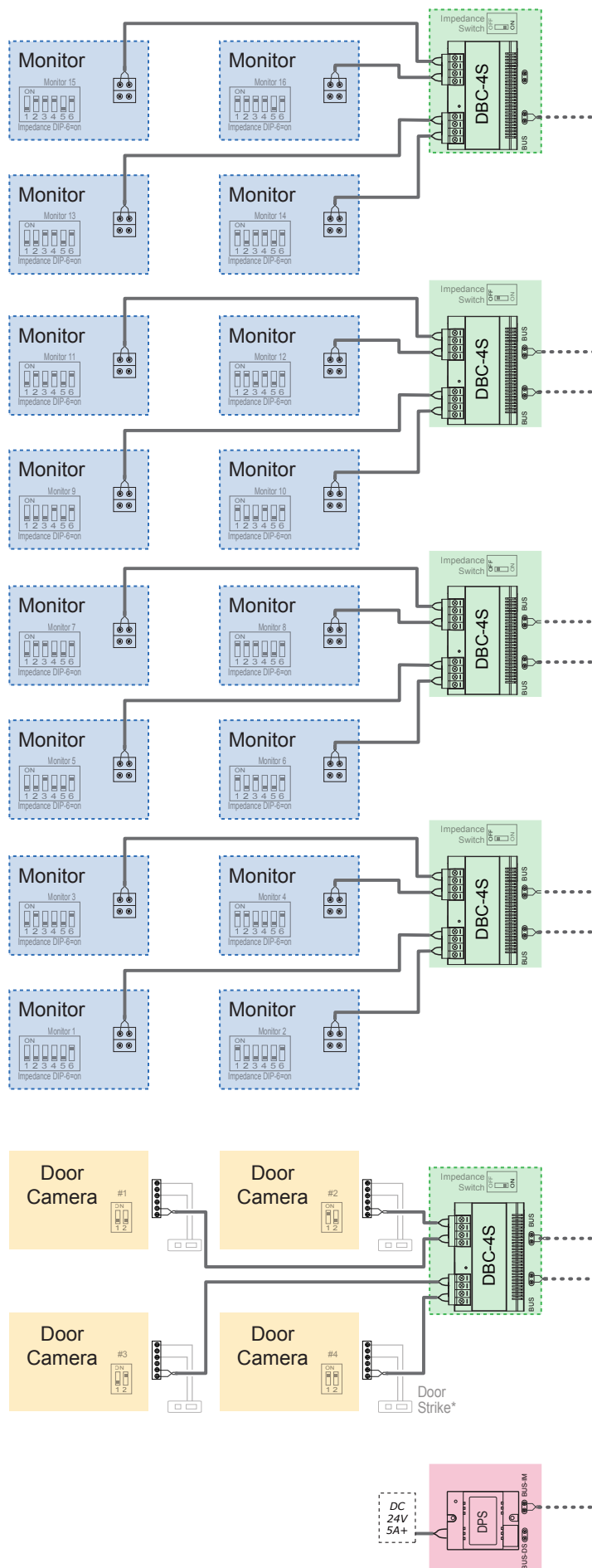
Multiple monitors need to be identified for the system to operate. This is done by changing DIP Switch settings (1-16). See DIP settings.

In this configuration, all the monitors are at the end of each Bus so their impedance switches need to be set to ON.

Multiple cameras need to be identified for the system to operate. This is done by changing DIP Switch settings (1-4). See DIP settings.

The master Bus needs to be terminated at end-of-line. This is done by selecting the DBC-4S Impedance Switch to ON.

*Further information available, see Door Strike Info



2 Wire - CCTV Controller

GENERAL SETUP DCU

Multi-function device designed to connect one or two Standard CCTV Analogue Video Cameras into the Look-C Two Wire Video Intercom System.

Also enables a zone control point for door actuator or Light with programmable automatic features.

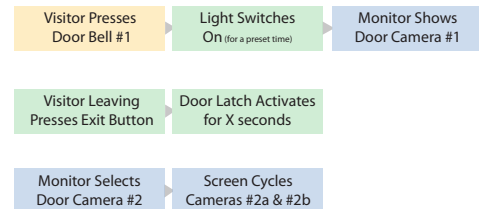
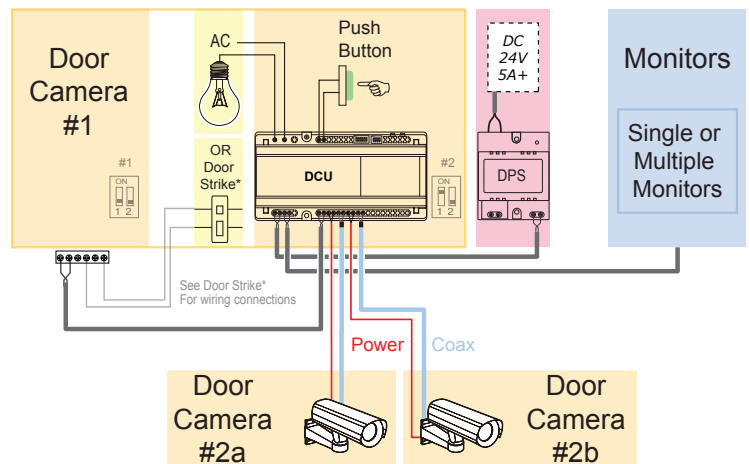
- Connects CCTV vision into the Look-C System
- One or Two analogue video camera inputs
- Includes 12Vdc power source for the cameras
- If two cameras are connected, then on-screen viewing is cycled between the two cameras
- Requires at least one Door Camera in system
- Connect Optional Door Actuator or a Light

OPTIONAL DOOR ACTUATOR

- See "Examples of Door Strike Connections"
- "Exit Button" with time delay for door actuator
- Requires external power for door actuator
- Wiring connection depends on Door Strike
- DCU Contacts programmed for NO/NC*

OPTIONAL LIGHT CONTROL

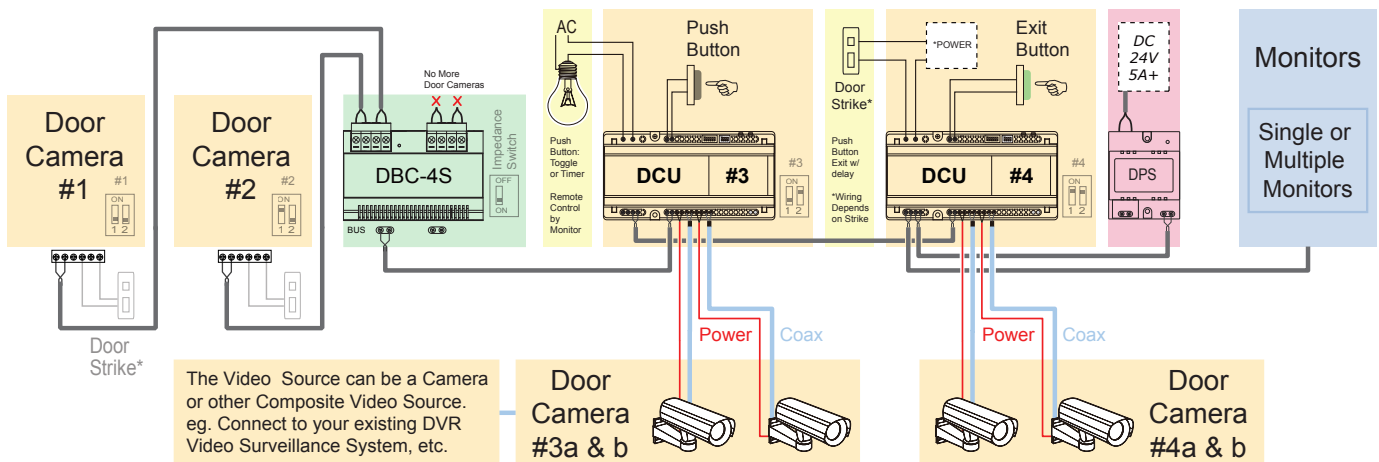
- or alternatively you can connect a light
- Light is triggered by push button ON with timer or Light is toggled on/off by the push-button or by Door Camera Station #1 call button or by any monitor viewing the DCU
- DCU uses dry contact relay (Normally Open)
- Relay Contacts up to 240Vac 7A max



EXPANDED SETUP DCU

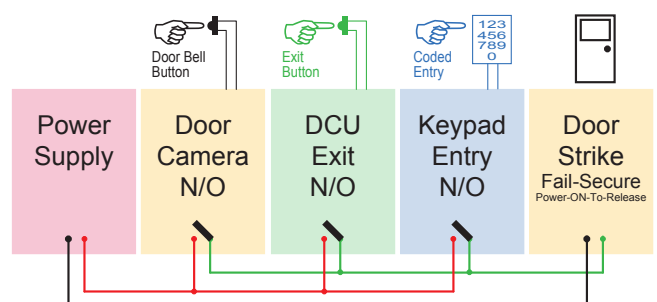
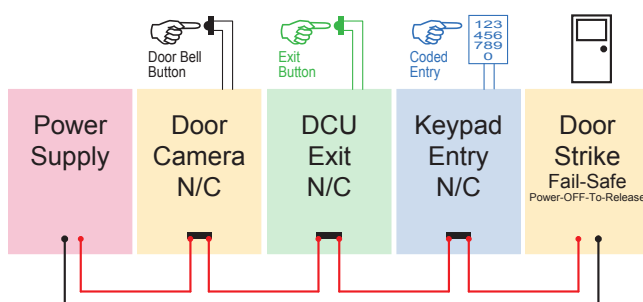
The diagram below shows an example of multiple DCU unit setup. The DCU is identified as also the Door Cameras with a maximum of four units. Thus you can have a combination of one door station and three DCUs, or three door cameras and one DCU. See manual for more information.

- Door Bell Pressed on Door Camera #1 or #2 both activate the Light
- Push Button Pressed will activate/de-activate the light (toggle)
- In Auto Mode, the light will stay on for a pre-set delay, then switch off
- In manual mode, light is switched Off by the push button only (Not the Monitor)



- Fail-Safe / Power-OFF-To-Release type Door Strike Connections
- DCU allows a programmable Time Delay Activation for Exiting
- Shown with optional Keypad or RFID entry module

- Fail-Secure / Power-ON-To-Release type Door Strike Connections
- DCU allows a programmable Time Delay Activation for Exiting
- Shown with optional Keypad or RFID entry module



LOOK-C DOOR SURVEILLANCE

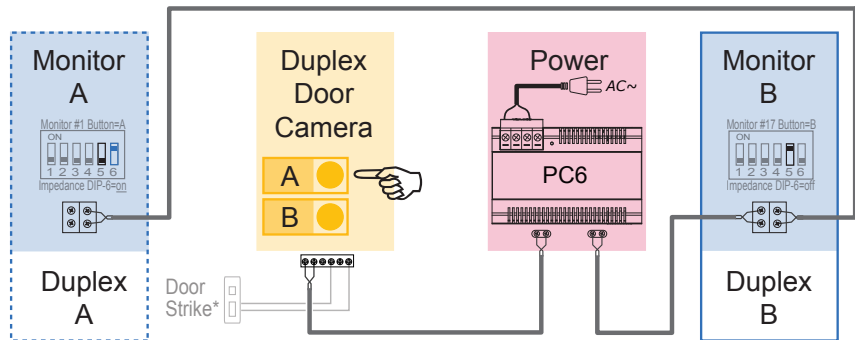
2 Wire - Duplex

H292RH DUAL BUTTON SYSTEM

The H292RH Door Camera Station is a single camera with two door-bell buttons A & B. Monitors are pre-set to ring on either one of the button presses A or B. The door strike is shared and monitors can intercom between each other. This makes the H292RH suitable for Duplex Units with a common door, or share situations in a common dwelling, Dual occupancy, Grannie Flats, Teenagers, Private/Office, Business A or B, etc. Two door strikes can be attached, however, both camera systems A & B can control both door strikes.

- Two separated systems share a single camera
- Door Camera has two Door-Bell Buttons A or B
- Requires a minimum of two Monitors (A & B)
- DIP Switch 5 selects as Monitor for Button A or B
- Monitors control common door strike*
- Door Strike connections may vary to that shown*
- System can expand to a maximum of 16 Monitors
- Monitor at the end of a chain must be terminated

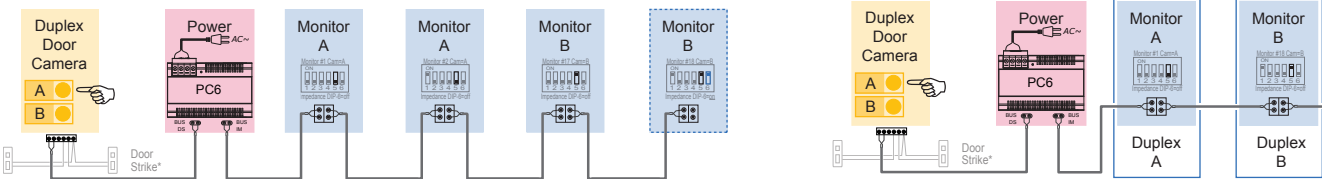
Button A rings Monitor A. Button B rings Monitor B.
Monitor A and B control the common door strike.
Monitor A can intercom with B (and vice-versa).



H292RH MULTI-MONITORS

Look-C 2-Wire System is shown here with monitors in Daisy-Chain or a combination of Splitter and Daisy-Chain with the PS6 Power Injector. The system can be further expanded to more monitors and cameras with the DPS Power Injector. See other 2-Wire diagrams for other extended system examples.

- Door Camera has two Door-Bell Buttons A or B
- DIP Switch 5 selects as Monitor for Button A or B
- Monitors control common door strike*
- Monitor at the end of a chain must be terminated



2 Wire - Cable Information

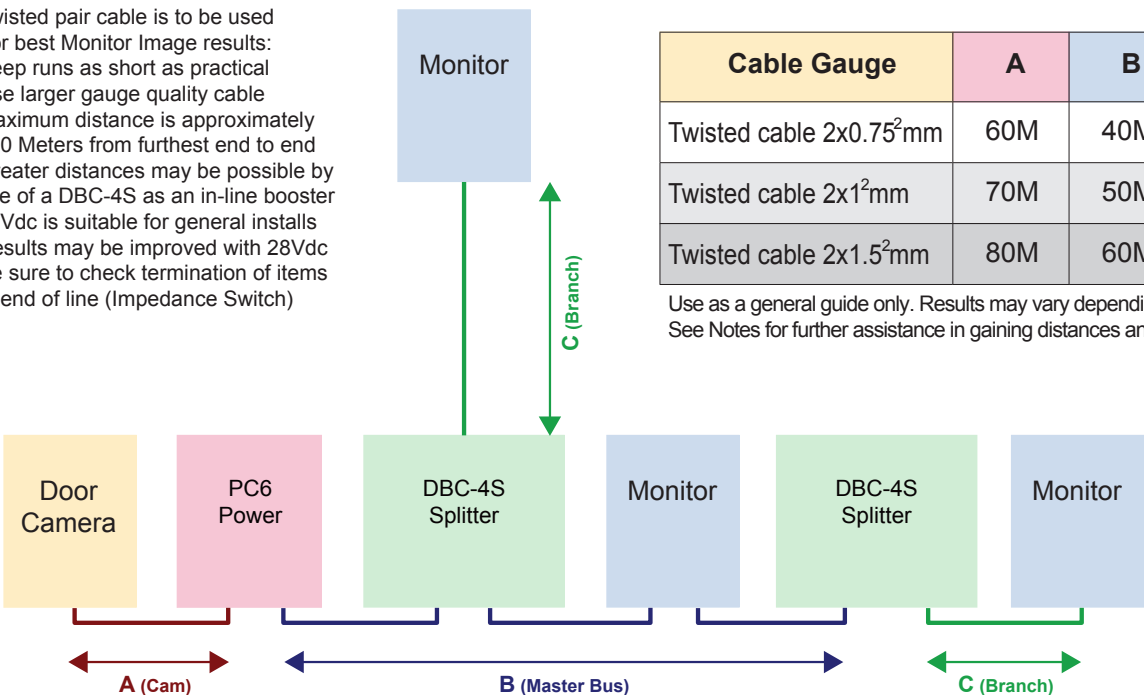
RECOMMENDED WIRE SOLUTIONS

The maximum distance of the wiring is limited on the Look-C 2-Wire system. Using different cables may also affect the maximum distance which the system can reach. The cable carries both video and data plus the power, so It is recommended that you use better quality with larger gauge for best results over longer distances. For relatively short distances, under 20 Meters, the cable choice is less critical.

- Twisted pair cable is to be used
- For best Monitor Image results:
Keep runs as short as practical
Use larger gauge quality cable
- Maximum distance is approximately 100 Meters from furthest end to end
- Greater distances may be possible by use of a DBC-4S as an in-line booster
- 24Vdc is suitable for general installs
Results may be improved with 28Vdc
- Be sure to check termination of items at end of line (Impedance Switch)

Cable Gauge	A	B	C
Twisted cable 2x0.75 ² mm	60M	40M	20M
Twisted cable 2x1 ² mm	70M	50M	30M
Twisted cable 2x1.5 ² mm	80M	60M	40M

Use as a general guide only. Results may vary depending on application.
See Notes for further assistance in gaining distances and image quality.



Door Strike

EXAMPLES OF DOOR STRIKE CONNECTION

Look-C 2-Wire System can control two door strikes per door station. These door strikes can be powered by the door station (12Vdc @ 250mA) or for more current or a higher voltage, you can add an external power source and use the door stations internal relay to activate the door strike.

Door strikes are of two types. "Fail Secure" is when power is momentarily applied to the strike to allow the door to open (Power-ON-To Release). "Fail Safe" is when power is always on to hold the door locked, and momentarily switched off to allow the door to open (Power-OFF-To Release). Release activation is programmed at the monitor for Fail-Secure(Default) / Fail-Safe. Activation time is set from 1 to 9 seconds.

Exit buttons are usually located on the inside of the premises to allow electronic door release so the person can exit the secured area.

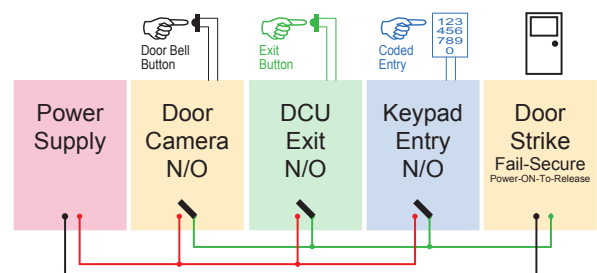
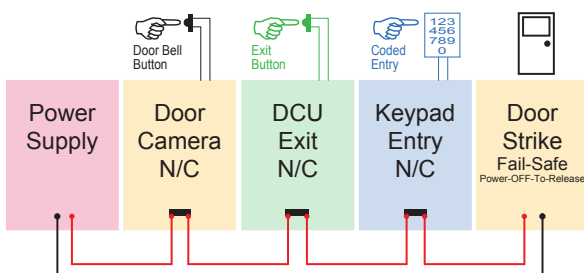
Exit buttons are not time delayed and not compatible with Fail-Safe door strikes. If these features are required then see the DCU add-on.

- (a) Door Camera Stations can supply power to an electronic lock of Power-On-To-Unlock type with a holding power of no more than 12V 250mA. Connection cable should be less than two metres.
- (b) For higher power door strikes or longer cabling, an external power source (Local) is required. Connection is by dry-contact relay (NO/NC). Removal of the "Jumper Connector" is required.
- (c) The addition of an "Exit Button" is a momentary contact that triggers the door latch for door release.
- (d) External Power with "Exit Button" is available.
- (2a) Dual Door Strike Connection is available for controlling two door strikes. Local power optional (2b) and Exit Button option (2c) or both (2d).
- (e) Power-OFF-To-Release is available and the setting programmed at the monitor. Requires external power.
- (f) Power-OFF-To-Release Door Strikes x2 (Optional).
- (x) Other options are available. See DCU module.

DOOR LATCH MODE	INTERNAL POWER	EXTERNAL POWER	EXIT BUTTON (Int Pwr)	EXIT BUTTON (Ext Pwr)
DOOR LATCH SECURE Strike is set as Default Power- On -To- Release Note: Exit Button does Not have activation delay. See DCU for time delay.	(a)	(b)	(c)	(d)
DOOR LATCH SECURE Strikes is set as Default Power- On -To- Release Two Door Strikes	(a)	(b)	(c)	(d)
DOOR LATCH SAFE Strike can be set as Power- Off -To- Release This is programmed into the door station via the monitor menu system. See the Instruction Manuals for details.	(x)	(e)	(x)	(f)

- Fail-Safe / Power-OFF-To-Release type Door Strike Connections
- DCU allows a programmable Time Delay Activation for Exiting
- Shown with optional Keypad or RFID entry module

- Fail-Secure / Power-ON-To-Release type Door Strike Connections
- DCU allows a programmable Time Delay Activation for Exiting
- Shown with optional Keypad or RFID entry module



LOOK-C DOOR SURVEILLANCE

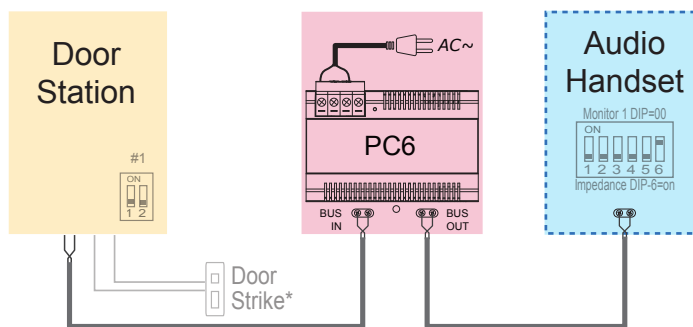
2 Wire - Audio Only

MINIMUM AUDIO SYSTEM

The simplest setup involves a Door Station with a Handset and a Bus Power Supply (PC6). Two wire setup as follows:

- No Polarity, twisted pair, easily to wire solution
- Use CAT5 or twin core drop cable or equivalent
- Cable distances can be up to 100M total (CAT5)
- One common power supply to all type solution (PC6)
- PC6 is a Mains 240Vac power to 26Vdc injector
- Each door camera can control a door strike*
- Door Strike connections may vary to that shown*
- System is expandable with additional components

*Further information available, see Door Strike Info

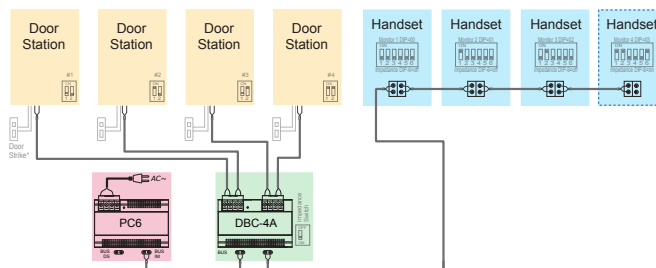


EXPANDED AUDIO SYSTEM

The 2-Wire Audio Intercom has the same connection topology as the Video Intercom 2-Wire system and can be expanded in a similar way.

- A maximum of 32 Handsets can be used in one system
- A combination of Daisy-Chain and Star wiring (DBC-4A)
- Set each Door Station & Handset unique ID using the DIP Switches
- End-Of-Line units require termination. Set the DIP6=ON.
- Set all other Handsets in a Daisy-Chain to DIP6=OFF
- PC6 has ample power to supply a fully expanded system
- Each Door Station can control a door strike*
- Door Strike connections may vary to that shown*

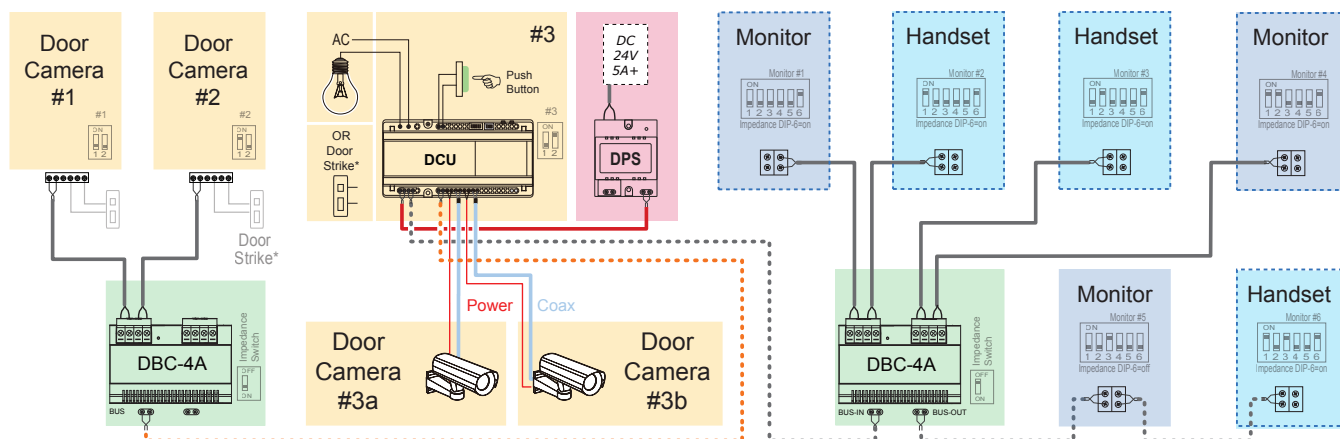
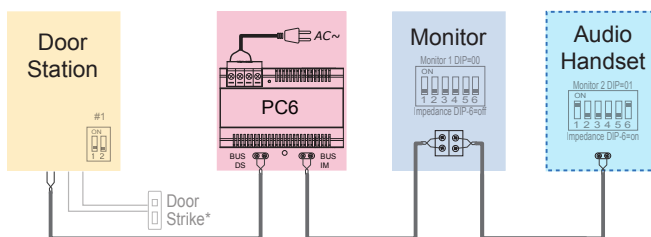
*Further information available, see Door Strike Info



EXTENDED VIDEO SYSTEM WITH HANDSETS

An Audio Only Handset can be used in place of a Video Monitor for circumstances where audio only communication with the door camera.

- A maximum of 16 Handsets and Monitors can be used in a system
- A combination of Daisy-Chain and Star wiring (DBC-4A) is shown
- Set each Door Station, Monitor & Handset with its own unique ID
- End-Of-Line units require termination. Set the DIP6=ON.
- Set all other Handsets/Monitors in a Daisy-Chain to DIP6=OFF
- DPC with 24Vdc high power to supply a fully expanded system
- Each Door Station can control a door strike*
- Door Strike connections may vary to that shown*



4-Wire Video Intercom System

Technical Manual

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LOOK-C DOOR SURVEILLANCE

4 Wire Look-C Door Intercom Surveillance System Instruction Manual

MONITOR INSTRUCTIONS APPLYING TO H424 & H427

H424 & H427 Inter-compatibility.

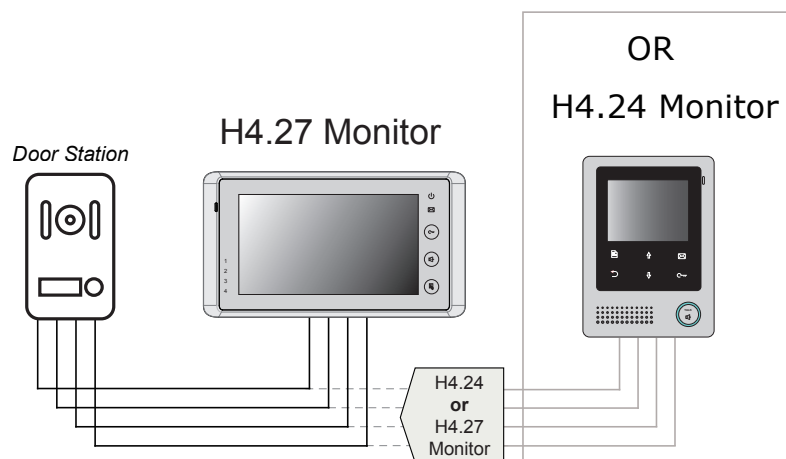
Although both monitors can operate on the same 4-Wire system, some of the features are not compatible between the H424 and H427 Monitors. For example, the majority of functions will work, including Door Camera monitoring, but the intercom feature between monitor units will not work and the Memory feature of H427SDD will not share. It is therefore recommended, for a professional setup, to restrict monitor choice to one of the two models available.

The H427 Monitor has a Two Door Station Camera Switch built-in. This enables you to connect one or two door station cameras to the system. If you require three or four cameras (Maximum), then the addition of a VT-MDS Camera Switch is required. See the "Two Door Stations" page for connecting two cameras and see the "MDS Multi-Door Station Switch" page for connecting three or four cameras.

The M424 Monitor has a single camera input. If you require two, three or four cameras (Maximum), then the addition of a VT-MDS Camera Switch is required. See "MDS Multi-Door Station Switch" page for further information.

The diagrams on the following pages show connections for Look-C 4 Wire Monitors and door cameras. Where applicable, both H424 and H427 connections are shown on the same diagrams.

For all features to work as per their respective instruction manuals, it is recommended to use only H424 with H424 Monitors and to only use H427 with other H427 Monitors. Both monitors are fully compatible with all 4-Wire Door Station Cameras and the other modules as shown on each page.



A Maximum of Four Monitors.

You can identify each of the monitors via the menu system from Monitor #1 through to Monitor #4. This enables you to use the intercom function between monitors within an installation. Further Monitors can be connected to the system and can view and operate the door camera, but will not be compatible with the monitor to monitor intercom feature. It is therefore recommended for a professional setup to use a maximum of four monitors within a system. See "Multi-Monitor" pages for more information.

The following diagrams show wiring topologies as recommended by the factory and tested here by our technicians. Other wiring solutions may work in some circumstances, however were not included as they have not been tested or recommended by the factory and may not give best results in all installations.

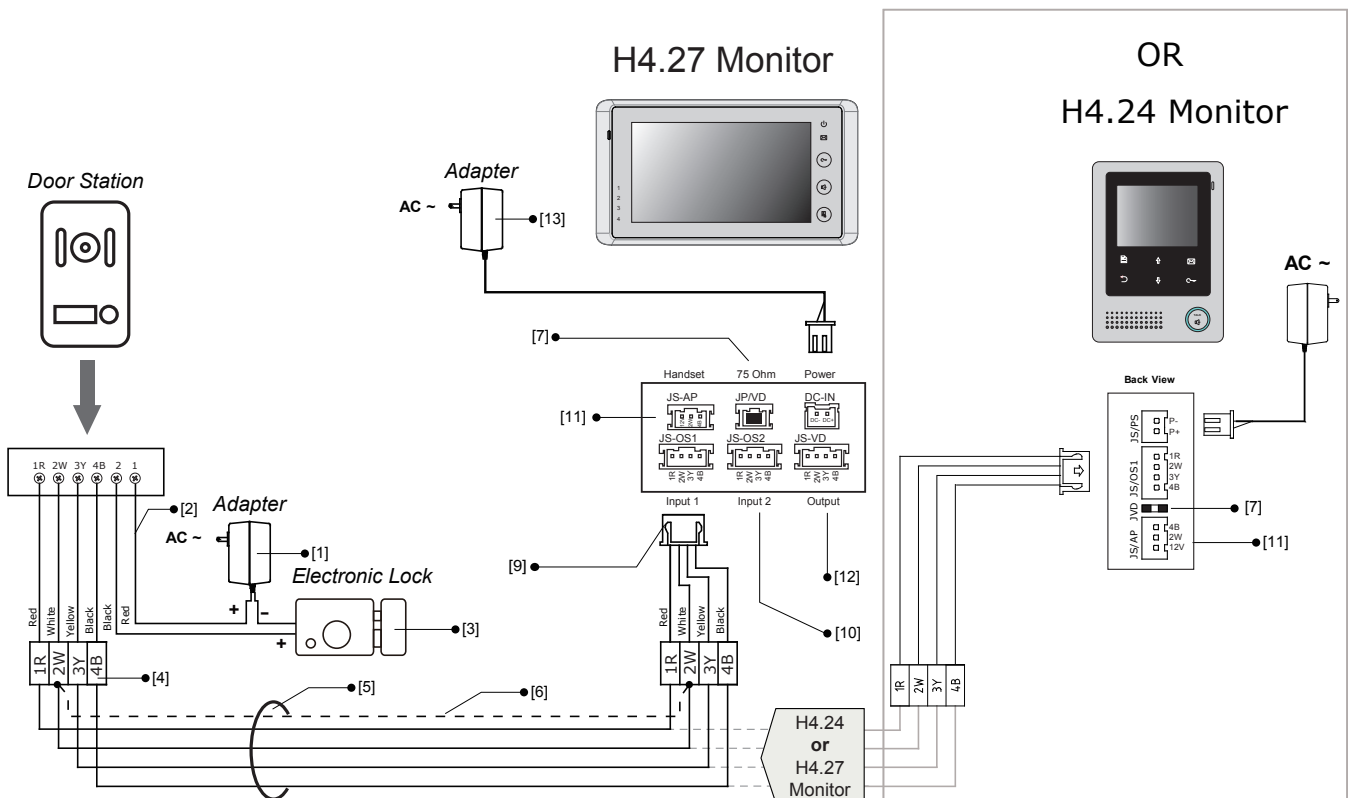
4 Wire - Basic Setup

ONE DOOR STATION & ONE MONITOR

The most common way to use the VT system in a house is one Doorstation connected with one Monitor. 4 wires (with color Red, White, Yellow and Black) will be used to connect the Doorstation and Monitor,

- **1R (Red):** Power positive. +12V present when Door Station calling or being monitored.
- **2W (White):** Power negative (Ground).
- **3Y (Yellow):** Image signal (Video signal).
- **4B (Black):** Talk and control signal (Audio signal).

It is recommended to use CAT5 Cable for standard installs and shielded cable for noisy installations when running cable with other wires (like mains cord, etc.) or steel structure buildings, industrial, etc.



- [1] Power supply for the lock. This adapter is not included in our product, please purchase the appropriate adapter required by the electronic lock. Not required if no door lock.
- [2] Relay Contact for lock control of Fail-Secure Latch. 2- Common Terminal, 1- Normally Open Terminal.
- [3] Electronic Lock. See Lock pages for detailed lock connection information, or RLC for exit button or Fail-Safety.
- [4] Screw Terminal Door Station Camera
- [5] RVVP cable. See Cable Pages for detail information
- [6] Shielded layer of the RVVP Cable.

For simple installations with shorter cable runs use CAT5 Twisted Pair Cable. For improved picture quality over longer runs or in noise environments, use coax for 3Y & 2W

- [7] JP_VD jumper. To adjust the video impedance; keep the jumper on the last Monitor and remove all on other Monitors. When only one Monitor installed, keep the jumper (as in this case). Jumper on the position by default.

- [8] Menu settings out-of-the-box in default are all preset for this simplest of setup configurations. See manual for menu information.

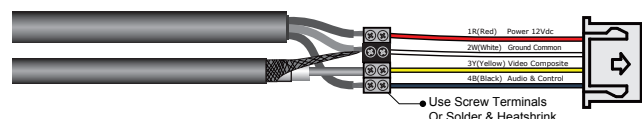
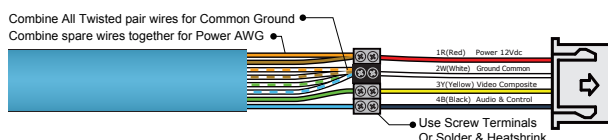
- [9] JS_OS1: Connect to first Doorstation.

- [10] JS_OS2: Connect to second Doorstation / CCTV camera.

- [11] JS_AP: Connect to Audio Phone (Plug compatible with H424).

- [12] If extending H427 to further H427 Monitors, connect the extra monitor to the JS-VD connector (See multi-monitor diagram).

- [13] Adapter: Power supply for the Monitor and Doorstation. 24V DC, 1000mA output.

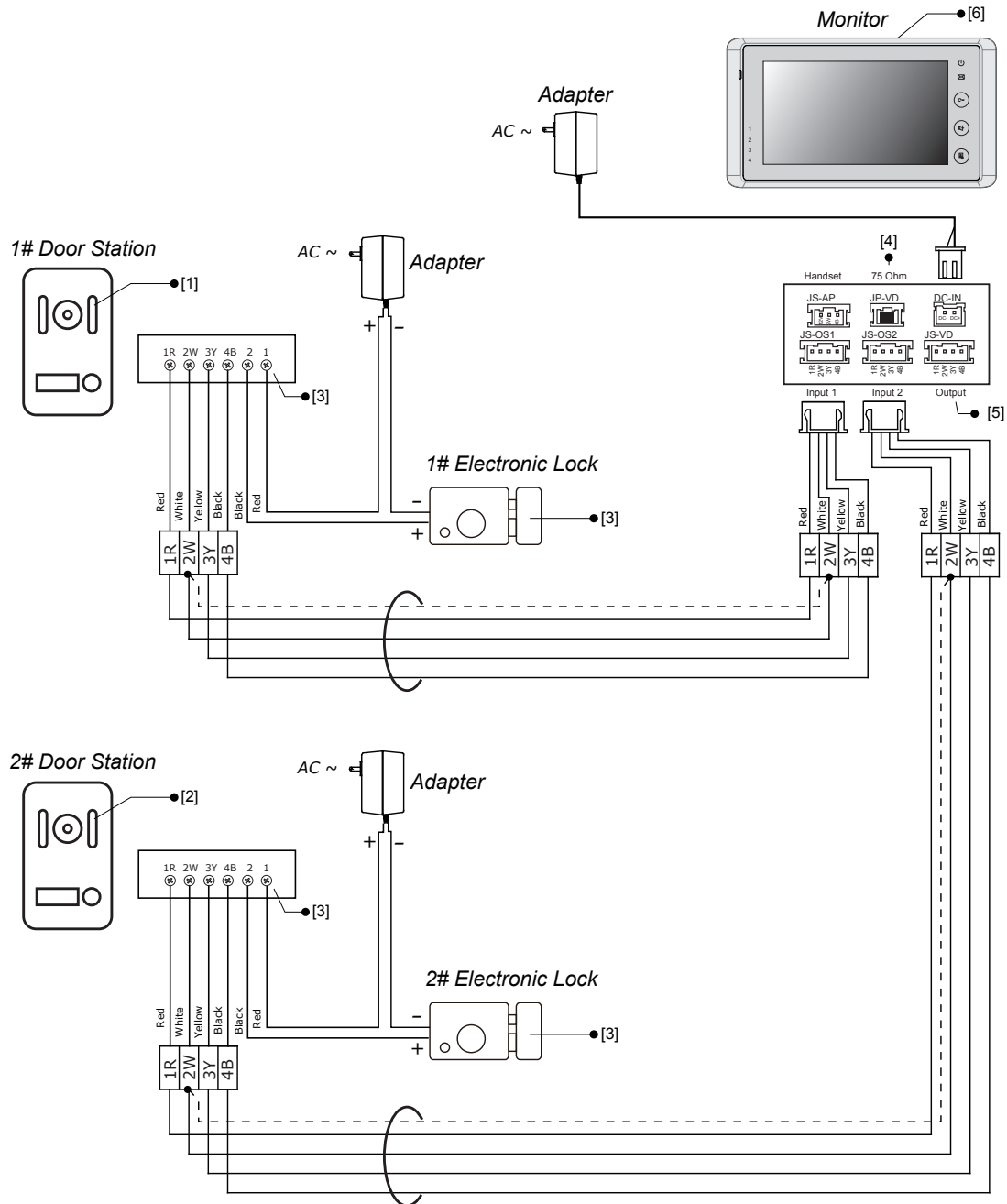


LOOK-C DOOR SURVEILLANCE

4 Wire - Camera Expanded

TWO DOOR STATIONS

The H4.27 Monitor is equipped with Two Input connection ports which allows a user to connect two door stations or one door station and one CCTV Camera directly. It is required that this monitor be menu set as Monitor #1 (Default). Door station control is automatic. eg., when any Monitor activates the door unlock function, only the door latch connected to the operating door station will be unlocked. H424 does not support 2 Inputs. See MDS for other options.



[1] The first Doorstation connect to the JS-OS1 port.

[2] The second Doorstation connect to the JS-OS2 port.

[3] The electronic lock used for each Doorstation must be of the Power-on-to-Unlock type. Power can be external as shown, or internal (see door lock page for options).

[4] JP-VD jumper. To adjust the video impedance; keep the jumper on the last Monitor and remove all on other Monitors. When only one Monitor installed, keep the jumper (as in this case). Jumper on the position by default.

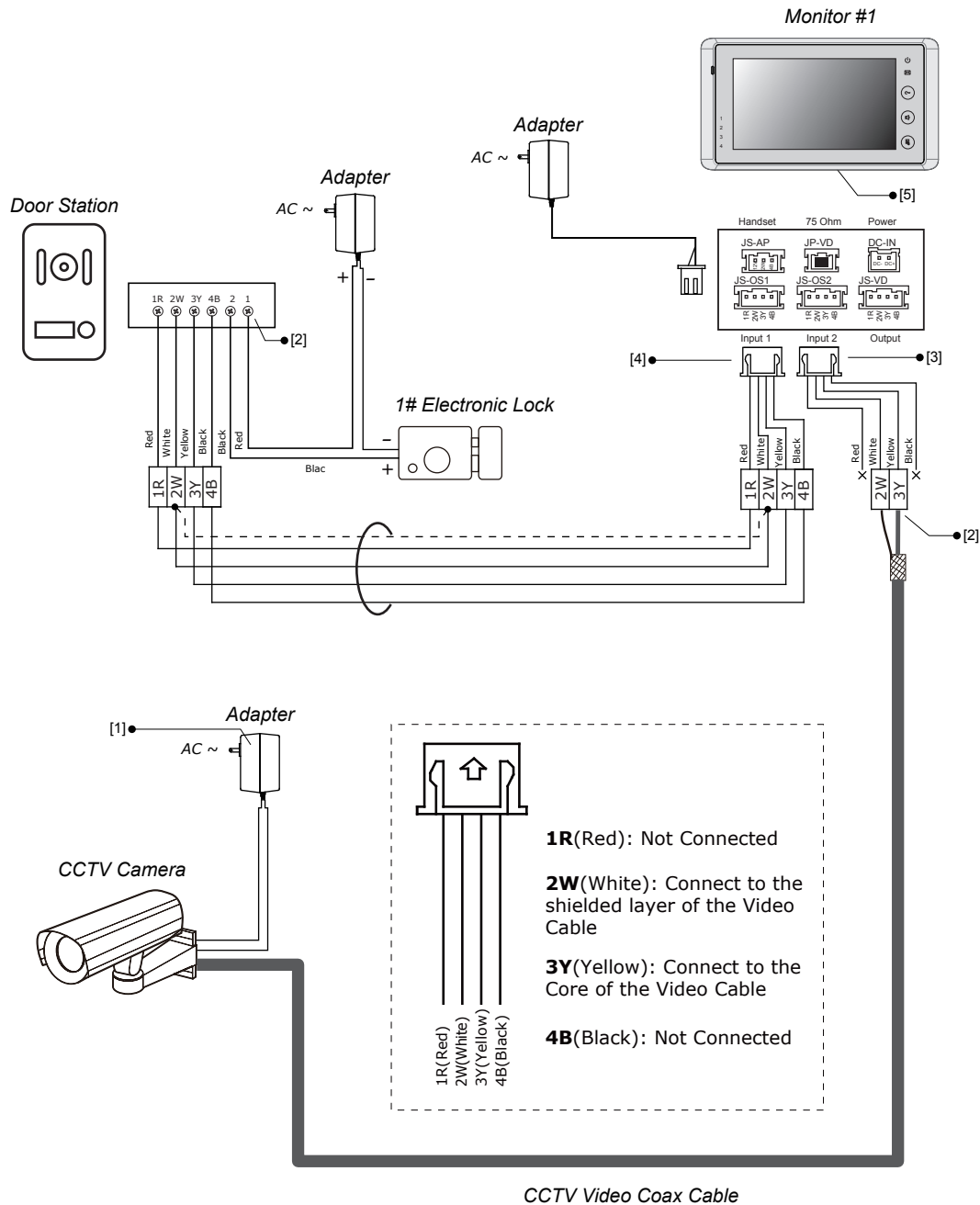
[5] System can be expanded to further monitors, see the Multi-monitor setup pages for connection topologies.

[6] When using two door stations the 2 Way Input menu should be set from 0 to 1 on Monitor 1# go to User Setup --> Installer Setup --> 2 Way Input and change the value to 1.

4 Wire - Camera Expanded

EXTEND CCTV CAMERA

A standard video CCTV camera can be connected to one of the built-in 2 way port of the Monitor. Video can be switched between Doorstation and CCTV camera on the Monitor just as switching video from 2 Doorstations.



[1] The power supply for the CCTV camera is not included in the system, please use an appropriate power supply which is suitable for the CCTV camera.

[2] Please connect the wire firmly, iron soldering is recommended. Screw terminals can be used, need encasing.

[3] Connect the Doorstation to the JS-OS1 port.

[4] Connect the CCTV camera to the JS-OS2 port.

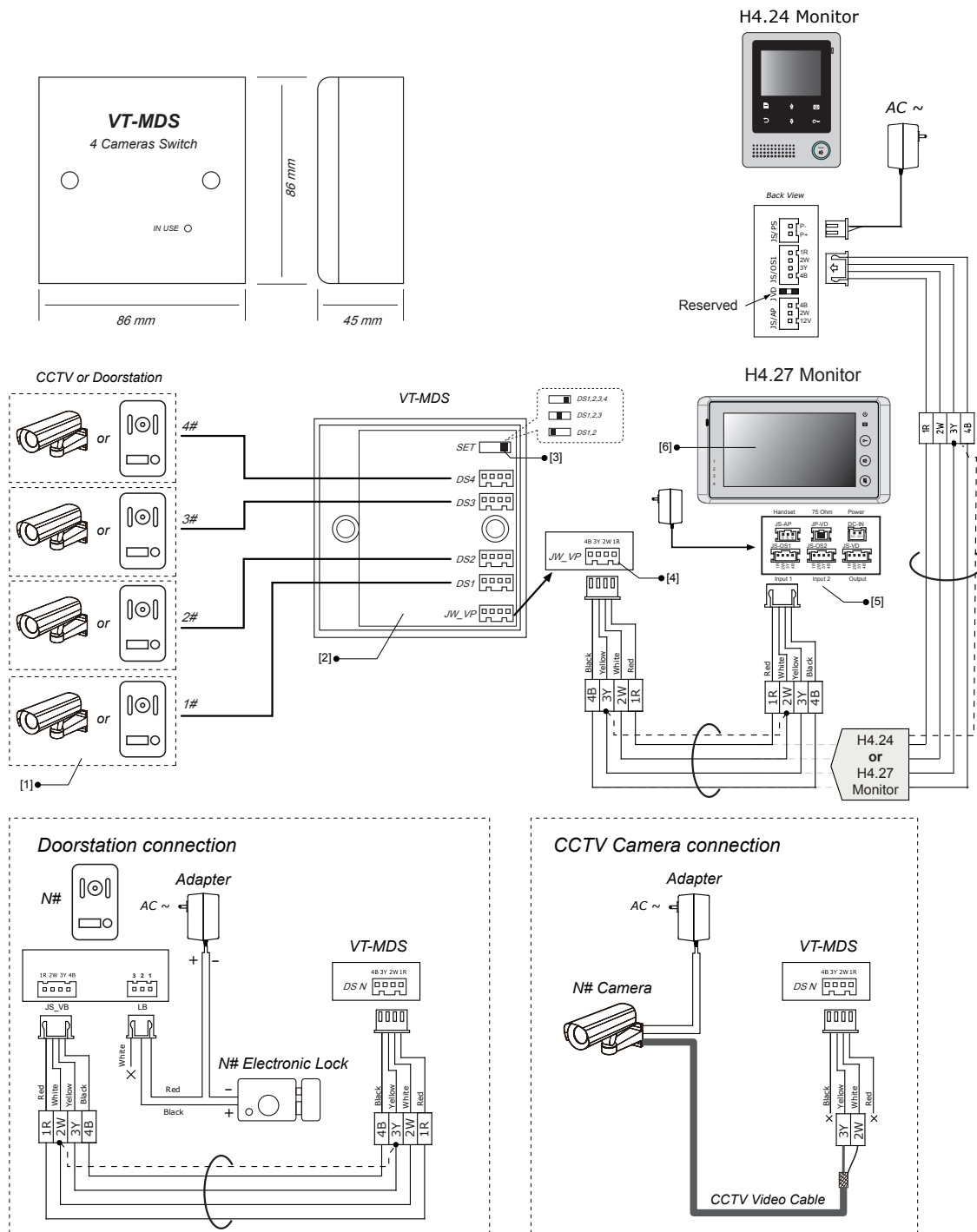
[5] When using 2 door stations, the 2 Way Input menu should be set to 1 on Monitor 1#. On the Monitor Menu system, go to *User Setup > Installer Setup > 2 Way Input* and change the value from 0 to 1.

LOOK-C DOOR SURVEILLANCE

4 Wire - Camera Expanded

MDS MULTI DOOR STATION SWITCH

The MDS unit is used to extended Multiple Door Stations or CCTV cameras to one 4-Wire bus to suit H424 or H427 Monitors
Multi-Monitor support - See Multi-Monitor Pages for connection topologies.



[1] Doorstation or CCTV Camera can be connected to any of the DS1 / DS2 / DS3 / DS4 ports. At least two sources should be connected (See [3]).

[2] Note that only one MDS unit can be installed in a system, DO NOT connect multiple MDS in one system.

[3] SET switch, for Doorstation or CCTV total number selection; if connect 2 Doorstations(and / or Cameras), set to left position; set to middle position for 3 Doorstations(and / or Camras); set to right position for 4 Doorstations(and / or Cameras)

[4] For MDS Video Combiner, the JW-VP Video Impedance jumper is in (Reserved) for Monitor #1 at the beguining of the chain even if multiple monitors are used (See Multi-Monitors), JP-VP always in #1.

[5] When using MDS in the system, the H427 JS-OS2 port becomes invalid, so DO NOT connect any Doorstation or CCTV camera to JS-OS2 port.

[6] When using a MDS unit, the 2 Way Input menu should be set to 0 on all the Monitors (including 1# Monitor). On the Monitor, go to User Setup --> Installer Setup --> 2 Way Input and change the value to 0. This is the default value.

4 Wire - Camera Expanded

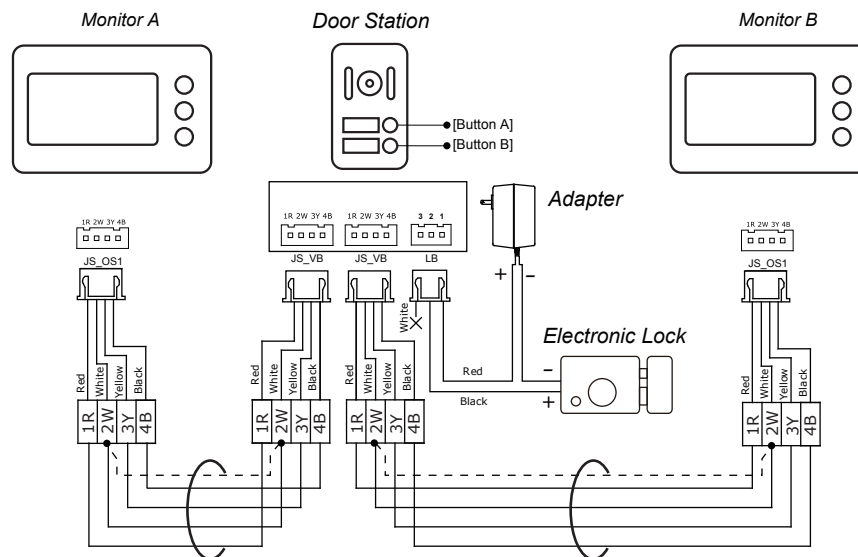
DUAL BUTTON DOOR STATION

The H492RH Door Camera Station is a single camera with two door-bell buttons. Monitors are connected on either A or B branch line and ring only on one of the button presses A or B.

The door strike is shared and monitors can intercom between each other. This makes the H492RH suitable for Duplex Units with a common door, or share situations in a common dwelling, Dual occupancy, Grannie Flats, Teenagers, Private/Office, Business A or B, etc.

More monitors can be added to either branch line, see multi-monitor topology.

Only one monitor can be set as monitor #1 for intercom feature to function and Monitors can intercom between each other. If only two monitors total are used and both are set as Monitor #1, then the intercom feature will not function.



4 Wire -Camera Expanded

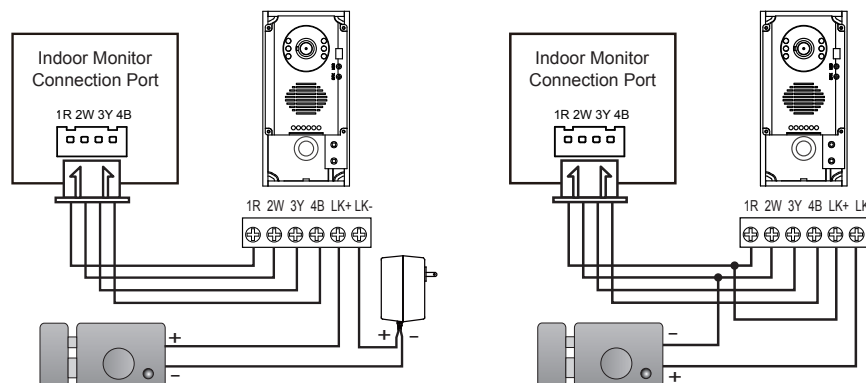
DOOR STRIKE

Fail-Secure is Power-On-To-Release.

The Door Station Camera has a Dry Relay Contact Connection, Normally Open.

Connect using internal power is 12V at 200mA max hold current with a lead from station to strike of no more that 2 metres.

For higher power door strike or a longer wire, it is recommended to add an external power pack for the door strike.



Fail-Safety is Power-Off-To-Release.

The Door Station Camera is NOT compatible with power always on type systems. For this feature there is an optional extra module for Fail-Safety door lock control. See RLC Relay Lock Control module for more information. This module is Fail-Secure compatible too and also offers an Exit-Button with programmable time delay.

LOOK-C DOOR SURVEILLANCE

4 Wire - Monitor Expanded

MULTI-MONITOR READ-ME !

- DO NOT MIX MONITORS**

Two styles of Monitors: H424 (4" Screen) and H427 (7" Screen) models are available in the 4-Wire system. The menu system on these two models are different and some of the extended features may not be available or compatible when mixing a system using both H424 and H427 models. For this reason it is recommended that for a professional system, an installer use only the same model monitor in one system.

- MONITOR #1**

By default, Monitors out of the box are set as Monitor #1. For some features to work it is necessary to change some settings via the menu system. See the units user manual for specific instructions. The master unit should be set to Monitor #1 and further monitors should be set in sequence, #2, #3, #4, etc.

- JP-VD JUMPER**

If multiple monitors are used then some attention to video termination is necessary for maintaining picture quality. This involves sometimes removing the JP-VD terminal. See the following diagrams for details depending on which wiring topology is used.

- SECURITY CODE 2412**

If you are presented with a security code screen, please enter the 4 digit code: 2412 (store this number with the instruction manual for future reference.)

- MEMORY MODULE**

Optional memory for capturing images of door bell button presses for retrieval is available with the H427SDD. Only one SDD model can be used in one system and should be set as Monitor #1. The other monitors in a system are the standard model and can each access this memory to view the sequence of images of the visitors.

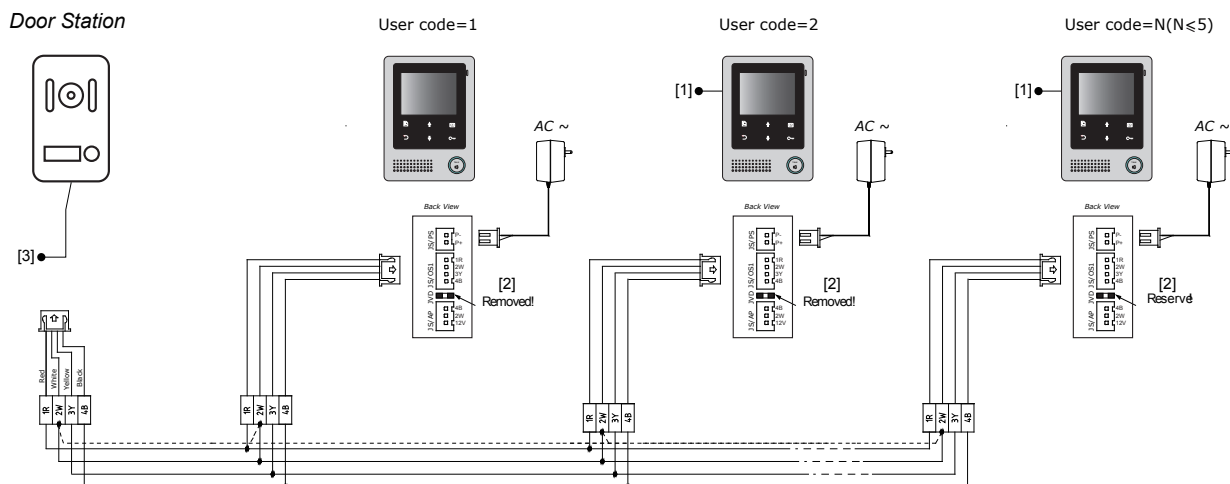
- Please note:* If using a BDU Splitter, be sure to set the monitors setup menu option "BDU Installed" = "1", see BDU Star Wiring Topology page for further information.



4 Wire - Monitor Expanded

EXTEND TO AN EXTRA MONITOR H427

The 4-Wire system uses a common Bus system wired in series for a daisy-chain type configuration. Cable distance between the Door Station and the Last Monitor (#n) depends on cable used. Typically 50M to 100M for CAT5. See Cable page for more information. Junctions should be directly next to the monitor for best image results. Notice the JVD Jumpers and Menu settings on Monitor #2 -> *User Setup* -> *Installer Setup* -> *User Code* = 2. Shown below is H424 Monitors, this same topology can be applied using H427 Monitors with the consequence of JP-OS2 no longer functioning. Multiple Door Stations can however be added with the addition of a MDS module.



[1] Change the setting on Monitor #2 to User Code = 2, etc.

[2] Remove the JVD jumper on Monitor 1# Keep the JVD jumper on Monitor N# being the last monitor on the chain. JVD is the "Jumper Video" for terminating 75Ω end of line.

[3] Only one Door Station on this wiring topology. For more Door Stations, see the MDS module.

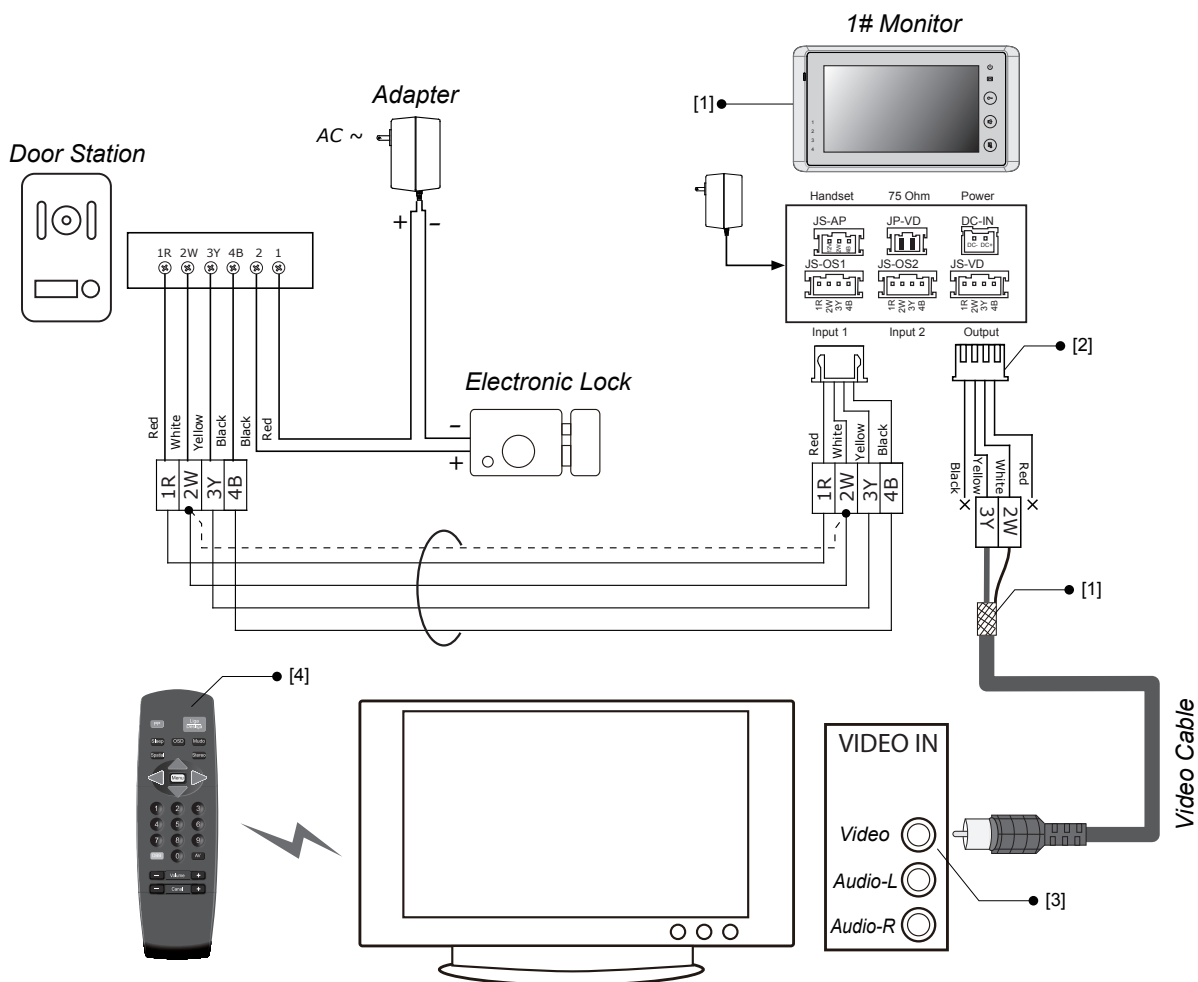
[4] Cable length depends on cable used. CAT5 gives up to 50M to 100M Use shielded for noisy environments. Use BDU as a booster if required.

LOOK-C DOOR SURVEILLANCE

4 Wire - Monitor Expanded

EXTEND TO A TV MONITOR

Television can be connect to the Monitor directly; when the visitor calls from the Doorstation, press the AV Button on the TV remote to view the video from the Doorstation.

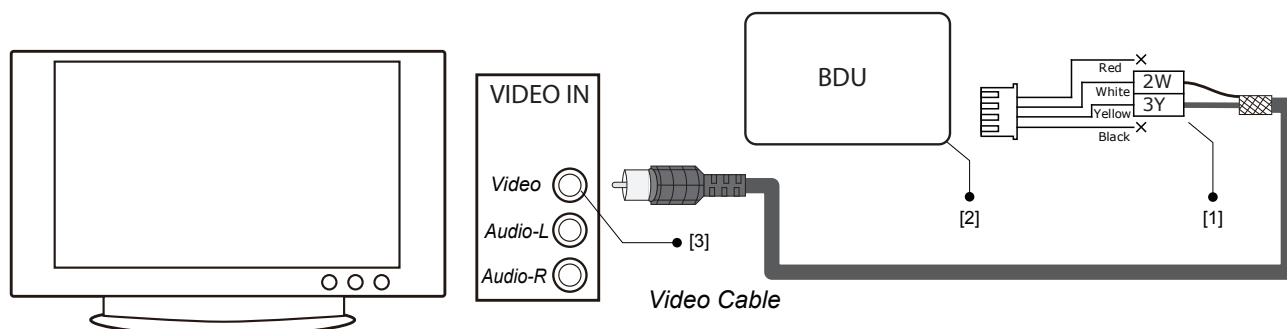


[1] Connect the video cable core to 3Y and the shielded layer to 2W.

[2] The Television can be connect to any H4.27 JS-VD port, even if multiple monitors are installed. Otherwise, the TV can be connected on a BDU branch. BDU will be required if using H4.24 units.

[3] Connect the video cable to the VIDEO terminal of the Television, Composite Video Input.

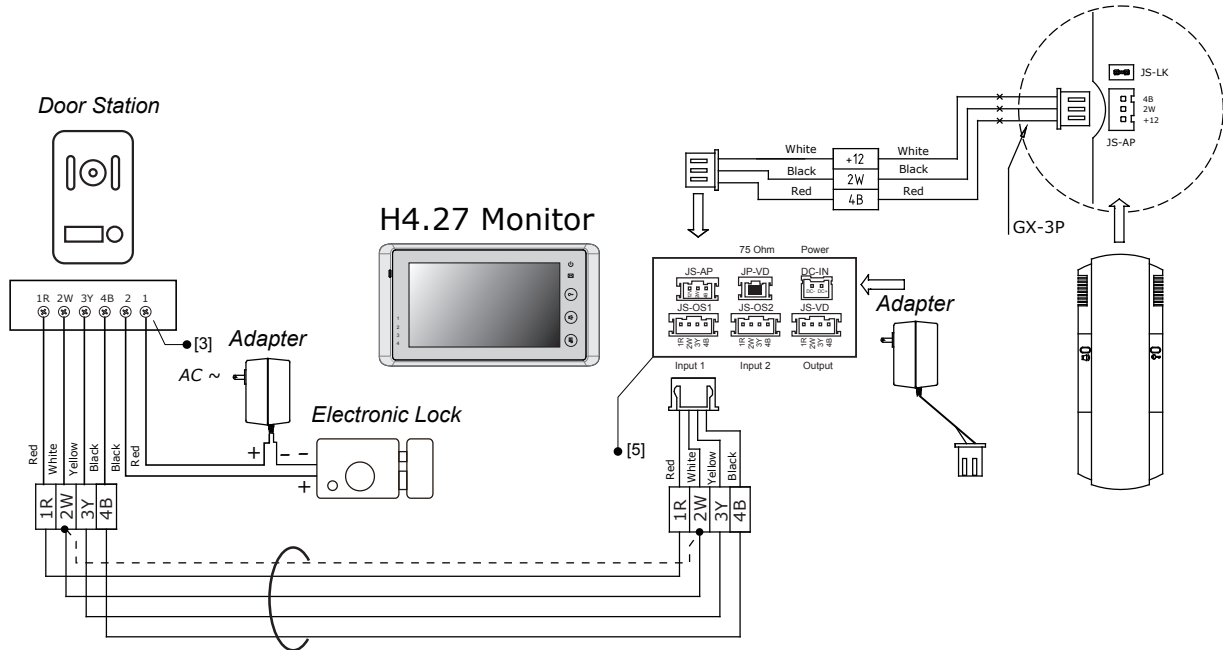
[4] Press the AV Button on the TV remote to switch the picture from TV to Doorstation.



4 Wire - Monitor Expanded

EXTEND AUDIO HANDSET

Audio Phones can be connected to the Monitor system. The Audio Phone can answer the calling from Doorstation and unlock the door. When visitors call from the Doorstation, Monitor(s) and Audio Phone(s) will ring at the same time, and any of them answer the call, the other will stop ringing. The Handset operates similar to a monotor involving conversation and door opening, etc.



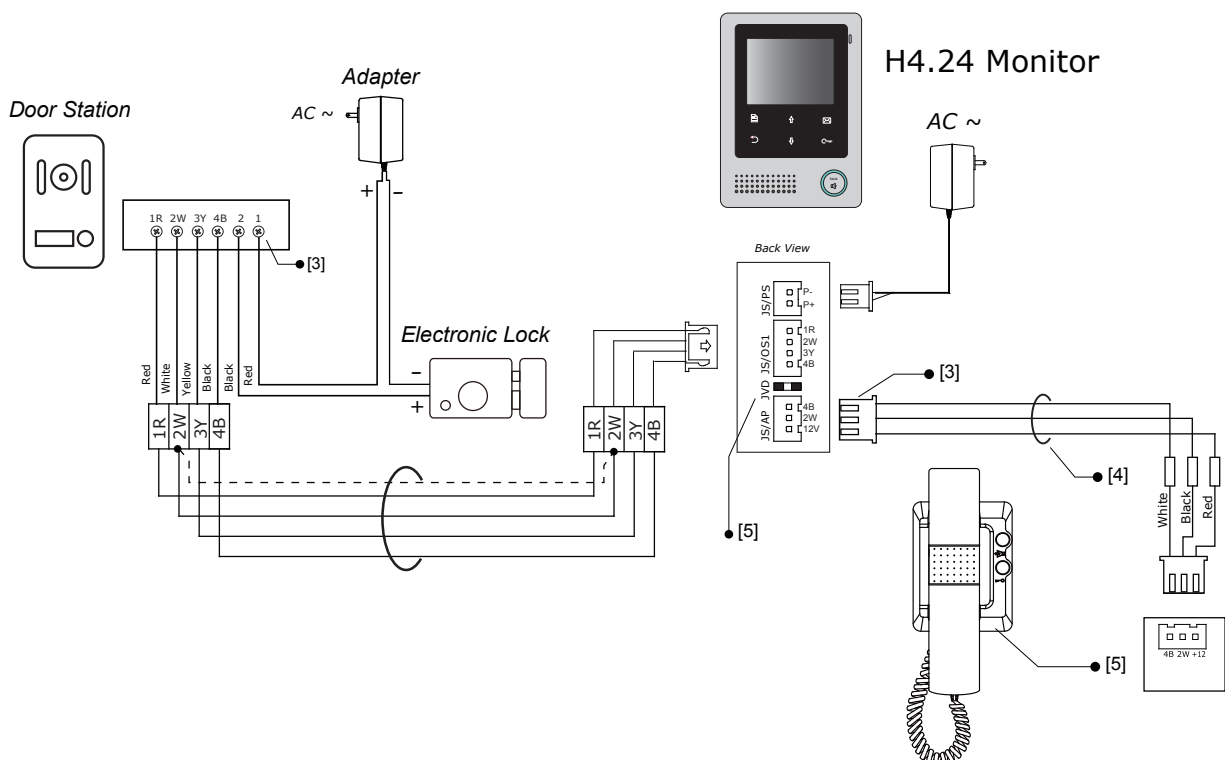
[1] The power supply for the Handset is not required. The 4 wire system incorporates 12Vdc to operate the handset.

[2] Please connect the wire firmly, iron welding is recommended. Screw terminals optional, will need enclosure.

[3] Connect the Doorstation to the JS-OS1 port (H427).

[4] Connect the Audio Phone to the JS-AP port (H424).

[5] Audio only handsets have no Video termination, If Monitor end-of-line then set last monitor JP-VD (JVD) = Closed



LOOK-C DOOR SURVEILLANCE

4 Wire - Connection Expanded

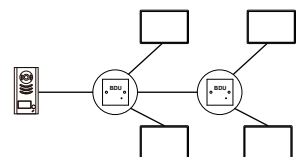
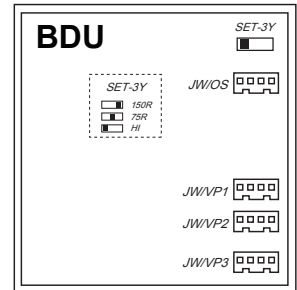
BDU BRANCH DISTRIBUTION UNIT

The BDU unit is designed as a repeater and distribution amplifier for splitting a Bus into three branches.

- Distribute the 4-Wire system in star topology, for splitting the Audio/Video/Control/Voltage Bus.
- Multiple BDUs can be used when multiple distributor nodes need to be applied (up to 3 max.).
- There is a maximum of three BDU's that can be used in one system, in any configuration. If the system also uses a MDS Camera splitter, then only two BDU's can be used.
- BDU can work as a signal repeater in a long wiring distance system (up to 100 meters).
- The Video Signal quality requires 75Ω to be maintained. Please pay attention to the setting of JP-VD or JVD of the monitors (See Star Wiring Topology) and SET-3Y below:
- **SET-3Y:** Video impedance setting; 1- When multiple BDU units are installed in the system, all the BDU units must be set to **HI** except the last one of the chain (which is end-of-line). 2- The last BDU unit (or only one*) it should be set to **75R** or **150R** according the following: when the distance from the door station to the BDU is over 50 meters, set to 150R, other wise set to **75R**.

**If there is only one BDU installed, the settings are the same as being the end-of-line unit.*

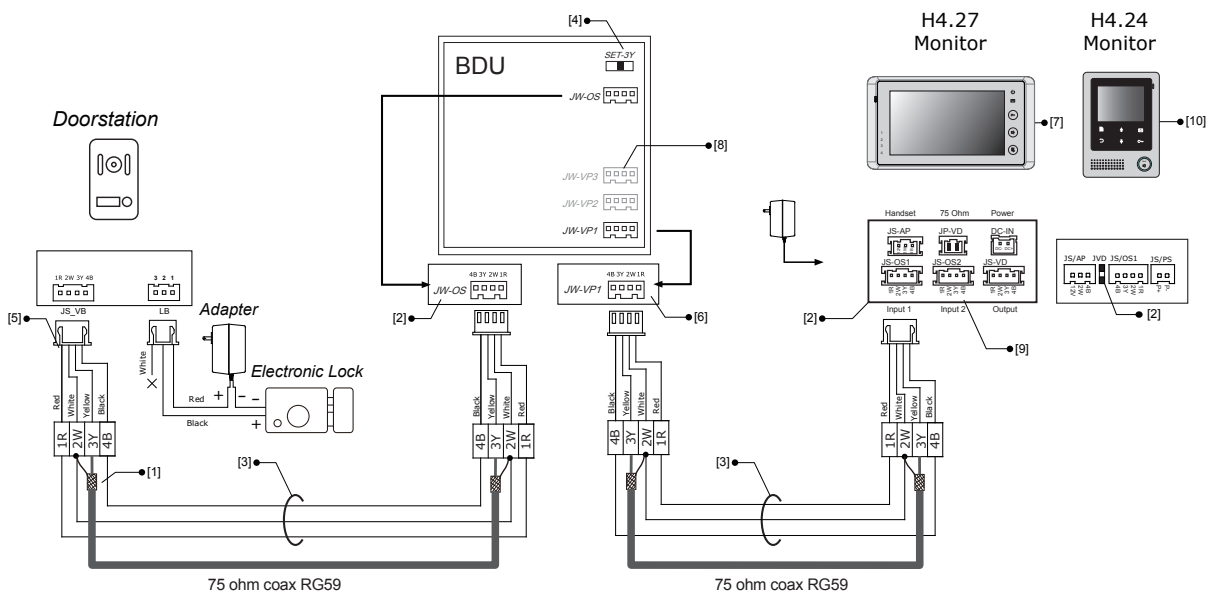
- **JW/OS:** Input port; Connect to the door station, or previous BDU unit.
- **JW/VP1/2/3:** Output port; connect to indoor monitors or next BDU unit.
- **H427** Requires Set Menu to: **User Setup -> Installer Setup -> BDU Installed = 1**



BDU DISTANCE EXTENDING

The BDU can be used to extend the wiring distance from Doorstation to Monitor or from Monitor to Monitor in a chain.

- Connect the BDU directly between Doorstation and Monitor(s). Maximum distance 100 meters.



- [1] 75 ohm coax RG59 video cable, connect the video core to 3Y and connect the shielded layer to 2W.
 - [2] Connect the Doorstation to the JW-OS port of the BDU.
 - [3] The use of higher guage cables can help maximise range
 - [4] Set the SET-3Y to 75R position(middle position)
 - [5] Illustrated with a Door station as source. Can also be from another BDU branch line or Output of Monitor #1, etc.
 - [6] Connect the JW/VP 1 to the Monitor #1.
- Optional Multi-Monitor setup. See Multi-Monitor pages.

- [7] H427 Requires Set Menu to: **User Setup -> Installer Setup -> BDU Installed = 1**
- [8] Multiple Monitors can be supported when using the BDU unit, refer to [Extend Multiple Monitors](#) section for connection detail).
- [9] The JS-OS2 can be connected to the second Doorstation, only if this H427 is the master Monitor #1.
- [10] H424 is shown for alternative conection Illustration purposes.

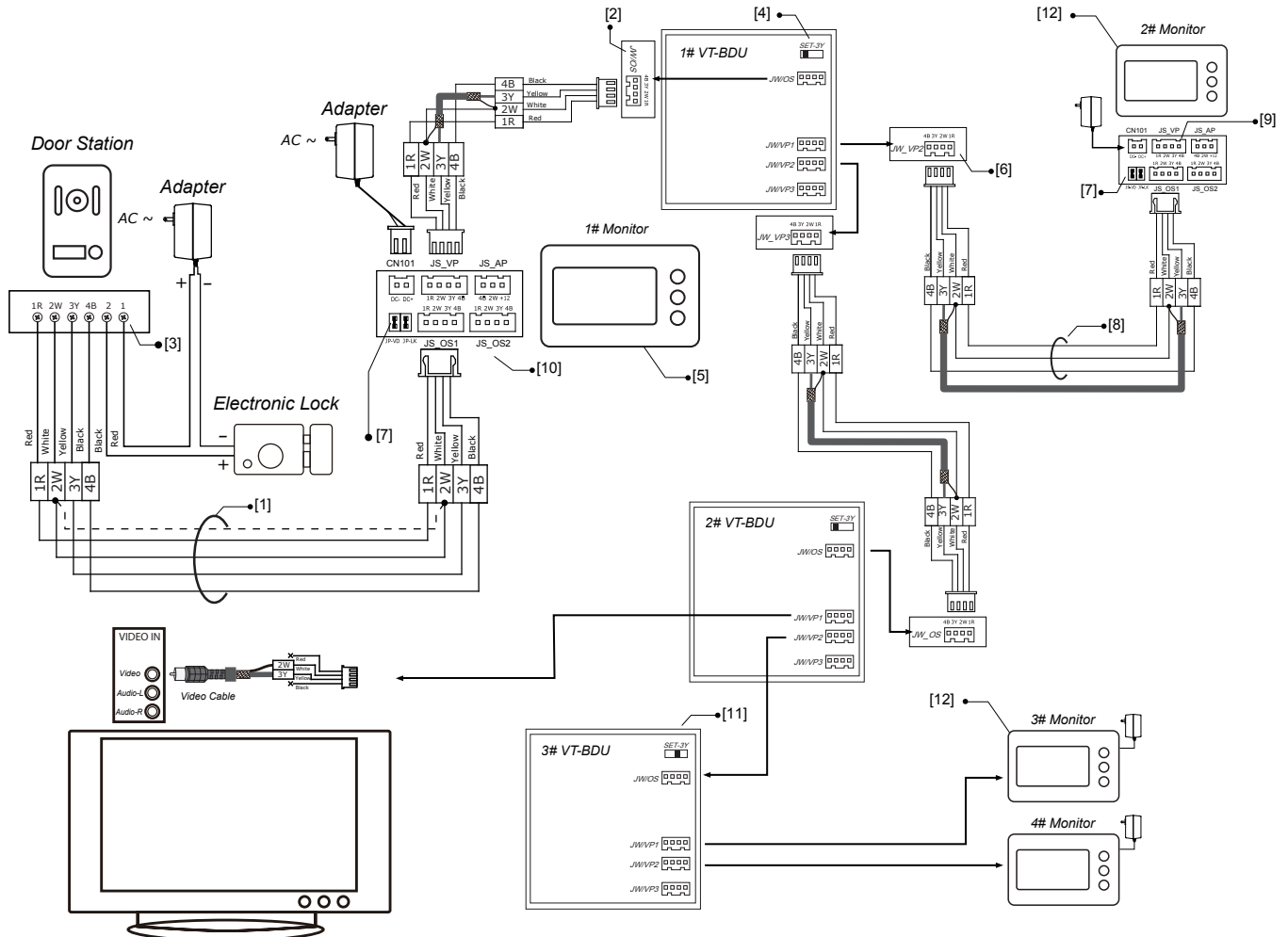
More BDU units can be inserted in the chain to further extend. Please note that a BDU will not fix issues with cable selection.

4 Wire - Connection Expanded

BDU STAR-WIRING TOPOLOGY

Star topology can be applied using one VT-BDU unit or multiple VT-DBU units, to meet the needs of different house structures. Maximum 3 VT-BDU units can be used in one system.

Star Topology Connection



[1] When the distance between two connect port is less than 30 meters, use RVVP 4*0.5 mm² shielded cable, when the distance is over 30 meters, use RVVP-75-3(RG-59) video cable plus a RVVP 3*0.5mm².

[2] Connect the Doorstation to the JW/OS port.

[3] This power adaptor is for the optional door strike only.

[4] Set the SET-3Y to HI except the last VT-BDU.(4# BDU in this case). This is the impedance setting for end-of-line 75Ω

[5] Monitors in this topology should be all of the one same type. See Multi-Monitor Notes. H427 shown here for connection eg. only.

[6] Each JW/VP port can be connected either Monitor or next VT-BDU unit.

[7] Keep the JP_VD jumpers connected on ALL monitors. This is the 75 ohm load for end-of-line termination (see 8).

[8] Multiple Monitors can be connected, and the distance from the farrest Monitor to the connected VT-BDU should be less than 50 meters. (refer to [Extend Multiple Monitors](#) section for connection detail).

[9] Audio phones can be extended, (refer to [Extend Audio Phone](#) section for connection detail)

[10] Doorstation can be connected to the JS_OS2 port of only Monitor1# (refer to [Dual Doorstation Connection](#) section for connection detail).

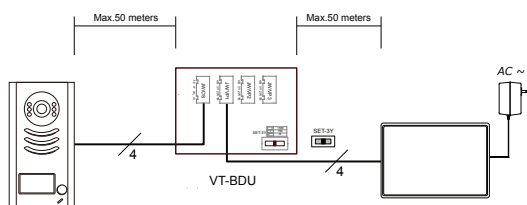
[11] The SET-3Y of the last VT-BDU must be set to 75R.

[12] "BDU Installed" Setting = "1" to enable all Monitor features. eg. To share H427SDD Memory between extra monitors, etc. [User Setup](#) --> [Installer Setup](#) --> 2412 --> [Save](#) --> Select Option [BDU Installed](#) and enter "1", [Save](#) and Exit.

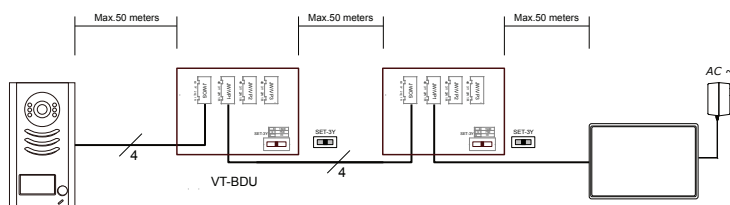
LOOK-C DOOR SURVEILLANCE

4 Wire - Connection Expanded

BDU EXTENSION TOPOLOGY

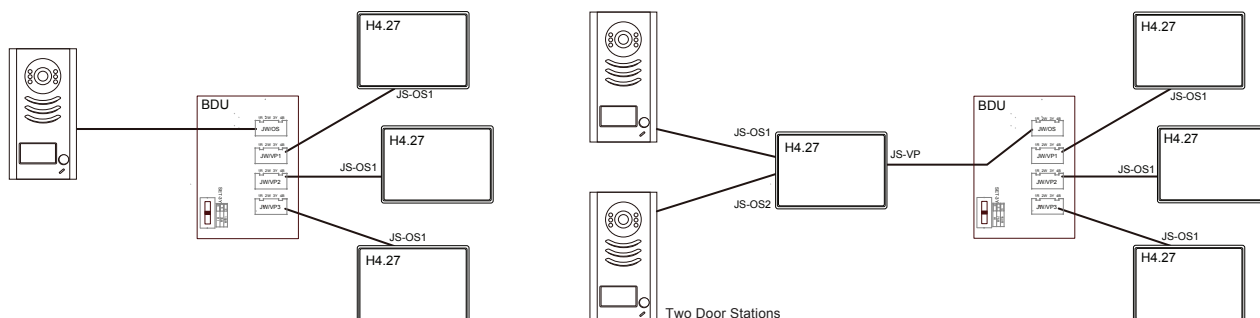


Note: SET-3Y set to 75R when the distance from door station to BDU is within 50 meters, otherwise set to 150R.

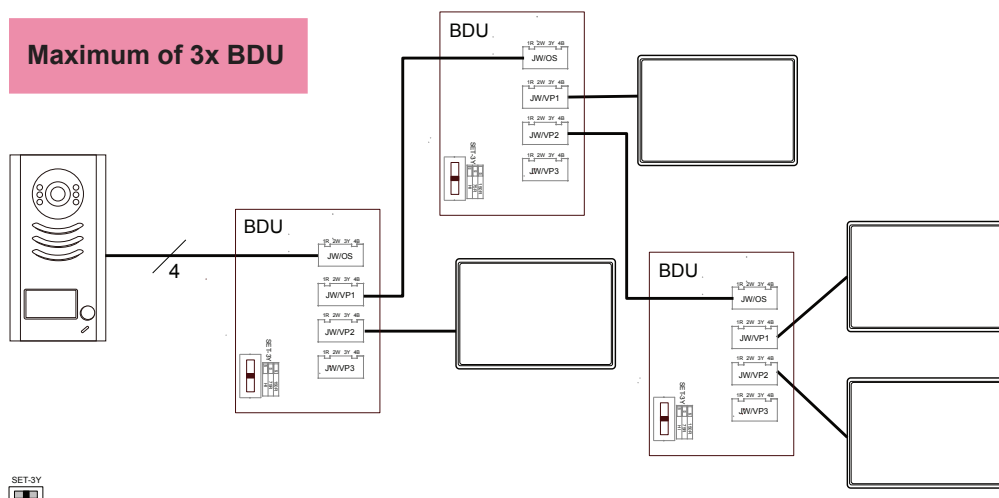


Note: SET-3Y set to 75R when the distance from door station to BDU is within 50 meters, otherwise set to 150R.

BDU STAR-WIRING TOPOLOGY



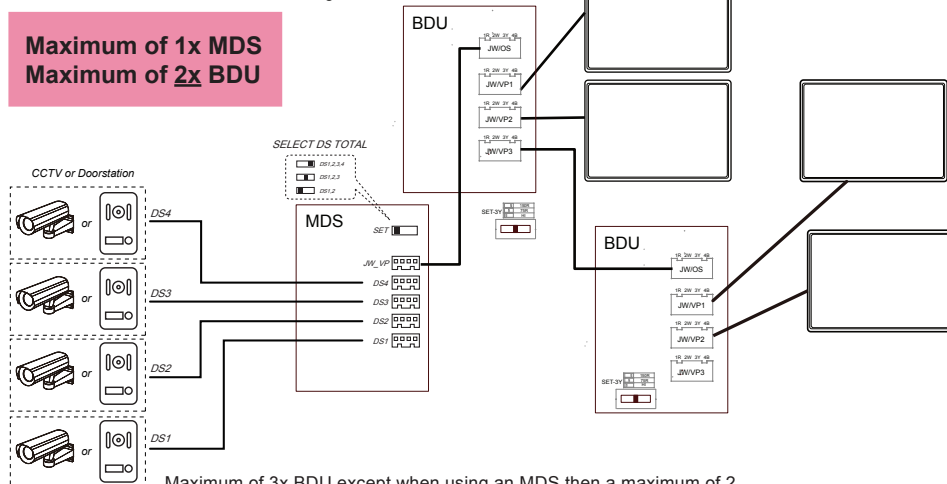
BDU is connected from one output to another (Star Configuration)



SET-3Y

Note: SET-3Y set to 75R when the distance from door station to BDU is within 50 meters, otherwise set to 150R.

MDS is connected with BDU in Star Configuration



Maximum of 3x BDU except when using an MDS then a maximum of 2

4 Wire - Accessories

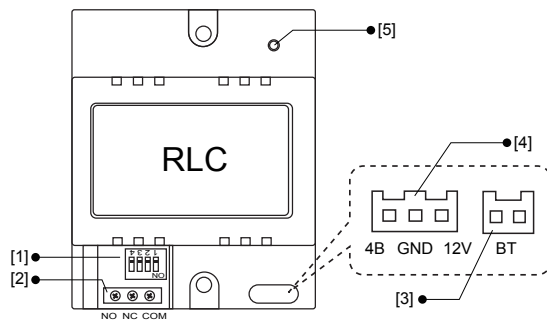
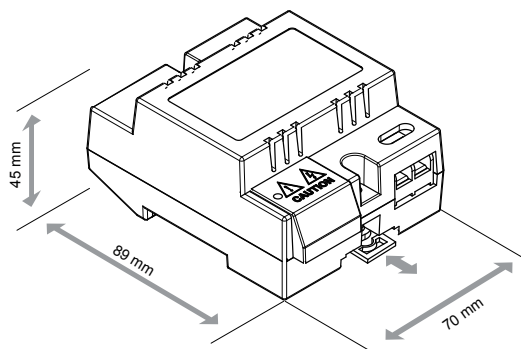
RLC LOCK/LAMP CONTROL UNIT

The VT-RLC unit can be used to control lamp(for example, the staircase light) or to control a additional electronic lock(for example, garage door lock).

When control a lamp, there are 2 different control modes can be used, Automatic mode and Manual mode.

- **Automatic Mode:** The lamp will be automatically turned on when visitors press Call button on the Doorstation, and it will be turned off automatically after a given time(called Light-on time, can be set by the DIP switches for 1, 3, 5 or 10 minutes)
- **Manual Mode:** The lamp will be turned on and off manually on the screen of the Monitor or by the external button.

RLC Terminal descriptions



[1] DIP switches for lamp control or unlock time settings(see detail information later this section).

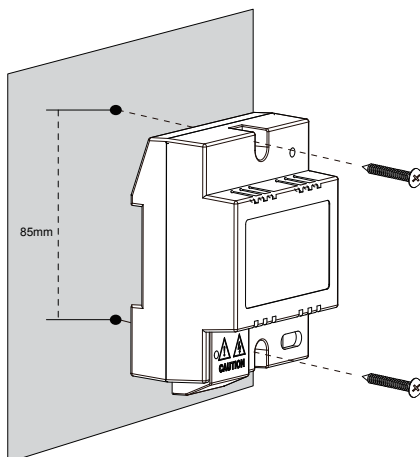
[2] Relay contact terminal, connect to lock or lamp. **NO** - Normally open terminal; **NC** - Normally closed terminal; **COM** - Common terminal.

[3] External control button port.

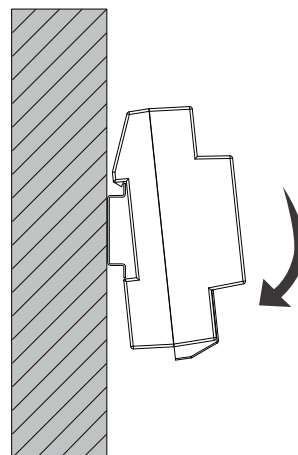
[4] Monitor connection port, connect to the **JS_AP** port of Monitor. **4B** - data transmission line, connect to 4B pin of Monitor; **GND** - power ground, connect to 2W pin of Monitor; **12V** - DC 12V power, connect to +12V of Monitor.

[5] LED indicator, lights in red when power is on, blink in red when the unit is active.

Direct wall mounting



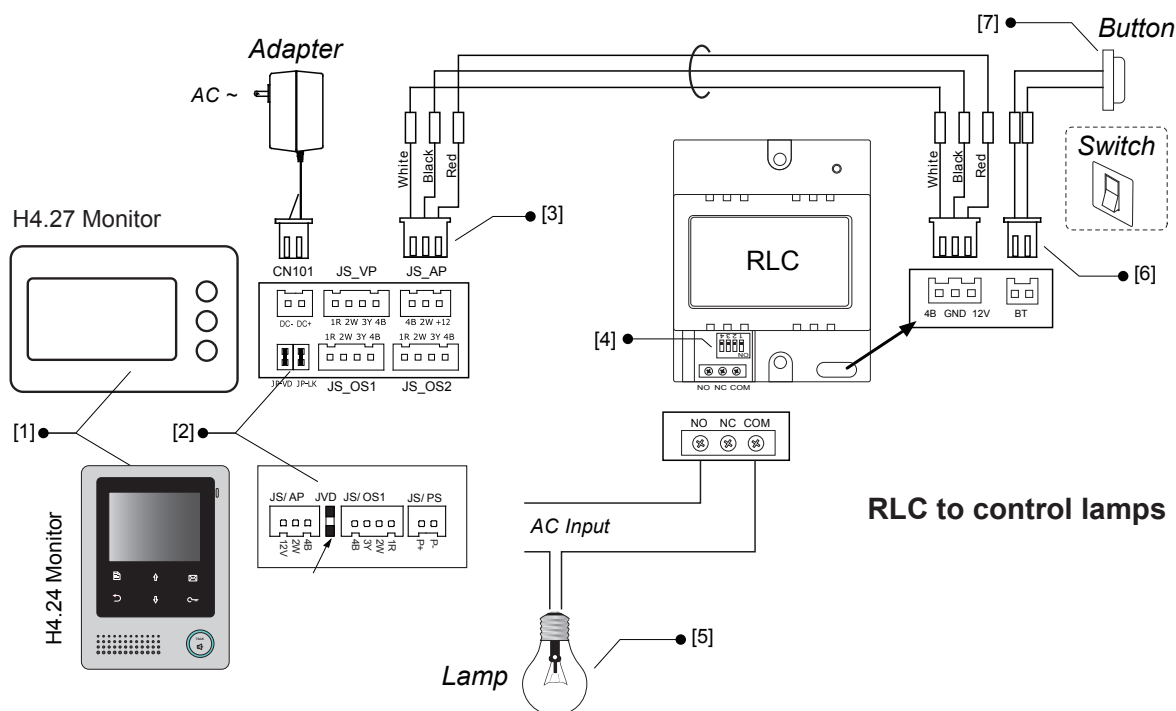
DIN rail mounting



LOOK-C DOOR SURVEILLANCE

4 Wire - Accessories

RLC LAMP CONTROL



[1] Only the Monitors with a touch screen can support VT-RLC unit, and settings need to be made to enable the RLC function.

[2] Connecting RLC unit will not affect the jamper settings.

[3] Connect the RLC unit to the JS_AP port of Monitor. Note that Audio Phone can not be supported when using RLC.

[4] DIP switches for Lock/Lamp control settings.

[5] Connect the lamp to **NO** and **COM** terminal, this lamp can be any type of AC light(the power rating must less then 700 w), such as a light tube.

[6] The button connection is Non-polarity.

[7] Both button or switch can be connect to the BT port. Note that if using a switch, the Light-on timing will only work when the switch is turned off, when the switch is turn on, the lamp will always be on.

DIP settings

- Bit-1: Lamp / Lock select. set to **OFF** for lamp control; set to **ON** for lock control.
- Bit-2: Control mode select. set to **ON** to select Manual Mode, set to **OFF** to select automatical Mode.
- Bit-3 and Bit-4: Light-on time select, see table below

DIP state Function descriptions



Automatic Mode;
Light-on time=10 min;
Default setting



Automatic Mode;
Light-on time=3 min;



Automatic Mode;
Light-on time=5 min;



Automatic Mode;
Light-on time=1 min;



Manual Mode;
Lamp manually control by button or Monitor

Monitor settings and operations

H424

Tools -> Installer Setup(1)/(2) -> Staircase Light

H427

User Setup -> Installer Setup -> Staircase Light

Light on door bell activation can be set as follows:

[0]: don't light on at any time when receive calling

[1]: light on at night only when receive calling

[2]: light on at any time when receive calling.

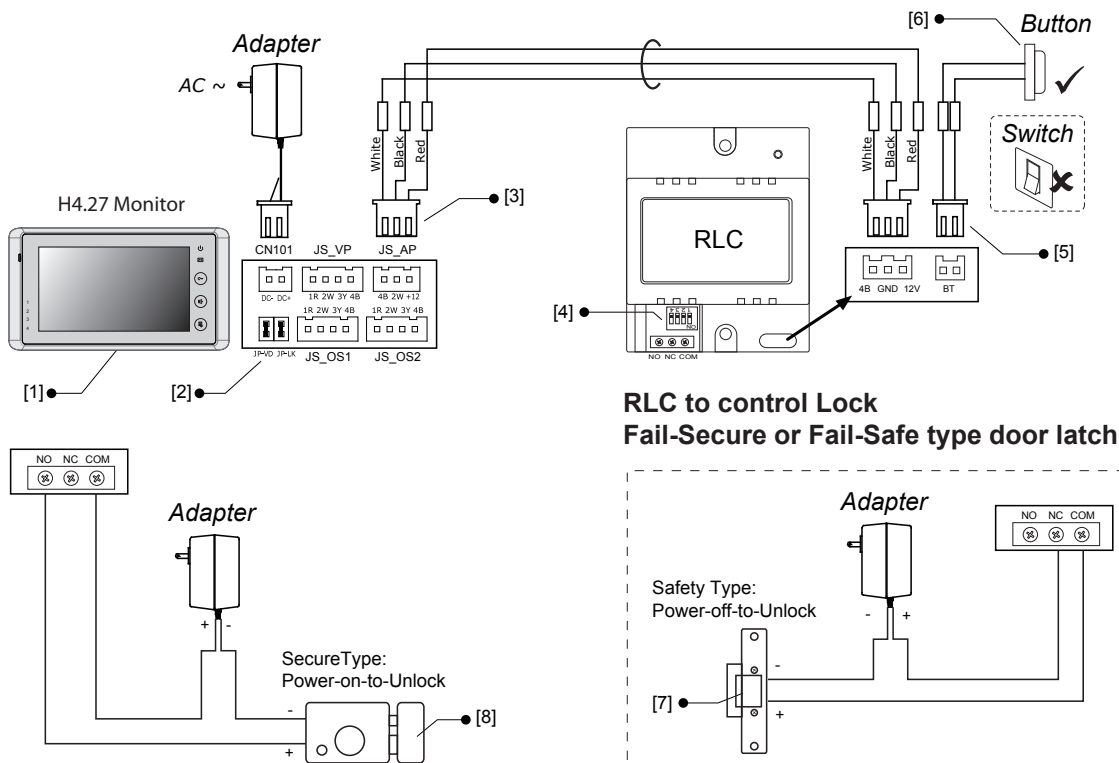
Note that this item should be set on Monitor #1 for slave monitors, this item is invalid.

Night/Day timing is set by the clock.



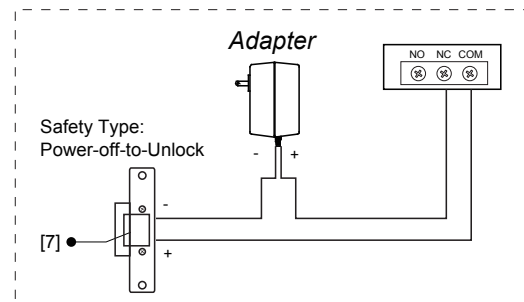
4 Wire - Accessories

RLC LOCK CONTROL



- [1] Only the Monitors with a touch screen can support VT-RLC unit, and settings need to be made to enable the RLC function.
- [2] Connecting RLC unit will not affect the jamper settings.
- [3] Connect the RLC unit to the JS_AP port of Monitor. Note that Audio Phone can not be supported when using RLC.
- [4] DIP switches for Lock/Lamp control settings.

RLC to control Lock Fail-Secure or Fail-Safe type door latch



- [5] The button connection is Non-polarity.
- [6] External button can be connect to the BT port. DO NOT connect a switch to the BT port.
- [7] When connecting a lock with the safety type of Power-off-to-Unlock, connect to the **NC** and **COM** port.
- [8] When connecting a lock with the safety type of Power-on-to Unlock, connect to the **NO** and **COM** port.

DIP settings

- Bit-1: Lamp / Lock select. set to **OFF** for lamp control; set to **ON** for lock control.
- Bit-2: Function reserved.
- Bit-3 and Bit-4: Light-on time select, see table below.

DIP state Function descriptions

ON 1 2 3 4
Unlocking time = 10 seconds

ON 1 2 3 4
Unlocking time = 3 seconds

ON 1 2 3 4
Unlocking time = 5 seconds

ON 1 2 3 4
Unlocking time = 1 seconds

Monitor settings and operations

H427 TIMING

User Setup ->> Installer Setup ->> Unlock Timing

Sets the timing interval that the door catch is activated for. 0 to 9 Seconds. Default 3 seconds.

User Setup ->> Installer Setup ->> Unlock Auto Off

Sets the timing interval that the Monitor remains on for, after the door release has finished activating. 0 to 9 Seconds. Default 3 seconds.

Fail Secure is Power-On-To Release

This is available standard with a Door Station (Door station is without Exit Button delay)

Fail-Safe is Power-Off-To-Release

This type requires RLC using NC/COM Contacts



H4.24 Monitor
Not Compatible with
Door Lock Control

LOOK-C DOOR SURVEILLANCE

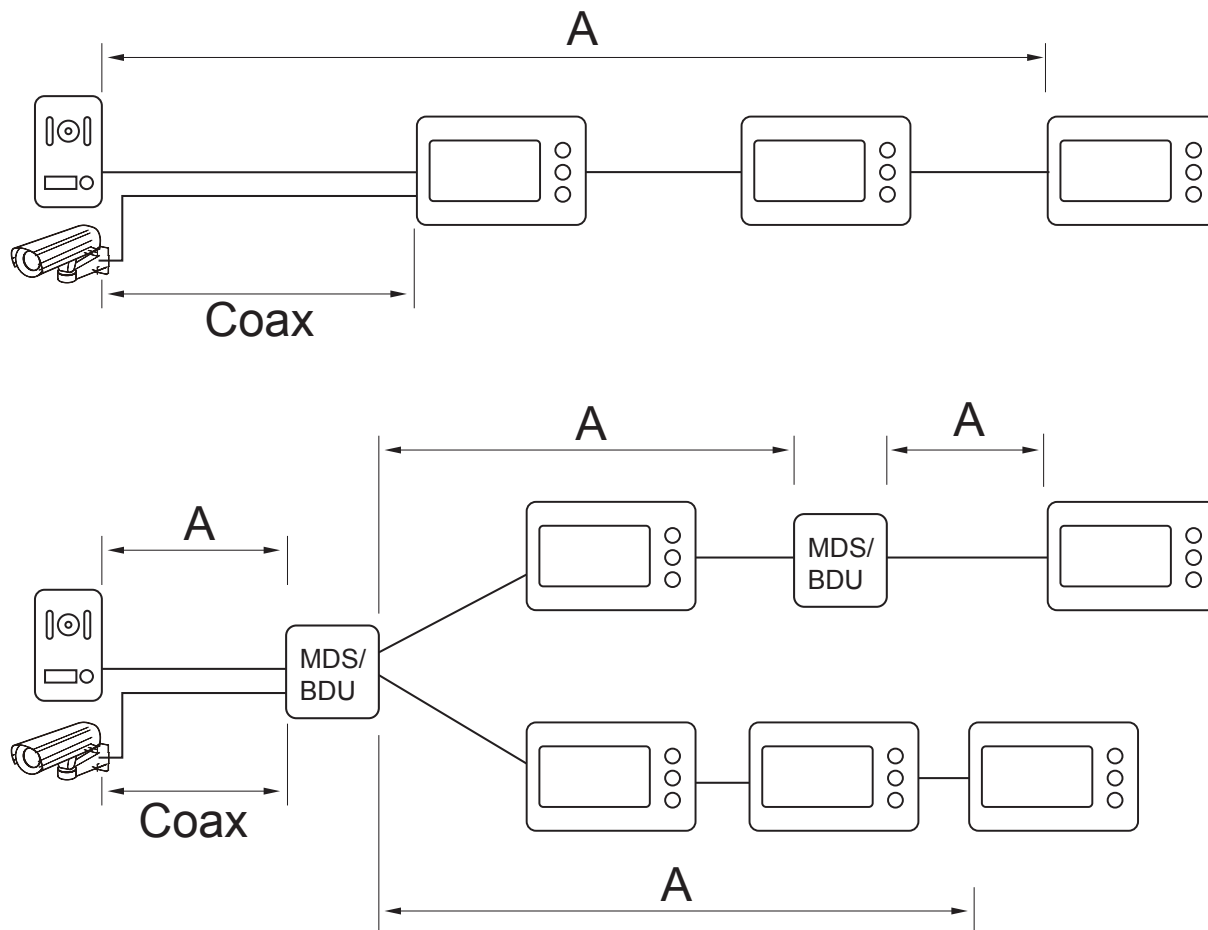
4 Wire - Technical Connections

CABLE DISTANCES

Distance achieved can vary when using different grades and types of cable and connection methods. Below is manufacturers recommended cables and cables available from WES Australasia (Tested). Results may vary depending on application.

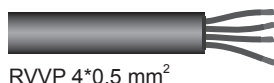
It is recommended to use CAT5 or CAT6 Cable for standard installations of shorter lengths and simpler type applications.

Use shielded cable for noisy environments when running cable with other wires (like mains, etc.) or steel structure buildings, etc.



Distance (A): $0 < \text{Distance} \leq 30\text{m}$ $30 \leq \text{Distance} \leq 50\text{m}$ $50\text{m} \leq \text{Distance} \leq 100\text{m}$

**Manufacturer
Recommended**



Distance $\leq 100\text{m}$

General Install

Shielded Cable For Noisy Environment Install

WES Cables



Application:

It is recommended to use CAT5 Cable for standard installs with shorter lengths. As tested, we found 24AWG CAT5 ample for up to 50 Meters (see also BDU as a booster). Longer lengths require 20AWG. It is recommended to use shielded cable for noisy installations when running cable with other wires (like mains cord, etc.) or steel structure buildings, industrial, etc.

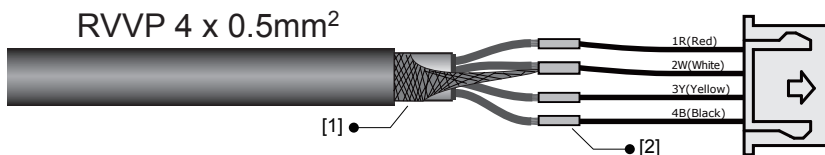
4 Wire - Technical Connections

CABLE CONNECTION

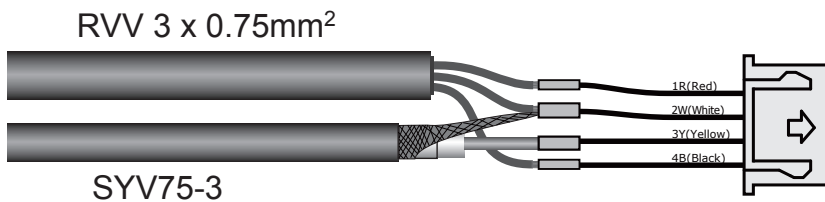
Connect the cable to the 4 pin connector, the joint should be soldered with an iron.

Manufacturers Recommended Cables

1. Connect RVVP 4 cable



2. Connect RVV 3 + SYV cable

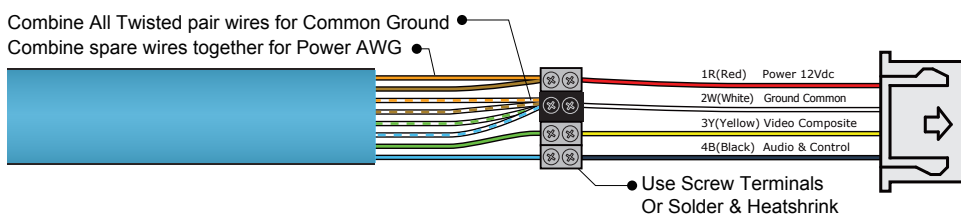


[1] Connect the shielded layer of the cable to the 2W wire.

[2] All the jointers should be welded with an iron.

WES Cables

1. Connect CAT5/CAT6 cable Twisted-Pair



2. Connect Security Cable SEC7505 - Shielded for noisy environments

