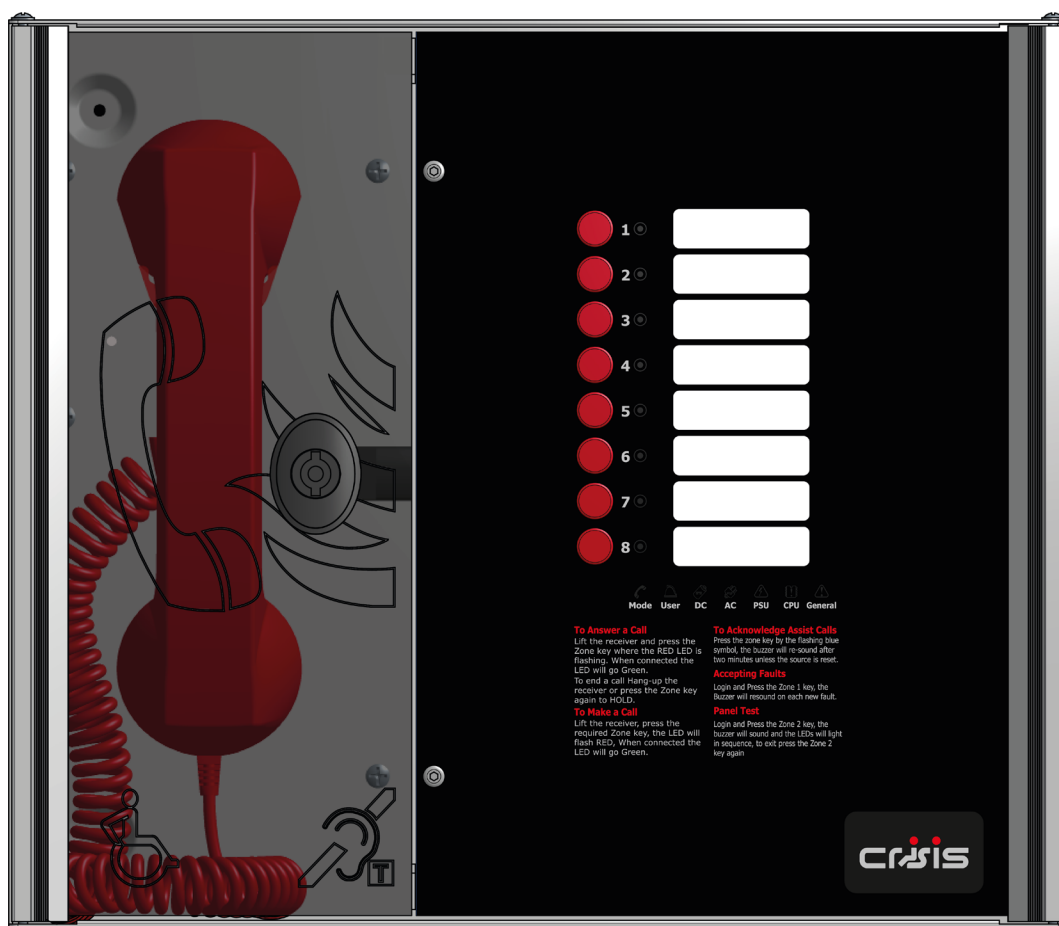




# EVC Standalone Master Station

## Installation Guide



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## Scope

The Crisis EVC Standalone Master Station Installation Guide provides a comprehensive description of the Crisis Emergency Voice Communication System.

This guide introduces the Crisis EVC Standalone Master Station features, technical specifications and gives an understanding of its components and their function. You will also find instructions on installing, configuration and testing.



This guide is for anyone involved with the design, maintenance and purchasing of a Crisis EVC system. It is assumed that anyone using this product has the knowledge and appropriate certification from local fire and electrical authorities.

## Document Conventions

The following typographic conventions are used in this document:

Convention	Description
<b>Bold</b>	<b>Used to denote:</b> Emphasis.
<i>Italics</i>	<b>Used to denote:</b> References to other parts of this document or other documents.

The following icons are used in this document:

Convention	Description
	<b>Recommended guideline:</b> Advising to do so.
	<b>Caution:</b> Not appropriate to do so or; care taken to avoid danger or mistakes.

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## 1 Introduction

### 1.1 What is an Emergency Voice Communication System?

An Emergency Voice Communication System, or EVCS, is a system that allows voice communication in either direction between a central control point and a number of other points throughout a building or building complex, particularly in a fire emergency situation. The control points, or outstations by which they are more commonly referred, generally comprise of a Type A outstation, a Type B outstation, or a Type C Combined Type outstation. "Assist Call" emergency assistance alarm systems can also be incorporated into the EVCS.

EVCS is generally required in the following situations:

- In any building or sports or similar venue where there are disabled people, or people who may have difficulty negotiating the evacuation route.
- In buildings with phased evacuation and/or fire fighting lifts where it facilitates secure communications for building managers, fire wardens, and attending fire officers.
- At sports venues and similar complexes, where it will assist stewards in controlling the evacuation of the area in an emergency.

The Crisis Emergency Voice Communications System (EVCS) is designed to fully comply with BS5839 Part 9:2021 for use as a Fire Telephone system, Disabled Refuge Call system or as a combined system when both Fire Telephones and Disabled Refuge Points are required.

### 1.2 Suitability

Fire telephone systems are recommended for all public buildings and multi-story buildings over four floors by BS9999:2017.

Disabled Refuge systems are required in buildings where the public or staff gains access to any floor other than the ground floor using lifts. A refuge is a relatively safe waiting area provided at each storey exit from each protected stairway.

Refuge areas are not just for wheelchair users, they are for anyone who may need assistance i.e. someone who's immediate evacuation will impede the egress of others, a pregnant woman over 6 months term or persons with long term injuries, arthritis etc.

## 2 Product Overview

Crisis EVC Standalone, comprises of a Master Station and one or more outstations. Additionally, the "Assist Call" emergency assistance alarm system can either be connected to the same line as a Type B outstation or connected to a dedicated line. Neither the outstations nor the "Assist Call" emergency alarm system require a separate power supply unit as each line is powered from the Master Station. This has the additional benefit of each line being fully monitored and battery backed up.

The Standalone Master Station has been designed for radial star topology. In most cases this will reduce the cable requirements for all ring-based systems. The topology consists of spurs formed of 1 off two core 1.5mm CSA cables (soft skin enhanced up to 500m per leg, MICC 200m per leg) to each outstation.

## 3 Important Safety Information

This Equipment must only be installed and maintained by a suitably skilled and competent person.

This Equipment is defined as Class 1 in EN60065 (Low Voltage Directive) and must be EARTHED.



	<p><b>Caution: Indoor Use Only</b>  <b>Warning: Shock Hazard - Isolate Before Opening</b>  <b>Warning: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE</b>  <b>Warning: THIS UNIT MUST BE EARTHED</b>  <b>Warning: NO USER SERVICEABLE PARTS</b></p>
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Each Crisis EVC Standalone Master Station requires local isolation with verification as per the Electricity at Work Regulations 1989, returning to a B6A breaker clearly marked 'EMERGENCY VOICE COMMUNICATION SYSTEM. DO NOT TURN OFF'.



### Anti-static handling guidelines

Make sure that electrostatic handling precautions are taken immediately before handling PCBs and other static sensitive components.

Before handling any static-sensitive items, operators should get rid of any electrostatic charge by touching a sound safety earth. Always handle PCBs by their sides and avoid touching any components.



## 4 Unpacking

Remove the Crisis EVC Standalone Master Station from its packing, and check the contents against the following list:

- Crisis EVC Standalone Master Station
- Quick Start Guide
- Accessory Pack:
  - 1 x 2.5mm AF Hex Key
  - 1 x Door Handle/Key
  - End of Line (EOL) Resistors, 2 per Line Card

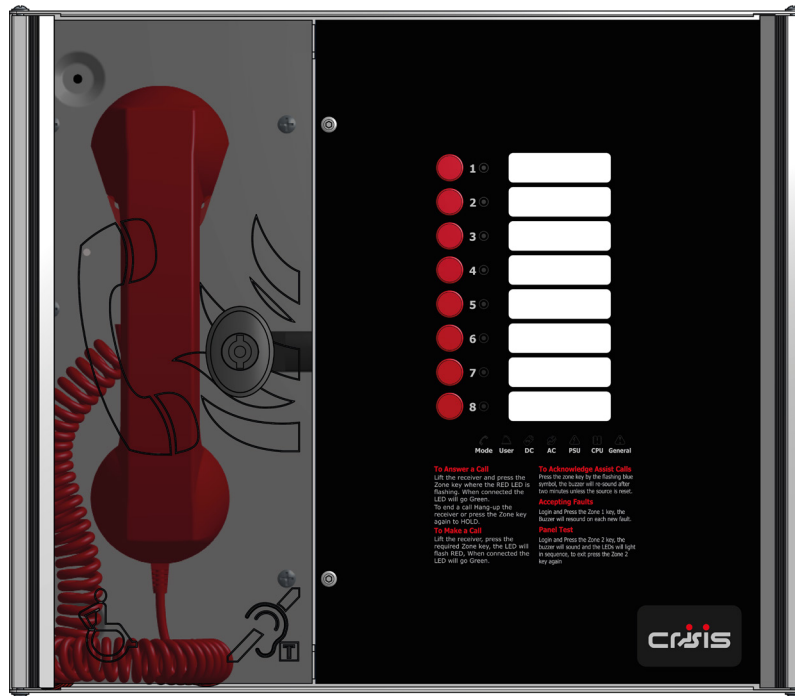


Figure 1: Crisis EVC Standalone Master Station Front

Use the 2.5mm AF Hex Key supplied to open the right-hand front cover.

Verify the following items are present:

- Correct number of Line Card, depending on configuration, c/w 2-way line connectors
- 1 x 3-way Mains Connector
- 1 x 2-way Fault Connector
- 1 x 2-way In Use Connector
- 1 x 2-way Enable Connector
- 1 x Battery Lead

If there are any items missing, please contact your supplier or Eurofyre Limited, quoting the unit serial number and the name on the packing list enclosed, so the situation can be rectified.

## 5 Installation

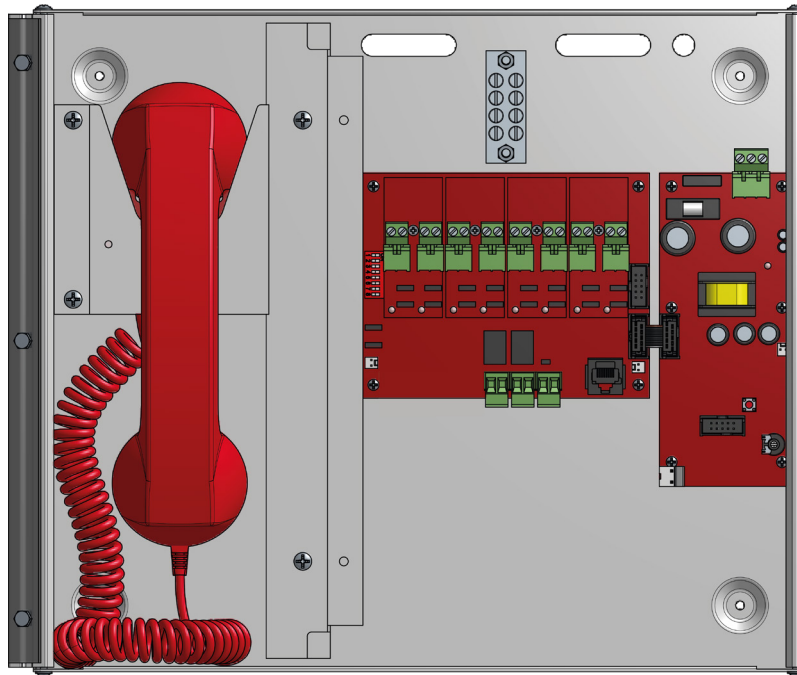


Figure 2: Crisis EVC Standalone Master Station Internals

Prior to mounting the Crisis EVC Standalone Master Station, it should be decided if the field wiring is to be run on the surface or concealed. There are 14 knockouts on the top and 2 slotted entries with a dedicated mains supply entry at the rear. If a knockout is removed by mistake, fill the hole with a good quality cable gland.

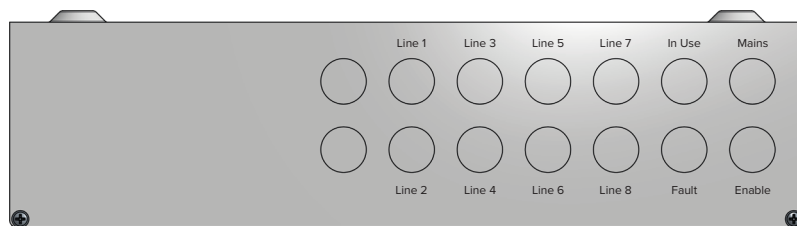


Figure 3: Crisis EVC Standalone Master Station Top Entries

Unused knockouts must be left unopened to comply with the Low Voltage Directive. Accidentally knocked out holes should be blanked off.

The Crisis EVC Standalone Master Station weighs 6kg with batteries, so care should be taken to securely mount the Station on stud walling.

### 5.1 Connecting the Crisis EVC Standalone Master Station

To comply with EMC (Electro Magnetic Compatibility) regulations and to reduce the risk of electrical interference in the system wiring, the use of fire-resistant screened cables is recommended throughout the installation.

All wiring should come into the enclosure via the knockouts provided and be fixed tidily to the relevant terminals.

Note that correct cable glanding is essential. Due regard should be paid to any system specifications which demand a certain cable type, providing it meets the appropriate national wiring regulations.

### 5.2 Planning the Wiring

All system wiring should be installed to meet the appropriate parts of BS5839 Part 9:2021 and BS 7671 (Wiring Regulations). Other national standards of installation should be adhered to where applicable.



**Do not test wiring using an insulation tester (Megger) with any equipment connected, as the 500 Volt test voltage will destroy these devices.**

You must observe local wiring regulations. Do not run SELV and LV cables in the same enclosure without adequate insulation between them.

## 5.3 Cable and Wiring Guidance

### 5.3.1 Fire Telephone System

Any system using Type A outstations must use enhanced grade cabling throughout for all wiring, including the mains supply to the Crisis EVC Standalone Master Station.

### 5.3.2 Disabled Refuge EVC System

For buildings less than 30m in height, or any building with sprinklers fitted, standard grade fire resistant cable may be used to wire Type B outstation and the mains supply to the Master Controller; as long as the planned evacuation will be completed in 30 minutes.

If the building is over 30m in height without sprinklers, or where the evacuation will take place over multiple stages exceeding 30 minutes, then enhanced grade cables must be used.

### 5.3.3 Combined Systems

For systems containing Type A, Type B or Type C outstations, shared cable such as network cables must be enhanced grade.

Cabling to Type A or Type C outstations must be in enhanced grade fire resistant cabling. Individual spurs to Type B outstations can be wired in standard grade fire resistant cabling in accordance with the wiring guidelines already set out for disabled refuge systems.

### 5.3.4 “Assist Call” Emergency Assistance Alarm Systems

All installations must conform to Building Regulations Approved Document M. The “Assist Call” is wired using 2 core cable, and the “Assist Call” plates can be wired in any order.

## 5.4 Cabling Methods

There are 3 cabling methods available:

- Connection to a Type A or Type C outstation: use 2 core enhanced grade fire resistant cable when extending a fire fighting telephone system.
- Connection to a Type B outstation: use 2 core standard grade fire resistant cable when extending a disabled refuge system.
- Connection to an “Assist Call” system on a dedicated line requires 2 core 1mm CSA or above PVC sheathed.

### 5.4.1 Crisis EVC Standalone Master Station Wiring

The wiring for a Crisis EVC Standalone Master Station is shown in the schematic below.

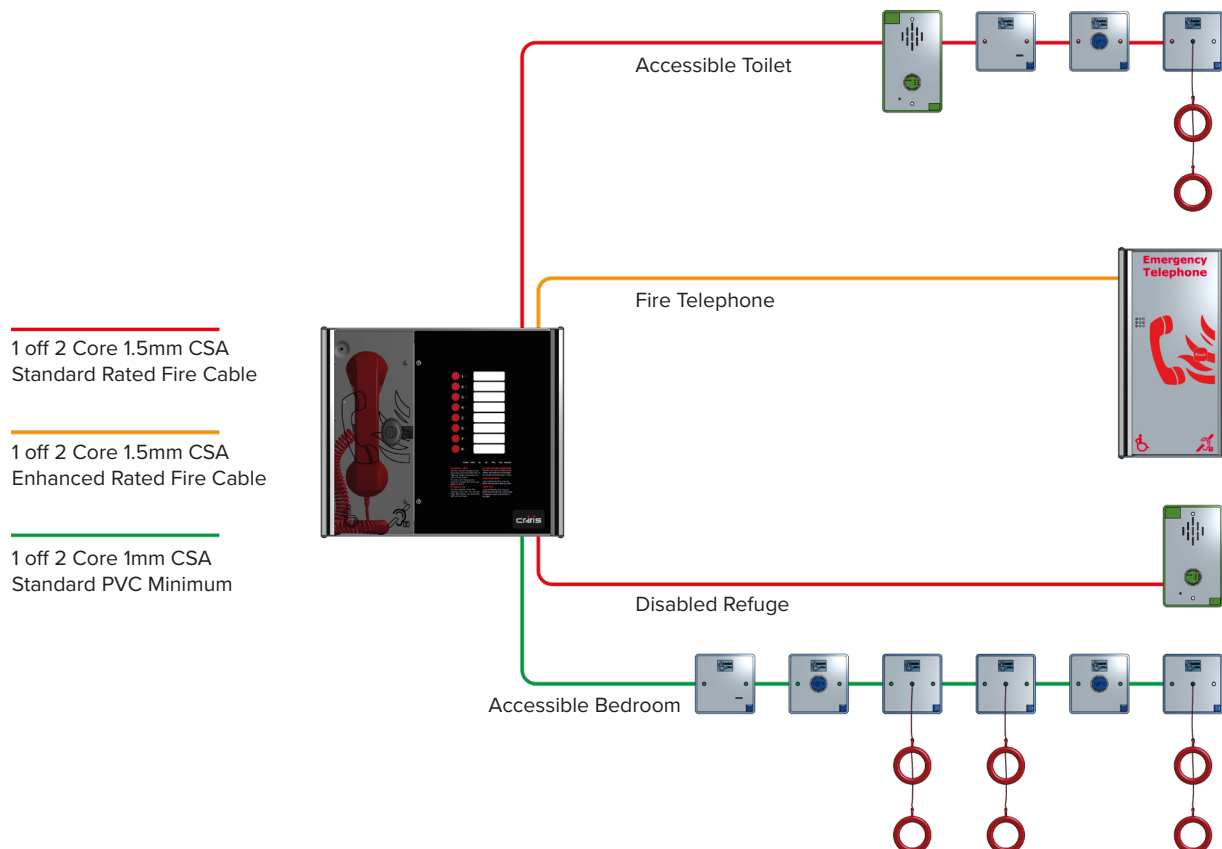


Figure 4: Typical Wiring Diagram - Crisis EVC Standalone Master Station


## 5.5 Mains Connection

Each Crisis EVC Master/Repeater Station requires local isolation with verification as per the Electricity at Work Regulations 1989, returning to a B6A breaker clearly marked '**EMERGENCY VOICE COMMUNICATION SYSTEM. DO NOT TURN OFF**'.

## 5.6 Battery Information

In the event of mains failure BS5839 Part 9:2021 requires battery backup for 24 hours standby and 3 hours operation thereafter.

A Crisis EVC Standalone Master Station requires one number 12V 7AH vent regulated sealed lead acid battery. The battery is not supplied with the Master Station. Eurofyre recommend Yuasa NP7-12.

	<p><b>Safety Information:</b> Sealed Lead Acid batteries contain sulphuric acid which can cause burns if exposed to the skin. The low internal resistance of these batteries mean large currents will flow if they are accidentally short-circuited causing burns and a risk of fire. Exercise caution when handling batteries.</p> <p><b>Power Up Procedure:</b> Always apply mains power before connecting batteries. When connecting batteries, always connect the Positive (Red +) terminal first.</p> <p><b>Power Down Procedure</b> Disconnect the batteries before removing the mains power. When disconnecting batteries, always remove the Negative (Black –) terminal first.</p>
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## 5.7 Outstation Connections

The Crisis EVC Standalone Master Station is equipped with at least one number Dual line card. One outstation per line output can be connected. If no outstation is connected to the line output, then an end of line 10kΩ resistor should be fitted. The dipswitch located on the rear of the door mounted Display PCB is used for configuration see 6.1.

The following devices are available on the system:

- Type A (fixed phone)
- Type B (hands-free refuge point)
- Type C “Combi” (combined Type A and Type B)
- Jack Point
- “Assist Call” emergency assistance alarm system

For Type A, and Type C outstations the end-of-line 10kΩ resistor is not required as it is integral to the product. For Type B outstations the end-of-line 10kΩ resistor should be removed from the accessory pack and connected to the end-of-line terminal in the outstation.

For Jack points and the “Assist Call” system, the end-of-line 10kΩ resistor should also be removed from the accessory pack and connected to the last plate on the system.

### 5.7.1 Type A Outstation

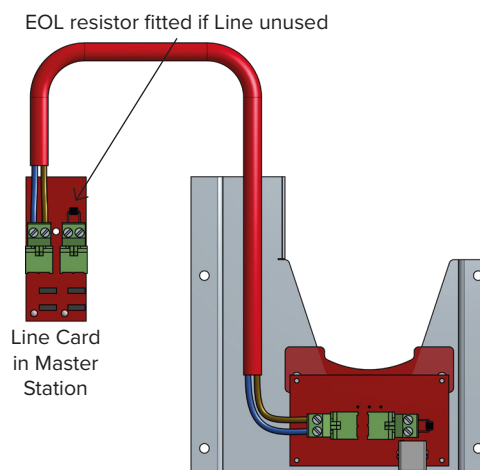



Figure 5: Type A Outstation Wiring Diagram

	<p>The Earth screen should be sleeved and connected to the terminal block in the controller, and the earth stud in the Type A outstation.</p>
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## 5.7.2 Type B Outstation

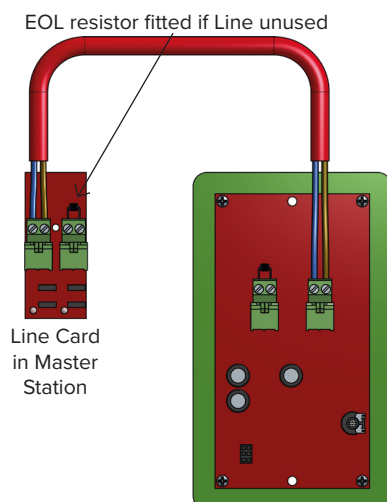


Figure 6: Type B Outstation Wiring Diagram



The Earth screen should be sleeved and connected to the terminal block in the controller, and the earth connection in the metal back box (if a plastic back-box is used cut the earth back and insulate at the outstation).

## 5.7.3 ACA Accessible Toilet Kit

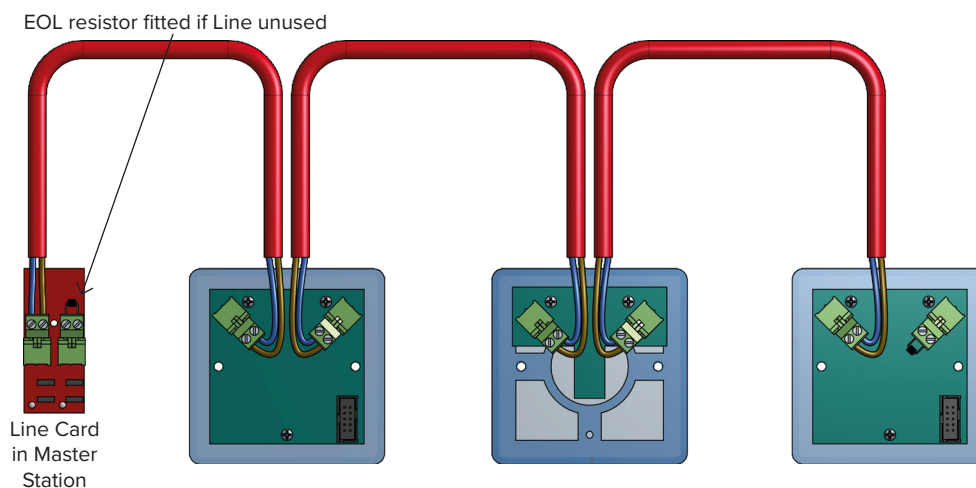


Figure 7: ACA Accessible Toilet Kit Wiring Diagram

The ACA kit comprises an Over door Indicator, a pull cord and a cancel plate and they can be wired in any order, the above is typically as installed, and runs Overdoor Plate, ceiling Pull and then the Cancel plate, the EOL resistor goes in the free terminals of the last plate.

## 5.8 Auxiliary Connections

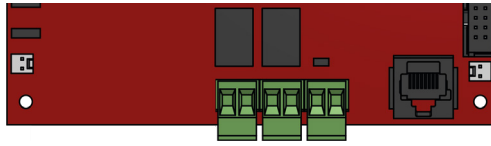


Figure 8: Auxiliary Connections

The Crisis EVC Standalone Master Station has three auxiliary connections:

**Fault** is a normally closed volt free relay (30V DC 1A) which OPENS on any fault, including loss of power.

**In Use** is a normally open volt free relay (30V DC 1A) connection which closes when any outstation is operated, see Remote Signal Display section 7.7 switch settings for further information.

**Enable** is a normally CLOSED input and is required to operate the system, this is often connected to the fire alarm system. If Jumper J9 is in place, then no connection is required at the terminals. This function only disables Type B outstations, with Type A outstations and “Assist Call” emergency assistance alarm systems continuing to operate. Calls from Type B outstations automatically “time out” after approximately 30 minutes. It is advised that this feature is not used as the system should always be available, not just during an evacuation. If the feature is used, then the mode LED illuminates yellow after 30 seconds to show that the system is disabled.



If the system is disabled, the master station can still make outgoing calls.

## 5.9 Powering Up Procedure

To power up the Crisis Standalone Master Station, carefully check all internal wiring before applying mains power to the Crisis Standalone Master Station. Once the Crisis Standalone Master Station is powered, the battery can be attached using the battery leads supplied. When attaching the battery, always attach the Positive (Red+) terminal first.

## 5.10 Powering Down Procedure

To power down the Crisis Standalone Master Station, first disconnect the battery. Always disconnect the Negative (Black -) terminal first. Once the battery leads have been disconnected, then remove mains power.

## 6 Set Up Procedure

The Crisis EVC Standalone Master Station has various site configurations which are configured using the dipswitch located on the rear of the Display PCB.

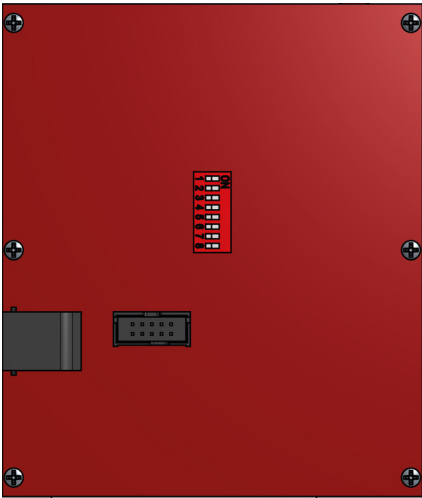


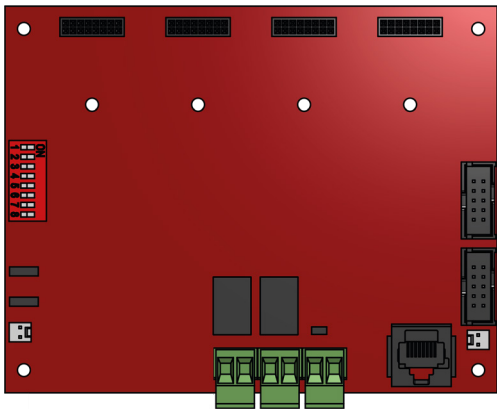
Figure 9: Rear PCB

### 6.1 Master Station Display PCB Dipswitch Settings

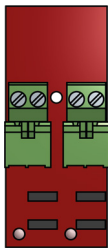
1	2	3	4	5	6	7	8	Remarks
Line 1 & 2	Line 3 & 4	Line 5 & 6	Line 7 & 8	N/A	N/A	N/A	Reserved	
ON								Line Card, 1 fitted
ON	ON							Line Card, 1 & 2 fitted
ON	ON	ON						Line Card, 1, 2 & 3 fitted
ON	ON	ON	ON					Line Card, 1, 2, 3 & 4 fitted

Table 1: Standalone Master Station Display PCB Dip Switch Settings

ON = Dipswitch in ON position  
OFF = Dipswitch in OFF position



Exchange PCB



Line PCB

Figure 10: Exchange and Line PCB Diagram

## 6.2 Adding a Line Card

The Crisis EVC Standalone Master Station is supplied with at least one number Line Card. There are 2 lines per Line Card.

Before adding a Line Card, ensure that the Master Station is not powered. If the Master Station is powered, then power down the Master Station, see 5.10.

To fit the Line Card:

1. Place Line Card in the next available space on the Exchange PCB and secure using the supplied screw.
2. Remove the line terminal and connect the field wiring.
3. Push the terminal into the correct position on the Line Card.
4. Set the dipswitch on the Display PCB, see 6.1 to enable Line Card monitoring.

Once the Line Card is securely fitted, power up the Master Station, see 5.9.

## 6.3 Removing a Line Card

Before removing a Line Card, ensure that the Crisis EVC Standalone Master Station is not powered. If the Master Station is powered, then power down the Master Station, see 5.10.

To remove the Line Card:

1. Remove all line terminals from the Line Card that is to be removed.
2. Remove the securing screw.
3. Remove the Line Card from Exchange PCB.
4. Set the dipswitch on the Display PCB, see 6.1 to disable Line Card monitoring.

Once the Line Card has been removed, the Master Station may be powered, see 5.9.

# 7 System Menus

## 7.1 Login Procedure

For access level 2 (User) the code is 1664, for access level 3 (Engineer) the code is 1812. Enter the relevant code using the numbered buttons 1-8, as each button is pressed the user LED will flash cyan/magenta faster until the required code is entered, at which point LEDs 1-3 will illuminate cyan for User mode and LEDs 1-5 will illuminate cyan for Engineer mode.

## 7.2 Fault Accept

Before accepting faults, the fault must be noted in the logbook, along with the time the fault was reported.

To accept the fault, enter either the access level 2 (code: 1664) or access level 3 (code: 1812) menu, then press zone button 1. The buzzer will silence, and the general fault LED will now go steady. Press zone button 8 to exit this menu and to return to the menu options. The buzzer will resound on each new fault and after 8 hours.

## 7.3 Panel Indicator Test

To test the panel indicators, enter either the access level 2 (code: 1664) or access level 3 (code: 1812) menu, then press zone button 2. All LEDs will illuminate in a predefined sequence, and the buzzer will sound. Press zone button 8 to stop the panel indicator test and to return to the menu options.



## 7.4 Extended Fault Menu

Enter the access level 2 code (1664) or access level 3 (code: 1812) then press zone button 3.

Zone	Indicator Status	Description
1 - 4	Blank	Line card configured as not fitted
	Yellow Solid	Line card configured as fitted but not present
	Green Solid	Line card configured as fitted and present
5		Not used
		Not used
		Not used
6		Not used
		Not used
		Not used
7	Green Solid	Display Processor Healthy
	Yellow Solid	Display Processor Fault
8	Green Solid	Exchange Processor Healthy
	Yellow Solid	Exchange Processor Fault

Table 2: Standalone Master Station Fault Menu

## 7.5 Remote Signal Delay Timer

The in-use relay, function can be altered to provide a remote signal via an autodialler, BMS or similar. The delay is adjustable between 30 seconds and 3 minutes such that if a call from an outstation is not answered within the chosen time delay then the relay operates. This could be used to send a signal off site during periods when the master station is not attended.

If the call is answered during the delay period, the relay will not operate, and the timer will cease. The above function works identically with the Assist Call emergency assistance system.

Enter the access level 3 code (1812), then press button 6 to enter this mode. The magenta zone indicators from 1 to 8 will be illuminated depending on selection, pressing button 2 will give a 30 second delay, button 3 a one-minute delay and so on to button 7 which gives a three minute delay. When the required delay is selected the adjacent indicator will illuminate to confirm the delay period. Press button 8 to exit this mode.

Button	Delay Timer Options
1	No Delay
2	30 Secs
3	1 Min
4	1 Min 30 secs
5	2 Min
6	2 Min 30 secs
7	3 Min
8	Exit

Table 3: Remote Signal Delay Timer

## 7.6 In Use Relay Options

The in use relay has programmable functions which can work in tandem with the delay timer described in 7.7. These functions can provide a relay output as described in the table below.

These relay functions can be useful for providing an output of specific system operation of EVC, Assist Call or both. This relay can also be used to connect to the Crisis Remote Alarm panel or a remote sounder or beacon which can be configured to cancel operation when the master handset is picked up such that the sounder will not interfere with the conversation.

Enter the access level 3 code (1812), then press button 7 to enter this mode. The magenta zone indicators from 1 to 8 will be illuminated depending on selection. When the required selection has been made press button 8 to exit this mode.

Button	Relay Option
1	Not Used
2	EVCS & Assist Call
3	EVCS only
4	Assist Call Only
5	EVCS, connected conversation
6	Relay activates on any call, Relay de-energises on master handset pickup
7	Relay operates when call not answered /acknowledged (EVCS and Assist Call)
8	Exit

Table 4: In Use Relay Options

## 8 Operation

All conversations are under the command of the Crisis EVC Standalone Master Station.

### 8.1 Receiving a Call

1. One of the eight zone LEDs and the mode LED will flash red to indicate an incoming call. The flash rate will identify the outstation type, with a Type A outstation having a faster flash rate than a Type B outstation.
2. Lift the Master handset receiver. The User LED will illuminate Red.
3. Press the corresponding zone button (indicated by the red flashing LED). This LED and the User LED will change to flashing green to show that this line is now connected, and a conversation can take place.

### 8.2 Making a Call

1. To make a call, lift the Master handset receiver and the User LED will illuminate red.
2. Press the zone button for the required outstation. The corresponding zone LED will flash red. This flash rate will be slower than the flash rate for either an incoming Type A or Type B call.
3. When the outstation answers the call, the zone LED flashes green, the mode LED illuminates red and the user flashes green to indicate this line is now connected and a conversation can take place.

### 8.3 Ending a Call

- To end the call from the outstation, either replace the Type A receiver back on its hook or press the call/cancel button for a Type B outstation.
- To end a conversation from the Crisis EVC Standalone Master Station, replace the Master handset receiver back on its hook.



This will not end the call, only the conversation. The outstation will revert back to requesting a call, and the zone LED will flash red to indicate this. The call **MUST** be ended at the outstation.

### 8.4 Putting a Call on Hold

1. To put a call on hold, press the zone button for the required outstation that is already connected. The zone LED will change from flashing green to flashing green/red. The hold tone will be heard in the handset.
2. To reconnect the call, press the zone button for the required outstation again. The zone LED will change from flashing green/red to flashing green to indicate the call is now connected again.

### 8.5 Conference Call

Depending upon the number of Line Cards fitted in the Master Station, up to five lines can be connected to the conference call at any one time. To receive a call, see 8.1. To make a call to an individual outstation, see 8.2. The Master Station controls which lines are involved in the conference, and only one conference group is allowed.

## 8.6 Acknowledging “Assist Call” Alarms

1. When an “Assist Call” goes into alarm, the appropriate zone LED will flash blue, and a two-tone buzzer sounds to indicate that an “Assist Call” alarm has been operated.
2. To acknowledge the alarm, press the corresponding zone button, and the blue LED will illuminate continuously with an intermittent buzzer tone every 15 seconds. If after 2 minutes the “Assist Call” alarm has not been cancelled, the buzzer will resound and the LED will flash blue.
3. Within the WC cubicle the pull cord indicator will change from continuous indication to no indication. The cancel plate will alter from flashing to continuous and the buzzer will change from continuous to intermittent. Outside the cubicle the Over door plate indication will alter from flashing to continuous and the buzzer will change from continuous to intermittent. This change in indication and buzzers during the acknowledge phase indicates to the WC user that help is on the way.

## 8.7 Accepting Faults

1. Before accepting faults, the fault must be noted in the log book, along with the time the fault was reported.
2. To accept the fault, enter either the access level 2 (code: 1664) or access level 3 (code: 1812) menu, then press zone button 1. The buzzer will silence and the general fault LED will now go steady.
3. Press zone button 8 to exit this menu and to return to the menu options.
4. The buzzer will resound on each new fault.

## 8.8 Panel Indicator Test

1. To test the panel indicators, enter either the access level 2 (code: 1664) or access level 3 (code: 1812) menu, then press zone button 2.
2. All LEDs will illuminate in a predefined sequence, and the buzzer will sound.
3. Press zone button 8 to stop the panel indicator test and to return to the menu options.

## 9 Indications and Controls



Figure 11: Crisis EVC Standalone Master Station Indication and Control

### 9.1 Mode Indicator Summary

Mode	Description
Green Solid	Normal state
Red Solid	Outstation off hook
Blue Solid	Assist call active
Yellow Solid	Refuge (type B) points disabled
Flashing Red/Blue	Incoming call/ Assist Call alarm at same time

Table 5: Indicator Summary

## 9.2 Power Supply & CPU indicator Summary


AC	DC	PSU	General	CPU	Description
ON					Mains OK
OFF		FLASH	FLASH		Mains failure
ON	ON				Battery OK
ON	OFF	FLASH	FLASH		Battery open circuit
ON	OFF	ON	FLASH		Battery short circuit
ON	FLASH	ON	FLASH		Battery high impedance
ON		ON	FLASH	ON	PSU processor fail
ON			FLASH	ON	Display or Exchange Processor Fault or Display-Exchange comms fault
ON			FLASH		Display or Exchange Processor Fault or Display-Exchange comms fault on remote panel (if applicable)
ON	FLASH		FLASH		Remote Battery fault
FLASH			FLASH		Remote Mains fault

Table 6: Power Supply & CPU Indicator Summary

ON = LED illuminated

OFF = LED off

FLASHING = LED Flashing

	When faults are accepted the general LED illuminates solid.
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## 9.3 User Indicator Summary

Red	Master handset off hook
Flashing Yellow	Master handset open circuit
Cyan	User logged in
Magenta	Engineer logged in
Flashing Green	Call connected
Flashing Red/Green	Call on hold
Solid Yellow	Master handset short circuit
Solid White	Call connected on remote master station

Table 7: User Indicator Summary

## 9.4 Zone Indicator Summary

Zone Indicator Status	User Indicator Status	Buzzer Status	Description
Slow Flashing Red		OFF	Outgoing call
Fast Flashing Red		Ringling	Incoming call from type A outstation
Normal Flashing Red		Ringling	Incoming call from type B outstation
Normal Flashing Green	Normal Flashing Green	OFF	Call connected to local master handset
Normal Flashing Green/Red	Normal flashing Green/Red	OFF	Call on hold
Normal Flashing Green/White	Solid White	OFF	Call connected via a remote master handset
Solid Yellow		ON	Line Short circuited
Slow Flashing Yellow		ON	Line card missing
Normal Flashing Yellow		ON	Line Open circuit or EOL missing
Fast Flashing Yellow		ON	Line Earth fault
Solid Cyan	Solid Cyan	OFF	Access level 2
Solid Magenta	Solid Magenta	OFF	Access level 3
Normal Flashing Blue		2 Tone Alarm	Incoming Assist Call alarm
Solid Blue		Intermittent Double Beep	Assist call acknowledged

Table 8: Zone Indicator Summary

## 10 Commissioning Procedure

The commissioning should be carried out by a competent person who has a basic knowledge and understanding of the design and installation sections of BS5839-9:2011, and has access to the specification of the project.

### 10.1 Cable Checks

1. The 500V insulation tests should have been carried out by the installer and the results made available to the commissioning engineer.
2. All cables should be correctly labelled.
3. Test field wiring and check for end-of-line 10KΩ resistor. Check cables are clear from any short or open circuits.
4. Connect cables into Line Cards.

### 10.2 Set-up, Power-up

1. Configure relevant dipswitches for the number of Line Cards fitted, and for any network settings that may be required as per the set up section in this manual.
2. Power up the Crisis EVC Standalone Master Station using mains only, fed from a 3A fuse fitted in an unswitched fused spur. The AC power indicator will be illuminated, and the DC power indicator is extinguished. The PSU fault and General fault indicators will be illuminated. There should be no line fault indicators illuminated.
3. If there are no line faults present, the battery may be connected. The DC power indicator will be illuminated, and the PSU fault and General fault indicators are extinguished when battery is connected.

### 10.3 Intelligibility Tests

1. Lift the master handset receiver and listen for a cadence tone.
2. An intelligibility test will need to be performed when the system is complete and the building has normal background noise levels. The intelligibility test requires two personnel.
3. One person should be present at the master station, the other person should visit each outstation in turn and put the outstation into call. The master station operator should check the location of the outstation is correct and have a conversation, the master station operator should then call the outstation back to check the reverse operation.

### 10.4 Assist Call Checks


1. Where Assist Call is fitted, all pull cords in each circuit should be tested, acknowledged at the panel, cancelled at the call location. Ensure all controls and indicators operate correctly.

## 11 Maintenance

It is a requirement of BS 5839-9:2021 that a maintenance agreement be in place for the EVCS. The maintenance schedule should be as follows:

Frequency	Test
Weekly	Test a different outstation on the system each week and make a call to the master station. Repeat each week until all outstations and master stations are tested. Record these results in the site log. *if more than one master station is present alternate weekly.  Non EVC mode devices should also be tested for correct operation, at a frequency of at least 1 per week so that all devices are tested over a 12 month period.
Biannually	Engineer call to check system operation, intelligibility, field strength of attached AFILS equipment and check battery health. Record results and any variations into the site Log Book
5 Yearly	In addition to Yearly tests replace all batteries and record in Log Book.

Table 9: Maintenance

	Refer to BS5839-9:2021 for full details of maintenance and testing requirements.
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## 12 Outstation Zone Template

There is space to the right of each outstation zone indicator to name the location of the outstation. At the rear of the display door there is a slot located in the centre above the display PCB; the outstation zone template can be inserted here.

The template is in "Word" format and can be downloaded at [www.eurofyre.co.uk](http://www.eurofyre.co.uk). This can be completed, printed out and cut to size as shown below.

TAB
Refuge 1 Name Toilet 1 Name
Refuge 2 Name Toilet 2 Name
Refuge 3 Name Toilet 3 Name
Refuge 4 Name Toilet 4 Name
Refuge 5 Name Toilet 5 Name
Spare 1
Spare 2
Spare 3

Figure 12: Crisis EVC Standalone Master Station Zone Template



## 13 Technical Specification

Power Supply & Charger	
AC Input	230Vac +/- 10%, 50/60Hz
Internal Power Supply	12Vdc Nominal
Supply and Battery	Monitored Open, Short, Fuses
Protection	Deep Discharge, Short, Thermals
Temperature Compensation	Yes
Battery Information	1 x 12V 7Ah VRSLA
Mains Fuse	1A HRC(T)
Battery Fuse	Self Resetting PTC
Max Charge Current	500mA

Table 10: Power Supply &amp; Charger Technical Specification

Inputs	
Lines	Between 2 and 8
Remote Enable	Short to Use
End of Line Monitoring	10KΩ 0.6W Resistor

Table 11: Inputs Technical Specification

Relay Outputs	
Number and Type	Fault and In Use, Volt Free 30Vdc 1A

Table 12: Relay Outputs Technical Specification

Controls	
Number and Type	8 x Push Button Zone Keys

Table 13: Controls Technical Specification

Indication	
Number and Type	8 x RGB Line Indicators 3 x PSU Status Indicators 1 x General Fault Indicator 1 x RGB Mode Indicator 1 x User Status Indicator

Table 14: Indication Technical Specification

Enclosure	
Back Box Finish	RAL 7035 Grey
Dimensions (W x H x D)	350mm x 300mm x 95mm
Entries	14 x Knockouts Top, 2 x Rear Slots
Flush Cut Out	352mm x 302mm x 85mm

Table 15: Enclosure Technical Specification

Standards	
EMC	EN 55035:2017+A11:2020 EN 55032:2015+A1:2020
LVD	EN IEC62368-1:2020+A11:2020
Product Family	BS5839-9:2021 BS9999:2017 BS8300-2:2018

Table 16: Standards Technical Specification

## Notes

## Notes

