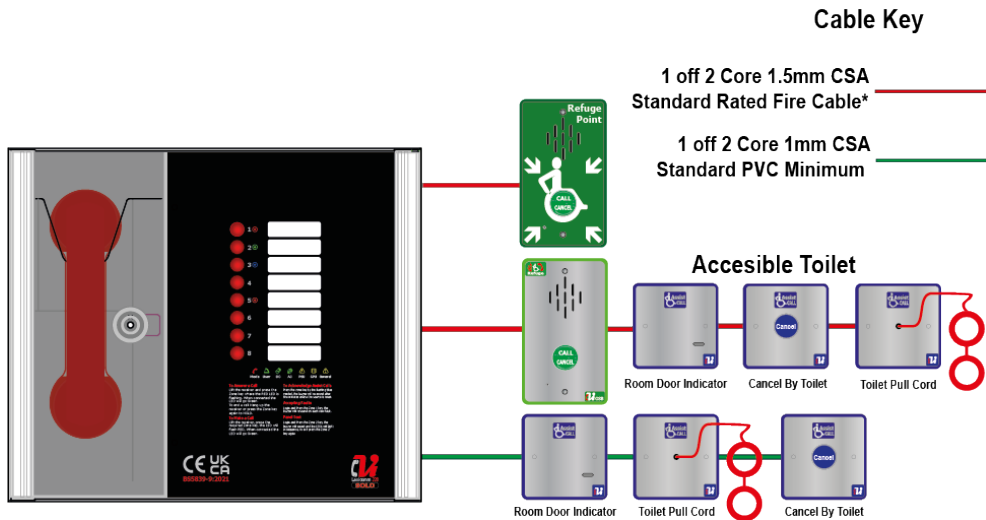


Lexicomm ViLX-228S EVCS Master Station



User Manual, Certificates and Logbook Version 2 – January 2025

Site Name

Address

Contractor

Commissioned

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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 several other points throughout a building or building complex, particularly in a fire or emergency. 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 firefighting 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 Lexicomm ViLX-228S Emergency Voice Communications System (EVCS) is designed to fully comply with BS 5839-9:2021 for use as a Fire Telephone system, Disabled Refuge 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 that require phased evacuation as per BS 9999:2017.

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

The Lexicomm EVCS, or ViLX-228S, 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 requires 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 ViLX-228S 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 EN IEC62368-1:2020+A11:2020 and must be EARTHED.



Caution



Indoor Use Only



Warning

Shock Hazard-
Isolate Before Opening

Warning

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT
EXPOSE THIS UNIT TO RAIN OR MOISTURE

Warning

THIS UNIT MUST BE EARTHED

Warning

NO USER SERVICEABLE PARTS

Each ViLX-228S S 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.

3.1 Battery Information

In the event of mains failure BS 5839-9:2021 requires battery backup for 24 hours standby and 3 hours operation thereafter.

A ViLX-228S 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**".

A ViLX-228S Master Station requires **one number** 12V 7AH vent regulated sealed lead acid battery. The battery is not supplied with the ViLX-228S Master Station.



Safety Information:

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.

Power Up Procedure:

Always apply mains power before connecting batteries.
When connecting batteries, always connect the Positive (Red +) terminal first.

Power Down Procedure:

Disconnect the batteries before removing the mains power.
When disconnecting batteries, always remove the Negative (Black -) terminal first.

Battery leads should be removed by grasping the plastic battery spade connector covers not the red and black wires as this can cause premature failure of the lead.

4 Operation

All conversations are under the command of the ViLX-228S Master Station.

4.1 Receiving a call

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.

Lift the Master handset receiver. The User LED will illuminate Red.

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.

4.2 Making a call

To make a call, lift the Master handset receiver and the User LED will illuminate red.

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.

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.

4.3 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 ViLX-228S Master Station, replace the Master handset receiver back on its hook.

Note: 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.

4.4 Putting a call on hold

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.

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.

4.5 Conference Call

Depending upon the number of Line Cards fitted in the ViLX-228S Master Station, up to eight lines can be connected to the conference call. See 4.1 for receiving a call, and 4.2 for making a call to each individual outstation. The ViLX-228S Master Station controls which lines are involved in the conference, and only one conference group is allowed.

4.6 Acknowledging "Assist Call" alarms

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.

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.

4.7 Accepting Faults

Before accepting faults, the fault must be noted in the log book, 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.

4.8 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.

5 Indications and Controls

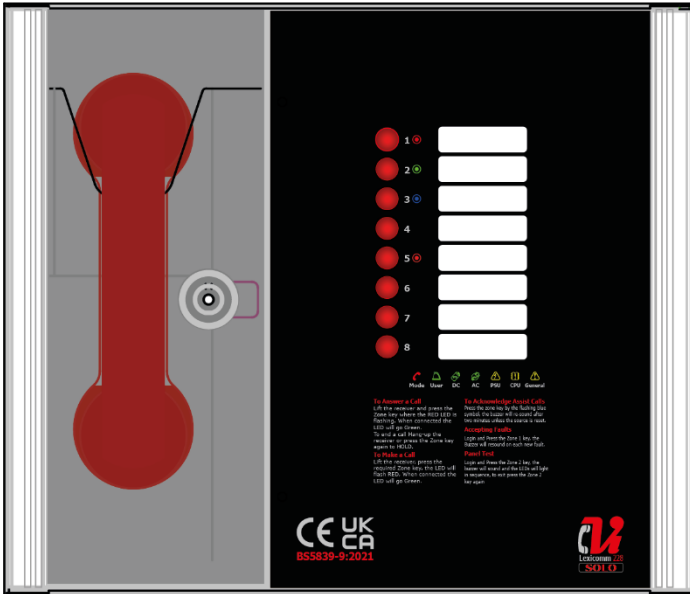


Figure 1

5.1 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 1

5.2 Power supply and CPU indicator Summary

AC	DC	PSU	General	CPU	Description
✓					Mains OK
x		Flash	Flash		Mains failure
✓	✓				Battery OK
✓	x	Flash	Flash		Battery open circuit
✓	x	✓	Flash		Battery short circuit
✓	Flash	✓	Flash		Battery high impedance
✓		✓	Flash	✓	PSU processor fail
✓			Flash	✓	Display or Exchange Processor Fault or Display-Exchange comms flt
✓			Flash		Display or Exchange Processor Fault or Display-Exchange comms flt
✓	Flash		Flash		Remote Battery fault
Flash			Flash		Remote Mains fault

Table 2

✓ = LED illuminated

x = LED off

Flash = LED Flashing

Note: When faults are accepted the general LED illuminates solid.

5.3 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

Table 3

5.4 Zone indicator summary

Zone Indicator Status	User Indicator Status	Buzzer Status	Description
Slow flash red		Off	Outgoing call
Fast flash red		Ringing	Incoming call from type A outstation
Normal flash red		Ringing	Incoming call from type B outstation
Normal flash green	Normal flash green	Off	Call connected to local master handset
Normal flash green/red	Normal flash green/red	Off	Call on hold
Solid yellow		On	Line Short circuited
Slow flash yellow		On	Line card missing
Normal flash yellow		On	Line Open circuit or EOL missing
Fast flash yellow		On	Line Earth fault
Solid cyan	Solid cyan	Off	Access level 2
Solid magenta	Solid magenta	Off	Access level 3
Normal flash blue		2 Tone Alarm	Incoming Assist Call alarm
Solid blue		Intermittent double Beep	Assist call acknowledged

Table 4

6 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 perform 100% outstation and master station operation, field strength of attached AFILS equipment and check battery health. Record results and any variations into the site Logbook.
5 Yearly	In addition to Yearly tests replace all batteries and record in Logbook.
	Refer to BS 5839-9:2021 for full details of maintenance and testing requirements.

Table 5

7 Certificate

Combined Certificate for Design Installation and Commissioning for an Emergency Voice Communication System (EVCS) to BS 5839-9:2021

Site Name

Address

Customer

Address

Areas Covered

System Design:

In accordance with **section 1** of BS 5839-9:2021 sub clause 6 the system design is in accordance with the recommendations of this code except for the following:

Installation:

In accordance with **section 3** of BS 5839-9:2021, the wiring has been inspected and tested and been found to be in accordance with the recommendations of this code except for the following:

Commissioning:

In accordance with **Section 4** of BS 5839-9:2021: sub clause **22C)**

1. Intelligible conversation is heard at all locations.
2. All controls and indicators operate correctly

Acceptance:

The system is accepted in good working order and, in accordance with BS 5839-9:2021, record drawings, operating instructions and a system logbook have been supplied and received.

Attention has been drawn to the recommendations concerning user's responsibilities, particularly those concerned with routine attention and test procedures in section 5, and an appointed single member of premises management should be nominated by the customer in accordance with the recommendations of Section 6 of BS 5839-9:2021.

Engineer

Date

Position

Signature:

8 Site Specific Information:

**Appointed member of
premises management**

Date

Position

Signature:

Equipment Locations

Master Station Location _____

Cable ID	Line	Area Served
	1	
	2	
	3	
	4	
	5	
	6	
	7	
	8	

9 Technical Specification

DETAILS		ViLX-228S
POWER SUPPLY AND CHARGER		
AC Input	230V AC \pm 10% 50/60Hz	
Internal supply	5V, 16V, 27V DC	
Supply and battery	Monitored Open, Short, Fuses, High Impedance	
Protection	Deep discharge, Short, Thermals	
Battery type	1 \times 12V 7AH VRSLA	
Mains fuse	240V 1A HRC	
Battery fuse	750mA PTC	
Max charge current	400mA	
INPUTS		
Lines	2-8 in 2 line blocks	
Remote enable	Short to use	
End of line	10k Ω	
OUTSTATION CABLES		
Type	Standard* / Enhanced	
Cores	1 \times 2 core radial 1mm or 1.5mm	
Distance	500m from master station	
OUTPUTS		
Number	2, Fault & In use	
Fault Relay	1 \times Volt free NC, Com 30V DC 1A	
In Use Relay	1 \times Volt free NO, Com 30V DC 1A	

CONTROLS AND INDICATIONS

Buttons	8 Zone keys
Zone LDSs (\times8)	RGB Status LEDs
Fault LEDs	3: PSU, System, General
Supply LEDs	2: AC, DC present

STANDARDS COMPLIANCE

EMC	EN 55035:2017+A11:2020 EN 55032:2015+A1:2020
LVD	EN IEC62368-1:2020+A11:2020
Product Family	BS 5839-9:2021, BS 9999:2017, BS 8300-2:2018

DIMENSIONS

	Panel	Bezel	Cut-out
Height	300mm	350mm	305mm
Width	350mm	400mm	355mm
Depth	95mm	1mm	85mm
Weight	4.2kg		

*Refer to BS 5839-9:2021 for exceptions

The Lexicomm ViLX-228S EVCS is designed and manufactured in the UK by:

Vox Ignis Limited
Unit 27 NEBIC
Enterprise Park East,
Sunderland,
SR5 2TA.

Company Registration No: 8892407

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WEEE
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Product

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