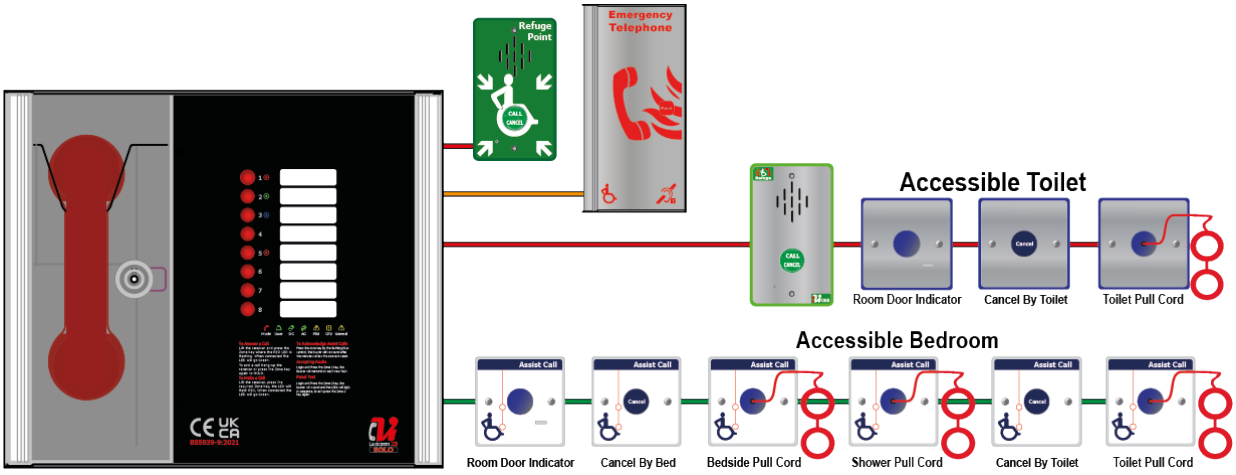
LexiComm

VoxIgnis

Lexicomm 228N User Guide

Lexicomm ViLX-228N EVCS Master Station



User Manual, Certificates and Log Book

Revision 1 – 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 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 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-228 Emergency Voice Communications System (EVCS) is designed to fully comply with BS 5839-9:2021 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.

Disabled Refuge systems are required in buildings where the public or disabled staff gains access to any floor other than the ground floor using lifts. Refuge areas are provided at each storey exit from each protected stairway.

2 Product Overview

The Lexicomm EVCS, or ViLX-228, 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 an outstation, or connected to a dedicated line. As each line is powered from the Master Station, the outstations and the "Assist Call" emergency alarm system do not require a separate power supply unit. This has the additional benefit of each line being fully monitored and battery backed up.

Each ViLX-228 Master Station can also perform as a ViLX-228 Repeater Station. A ViLX-228 Repeater Station mimics the ViLX-228 Master Station both in operation and indication. Any reference in this document to the ViLX-228 Master Station also applies to the ViLX-228 Repeater Station, unless specified otherwise.

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

WEEE Compliant Product

4 Operation

All conversations are under the command of the ViLX-228N 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-228 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-228 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-228 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.

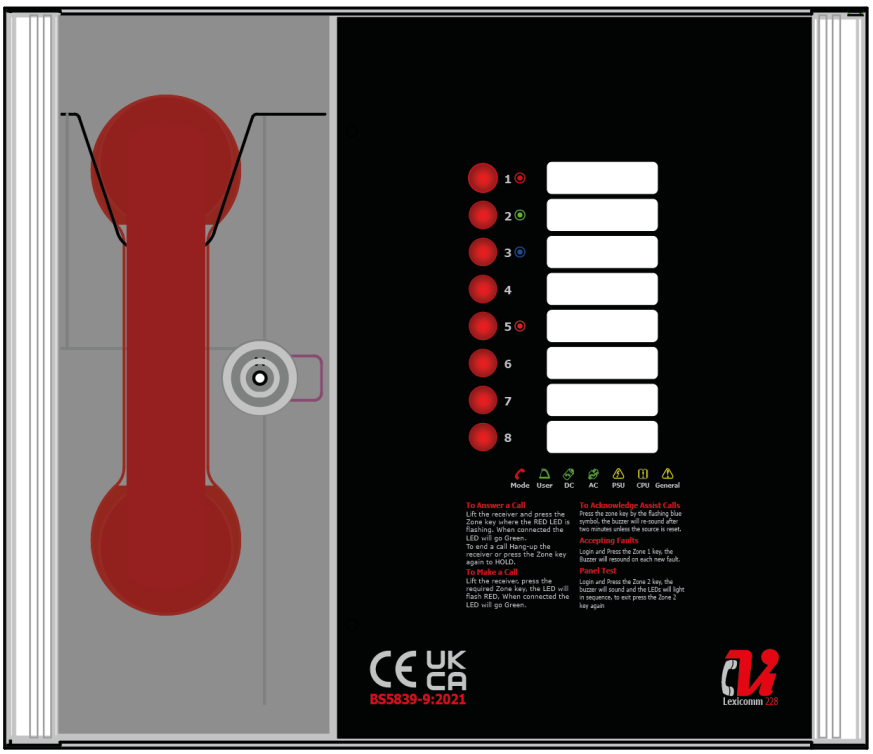
4.7 Accepting Faults

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



5.1 Indicator Icons Key

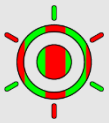
LED off	LED illuminated a single colour	LED flashing on and off	LED flashing between two colours
			

Table 1

5.2 Mode Indicator Summary

Mode LED	Description	Mode LED	Description
	Normal state		Outstation off hook and assistance alarm active at same time
	Outstation off hook		Refuge (Type B) points disabled
	Assistance alarm active		Panel in fault

Table 2

5.3 Power supply and CPU indicator Summary

DC LED	AC LED	PSU LED	CPU LED	Description
				Mains and battery OK
				Mains failure
				Battery open circuit
				Battery short circuit
				Battery high impedance
				PSU system fault
				Display / Exchange system fault or display-exchange comms fault
				Remote battery fault
				Remote mains fault

Table 3

5.4 User Indicator Summary

User LED	Description	User LED	Description
	Idle		User logged in
	Master handset off hook		Engineer logged in
	Master handset open circuit		Call connected
	Master handset short circuit		Call on hold
	Login in progress		

Table 4

5.5 Zone indicator summary

Zone LED	User LED	Buzzer	Description
		Off	Outgoing call
		Ringing	Incoming Type A call
		Ringing	Incoming Type B call
		Off	Call connected to master handset
		Off	Call on hold
		2 – tone alarm	Incoming alarm
		Intermittent double beep	Alarm acknowledged
		Fault tone	Line short circuited
		Fault tone	Line card missing
		Fault tone	Line open circuit or EOL missing
		Fault tone	Line Earth Fault
		Off	Access level 2
		Off	Access level 3

Table 5

The flash rates for the line LEDs are described below:

Flashing at same rate as Mode LED	Flashing at a faster rate than the Mode LED	Flashing at a slower rate than the Mode LED
		

Table 6

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Document DViLX228N1003-01

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 control. 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.
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
Yearly	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 Log Book
5 Yearly	In addition to Yearly tests replace all batteries and record in Log Book.

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 has 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 responsible person 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:

Responsible Person _____

Date _____

Position _____

Signature:

_____

Equipment Locations

ViLX228 Location _____

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

Log Book Page 1

Date	Event or Work Done	Engineer	Company	Signature
	Lexicomm System commissioned			

Log Book Page __

Date	Event or Work Done	Engineer	Company	Signature

Copy this page as many times as required

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Company Registration No: 8892407 info@vox-ignis.com
Document DViLX228N1003-01

UK CA CE

9 Technical Specification

DETAILS	ViLX-228N
POWER SUPPLY AND CHARGER	
AC Input	230V AC ± 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× 12V 7AH VRSLA
Mains fuse	240V 1A HRC
Battery fuse	750mA PTC
Max charge current	500mA
INPUTS	
Lines	2-8 in 2 line blocks
Remote enable	Short to use
End of line	10kΩ
OUTSTATION CABLES	
Type	Standard* / Enhanced
Cores	1× 2 core radial 1mm or 1.5mm
Distance	500m from master station
OUTPUTS	
Number	2, Fault & In use
Fault Relay	1× Volt free NC, Com 30V DC 1A
In Use Relay	1× Volt free NO, Com 30V DC 1A

CONTROLS AND INDICATIONS	
Navigation Buttons	8 push button zone keys
Statutory indicators	8× RGB line indicators
	3× PSU status indicators
	1× CPU fault indicator
	1× General fault indicator
	1× RGB mode indicator
	1× User status indicator

NETWORK CABLES	
Type	Standard* / Enhanced
Cores	2× 2 core loops, 1mm or 1.5mm (2C Data, 2C Audio)
Distance	500m max between panels

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	4.5kg		

*Refer to BS 5839-9:2021 for exceptions

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

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Enterprise Park East,
Sunderland,
SR5 2TA.
Company Registration No: 8892407

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