Technical Information & Operating Instructions





Introduction

The SHEVTEC® Repeater Panel is implemented using modular construction. The size of the panel is matched to the job requirements, from four to twelve rows of indicators as standard. The indicators are arranged in a grid of three columns which allows buildings with one, two or three smoke stacks to be represented. For large and complex installations, more than one panel may be used.

Every panel features four rows by three columns of zone indicator, six status indicators and programmable touch buttons. Two extension panels may be used, each adding two or four rows of zone indicators.

Installation of this equipment must only be carried out by competent and qualified persons.

The Installer and end user are requested to read, understand and retain this information pack with the panel for future reference.

This information pack must be retained for future reference by the client and be made available for reference by persons installing, servicing or modifying the panel.

Application

The SHEVTEC® Repeater Panel provides a low cost, custom solution for reporting the status for SE Controls smoke ventilation installations.

The system is designed to work with OS2 OSLink and OSLoop systems.

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Important Notices

- The equipment has no mains on/off switch and is intended for permanent connection only.
- Do NOT allow abuse or mishandling of the device.
- Do NOT adjust or alter the device or its enclosure including labelling/marking.
- Do NOT use this controller for any other purpose other than that intended by the manufacturer.
- Do NOT allow installation of this equipment by persons not electrically qualified.
- Failure to test the electrical integrity of external wiring will invalidate any warranties.
- Failure to install the

device in accordance with the manufacturer's instructions will invalidate any warranties.

- Failure to follow current electrical regulations governing the installation of fixed equipment can lead to prosecution and may invalidate any warranties.
- Unless otherwise indicated, you must not adjust or remove existing manufacturers cabling or use terminal outputs or inputs for purposes other than their design without written authorisation from SE Controls.
- Use of abrasive or solvent cleaning products may damage the panel.
- Care should be taken when fault finding or servicing to ensure device addresses are retained.

SE Controls accepts no liability for failure to comply with these statements or the installation and operation guidance in the following sections of this guide and reserves the right to invalidate the warranty of the controller

SE Controls reserves the right to introduce any modifications and improvements to the contents of this publication without the obligation of giving prior notice.

1. General Information

1.1. Parts

The SHEVTEC Repeater Panel is supplied as follows:

- SHEVTEC® Repeater Panel
- · Mounting Plate the top identified by a screw fixing lug.
- Torx locking screw

Not supplied but required:

- Installation of one or more OS2, OSLink or OSLoop Coordinator
- Four core fire rated cable
- Wall fixings and screws

1.2. Tools Required

- Drill for wall fixings
- Spirit level
- Screwdriver
- Wire cutters and strippers
- Torx 8 screwdriver
- Optional multimeter

OSLoop systems require the parameter [OADD] set – this may be preset at the factory or may require use of an SCEPTRE configuration tool.

1.3. **Preparation**

SHEVTEC® Repeater Panels are custom built for each application. After unpacking the SHEVTEC® Repeater Panel check the reference printed on the data badge is correct.

1.4. Cable Installation

Install a four core fire-rated cable between the nearest OS2 or OSLoop Coordinator and repeater panel. Where cables are buried in the wall, ensure the wall is flat over the area of the panel and that the cable is brought to the centre of the desired location. Leave 200-300mm spare cable at the repeater.

Strip back the cable leaving a reasonable spare length to allow mounting and removal of the panel. Undo the screws which retain CN3 and remove the free part of the connector and connect the four wires.

If the panel is not at the end of a network, it may be necessary to connect more than one cable. If possible, common the connections at the pluggable connector. Otherwise use a separate terminal block.

1.5. Fixing the Mounting Plate

The top of the mounting plate is identified by a screw fixing lug.

Ensure the area to mount the panel is flat. Hold the mounting plate up against the surface to which it is to be fixed, with the cable coming though the central hole. Check the panel is vertical using a spirit level before marking through the holes and remove the plate.

Drill appropriate-sized pilot/fixing holes and use plastic plugs/cavity fixings where appropriate to fix the mounting plate.

Plug in the CN3 connector and screw with the connector retaining screws. Hook the panel onto the black plate and secure with the Torx tamperproof screw.

2. Specification

2.1. Device Overview

Product Designation	SHEVTEC Repeater Panel	
Dimensions	164mm x (H dependant on specification) x 24mm (WxHxD)*	
Typical Input Voltage	24 V dc	
Maximum Input Current	100mA	
Typical Input Voltage	20mA	
Environmental Temperature	0°C to 40°C	
Humidity	90% Non-Condensing	
IP Rating	IP20	
Panel Status	Battery Fault	
	Mains Power Fault	
	Communcation Fault	
	System Fault	
	Service Due	
	Maintenance	
	Rain Sensor - Optional	
Interactive Touch Button	Sounder Silence	
	Lamp Test	
Status information configurations	Green = Healthy	
Zone Indication	Green Flash = Needs Reset	
	Red=Activated	
	Red Flash = Not Closed	
	Yellow = Fault	

2.2. Panel Dimensions

The basic SHEVTEC Repeater Panel provides four rows by three columns of zone indication, status indicators and three touch buttons. The standard maximum length is 12 rows.

	Width	Height
4 Rows	164 mm	224 mm
6 Rows	164 mm	284 mm
8 Rows	164 mm	344 mm
10 Rows	164 mm	404 mm
12 Rows	164 mm	464 mm

2.3. Product Codes

Product	Number of Rows	Part Number
SHEVTEC Repeater Panel	3 or 4	FCS00700001
	5 or 6	FCS00700002
	7 or 8	FCS00700003
	9 or10	FCS00700004
	11 or12	FCS00700005

3. Connections

3.1. Binding Addresses (OS2)



The binding addresses of the panel are pre-configured at the factory and for each indicator it is printed in the bottom right corner. For OS2 bindings, this is a single digit number.

The OSLink addresses set on the OSLink card rotary address switch must be set to match each LED zone.

After changing OS2 OSlink address, the network must be restarted using the commission button on the OSLink card.

3.2. Binding Addresses (OSLoop)



The binding address for each indicator it is printed in the bottom right corner. For OSLoop bindings, this is a dotted address.

These are factory set addresses and unless advised by SE Controls should not be reset.

The binding contains the address of the coordinator and a sub-address of the OSLoop MCP. For example, 1.0 refers to OSLoop coordinator at address 1 with MCP at zone switch set to 0.

If not already set, each OSLoop coordinator needs to have the OSLink address set using the SCEPTRE configuration tool (Parameters- >OSLink-> OADD). After changing this parameter, it is necessary to reset the coordinator.

Ensure the MCP zone switches are correctly set to match the sub-addresses.

3.3. **Connections to OSLoop Coordinator**

The OSLOOP coordinator has an OSLink repeater comms connector (CN3) supplying both data and power to the SHEVTEC® Repeater Panel. NA and NB connections are duplicated to allow daisy-chaining of devices.



Signal	Device Terminal	FP+4 Core and Earth 1.5mm
Power V+	VC+	Red
Power 0V	OV	Black
Data A	NA	Green
Data B	NB	Blue

Current draw from VC+ should not exceed 400mA and is protected by a self -resetting fuse.

3.4. Connection to the OS2 SHEVTEC Controller

Connection to the SHEVTEC® Repeater Panel is made using a pluggable terminal block (CN3). Connections are labelled on the rear of the panel.



Signal	Device Terminal	FP + 4 core and earth 1.5mm
Power V+	PER	Red
Power 0V	OVP	Black
Data A	NTA	Green
Data B	NTB	Blue

3.5. Address and DIP Switch

The rear of the repeater panel has a four-way DIP switch and a rotary address switch.

The rotary address switch which selects the OSLink address of the panel ranges from 0-15. This should be pre-set in the factory when the panel is programmed. Unless there are multiple panels, the address is likely to be zero.

The Dipswitch SW1 on the back of the SHEVTEC® Repeater Panel has four configuration switches.

Switch	Function	
1	Terminator	Used to place a line terminating resistor on the communications line. Leave this switched off unless advised by SEC technical staff.
2	Silence	Switch on to disable the SHEVTEC® Repeater Panel sounder. (Default is set to off)
3	Test	Always off
4	Address + 16	Allows OSLink addresses 16-31 to be used. Should be pre-set off at the factory.

4. Installation and Maintenance

4.1. Electrical Installation and Commissioning

Connect the power and data connections, then power up the system. For OS2 OSLink, it may be necessary to use the install button on the OSLink card to initialize the network. Allow 15 seconds for all devices to report the system status.

In case of no function, double check the connections and measure the voltage supplied by the power terminals.

Hold the lamp test button to test the panel.

To verify the device addressing and mapping, check each device in turn by either activating or simulating a fault. Remove the protective film from the front panel or leave in place until the building is complete.

10.0. Recommended Maintenace

The SHEVTEC Repeater Panel requires no maintenance and contains no replaceable parts. Operation of the LEDs and sounder may be tested using the lamp test button.

When cleaning the panel, do not use solvent based or abrasive cleaning products.

	Green
Healthy	Solid
Has been activated and re-closed , tamper indication*	On-Short Off
Not healthy	Off
	Red
Active, actuator not in fire position**	Flashing
Active, vent in fire position	On-Solid
	Yellow
Status (Rain Sensor activated, maintenance), Panel Fault	On Solid
Fault	Flashing
Fault, mains fail	Short Blink

* OSLoop system with feature enabled only – Insert reset key into underside of the OSLoop MCP to fully reset. Not OS2

** OSLoop only.

4.3. Disposal

At end of life, this product should be disposed of in compliance with the WEEE waste electronics directive. For advice on disposal consult the local environmental officer or contact SE Controls.



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