

## MAINTAINING THE DISPLAY UNIT

### SWITCH THE POWER OFF

Keep the display unit clean, dry and free of dust and other particulates.

Check that the EEPROM and microprocessor ICs are fully inserted in their sockets.

Check tightness of field wiring terminations and that associated plugs are secure.

Replace the faceplate assembly, switch the power ON. Actuate lift to ensure that all displays work correctly.

### CAUTION

1. **SWITCH OFF** the mains supply before any installation, maintenance or repair work is carried out.
2. **DO NOT** work on live equipment unless it is essential to do so, in which case extreme care must be taken to avoid electrical shocks, including the use of rubber mats.
3. Installation, maintenance or repair must only be carried out by a competent person who is trained on this equipment.
4. Replace all covers on completion of work and ensure the unit is safe for installation and use.

### EEC DIRECTIVES

These components comply with the relevant EEC Directives when used on lifts



## Installation and setting instructions

### Horizontal and Vertical Position Indicator Units with Serial Inputs

ULS32HS & ULS32VS

ULS34HS

ULS42HS

ULS43HS

ULS52HS & ULS52SP

ULS54HS

**Publication number: II092/0517**

**Part Number: 002069-000092**

#### Important

**These instructions must remain with the product to ensure correct installation. If extra copies are required please contact Dewhurst UK Limited and quote publication number and issue**

If you have any problems or questions, please contact our technical support desk direct on **+44 (0)20 8744 8283/8227/8240** during office hours.

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## INTRODUCTION

These instructions relate to Serial Input Position Indicator Units only used with CH024 and CH034 Encoders, Publication I1097. For Parallel Input versions refer to Publication I1091.

The display units incorporate 4 wire Serial Interface which may be directly connected to the above encoders. The encoders can accept either one per floor inputs or parallel encoded inputs directly from the lift controller using binary, grey code or equivalent.

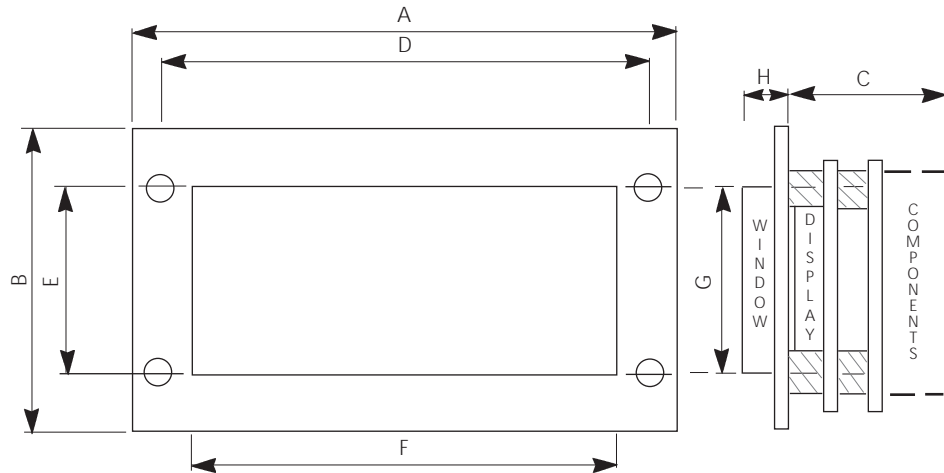
For the full specification and other details refer to the publications detailed below.

DISPLAY UNITS	PUBLICATION NUMBER
ULS32HS	PB127
ULS32VS	PB127
ULS34HS	PB127
ULS42HS	PB126
ULS43HS	PB126
ULS52HS	PB125
ULS52VS	PB125
ULS54HS	PB125

## ENCODERS

CH024	PB133
CH034	PB128

## Dimensional Data of Display Units with Serial Inputs

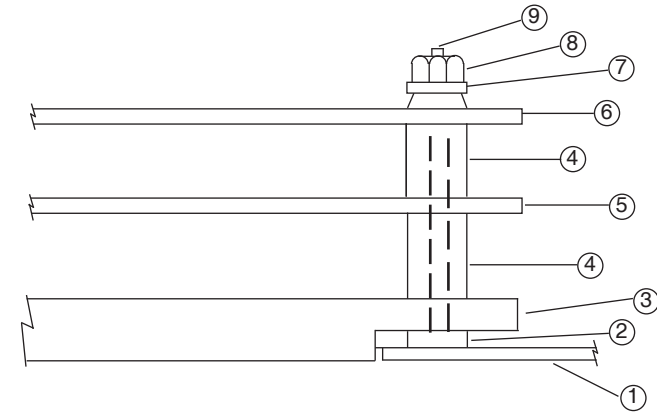


DIMENSION TABLE (mm)	SPACE ENVELOPE DISPLAY ASSY.			FIXINGS		WINDOW** SIZE		
	A	B	C*	D	E	F	G	H
ULS32HS	122	39	44	112	29	54.5	44.5	6
ULS32VS	45	122	44	29	112	44.5	54.5	6
ULS34HS	122	39	44	112	29	96.0	44.5	6
ULS42HS	150	45	44	140	35	89.5	49.5	6
ULS43HS	150	45	44	140	35	129.5	49.5	6
ULS52HS	122	45	46	112	29	84.5	59.5	6
ULS52VS	59	122	46	29	112	79.5	59.5	6
ULS54HS	182	45	46	172	35	161.5	59.5	6

\* Allow an additional 10mm minimum for wiring space

\*\*For window cutout details refer to Publication No: PB130

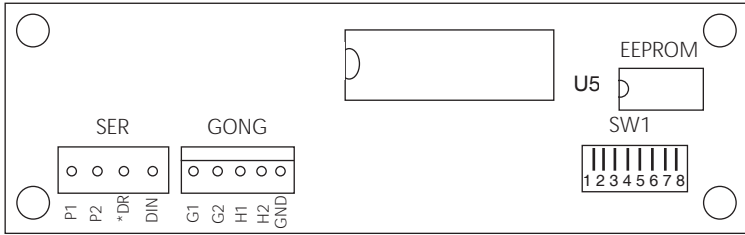
## TYPICAL DISPLAY FACEPLATE ASSEMBLY



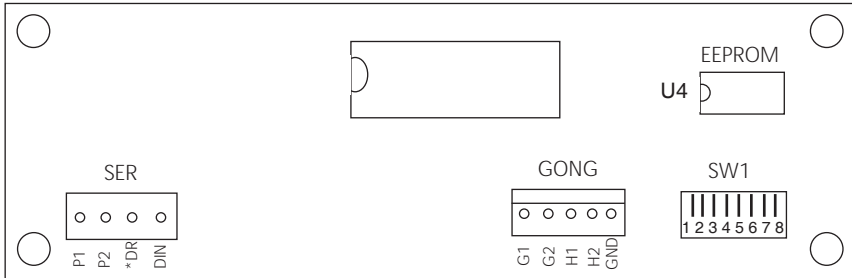
ITEM	DESCRIPTION
1	Faceplate
2	Spacer Washer
3	Window
4	Insulated Spacer
5	Display PCB
6	Control PCB
7	Plain Washer M4
8	Full Nut M4
9	Weldstud M4

**NOTE:** On some assemblies an additional Control PCB (6) and Insulated Spacer (4) may be fitted.

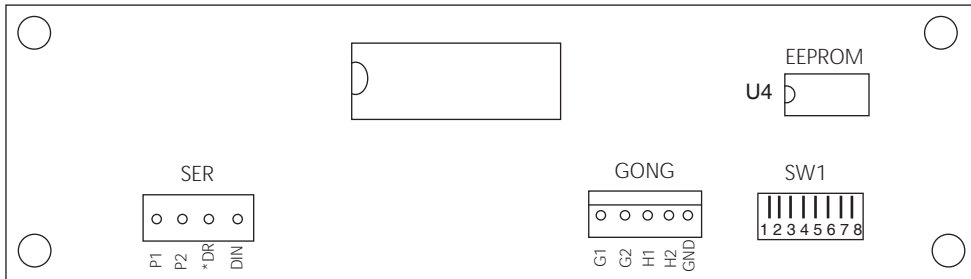
**Generic Wiring of Display Units with Serial Inputs**



REAR VIEW  
ULS32HS  
ULS32VS  
ULS34HS  
ULS52HS



REAR VIEW  
ULS42HS  
ULA43HS



REAR VIEW  
ULS54HS

\* Previous version of board was OV

**SW1 SWITCH SETTINGS**

If "Flashing Arrows" are specified, to simulate "Hall Lantern Indicators" when the lift car arrives at a landing entrance, it is necessary to set SW1 switch of the landing display to the encoded address of the floor legend for that floor.

The table defines normal binary and gray code formats. The switch positions are defined as 0 = OFF and 1 = ON.

FLOOR NO. DECIMAL	BINARY				GRAY CODE								
	MSB	5	4	3	2	1	MSB	5	4	3	2	1	
Car Unit	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0	0	1
2	0	0	0	0	1	0	0	0	0	0	0	0	1
3	0	0	0	0	1	0	0	1	0	0	0	0	1
4	0	0	1	0	0	0	0	0	0	0	0	1	0
5	0	0	1	0	1	0	0	0	0	0	0	1	1
6	0	0	1	1	0	0	0	0	0	0	0	1	0
7	0	0	1	1	1	0	0	0	0	0	0	1	0
8	0	1	0	0	0	0	0	0	0	0	1	1	0
9	0	1	0	0	1	0	0	0	0	0	1	1	0
10	0	1	0	1	0	0	0	0	0	0	1	1	1
11	0	1	0	1	1	0	0	0	0	0	1	1	1
12	0	1	1	0	0	0	0	0	0	0	1	1	0
13	0	1	1	0	1	0	0	0	0	0	1	1	0
14	0	1	1	1	0	0	0	0	0	0	1	0	0
15	0	1	1	1	1	0	0	0	0	0	1	0	0
16	1	0	0	0	0	0	0	0	0	0	1	1	0
17	1	0	0	0	1	0	0	0	0	0	1	1	0
18	1	0	0	1	0	0	0	0	0	0	1	1	0
19	1	0	0	1	1	0	0	0	0	0	1	1	0
20	1	0	1	0	0	0	0	0	0	0	1	1	1
21	1	0	1	0	1	0	0	0	0	0	1	1	1
22	1	0	1	1	0	0	0	0	0	0	1	1	1
23	1	0	1	1	1	0	0	0	0	0	1	1	0
24	1	1	0	0	0	0	0	0	0	0	1	0	1
25	1	1	0	0	1	0	0	0	0	0	1	0	1
26	1	1	0	1	0	0	0	0	0	0	1	0	1
27	1	1	0	1	1	0	0	0	0	0	1	0	1
28	1	1	1	0	0	0	0	0	0	0	1	0	0
29	1	1	1	0	1	0	0	0	0	0	1	0	0
30	1	1	1	1	0	0	0	0	0	0	1	0	0
31	1	1	1	1	1	0	0	0	0	0	1	0	0

If fitted, switch contacts 6, 7 and 8 are reserved for other uses

**ENCODER CAPABILITIES**

Features Available	Terminal Allocation	
	CH024 24 max	CH034 34 max
UP & DN Arrows	2	2
Scrolling Arrows	1	1
Flashing Arrows	1	1
Gong	2	2
Floors: Encoded	1-3	2
	1-7	2
	1-15	3
	1-31	4
One per floor	1-16	5
	1-31	5
	-	-
	-	1 each
Message Triggers	1 each	1 each

Features Available	Terminal Allocation
Up and Down Arrows	UA, DA (PAR4)
Up and Down Gongs	UG, DG (PAR5)
Up and Down Lanterns	UL, DL (PAR6)
Slow Down/Door Open	SL (PAR7)
Door Close	DC (PAR7)
Door Open	DO (PAR7)

**CHECKING PREPROGRAMMED MEMORY INTEGRATED CIRCUITS**

The EEPROM Memory Integrated Circuits are preprogrammed by **Dewhurst/LiftStore** with the software required to drive the displays.

The EEPROM may be fitted in various locations, will be socketed, have the same number of pins and will be labelled in a similar manner to its new replacement.

It is important to carry out the following instructions carefully to ensure that components are not damaged.

SWITCH THE POWER OFF

Since the devices are sensitive to static electricity the pins should not be touched by hand. The EEPROMS must be inserted with correct orientation, represented by a small notch on one end of the device to match a similar notch on the socket.

INCORRECT INSERTION WILL INSTANTLY DESTROY THE EEPROM

Use an IC extraction tool (or small screwdriver if available). Carefully insert the tool between the EEPROM and its socket and remove the EEPROM. If using a screwdriver take care not to damage PCB tracks beneath and around the socket.

Check that the pins on the replacement EEPROM are in line, correct as necessary. Offer the EEPROM to the socket whilst checking orientation. Carefully align all pins along one side to the socket then align other side. Check all pins are properly engaged then gently push the EEPROM into the socket. Check all pins are engaged correctly then push firmly to ensure full insertion. Finally recheck orientation and ensure all pins are fully inserted and undamaged.

**TESTING THE DISPLAY UNIT**

SWITCH THE POWER OFF

Carefully dismantle the faceplate to permit access to the display's field wiring terminals. Ensure all potentially live parts are temporarily insulated from earth.

SWITCH THE POWER ON

Never apply power directly to SER or Gong socket pins as they may be damaged. Always connect to the field wiring plugs or spare plugs which are easily replaceable.

Measure the applied power between AC-AC field terminals, using a digital multimeter or equal, set to an appropriate range. Check that the measurement meets the display unit specification.

Check the data input on SER field terminals using an oscilloscope. Do not use any other method of measurement. See below for power off checks.

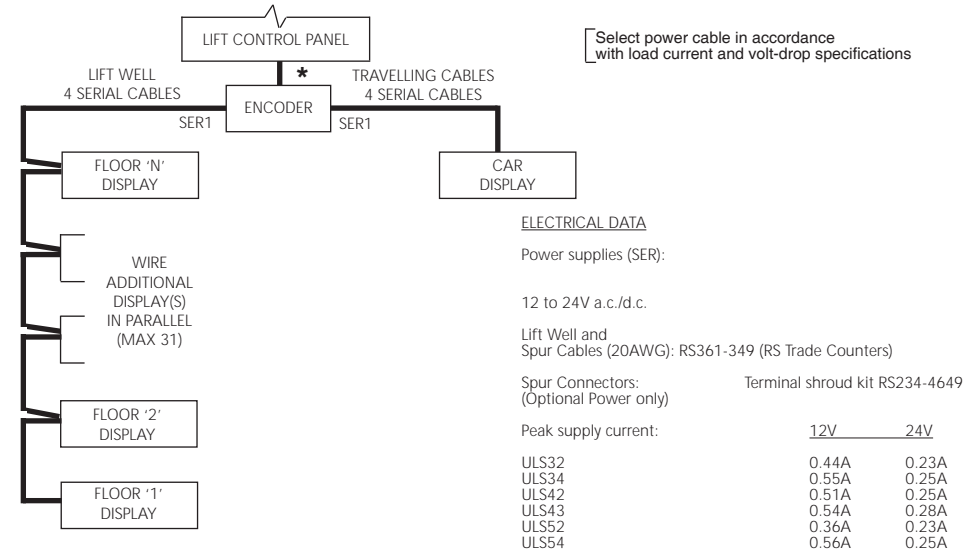
Check the gongs between G1-GND and G2-GND respectfully using a digital multimeter or equal, set to an appropriate range. Check that the arrows flash and the gong actuates when the floor number = installed floor only. Check SW1 switch setting if necessary.

SWITCH THE POWER OFF

If no displays are present check the serial cable on SER terminals. Temporarily remove the SER field wiring plug from the encoder on all car and landing displays. Using a low power ohm meter, check continuity of both serial wires and earth screen between the encoder plug and each display plug. Check for short-circuits between active wires, screen and earth at each plug. Check polarity of active wires.

If necessary remove, replace or reinstall display unit complete with field wiring. Refix all display and encoder plugs.

**GENERIC WIRING OF DISPLAY UNITS WITH SERIAL INPUTS**



\* Encoder Input Wiring: See Installation Instruction II097

DESIGNATOR	LABEL	DESCRIPTION
SER	P1	Supply voltage a.c. or d.c.
SER	P2	Supply voltage a.c. or d.c.
SER	DR	Data Return
SER	DIN	Data Input
<b>Accepts either polarity</b>		
GONG	G1	Gong for up direction
GONG	G2	Gong for down direction
GONG	H1	Lantern for up direction
GONG	H2	Lantern for down direction
GONG	GR	Ground return (for gong and lantern outputs)
SW1	1	Display Selectable Address (Binary, LSB)
SW1	2	Display Selectable Address
SW1	3	Display Selectable Address
SW1	4	Display Selectable Address
SW1	5	Display Selectable Address (Binary, MSB)
SW1	6	Reserved
SW1	7	
SW1	8	