dewhurst

Installation and setting instructions

Horizontal and Vertical Position Indicator Units with Serial Inputs

ULSP32HS & ULSP32VS
ULSP52HS & ULSP52VS

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

UK Customers only

If you have any problems or questions, please contact our technical support desk direct on **t 01352 793222 f 01352 793255** during office hours.

Introduction

These instructions relate to Serial Input Position Indicator Units only used with CH024 and CH034 encoders, publication II097. For Parallel Input versions refer to publication II105.

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
ULSP32HS	PB145
ULSP32VS	PB145
ULSP52HS	PB146
ULSP52VS	PB146

Dimensional Data of Display Units with Serial Inputs
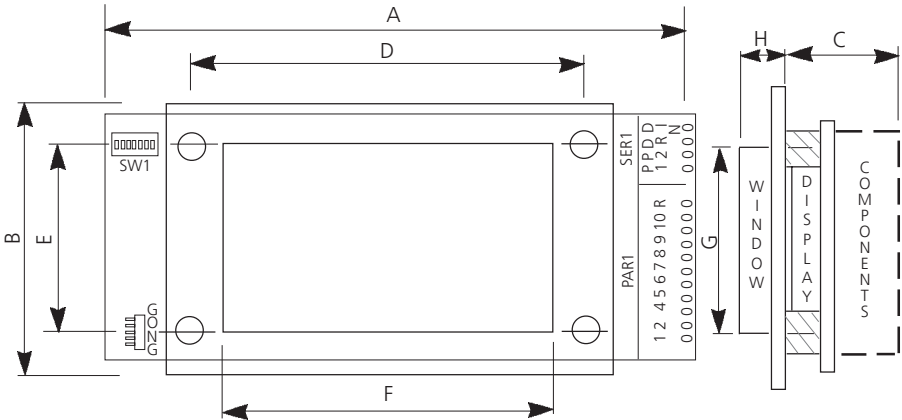
DIMENSION TABLE (mm)	SPACE ENVELOPE DISPLAY ASSY.			FIXINGS		WINDOW ** SIZE		
	A*	B	C	D	E	F	G	H
ULSP32HP	157	64	16	100	50	54.5	44.5	4
ULSP32VP	157	64	16	100	50	44.5	54.5	4
ULSP52HP	157	64	16	100	50	84.5	59.5	4
ULSP52VP	157	90	16	100	50	59.5	84.5	4
* Allow an additional 10mm minimum for wiring space								

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

GENERIC WIRING OF DISPLAY UNITS WITH SERIAL INPUTS

```
                          ┌─── ∧ ───┐
                          │ LIFT CONTROL │
                          │   PANEL      │
                          └──────┬───────┘
                                 │ *
   LIFT WELL                ┌─────────┐      TRAVELLING CABLES
   4 SERIAL CABLES          │ ENCODER │      4 SERIAL CABLES
                            └─────────┘
              SER1                      SER1
```

Select power cable in accordance
with load current and volt-drop specifications

```
   FLOOR 'N'                                  CAR
   DISPLAY                                  DISPLAY

   WIRE
   ADDITIONAL
   DISPLAY(S)
   IN PARALLEL
   (MAX 31)

   FLOOR '2'
   DISPLAY

   FLOOR '1'
   DISPLAY
```
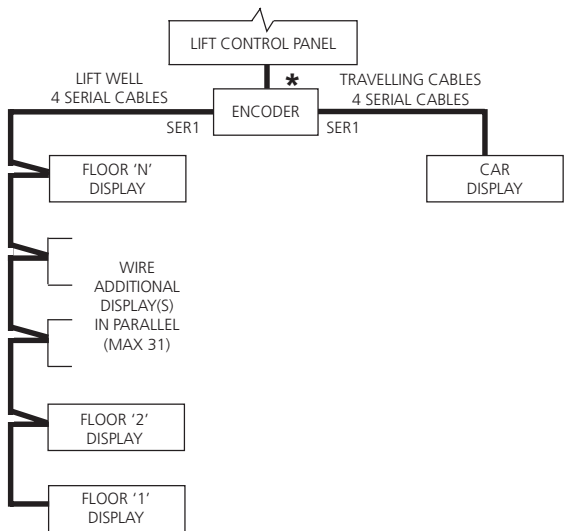
* Encoder Input Wiring: See Installation Instruction II097

DESIGNATOR	LABEL	DESCRIPTION	
SER	P1	Supply voltage a.c. or d.c.	Accepts either polarity
SER	P2	Supply voltage a.c. or d.c.	
SER	DR	Data Return	
SER	DIN	Data Input	
GONG	G1	Gong for down direction	
GONG	G2	Gong for up direction	
GONG	H1	Lantern for down direction	
GONG	H2	Lantern for up direction	
GONG	GND	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		

Generic Wiring of Display Units with Parallel Inputs

U7

U5

EEPROM
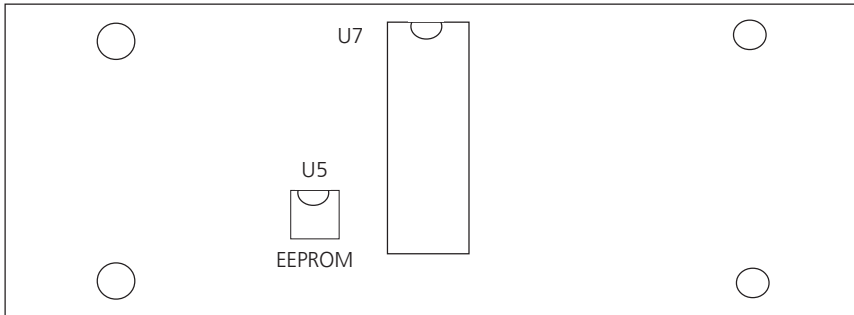
REAR VIEW

ULSP32HS
ULSP32VS
ULSP52HS
ULSP52VS

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 MSB LSB 5 4 3 2 1	GRAY CODE MSB LSB 5 4 3 2 1
Car Unit	00000	00000
1	00001	00001
2	00010	00011
3	00011	00010
4	00100	00110
5	00101	00111
6	00110	00101
7	00111	00100
8	01000	01100
9	01001	01101
10	01010	01111
11	01011	01110
12	01100	01010
13	01101	01011
14	01110	01001
15	01111	01000
16	10000	11000
17	10001	11001
18	10010	11011
19	10011	11010
20	10100	11110
21	10101	11111
22	10110	11101
23	10111	11100
24	11000	10100
25	11001	10101
26	11010	10111
27	11011	10110
28	11100	10010
29	11101	10011
30	11110	10001
31	11111	10000

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	2
	1-7	3	3
	1-15	4	4
	1-31	5	5
One per floor	1-16	1 each	-
	1-31	-	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)

Changing 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 that all potentially live parts are temporarily insulated from earth.

SWITCH THE POWER ON

NOTE: Never apply power directly to the SER and PAR1 socket pins as they may be damaged.
Always connect to the actual field wiring plugs or spare plugs which are easily replaceable.

Measure the applied power between a.c. - a.c. 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 encloder on all car and landing displays. Using a low power ohmeter, 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 displays and encoder plugs.

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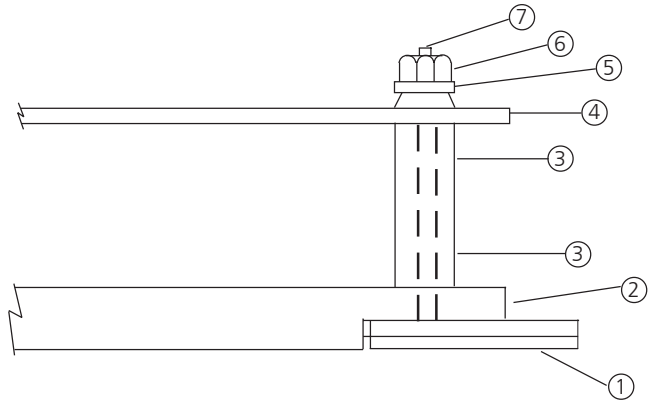
ITEM	DESCRIPTION
1	Faceplate
2	Window
3	Insulated Spacer
4	Display PCB
5	Plain Washer M4
6	Full Nut M4
7	Weldstud M4

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