

SUPPLEMENT

DIGITAL INDICATOR TYPE HDI

The HDI range of indicators have been designed based on the ever successful TC3 indicator to utilize the latest surface mount technology to make the footprints of the HDI16 and HDI32 as small as possible, while still providing a quality high definition display.

HDI16

The HDI16 unit gives an active 40mm by 40mm HD monochrome RED display. Its overall footprint is 73mm X 74mm X 14mm deep. It will display a SINGLE character in RED only with vertically scrolling RED direction arrows. It also has a facility for multi tone Gong and Hall Lantern arrow up to 15 floors. It will also display horizontal scrolling messages the same as the TC3 but in RED only

POWER SUPPLY REQUIREMENTS FOR THE HDI16

24Vdc smoothed 50mA and at 12Vdc smoothed 80mA

HDI32

The HDI32 unit gives an active 80mm by 40mm HD monochrome RED display. Its overall footprint is 84mm X 74mm X 14mm deep. It will display TWO characters in RED only with vertically scrolling RED direction arrows. It also has a facility for multi tone Gong and RED Hall Lantern arrows up to 63 floors. It will also display horizontal scrolling messages the same as the TC3 but in red only

POWER SUPPLY REQUIREMENTS FOR THE HDI32

24Vdc smoothed 60mA and at 12Vdc smoothed 120mA

DIGITAL INDICATOR TYPE TC3

INTRODUCTION

The MP-TI Digital Indicator System comprises of a Controller Interface Module (fitted in the lift controller), and a Digital Indicator fitted on the lift car or landings. The Controller Interface Module will support upto 64 indicator units, and each Digital Indicator Unit can display the floor reference as 2 alpha-numeric characters (which are site programmable).

Indicator Unit Features

Intelligent vertical and horizontal scrolling of messages.

Operates to give fully dynamic 3 character control in red, green, or yellow for 7x15 led display resolution over a display area of 30mm x70mm.

Uses latest developments of circuit integration together with surface mount manufacturing techniques to give an indicator footprint of 70mm. x 50mm. and 40mm deep.

Utilizes CAN communications to reduce site wiring and ease installation (2 wires for power and 2 wires for communications).

Standard message control format is:

- Lift Position displayed using 2 characters in yellow with vertical scrolling

- Lift Direction displayed green for up, red for down with continual vertical scroll

- Hall Lantern displayed green for up, red for down using large full screen arrow Messages for Fire Control, Car Overloaded, Out of Service displayed red with horizontal scrolling.

- During message displays, the message and position data alternate.

- Multi-tone Hall Lantern Gong sounds once for up, twice for down.

Controller Interface Unit Features

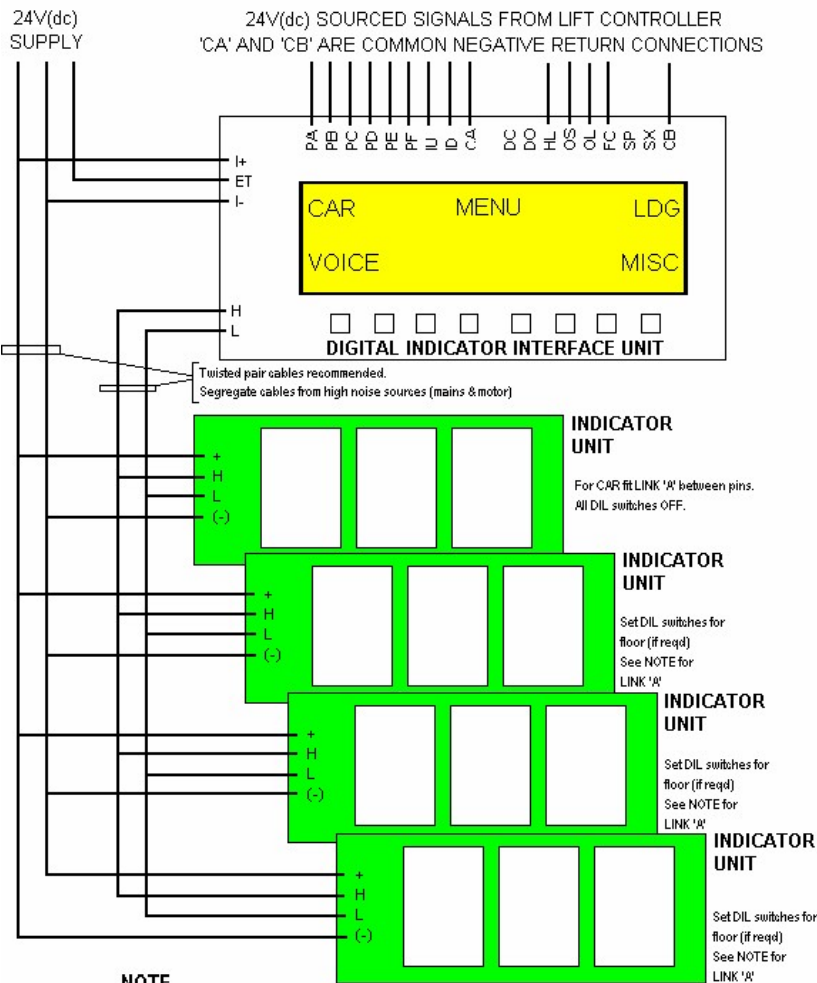
Incorporates Liquid Crystal Display to monitor and program indicator operation.

Floor Identities are site programmable into NVRAM with no special equipment required.

Inputs are opto-isolated for 24Vdc operation and include :- Binary position inputs PA, PB, PC, PD, PE, PF for upto 63 floors. IU, ID inputs for Direction. HL input for Hall Lanterns OS, OL, FC for messages.

Note: A decimal to binary encoder unit is available as an optional chargeable extra to help controller position data interfacing.

DIGITAL INDICATOR EXTERNAL WIRING



NOTE

LINK 'A' is supplied connected on one pin only for all Indicator units.
LINK 'A' must be fitted between both pins for last unit in communications run only (car & landing furthest from controller). Other units have LINK 'A' on one pin only.

PA,PB,PC,PD,PE,PF _____ POSITION INPUTS (BINARY)
 IU,ID _____ DIRECTION ARROW INPUTS
 HL _____ HALL LANTERN CONTROL INPUT
 OL,OS,FC _____ MESSAGE INPUTS FOR OVERLOAD,
 OUT OF SERVICE, FIRE CONTROL

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DIGITAL INDICATOR TYPE TC3



INTERFACE UNIT CONTROLS

Following power initialization the system is set to the 'main menu' operation to give a display as follows :-

```
CAR VOICE MENU      LDG
                    MISC
```

PUSH BUTTON FUNCTIONS

Left Arrow	Shifts cursor one field to left
Right Arrow	_Shifts cursor one field to right
Up Arrow	_Shifts cursor up one line
Down Arrow	Shifts cursor down one line
Menu	Returns display to Main Menu Screen
RTN	Selects / terminates function or instruction
SET	Selects Position Floor Reference Setup operation
SAVE	Selects saving of Floor Reference Data

To show the data displayed by the car position indicator push cursor left once then push return once to give display as follows :-

```
P=01      ^CAR^      D=SB
-----CAR OVERLOADED-----
```

This shows the data regarding the Position Indicator in the lift car as having an absolute position of floor '01' (bottom), a displayed position of 'SB', an Up direction and hall lantern operational, and a 'Car Overloaded' message displayed.

To return to the 'Main Menu' press 'Menu' push.

To show the data displayed by the landing position indicator push cursor right once then push return once to give display as follows :-

```
P=01      ^LDG^      D=SB
-----MESSAGE-----
```

This shows the data regarding the Position Indicator on the landings as having an absolute position of floor '01' (bottom), a displayed position of 'SB', an Up direction and hall lantern operational, and no message displayed.

To return to the 'Main Menu' press 'Menu' push.

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SETTING THE DISPLAYED FLOOR REFERENCES

The Floor References corresponding to the absolute lift position (floor 1 as bottom) may be programmed on site with no special equipment required. To enter the position reference setup operation press 'SET' push to give the following display :-

P=01	D=SB
SET DISPLAY DATA	

Use the UP or DOWN ARROW to increase or decrease the absolute position to the required floor.

Push the RIGHT ARROW to shift to the displayed position (left hand character).

Use the UP or DOWN arrow to set the character to +, -, space, or any numeric or alphabetic character (push may be held down to scroll).

Push the RIGHT ARROW to shift to the displayed position (right hand character).

Use the UP or DOWN arrow to set the character.

Press SAVE push to save the data.

The display will respond by showing 'save ?' on the top line centre.

Press SAVE push again to confirm.

The display will respond by showing 'saving' on the top line centre.

After a few seconds the display will show 'saved !' on the top line centre.

The data for the set entry is now set in NVRAM (held even if the supply is switched OFF)

After a few further seconds the display will return to the set display data screen shown above.

The procedure may be repeated for further floor entries or the MENU push may be pressed to return to the basic MENU screen.

If in doubt at any time press the MENU button to recover back to the MENU screen.

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DIGITAL INDICATOR OPERATION

A CAN link is used to transfer data between the Interface Unit and the Digital indicators. LED indicators are illuminated on the indicator PCB to show :-

- S _____ 5Vdc power supply monitor.
- _____ R Receive data monitor for CAN link (raw CAN data).
- C _____ Communications confirmation monitor for CAN Data.

‘C’ indicator shows the data has been received correct following integrity checks.

During NORMAL operation led status should be :-

- S _____ illuminated constantly
- R _____ pulsing at approximately 0.25 second intervals
- C _____ pulsing at approximately 1 second intervals.

For communications purposes all Digital Indicator units are supplied with LINK ‘A’ connected to one pin only. LINK ‘A’ must be fitted between both pins for the indicator unit fitted on the car, and the landing unit furthest from the Interface Unit.

Although the CAN link is reasonably noise immune, the indicator wiring should be segregated from sources of high electrical noise such as heavy mains and motor wiring. Initial recommendations are to use twisted pairs for indicator wiring, or screened cable where noise problems are experienced.

An 8 way dil switch is fitted on the indicator PCB to set the type of indicator usage. If all dil switches are OFF then the indicator is set to be a car indicator and so will not operate to give a large Hall Lantern Arrow or Gong signal. If the dil switches are set as the binary equivalent of the absolute landing floor (1 is bottom), then the indicator is set to be a specific landing indicator. If the lift is at a floor position equal to its dil switch setting, then a large Hall Lantern Arrow (and Gong if fitted) is illuminated under control of the HL input at that floor only. All other floors operate with normal position and direction arrow illumination.

Dil switch settings

Floor Switch Setting Floor Switch Setting Floor Switch Setting

1 00000001	9 00001001	17 00010001
2 00000010	10 00001010	18 00010010
3 00000011	11 00001011	19 00010011
4 00000100	12 00001100	20 00010100
5 00000101	13 00001101	21 00010101
6 00000110	14 00001110	22 00010110
7 00000111	15 00001111	23 00010111
8 00001000	16 00010000	24 00011000 etc. up to 63 floors

POWER SUPPLY REQUIREMENTS

Indicator Unit _____ 24Vdc smoothed 0.25A Interface Unit _____ 24Vdc smoothed 0.5A