

# LCD240 vertical series

**PIKOTEC**

## Vertical Graphic LCD Display Device for Lifts

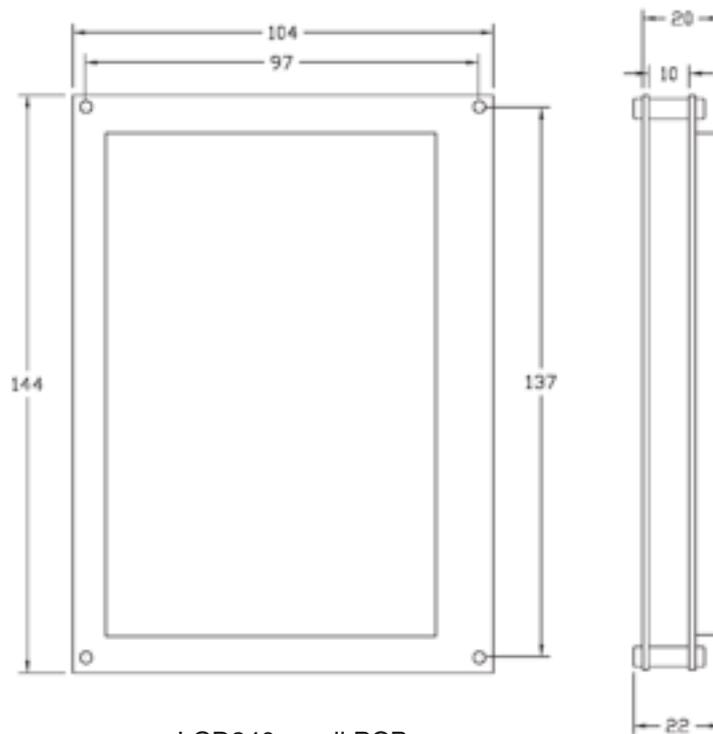


LCD240 vertical series

**Vertical version of LCD240 is a graphic LCD display with a resolution of 128 by 240 pixels and vertical orientation. The display is optimized for lift applications. It can be assembled either to the car or to the level. It can present floor markings, direction arrows and the other graphical symbols needed for special indications. Also other information, such as a company logo can be presented. Audible signaling can be done by a standard gong. Gong sounds differently according to direction that car moves. Device is capable to take action in power failure situation automatically. There are two PCB versions available, standard and small.**

### Functional specifications

- Applicable for assembly either to the car or to a level
- Maximum number of floors is 32
- Presents floor markings, direction arrows and graphical symbols needed for special indications
- Floor mark consists of one or two letters or numbers (0...9, A...Z, minus sign)
- Audible signaling by a standard gong (loudspeaker is an accessory)
- Ability to display emergency information in a power failure situation automatically (requires external back-up power supplied to corresponding connector), polarity is software selectable
- Adjustable loudspeaker volume (loudspeaker is an accessory)



LCD240 small PCB

### Display module specifications

- Display resolution: 128 x 240 pixels (H x V)
- LCD type: STN, negative, blue, transmissive
- Backlight: long life white LED
- Active area: 114 mm x 64 mm
- Viewing angle: min. 40° (with contrast ratio = 1.4)
- Contrast ratio: typ. 5 (when  $\sigma = 10^\circ$  and  $\tau = 0^\circ$ )
- Adjustable contrast (trimmer potentiometer)
- Expected lifetime 100 000 h

### Electrical connections

- Operating voltage range 12...30 VDC (max. 5% ripple)
- Current consumption 65...113 mA @ 24 VDC (without gong)
- Backup battery input
- Parallel interface has:
  - Internal 10 k ohm pull-down or pull-up resistors (jumper selectable)
  - Input voltage range: 0...30 VDC
    - Logic 0: 0...1 VDC
    - Logic 1: 10...30 VDC
  - Parallel mode position input coding is selectable: Binary / Gray
  - 4 inputs for the symbol indications control
  - 2 inputs for the gong control
  - 2 inputs for arrow direction control
  - 1 input that activates arrow scrolling
- RS-232 serial interface for LCDtool cable
- Loudspeaker impedance: 8...32 ohm
- Adjustable volume (trimmer potentiometer)

### Configuration

- LCDtool application (accessory)
  - All graphics (bitmap) are editable with a PC
  - Requires LCDtool software and a cable, also picture editing software is needed
  - Floor marks and twelve floor pictures can be easily modified by editing the text file
- Device configuration is made by means of displayed menu and 3 push buttons covering configuration of:
  - Input coding (BIN or GRAY)
  - Installation position selection (CAR/LANDING)
  - Logo graphics (OFF/ON)
  - Programming (PROG OFF/ON)
  - Power Failure Polarity (PF POLAR 0/1)
  - Arrow input selection (EXT/AUTO)
  - Emergency info picture (EMER INFO 0...2)
  - Level for SYM4 (SYM4 FLOOR)
  - Level for gong if in landing-mode (GONG FLOOR)
  - Floor marks (BUS 00...BUS 31)

### Size and environment

- Physical dimensions (+additional space for connectors)
  - Standard PCB: 144 mm x 135 mm x 24 mm
  - Small PCB: 144 mm x 104 mm x 24 mm
- Weight: 245 g (max.)
- Operation environment: 0...70 °C, RH: <85% (no condensation)
- Not to be used in wet, moist or dusty environment