

KB18LD2-xx

Pin-pad Terminal

User' s manual

FEATURES

- Programmable 4 columns x 5 rows key matrix.
A maximum of 12 codes can be defined for each key.
- Data can be displayed on 16 columns x 2 rows.
- Included manual swipe MSR (Magnetic Stripe Reader.)
ISO standard.
- Include manual swipe barcode reader.
For code 39 only.
- Provides the RS-232 interface.
Baud rate from 2400 to 19200 bps.
- Provides the AT keyboard interface.

ORDERING INFORMATION

| Model | LCD | Keypad | MSR | Barcode (Code39) | Interface |
|---------------|-----|--------|-----------|---------------------|-----------|
| KB18LD2-X0-R | | | | | RS232 |
| KB18LD2-X0-K | | | | | AT KB |
| KB18LD2-E1-R | | | Track 1 | | RS232 |
| KB18LD2-E1-K | | | Track 1 | | AT KB |
| KB18LD2-E2-R | | | Track 2 | | RS232 |
| KB18LD2-E2-K | | | Track 2 | | AT KB |
| KB18LD2-E3-R | | | Track 3 | | RS232 |
| KB18LD2-E3-K | | | Track 3 | | AT KB |
| KB18LD2-E5-R | | | Track 12 | | RS232 |
| KB18LD2-E5-K | | | Track 12 | | AT KB |
| KB18LD2-E6-R | | | Track 23 | | RS232 |
| KB18LD2-E6-K | | | Track 23 | | AT KB |
| KB18LD2-E7-R | | | Track 123 | | RS232 |
| KB18LD2-E7-K | | | Track 123 | | AT KB |
| KB18LD2-B39-R | | | | | RS232 |
| KB18LD2-B39-K | | | | | AT KB |

GENERAL SPECIFICATIONS

| NO | ITEM | Description |
|----|------------------|--------------------------------------|
| 1 | Key contact tech | Gold cross point, linear feel |
| 2 | Number of keys | 19 (18keys of 1x1, 1key of 1x2) |
| 3 | Display method | Liquid Crystal display |
| 4 | Number of char | 32 characters (16 columns x 2 lines) |
| 5 | Character | 5 x7 dot matrix, 96 alphanumeric |
| 6 | Card standard | ISO 7811/2 |
| 7 | Interface | RS232C AT keyboard |
| 8 | Power supply | 9-12Vdc External (RS232) |

INTERFACE SPECIFICATIONS

1. RS232

Connector type: D-sub 9 pin (Female)

| NO | Signal | Direction | Function description |
|----|--------|--------------|----------------------|
| 2 | TXD | To PC/Host | Transmit data |
| 3 | RXD | From PC/Host | Receive data |
| 4 | DSR | From PC/Host | PC/Host ready signal |
| 5 | GND | | Signal ground |
| 6 | DTR | To PC/Host | Pin pad ready signal |

Connector type: DC-jack

| NO | Signal | Direction | Function description |
|----|--------|--------------|----------------------|
| + | VPP | From adapter | 9-12Vdc, 250mA |
| - | GND | From adapter | |

2. AT Keyboard

Connector type: PS/2, male for PC, female for standard keyboard

COMMAND

HOM /Move cursor to home position/

Dec. Format { 011 }

Hex. Format { 0Bh }

Description Moves the cursor to the left-most position of the upper line

CLR /Clear display screen, and cursor to home/

Dec. Format { 012 }

Hex. Format { 0CH }

Description Clear display screen, and cursor to home

CR /Move cursor to lower line left-most position/

Dec. Format { 013 }

Hex. Format { 0DH }

Description Moves the cursor to the left-most position on the lower line

CURB Cursor on and bottom bar

Dec. Format { 017 }

Hex. Format { 11h }

Description Cursor on and bottom bar

CURH Cursor on and block all

Dec. Format { 018 }

Hex. Format { 12h }

Description Cursor on and block all

ESC x n /Set transmit MSR/Barcode data package

Dec. Format { 027 } { 120 } n 30h<=n<=33

Hex. Format { 1Bh } { 78h } n

Description Set transmit MSR data package

n=30h, normal n=31h, data +CR

n=32h, " ["data"] " n=33h, " ["data"] " +CR refer 3

DEC"% " n s /Set key code status/ 5 (except KB18LD-X0)

Dec. Format { 030 } { 037 } n s

Hex. Format { 1Eh } { 25h } n s

Description Set key code status

n =key position, refer Table key map

s =" 0", Null key

s =" 1", use user define key code

DCE"@" /Clear EEPROM and reset/ 6 (except KB18LD-X0)

Dec. Format [030] [064]

Hex. Format [1Eh] [40h]

Description Clear EEPROM and wait 15 sec

DCE "&" n l [DATA] * l / Set user defined key code / 4

Dec. Format [030] [038] n l {data}* l (except KB18LD-X0)

Hex. Format [1Eh] [26h] n l {data}* l

Description Set user defined key code and change key status is use

User defined key code

n is key position (31h <= n <= 45h)

Refer 1

l is key string length (31h <= l <= 3Ch)

01h <= {data} <= FFh

DCD"! " /transmit setting data/

Dec. Format [030] [033]

Hex. Format [1Eh] [21h]

Description Transmit setting data to PC.

US n /Move cursor to specified position/

Dec. Format [031] n { 0 <= n < 31 or 48 <= n <= 67 }

Hex. Format [1Fh] n refer 2

Description Moves the cursor to the n position

CURC **Cursor off**

Dec. Format [019]

Hex. Format [13h]

Description Cursor off

DC4 /Sounds a short beep/

Dec. Format [020]

Hex. Format [14h]

Description Sounds a short beep, 0.2 sec

DC5 /SOUND 4 TIMES SHORT BEEP/

Dec. Format [021]

Hex. Format [15h]

Description Sounds 4 times short beep and pulse interval is 0.2sec ON
And 0.1 sec break

DC6 /Enable keyboard beep echo/

Dec. Format [022]

Hex. Format [16h]

Description Enable beep echo to valid key press

DC7 /Disable keyboard beep echo/

Dec. Format [023]

Hex. Format [17h]

Description Disable beep echo to valid key press

DC8 Valid key press echo to LCD/

Dec. Format [024]

Hex. Format [18h]

Description Valid key press is transmit to Host and show to display

DC9 /Valid key press not echo to LCD/

Dec. Format [025]

Hex. Format [19h]

Description Valid key press only transmit to Host

ESC b n /Baud rate setting/ (except KB18LD-X0)

Dec. Format [027] [098] n 30h <= n <= 33h

Hex. Format [1Bh] [62h] n

Description Setting baud rate and save to EEPROM
n = 30h/31h/32h/33h baud rate=9600/4800/2400/19200 bps

ESC m n /MSR type setting/

Dec. Format [027] [109] n 30h <= n <= 33h

Hex. Format [1Bh] [6Dh] n

Description Setting MSR type rate and save to EEPROM

n = 31h : Track 1

n = 32h : Track 2

n = 33h : Track 1 and 2

n = 34h : Track 3

n = 36h : Track 2 and 3

n = 37h : Track 1, 2 and 3

1. Key position n and default key code

| | | | |
|-----|-----|-----|-----|
| 40h | 41h | 42h | 43h |
| 3Ch | 3Dh | 3Eh | 3Fh |
| 38h | 39h | 3Ah | 3Bh |
| 35h | 36h | 37h | |
| 32H | 31H | 33h | 34h |

| | | | |
|-----|------|-----|-----|
| "A" | "B" | "C" | "D" |
| "7" | "8" | "9" | "_" |
| "4" | "5" | "6" | "+" |
| "1" | "2" | "3" | |
| "0" | "00" | ." | CR |

2. LCD display position n is

| | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |

Or

| | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 |
| 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 |

3. Example for MSR/Barcode data format

- n =30h____Not send [] and CR DATA
- n =31h____Not send [] and send CR DATA +CR
- n =32h____Send [] and no CR [DATA]
- n =33h____Send [] AND CR [DATA] +CR"
- n =34h____Send start/end sentinel of card track data
- n =35h____No send start/end sentinel of card track data
- n =36h____Barcode is with checksum
- n =37h____Barcode is not with checksum
- n =38h____Barcode is full ASCII format
- n =39h____Barcode is not full ASCII format
- n =3Ah____Not send barcode checksum character
- n =3Bh____Send barcode checksum character

Note: the checksum character is not shown in the LCD.

4. Example for defined key code

Host send to pin-pad: DCE "&" [31h] [36h] "123456" and pin pad echo to Host; "OK"

Valid key position [31h] press and the pin pad send to Host;"123456"

5. Example for Set key code status

Host send to pin-pad: DCE “%” [31h][30h] and pin-pad echo to Host; “OK”

Valid key position [31h] is defined to be Null key.

6. Example for Clear EEPROM and reset

Host send to pin-pad: DCE “@”

Pin-pad will be clear EEPROM echo to Host; “OK” and Reset like power on