ALGE-TIMING

D-LCC
Lapcounter

Manual

Important Information

General

Before using your ALGE·TIMING device read the complete manual carefully. It is part of the device and contains important information about installation, safety and its intended use. This manual cannot cover all conceivable applications. For further information or in case of problems that are mentioned not at all or not sufficiently detailed, please contact your ALGE·TIMING representative. You can find contact details on our homepage https://www.alge-timing.com/

Safety

Apart from the information of this manual all general safety and accident prevention regulations of the legislator must be taken into account.
The device must only be used by trained persons. The setting-up and installation must only be executed according to the manufacturer's data.

Intended Use

The device must only be used for its intended applications. Technical modifications and any misuse are prohibited because of the risks involved! ALGE·TIMING is not liable for damages that are caused by improper use or incorrect operation.

Power supply

The stated voltage on the type plate must correspond to voltage of the power source. Check all connections and plugs before usage. Damaged connection wires must be replaced immediately by an authorized electrician. The device must only be connected to an electric supply that has been installed by an electrician according to IEC 60364-1. Never touch the mains plug with wet hands! Never touch live parts!

Cleaning

Please clean the outside of the device only with a smooth cloth. Detergents can cause damage. Never submerge in water, never open or clean with wet cloth. The cleaning must not be carried out by hose or high-pressure (risk of short circuits or other damage).

Liability Limitations

All technical information, data and information for installation and operation correspond to the latest status at time of printing and are made in all conscience considering our past experience and knowledge. Information, pictures and description do not entitle to base any claims. The manufacturer is not liable for damage due to failure to observe the manual, improper use, incorrect repairs, technical modifications, use of unauthorized spare parts. Translations are made in all conscience. We assume no liability for translation mistakes, even if the translation is carried out by us or on our behalf.

Disposal

If a label is placed on the device showing a crossed out dustbin on wheels (see drawing), the European directive 2002/96/EG applies for this device.
Please get informed about the applicable regulations for separate collection of electrical and electronical waste in your country and do not dispose of the old devices as household waste. Correct disposal of old equipment protects the environment and humans against negative consequences!

Declaration of Conformity

We declare that the following products comply with the requirements of the listed standards. Parts that we use in the product are CE certificated by the manufacturers and ALGE·TIMING GmbH does not change them.

We, **ALGE·TIMING GmbH**
Rotkreuzstrasse 39
A-6890 Lustenau

Declare under our sole responsibility, that the display boards of the type:

D-LCC

produced from 01.01.2005 and later is in conformity with the following standard(s) or other normative documents(s):

Safety: IEC 60950:1999 / EN 60950:2000
            EN 60335-1:2002 + A11:2004 + A1:2004 + A12:2006 + A2:2006

EMC: EN55022:2006+A1:2007
            EN55024:1998+A1:2001+A2:2003
            EN61000 3-2:2006
            EN61000 3-3:1995+A1:2001+A2:2005

Additional Information:
The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC, also the EMC Directive 2004/108EG and accordingly carries the CE-marking.

Lustenau, 27.04.2021   ALGE·TIMING GmbH

Albert Vetter
(General Manager)

Table of Contents

1 General

The display board D-LCC is a lap counter with very flexible functions. Laps can be counted up or down. Various models of the lap counter are available:

- one-sided, double-sided, triple-sided
- 1 digit per side, 2 digits per side, 3 digits per side
- lap counter with or without bell

2 System Components:

- desired display board (see 1) with built-in powerpack (battery and charging unit)
- controller D-CKA2-LCC
- tripod for lap counter (TRI128 or TRIMAN depending on lap counter model)
- mains cable (to charge the built-in battery)
- possibly bell (depending on lap counter model)

3 Power Supply

The lap counter has an integrated powerpack (battery is installed in the lap counter which can be connected to the mains for charging (100 - 240 VAC / 50 - 60 Hz).

If the lap counter is connected to mains supply during operation, the internal battery functions as a buffer battery. This means that the battery takes over in case of a power failure.

The powerpack supplies power for a maximum of 15 hours in continuous use. After a charging period of 14 hours, the battery is fully charged. The battery can only be charged at temperatures above temperatures of 5°C (41°F).

- green LED: fully charged

- yellow LED: charging

- red LED: battery almost empty

Power Down:

In order to conserve battery power, the lap counter automatically switches to power down mode after 5 minutes (factory setting). In power down mode, the display switches off. Press the push button (connected to the green and yellow banana socket) to end the power down mode. The lap counter automatically displays the last value before the power down mode started.

The duration until the power down mode activates can be set in the menu (parameter ▊▊, see point 5.5).

4 Default Setting

A new D-LCC display board has factory settings that are optimized for the device. To restore these factory settings, press the push button "DOWN/PAR." of the controller D-CKA2-LCC until the display shows the version number. This restores all parameters to the factory settings.

5 Parameter Setting

There is a menu for setting the parameters of the lap counter:

- brightness   `br`
- countdown or count-up   `CU`
- countdown start value hundreds   `Ch`
- Countdown start value till 99   `CL`
- format parameter   `SE`
- power down time   `t0`
- address of the lap counter   `Ad`

Start the menu by pressing the push button "DOWN/PAR." for approx. 5 seconds until flashing `br` is shown. While `br` is flashing, you can switch to the next parameter by pressing the button "DOWN/PAR." again. If you wait for about 3 seconds when a parameter is displayed, it shows the variables of this parameter. As long as a variable is flashing, it can be adjusted with the button "DOWN/PAR.".

5.1   `br` *Brightness*

This parameter is used to adjust the brightness. The first figure (digit) stands for the appearance, the second digit for the brightness.

Factory setting: `br` `09`

5.1.1 Setting the First Digit

The first digit defines the type of switching between two different display modes. The fade in (fade-in) changes with brightness effects.

`br 0`   **Fade-in off**

Function is not activated.

`br 1`   **Fade-in on**

Function is activated. (Brightness is switched on and off at the time of switching)

5.1.2 Setting the Second Digit

This setting defines the brightness of the display.

`br 8`   **Manual adjustment**

The second position of the brightness setting can be set manually with values between 0 and 9. 0 denotes the minimum, 9 the maximum brightness level. This setting can also be made via the menu of TDC8001 or TIMY.

`br d`   **Time-dependent brightness**

The brightness is adjusted automatically depending on the time of day.

`br A`   **Light-sensitive brightness**

With this setting, the brightness of the display depends on the light sensor. If the light sensor is not connected, the maximum brightness level is set.

5.2   ▦ *Countdown or Count-Up*

The factory setting is „Countdown" starting with a value of 25. If you want to count up, you have to adjust the counting direction in the menu. The start value is always 0 (zero) for the count-up.

▦ ▦   adjustment for countdown (factory setup)

▦ ▦   adjustment for count-up

5.3   ▦ *and* ▦ *- Countdown Start Value*

It is possible to define the value from which the countdown should start. With a 3-digit lap counter display you can set the hundreds value (0 to 9) with the parameter Ch and the single and tens values (0 to 99) with the parameter CL. If you set Ch 01 and CL 50, the countdown starts at 150.

With a 2-digit lap counter there is only the parameter CL and you can set. The lap counter start value for the countdown mode is possible to define from 0 to 99.

Factory Setting: ▦ ▦ and ▦ ▦

5.4   ▦ *Display mode and Interface*

This setting is required for the interface parameters. The first position of the setting is for the display mode, the second position for the interface speed (baud rate).

Factory setting: ▦ ▦

5.4.1 Display Mode

You can set the various display modes for your display board.

▦ ▦   **HH:mm:ss (1 sec.)**

▦ ▦   **H:mm:ss.z (1/10 sec.) also speed with 1/10**

▦ ▦   **mm:ss.zh (1/100 sec.)**

▦ ▦   **m:ss.zht (1/1000 sec.)**

▦ ▦   **bib (ID-number), rank**

▦ ▦   **extended mode**

The extended mode is used to configure the entire display. You can select which byte is displayed at which position of the display. If the serial setting is in this mode, you have several parameters to set the mode.

The parameters are ▦,▦,▦,▦, … For a detailed description of this function please see the manual of the D-LINE.

▦ ▦   **master/slave communication (RS485 or RS232, master=TX,** slave=RX) **and for GPS operation! (4800 Baud adjustment = Sen4)**

▦ ▦   **mm:ss.zh (1/100sec.):** no function

▦ ▦   **terminal D-CKN game time (MM:SS, centered) must be 9600 Baud!**

     !!!D-Line connected by RS232 with D-CKN (Pin5=GND, Pin2=Data)!!!

▦ ▦   **stop time of day:** no function

5.4.2 Transfer Speed/Protocol

The second digit of the setting is responsible for the transfer speed of the serial interface.

SE 2   2400, N, 8, 1 _ALGE_ standard

SE 4   4800, N, 8, 1 _ALGE_

SE 9   9600, N, 8, 1 _ALGE_

SE 1   19200, N, 8, 1 _ALGE_

SE L   special format

SE 5   old devices like the S3, Selftimer SF2

SE d   no function

5.5   _t0_ _Power Down Time_

This setting defines the time after which the display board changes into the power down mode. When this is set to 00, the power down mode is off. The time set in power down mode is always multiplied by a factor of 10 (i.e. 03 would be 30 seconds).

Factory Setting: **t0 30** (300 seconds = 5 minutes)

5.6   _Ad_ _Address Setting_

To use more than one D-LCC on an addressed protocol, you have to define the addresses of every single lap counter. Normally, the first line is address 1 **Ad 01**, second line address 2 **Ad 02**, etc.

6   Functions of Countdown and Count-Up

6.1   _Countdown_

- connect controller D-CKA2-LCC at the 4-pin Ampenenol connector
- parameter **CU** must be set to **00** (see point 5.2).
- parameter **CH**: set the start value of the countdown (factory setting = 25).
- press button "DOWN/PAR.": the value counts down.
- press button "UP": the value counts up.
- press button "DOWN/PAR." about 4 seconds: sets the value to the start value

6.2   _Count-Up_

- connect controller D-CKA2-LCC at the 4-pin Ampenenol connector
- parameter **CU** must be set to **01** (see point 5.2)
- start value for count-up is always 0 (zero)
- press button "UP": the value counts up.
- press button "DOWN/PAR.": the value counts down.
- press button "DOWN/PAR." about 4 seconds: sets the value to the start value

7   Lap Counter Controlled by Timy

It is possible to control the lap counter from the Timy. In order to do so, select the program "Commander" and then "Counter". Now you can set any number desired and confirm with OK.

- Counting up: press <F0>, <F1> or green <OK> button
- Counting down: press <F2>, <F3> or red <OK> button
- Input a number: input number on Timy keypad, press <OK>

Connect the Timy with a banana cable and at the lap counter (display board banana sockets at Timy to yellow and black banana sockets at lap counter). The baud rate is 2400 baud (parameter ⬛⬛ ⬛⬛ - factory setting).

8   RS232 Interface

It is possible to control the lap counter by RS232 interface.

Connection: yellow and black banana socket

Standard Setting:

- 2400 Baud
- 1 start bit
- 8 data ASCII-Bit
- 1 stop bit
- no parity bit

Protocol:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	**H**	b	**Z**	**E**	b	b	CR

- b   blank
- H   hundred-digit
- Z   ten-digit
- E   one-digit
- CR Carriage Return

9 Technical Data

All connections, switches and status LEDs are on the bottom of the lap counter D-LC.

1	Amphenol plug to connect controller D-CKA2-LCC
2	RS232 connection
3	status LED green – full battery
4	status LED yellow – battery charging
5	status LED red – low battery
6	On/Off-Switch
7	fuse (1.0A)
8	mains 100-240V, 50-60Hz
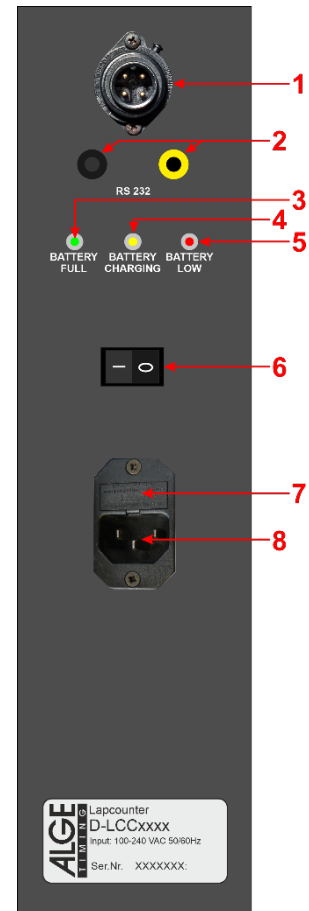
9.1   Powerpack

Charging time of battery: **at least 14 hours at 230 V**

Subject to changes