SPEEDY

ALGE-TIMING

73.6

ALGE-TIMING

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 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!

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1 General

The Speedy is a device to measure the speed of an object that passes two photocells. The distance of the photocells is adjustable. The speed is measured by measuring the time between both photocells and then calculating the speed from distance and time.

It is possible to adjust the unit of the speed choosing km/h, m/s or mph.

The speed measurement works only in one direction. The photocell that is connected to the green cable end of the cable 172-30 is the first photocell (start of speed measurement) and the red cable end goes to the second photocell (end of speed measurement).

The cable that connects the photocells must be plugged in at one of the DIN-plugs on the left side of the display board D-SFXXX-3-E0.

The **RS232 and RS485** interfaces are **not active** for this type of display board.

All banana plugs are out of function for this display!

Start of Speed Measurement

Photocell PR1a-R

Cable 171-30
Cable is 30 m long

Photocell PR1a-R

End of Speed Measurement

Display Board
D-SFXXX-3-E0

Push Button

Mains
100 - 240 VAC

B COIN A
B START A

DIN-Socket for
Cable 171-30
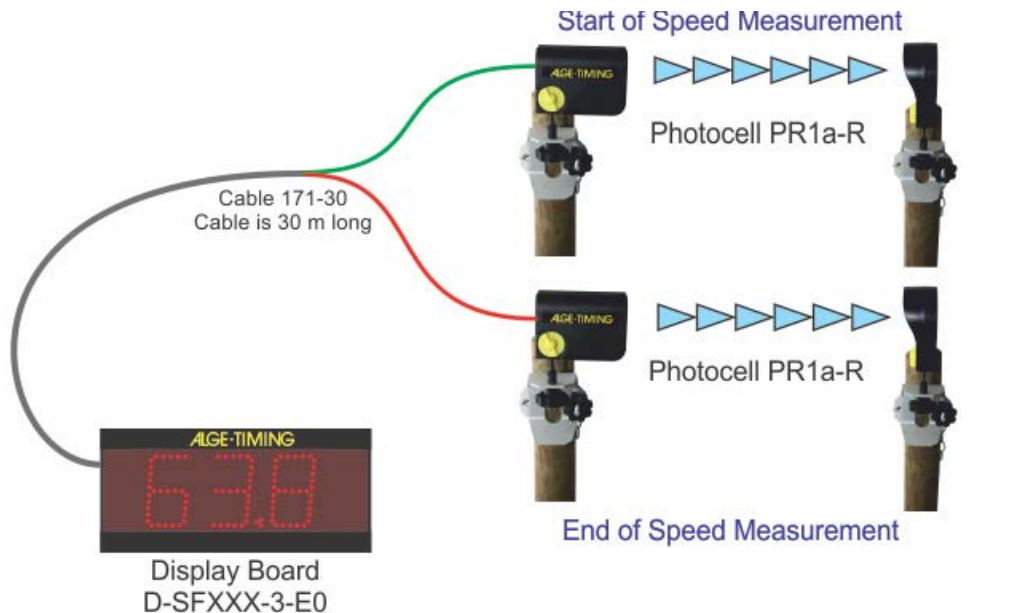
PHOTOCELL

1.1 Components of the System

- display board with different sizes:
    - o display D-SF150-3-E0 (figure height 150 mm)
    - o display D-SF250-3-E0 (figure height 250 mm)
    - o display D-SF450-3-E0 (figure height 450 mm)
- two photocells PR1a-R
- cable 171-30 (split cable from display board to both photocells, 30 m long)

1.2 Setup of the System
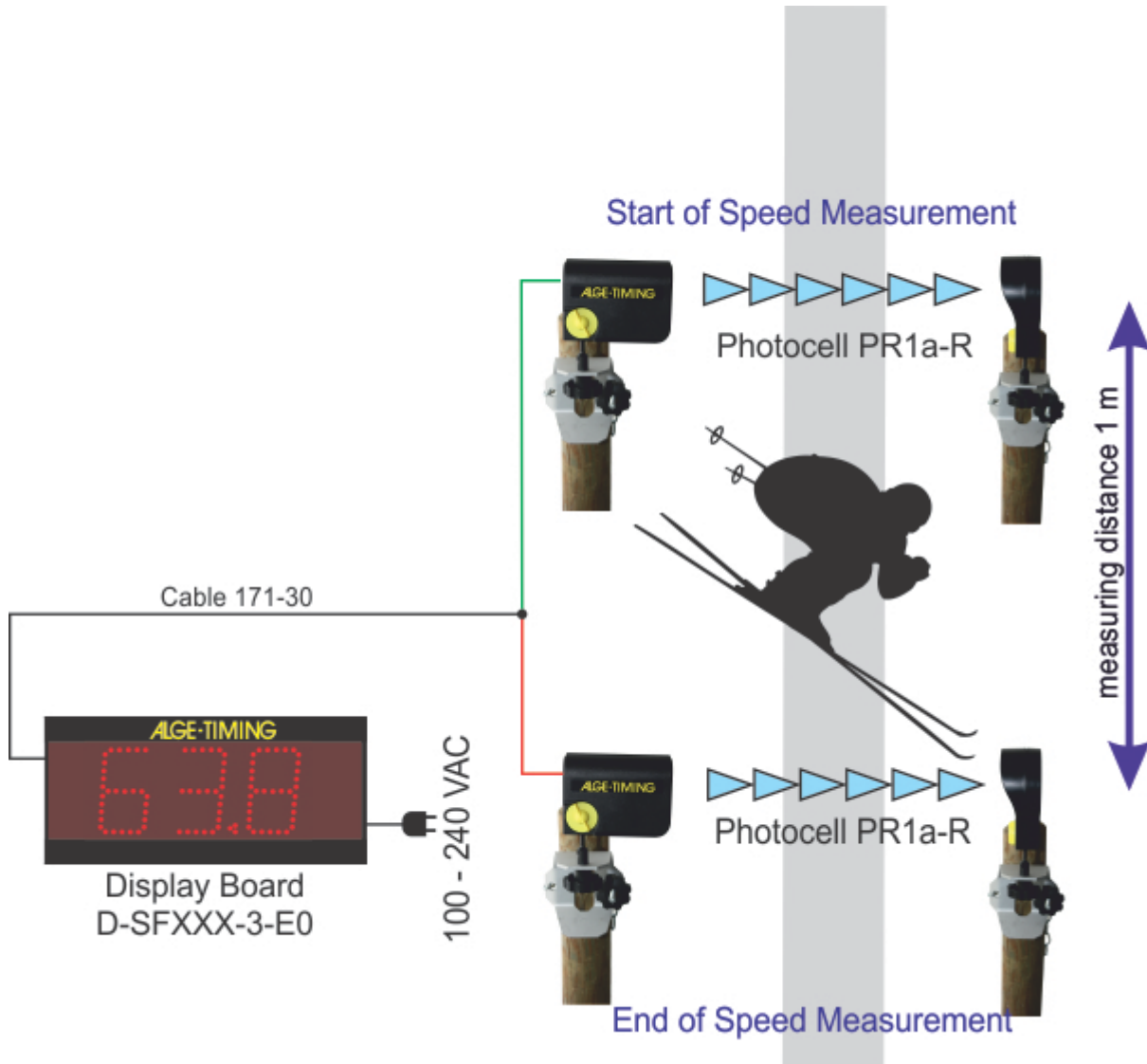
2 Adjustments of the Display Board D-SFxxx-3-E0

2.1 Default Values

When *ALGE-TIMING* supplies a display board it has the following settings:

🔲 Brightness:	Default = 09 (full brightness)	
🔲 Unit:	Default = C (km/h with decimals)	
🔲 Display Time:	Default = 0 (it shows the speed until the next measurement)	
🔲 Distance in meters:	Default = 01 (1 m between photocells)	
🔲 Distance in 100 meters:	Default = 0 (only value of *SP* is relevant)	
🔲 Speed Limit – Low:	Default = 01 (minimum measured speed is 1 km/h)	
🔲 Speed Limit – High:	Default = 00 (maximum measured speed is endless)	

In case the parameters are changed or you are not sure about the function of the display board, you have the possibility to adjust the default settings by pressing the black push button on the right side for about 15 seconds until the display shows the version number (e.g. 1.2).

2.2 Parameters

It is possible to set parameters in the display board for the optimal usage. In order to select the parameters you proceed as follows:

- Select the parameters:
  - o Press the black push button on the right upper corner of the display board for about four seconds until it shows blinking <*br*> (Brightness).
  - o Release the push button.
  - o To move to the next parameter press the push button again shortly

- Change the parameters:
  - o Move to the parameter that you want to change as described above
  - o Wait for four seconds until the display switches from the parameter to the value of the parameter (value is now blinking)
  - o Press the push button to adjust the value that you need
  - o Some parameters have a value that has two digits. In this case you can only change one digit (value) after the other.

2.2.1 🔲 Brightness of Display Board

With this parameter the brightness effects and settings can be adjusted. The first digit is for the appearance, the second one for the brightness.

- **Setting the First Digit**
  The first digit defines the type of change between time and temperature. The fade-in changes over with brightness effects from time to temperature.

  - 🔲🔲 **Fade-in Off**
    Fading is deactivated.

  - 🔲🔲 **Fade-in On**
    Fading is activated. (Brightness is immediately switched on and off when changing.)

- **Setting the Second Digit**
  This setting defines the brightness mode of the display.

  - **br 8 Manual setting**
    The second digit of the brightness setting can be manually adjusted from 0 to 9. Value 0 is minimum brightness and value 9 is maximum brightness. This setting can also be carried out via the menu of your TdC8001 or Timy.

  - **br d Daytime depending Brightness**
    Brightness is set automatically, depending on the daytime.

  - **br A Light Sensor depending Brightness**
    With this setting, the brightness depends on the light sensor. If no light sensor is connected, the brightness is always at maximum.

2.2.2 Measurement Counter

2.2.2.1 St Total Measurement-Counter

Shows the total number of measurements of the Speedy.
If you press the button when the counter reading is blinking the counter is reset to zero. To read the counter just blocks the photocell. After 10 seconds the total counter reading is shown and subsequently the daily counter reading.

2.2.2.2 Sd Daily Measurement -Counter

Shows the daily number of measurements of the Speedy.
If you press the button when the counter reading is blinking the counter is reset to zero. To read the counter just blocks the photocell. After 10 seconds the total counter reading is shown and subsequently the daily counter reading.

2.2.3 Un Unit of Displayed Speed

This parameter serves for setting the desired measurement unit.

- **UnC Km/h (default)**
  Shows the measured speed in kilometers per hour with decimals if possible

- **Unc Km/h**
  Shows the measured speed in full kilometers per hour only

- **UnE M/s**
  Shows the measured speed in meters per second

- **UnP Mph**
  Shows the measured speed in miles per hour

- **Unt ss.th**
  Shows the measured time in seconds and hundredths; maximum measuring period is 99.00 seconds

2.2.4 dS Display Time

With this value you can set the time in seconds during which the speed is shown on the display board (e.g. default value 15 means the measured speed is shown for 15 seconds on the display board). If you receive a further speed before the display time is over, the previous speed is overwritten by the current speed and the display time starts anew.
Value 0 is displayed until the next measurement overwrites it.

2.2.5 Photocell Distance (1 – 999 m) `SP` and `Sh`

The correct and accurate measuring distance between the photocells is important to obtain an accurate result of the speed. The shorter the measuring distance is, the more accurate the adjustment must be.

The system allows you to input a measuring distance between 1 and 999 m. The distance value is split in two parameters (<SP> for the last two digits (0 to 99 m) and <Sh> for the first digit (100 to 900 m)). Longer distance means more accurate measurement.

2.2.5.1 `SP` Photocell Distance (1 – 99 m)

Input with <SP> the distance between 0 and 99 m. Check always also the parameter <Sh> to avoid wrong adjustments; e.g. if you want a measuring distance of 1 m, the parameter <SP> must be 01 and the parameter <Sh> must be 0.

2.2.5.2 `Sh` Photocell Distance (100 – 900 m)

Input with <Sh> the distance for hundreds meters. For distances below 100 m this value must be on zero.

2.2.6 Speed Limit `LL` and `Lh`

Often the speed is only of interest within a certain range, e.g. between 30 and 60 km/h. Other speeds are wrong measurements (e.g. objects that pass the photocell that you do not want to measure). Therefore, it is possible to adjust a lowest and highest speed limit. The value you input is always in such a unit that you selected as measuring unit (e.g. if you display km/h the input is in km/h).

2.2.6.1 `LL` Speed Limit – Low

Input the minimum speed that you want to measure.

This value is important in order to have an automatic reset of the speed measurement if an object only crosses the first photocell, but never reaches the second photocell.

2.2.6.2 `Lh` Speed Limit - High

Input the maximum speed that you want to measure. Please note that the digit you input is always to be multiplied with the factor 10 (e.g. if you input 1, it means you measure up to 10).

2.3 Malfunctions

2.3.1 `Er` `01` Start Photocell Error

If the start photocell is triggered for more than 10 seconds, the display shows the error message. It shows alternating `Er` and `01`.

2.3.2 `Er` `02` Finish Photocell Error

If the finish photocell is triggered for more than 10 seconds, the display shows the error message. It shows alternating `Er` and `02`.

3 Technical Data

Internal button to set the display mode

Amphenol socket:
1 +10 - 12 VAC (external supply)
2 ground
3 no function
E no function

No function for these banana sockets

No function for these banana sockets

90 - 240V, 50-60Hz
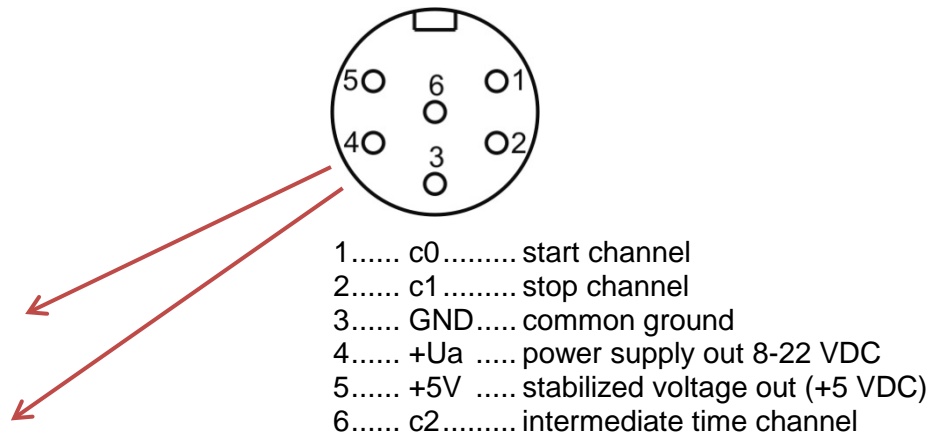1.0A Fuse

3.1 Power Supply

3.1.1 Mains

90 - 240V, 50-60Hz
1.0A Fuse

3.1.2 External Battery

+10 - 12 VAC

3.2 Impulse Channels

1...... c0......... start channel
2...... c1......... stop channel
3...... GND..... common ground
4...... +Ua ..... power supply out 8-22 VDC
5...... +5V ..... stabilized voltage out (+5 VDC)
6...... c2......... intermediate time channel

3.3 Interfaces

3.3.1 RS232 Interface

No function

3.3.2 RS485 Interface

No function

3.4 Hints

The decimal point is displayed based on the measured speed.

Velocity <10 is displayed with two 2 decimal places
Speed <100 is displayed with one decimal place
Velocity >99.9 is displayed without decimals

This behavior cannot be changed.

Subject to changes