

# WS2

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](http://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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### Subject to changes!

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## 1 General

The ALGE WINDSPEED (WS2) functions with a colorimetric mass flow sensor. This enables fast and exact wind measurement.

The miniaturized colorimetric mass flow sensor features an exceptionally dynamic. Based on the light involved masses of the sensors and the thermal influenced surrounding, for the measurements needed, time constant will be achieved in a range of under 1ms in dependance of the used media.

The ideal design of the wind pickup sensor and the fast reaction time for a measurement guarantee that no change of wind will appear between the measurements. Viz in a measuring for athletics, the time will be measured for 10 seconds. The more measurements will follow in this time, the more exactly the average value for this period will be.

Due to the fact that no mechanical parts are used, the WS2 should never be calibrated. The calibration happens one time before delivery to the customer, after that the device will retain its features forever. Annoyance influences through humidity or thermal fluctuations are not existing.

The WS2 is also supremely robust. Even a drop to the floor of the measuring unit shouldn't cause any functions annoyances.

It is very important, that the air supply through the tubes is always ensured in the same way, that means that the tubes must not be plugged.

### 1.1 System components:

- Wind measuring device WINDSPEED WS2
- Terminal TIMY
- Cable reel KT-WS100 with 100m cable (wind measuring device to terminal or PC)
- Tripod TRI128

#### Option:

- Case with foam plastic inlay K12
- USB-RS485 adapter (for PC-Connection)
- Displayboard

#### WINDSPEED WS2-TY (with terminal TIMY):

##### Advantages:

- Timy has got all interfaces.
- Usage of anemometer at long jump
- Simple connection of the display board

## 2 Implementing

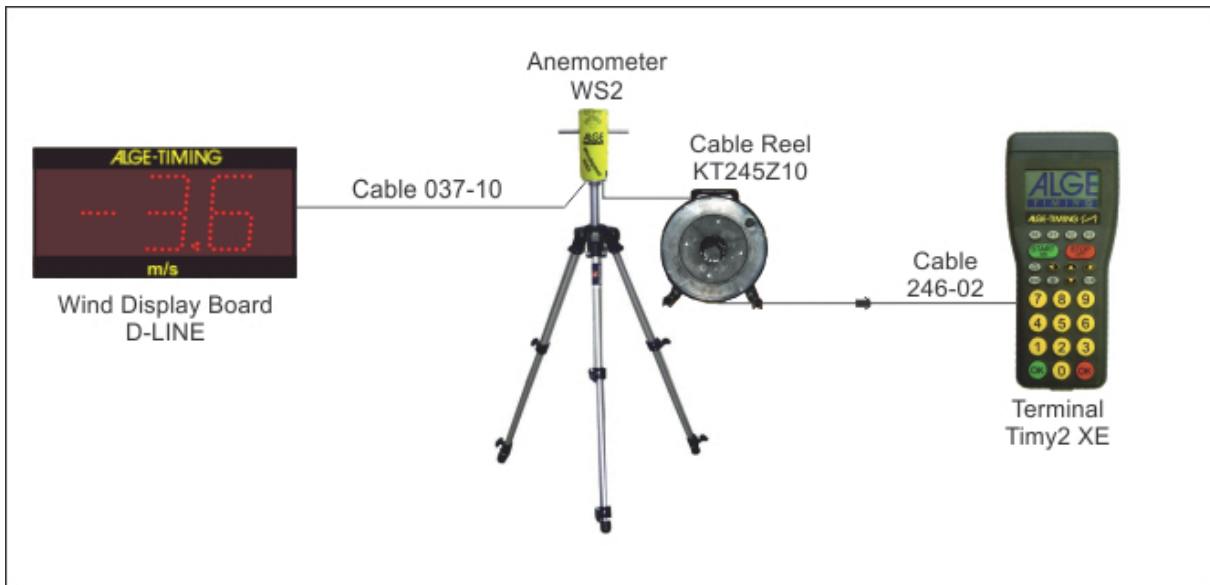
See Timy manual "GENERAL"

## 3 Set Up of the System

There are several possibilities to connect the Windspeed WS2 to a photofinish. Of course you can use the Windspeed WS2 as well without photofinish with a Timy2 or Timy3 for long jump and triple jump.

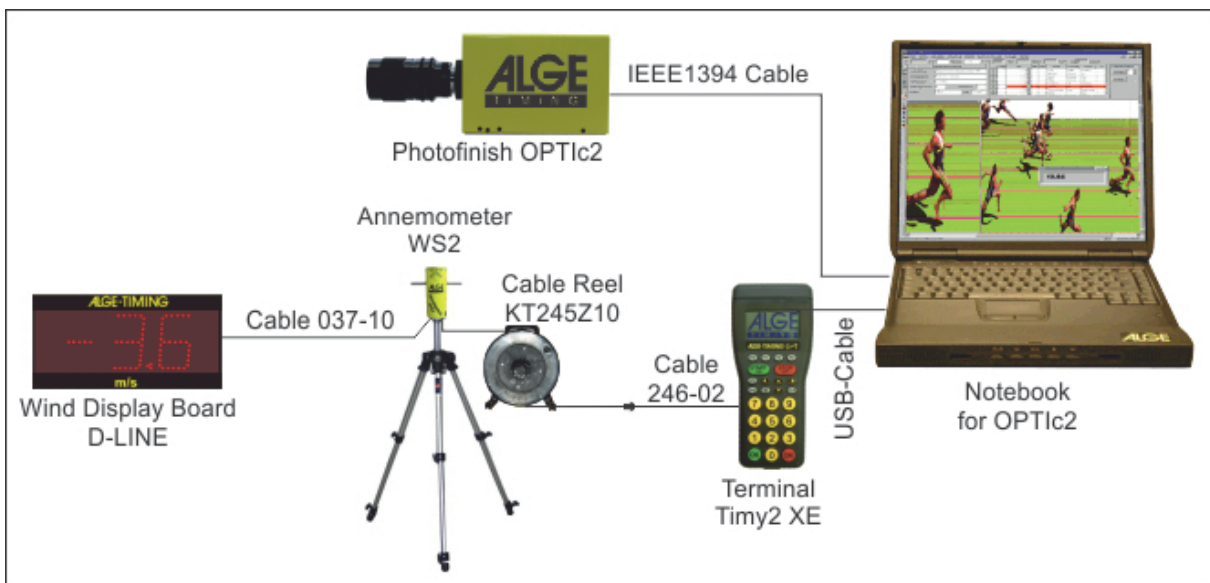
### 3.1 Anemometer with Timy

The Timy2 or Timy3 is connected by cable 246-02 and cable reel KT245K10 with the anemometer WS2. This configuration you use for long jump or triple jump.



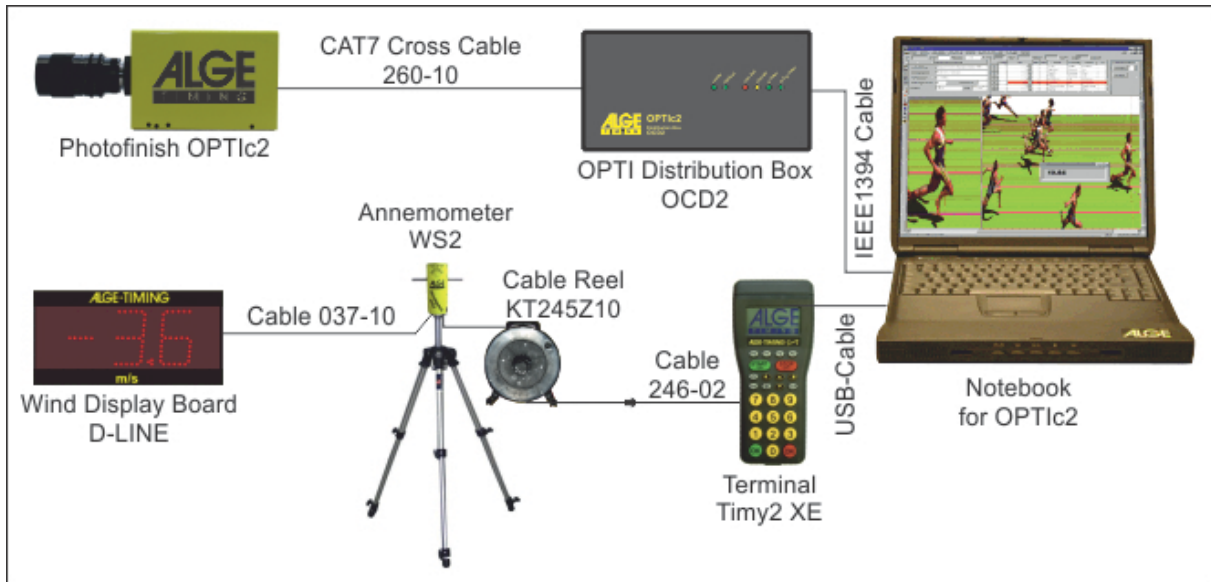
### 3.2 Anemometer with Timy and Photofinish System

The Timy2 or Timy3 is connected by cable 246-02 and cable reel KT245K10 with the anemometer WS2. The photofinish camera OPTIc2 is connected to the PC by IEEE1394 cable.



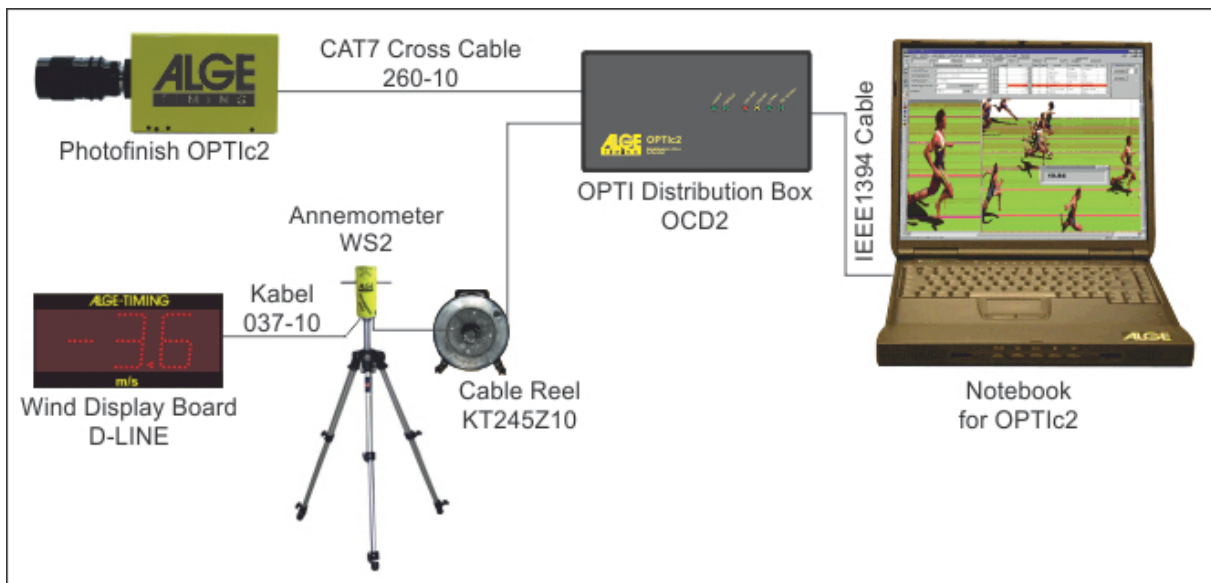
### 3.3 Anemometer with Timy and Distribution Box

The Timy2 or Timy3 is connected by cable 246-02 and cable reel KT245K10 with the anemometer WS2. The distribution box OCD2 is connected by IEEE1394 cable with the PC and the photofinish camera OPTIc2 is connected to OCD2 e.g. by cable 260-10.



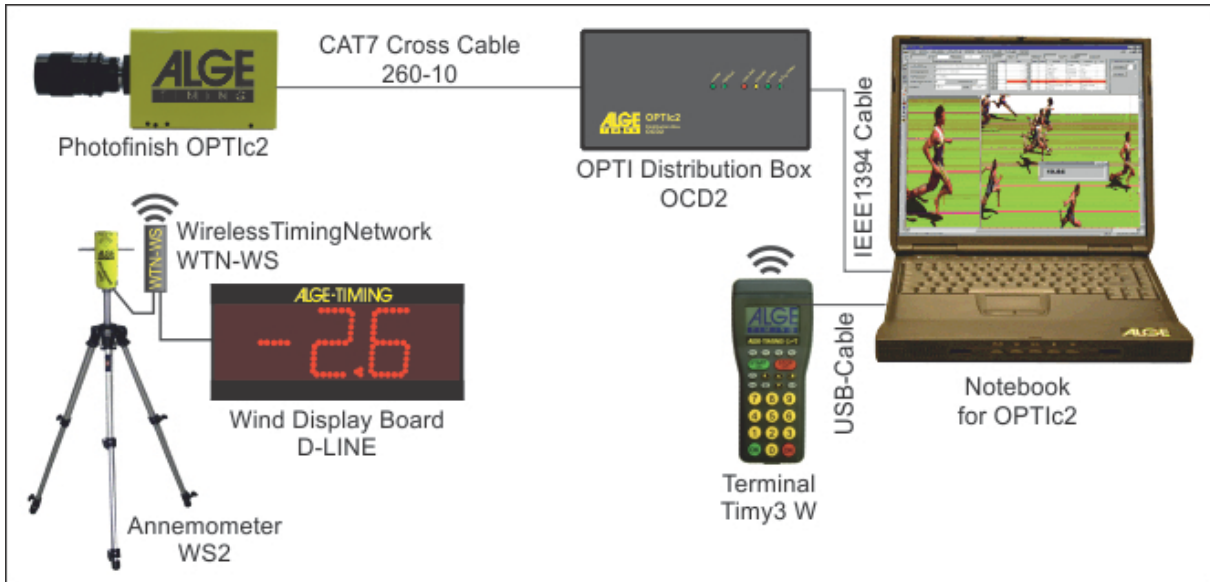
### 3.4 Anemometer with Distribution Box

The Anemometer WS2 is connected by cable reel KT245K10 with the distribution box OCD2. The distribution box OCD2 is connected by IEEE1394 cable with the PC and the photofinish camera OPTIc2 is connected to OCD2 e.g. by cable 260-10.-Kamera wird ebenfalls an der Distribution Box angeschlossen.

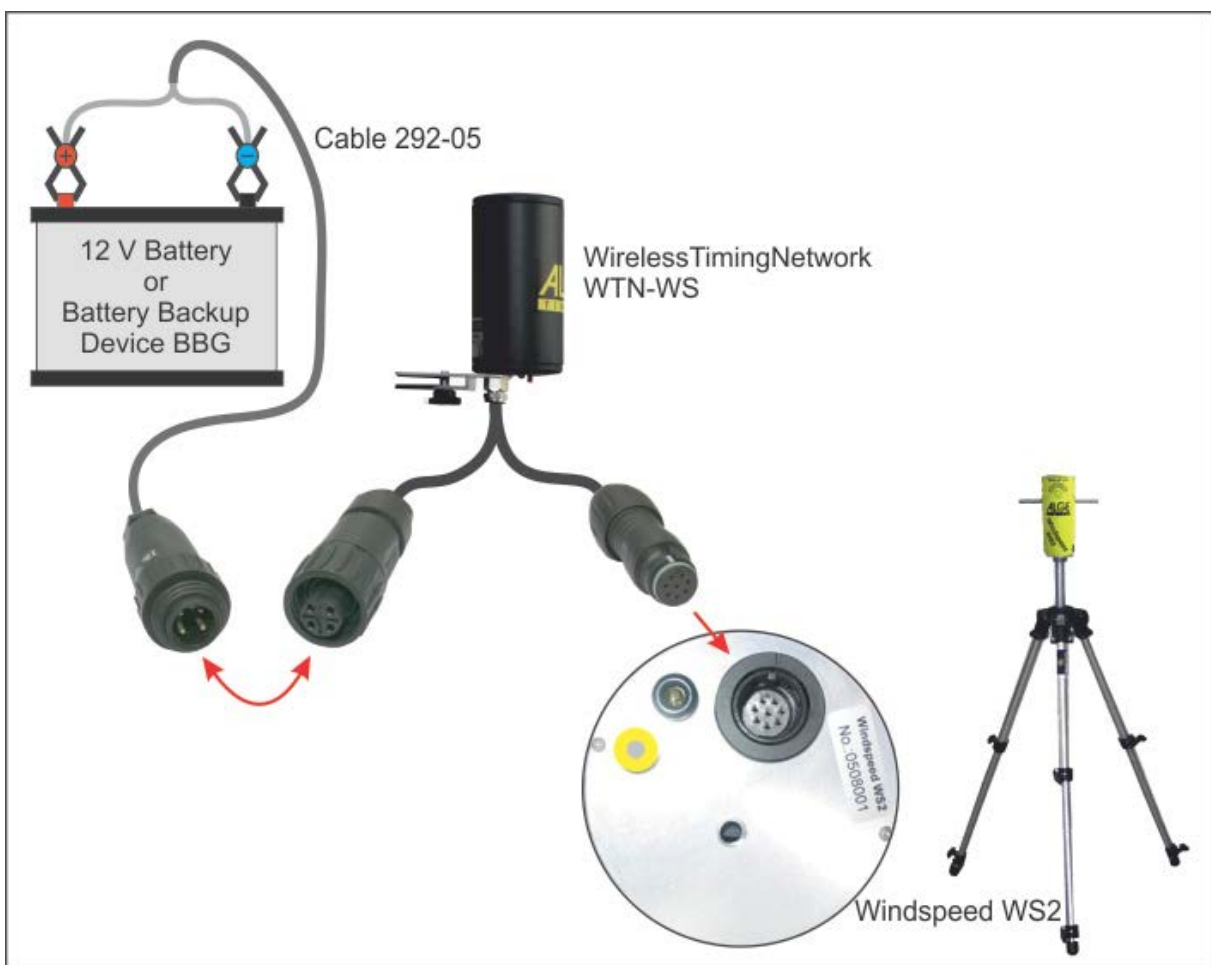
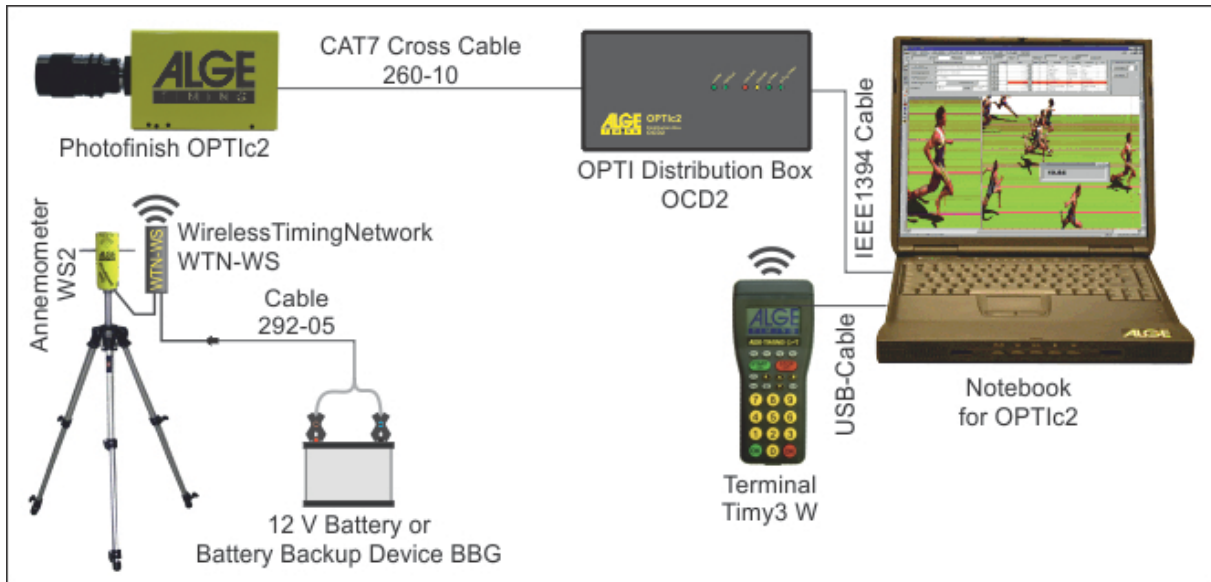


## 3.5 Anemometer with Radio System WTN-WS

The anemometer WS2 communicates with the Timy3 W by radio. The power supply for the WS2 and WTN-WS comes from the wind display board D-LINE.



The anemometer WS2 communicates with the Timy3 W by radio. The power supply for the WS2 and WTN-WS comes from an external supply (e.g. Battery Backup Device BBG or 12V battery).





## 4 Mounting of the anemometer WS2

Dismantle the interlock (1) of the tripod-legs and pull them out totally. Now interlock the tripod-legs.

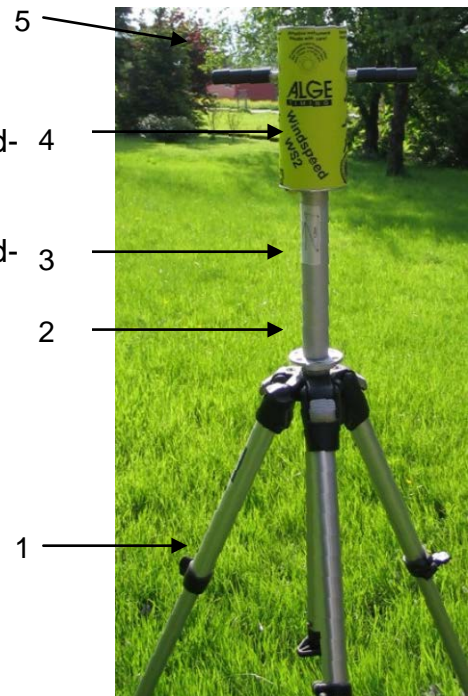
The tripod-middle-part (2) must be completely inserted

Screw the provided intermediate-piece (3) on the tripod-middle-part and put the anemometer WINDSPEED WS2 (4) afterwards on the top.

Remove the protection rings (5) and connect the provided cable.

If the mounting is correctly, the distance between ground and middle of wind catcher shall be approximately 1,22m.

**!! Attention – The arrow, located on the upside of the anemometer, must always show into the running direction !!**



## 5 Operation of the anemometer WINDSPEED WS2

The handling of the program is very easy. As soon as all components are connected, you just have to chose the desired wind-measuring-type.

### F0 Normal

Measures the wind-speed continuously. This mode is used before the run or sprint starts.

### F1 100 m / 200 m / 75 m / 80 m H

Measures the average speed for 10 seconds. This mode is used for all sprint-runs from 75m on (except 100m hurdles or 110m hurdles).

### F2 110 m H / 100 m H

Measures the average speed for 13 seconds. This mode is used for 100m hurdles or 110m hurdles.

### F3 Jump / < 75m

Measures the average speed for 5 seconds. This mode is used for all sprint-runs under 75m.

If the anemometer is connected to the ALGE Photofinish-system OPTIc, a manual handling is not applicable. The software of OPTIc adopt the handling automatically.

### 5.1 Display indication

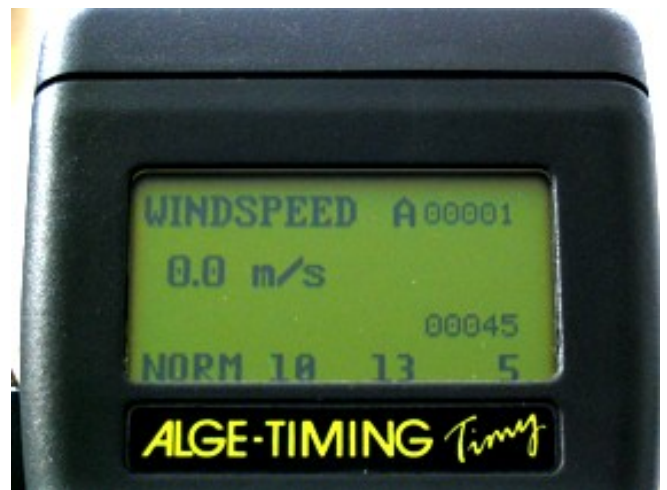
In this display of the TIMY, different information are shown. The line below (1) shows the 4 different types of measuring. The 5-digit figure on the right side (2) indicates, how many measurements the WINDSPEED has sent to the TIMY. Central left will show the measured windspeed (3). If a measurement is carried out, occurs the indication of the measurement period instead of „0.0 m/s“.



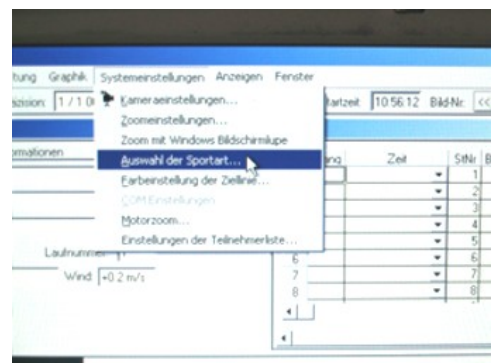
### 6 WINDSPEED WS2 with OPTIc

If WINDSPEED WS2 is used in connection with OPTIc, you don't have to handle TIMY terminal manually - the software will adopt the handling automatically. Numerous measuring-adjustments will be adopted by the software of OPTIc. After the mounting of the device (see point 2 and 4), switch-on all the devices.

The indication „A 00001“ right above in the display signalize, that the connection between TIMY and OPTIc is made. The Software of OPTIc indicates „Anemometer is ready“.



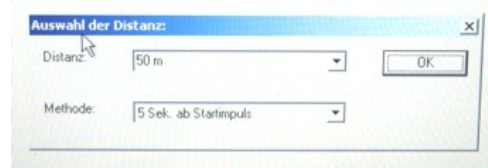
You have to adjust the necessary adjustments in the software of OPTIc. Open the program of OPTIc, click on “system adjustments”, and continue with “chosed of sport”.



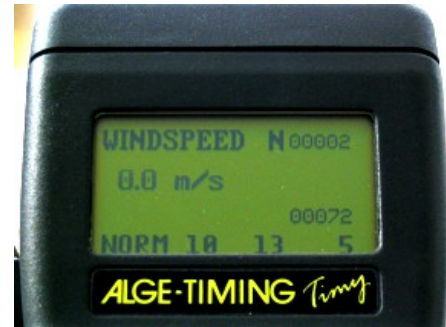
In the window „dialog sports“, please mark the field „athletics with ALGE anemometer“. Confirm with „OK“.



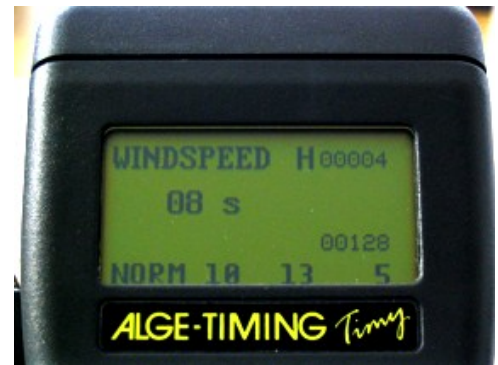
After open up a race and indicating the name of the event, the window „choice of distance” will open. Here you can adjust the requested measuring type.



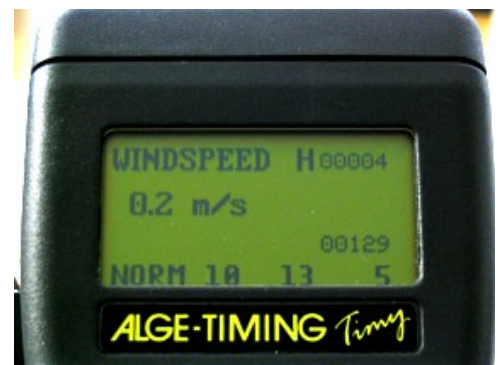
If you have chosen the measuring type, the start-dialog window will appear. In the TIMY-display will chose the "A" right above to "N". The device is now ready for wind-measuring.



If the start-impulse is triggered off, TIMY will send a command to the anemometer to start the adjusted measuring duration. Right above in the display will appear "H" for the ongoing measurement. Central left will show the remaining measuring duration.



If the wind-measurments are finished and the measuring duration expired, the WINDSPEED will send all the data to the TIMY. These data will be shown in the display of the TIMY and in the OPTIc-user-software.



## 7 Settings for the Displayboard

### 7.1 D-LINE Scoreboards

For D-LINE scoreboards use the following settings [parameters].

**D-LINE with version 3.6 and higher:  
6-digit Scoreboard:**

SEt2  
t000  
Ad00

**D-LINE with version 3.5 and lower:  
6-Digit Scoreboard:**

SEE2  
T000  
Ad00  
1 00  
1:00  
2 00  
2:00  
3 15  
3:10  
4 16  
4:17  
5 18  
5:00  
6 00

**D-LINE with version 3.6 and higher:  
6-digit Scoreboard:**

St2  
t00  
A00

**D-LINE with version 3.5 and lower:  
3-digit Scoreboard**

S E 2  
A 0 0  
1 1 5  
1:1 0  
2 1 6  
2:1 7  
3 1 8

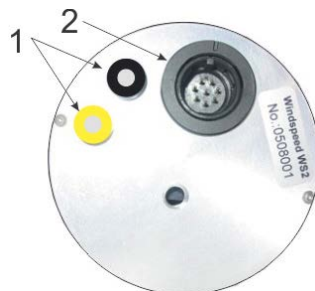
### 7.2 GAZ Scoreboards

Adjust the Thumbwheelswitch Switch to position 0. The toggle-switch has to be on middle position.

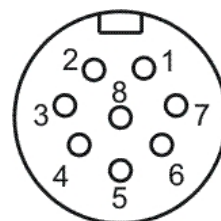
## 8 Technical details

### 8.1 Circuit points

- 1 Data for WIND-GAZ
- 2 Data WS2 – TIMY



**Pin Assignment:**



- 1.....RS485A
- 2.....RS485B
- 3.....GND
- 4.....+5Volt
- 5.....WIND GAZ

## 9 Treatment of the sensor

The sensor does not need cleaning or auxiliary treatment during its entire lifetime!

### 9.1 Very important

Never clean the sensor with a pipe cleaner, cotton bud, compressed air or something like that. Use your mouth to blow the dirt away.