

# 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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## Table of contents

<b>1</b>	<b>General</b> .....	<b>4</b>
1.1	System components: .....	4
<b>2</b>	<b>Set Up of the System</b> .....	<b>5</b>
2.1	Anemometer with Timy .....	5
2.2	Anemometer with OPTIc2 and OCD2 .....	5
2.3	Anemometer with OPTIc2 .....	6
2.4	Anemometer with OPTIc3 .....	6
2.5	Anemometer with Radio System WTN-WS .....	7
2.6	Anemometer for Infield-Events .....	9
<b>3</b>	<b>Mounting of the anemometer WS2</b> .....	<b>10</b>
<b>4</b>	<b>Timy Programs for Operation</b> .....	<b>11</b>
4.1	<u>WINDSPEED</u> .....	11
4.1.1	Timy Display .....	11
4.1.2	Operation .....	12
4.2	<u>FIELD-EVENT</u> .....	13
4.2.1	Timy Display .....	13
4.2.2	Operation .....	13
<b>5</b>	<b>Settings for the Displayboard</b> .....	<b>14</b>
5.1	<u>Wind Speed</u> .....	14
5.1.1	D-LINE Scoreboards .....	14
5.1.2	GAZ Scoreboards .....	14
5.2	<u>Concentration and performance</u> .....	15
5.2.1	D-LINE scoreboard .....	15
5.2.2	GAZ Scoreboard .....	15
5.3	<u>Start number and Attempt</u> .....	15
5.3.1	D-LINE scoreboard .....	15
5.4	<u>Concentration time, Wind and Performance</u> .....	16
5.4.1	3-digit D-LINE .....	16
5.4.2	4 digit D-LINE .....	16
<b>6</b>	<b>Technical details</b> .....	<b>16</b>
6.1	<u>Connections</u> .....	16
<b>7</b>	<b>Treatment of the sensor</b> .....	<b>16</b>
7.1	<u>Very important</u> .....	16

Subject to changes and misprints

### ALGE-TIMING GmbH

Rotkreuzstraße 39

A-6890 Lustenau

Austria

Tel: +43-5577-85966

Fax: +43-5577-85966-4

[office@alge-timing.com](mailto:office@alge-timing.com)

[www.alge-timing.com](http://www.alge-timing.com)

## 1 General

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

The miniaturized calorimetric 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 dependence 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 measuring's. So 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 covered.

### 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 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.

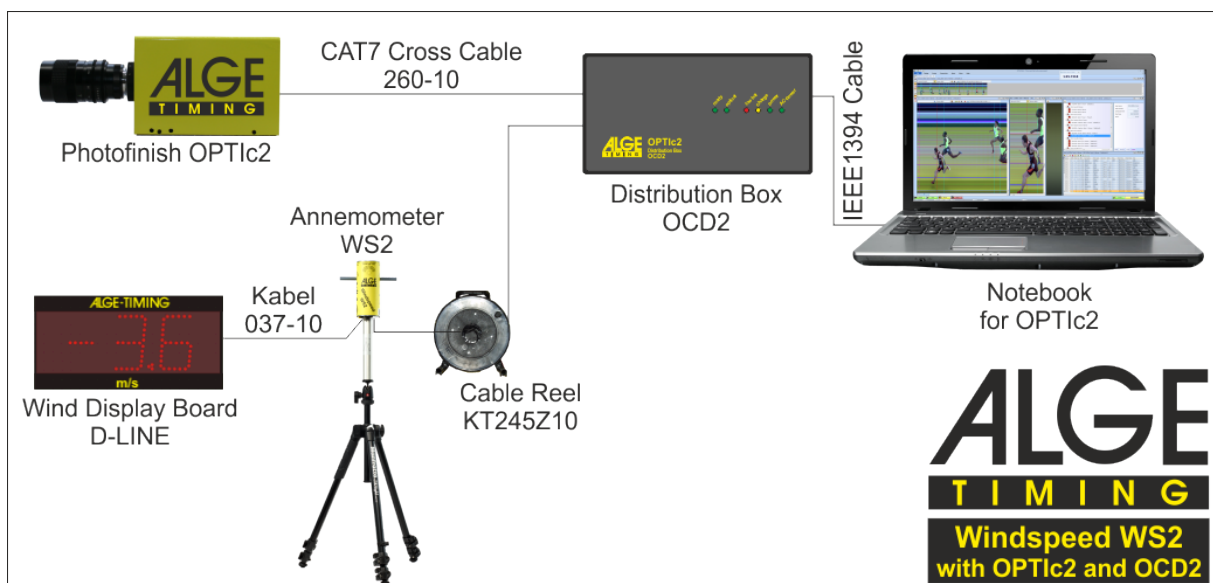
### 2.1 Anemometer with Timy

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.



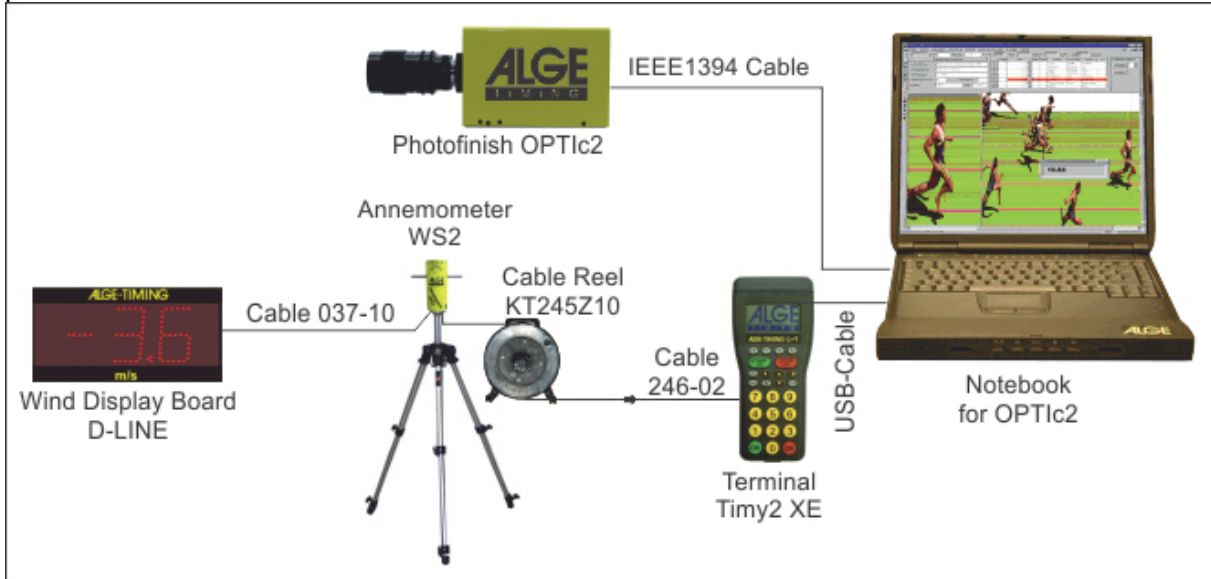
### 2.2 Anemometer with OPTIc2 and OCD2

The Timy2 or Timy3 is connected by cable 246-02 and cable reel KT245Z10 with the anemometer WS2. The distribution box OCD2 is connected by IEEE1394 cable with the PC and the photo finish camera OPTIc2 is connected to OCD2 e.g. by cable 260-10.



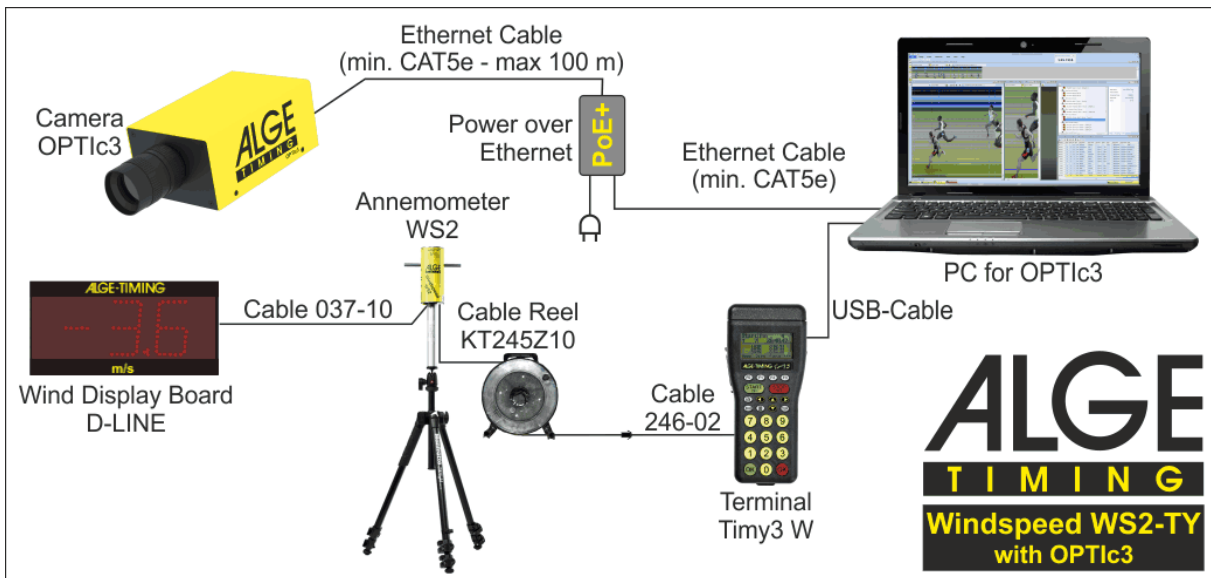
### 2.3 Anemometer with OPTIc2

In this configuration the Timy is connected directly via USB-Cable to the photo finish computer.



### 2.4 Anemometer with OPTIc3

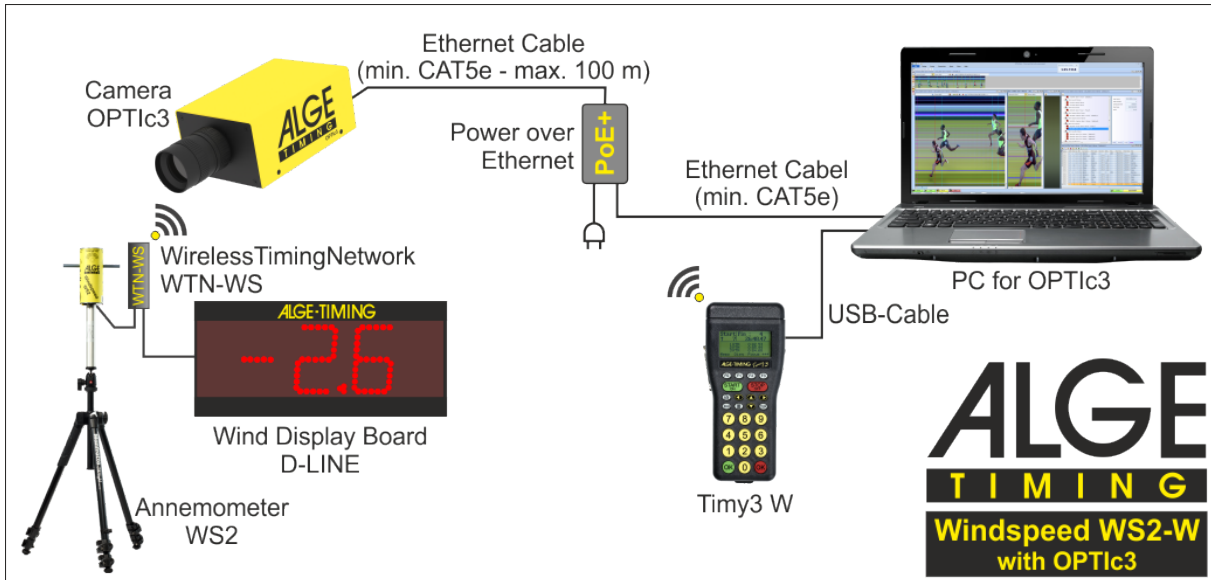
The Timy2 or Timy3 is connected by cable 246-02 and cable reel KT245K10 with the anemometer WS2. The photo finish camera OPTIc3 is connected to the PC by IEEE1394 cable.



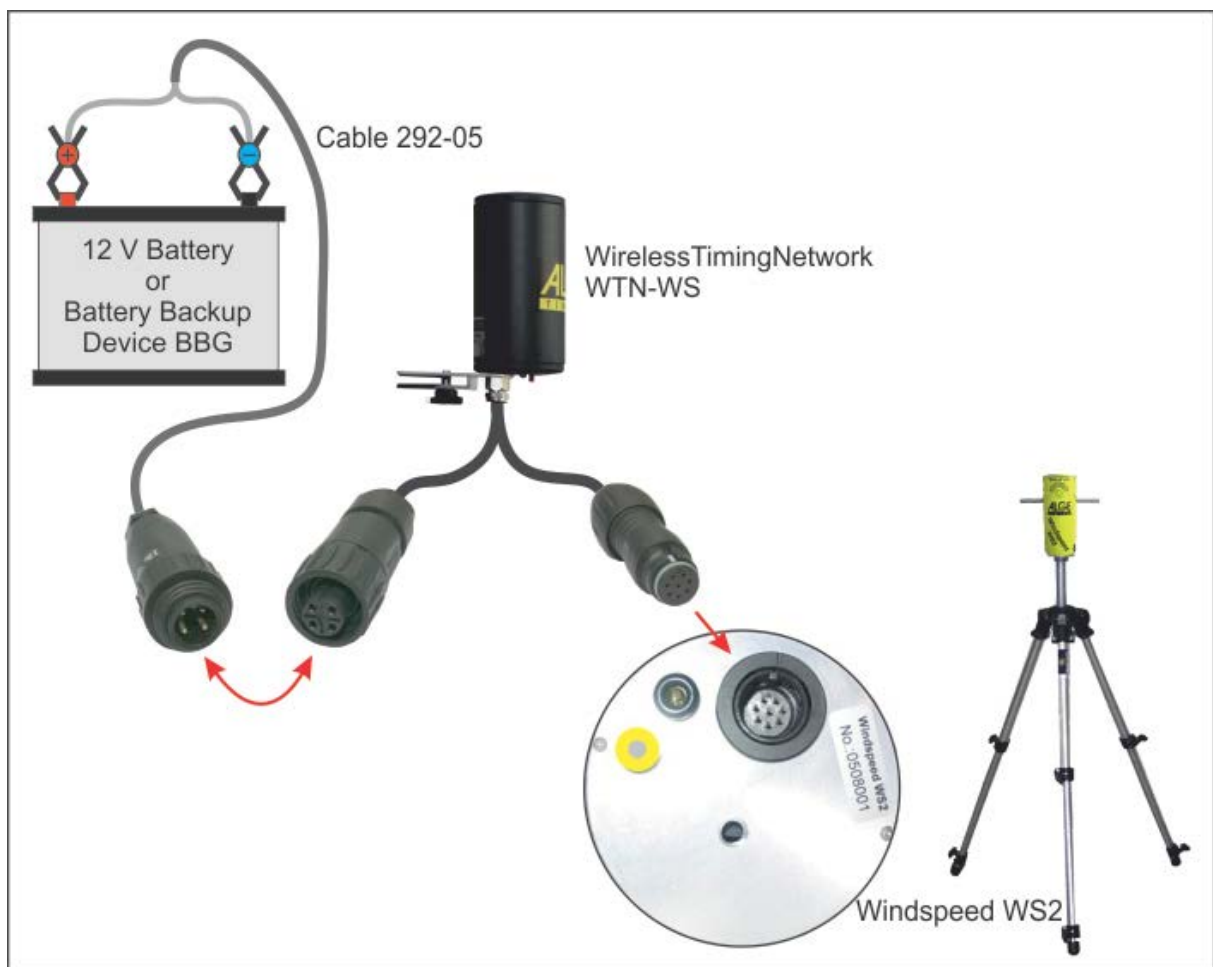
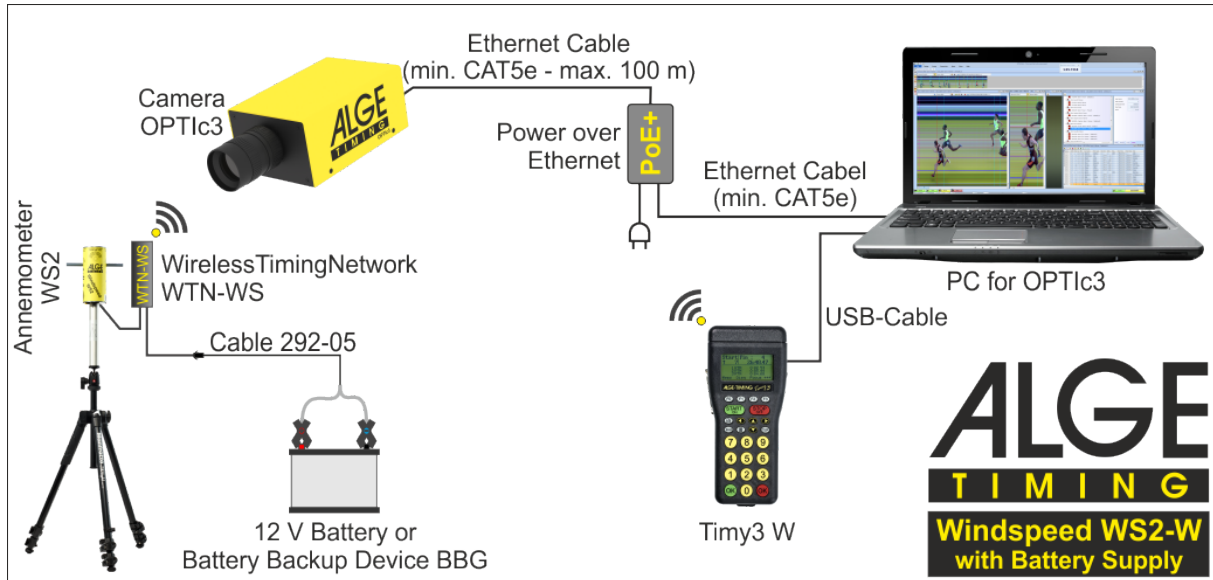
**ALGE**  
TIMING  
Windspeed WS2-TY  
with OPTIc3

## 2.5 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.



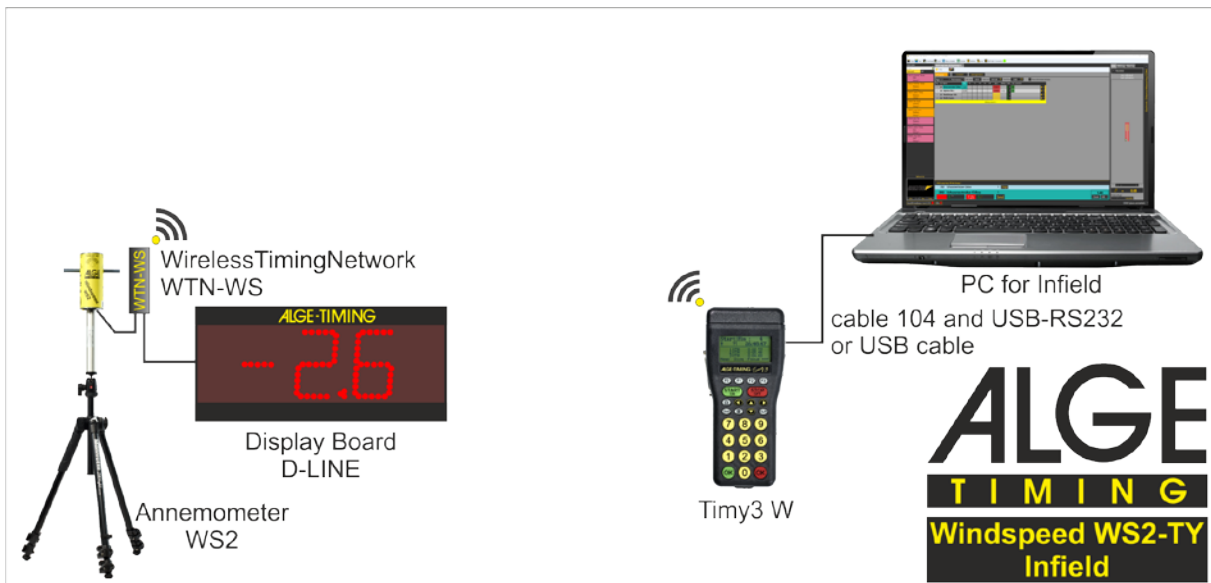
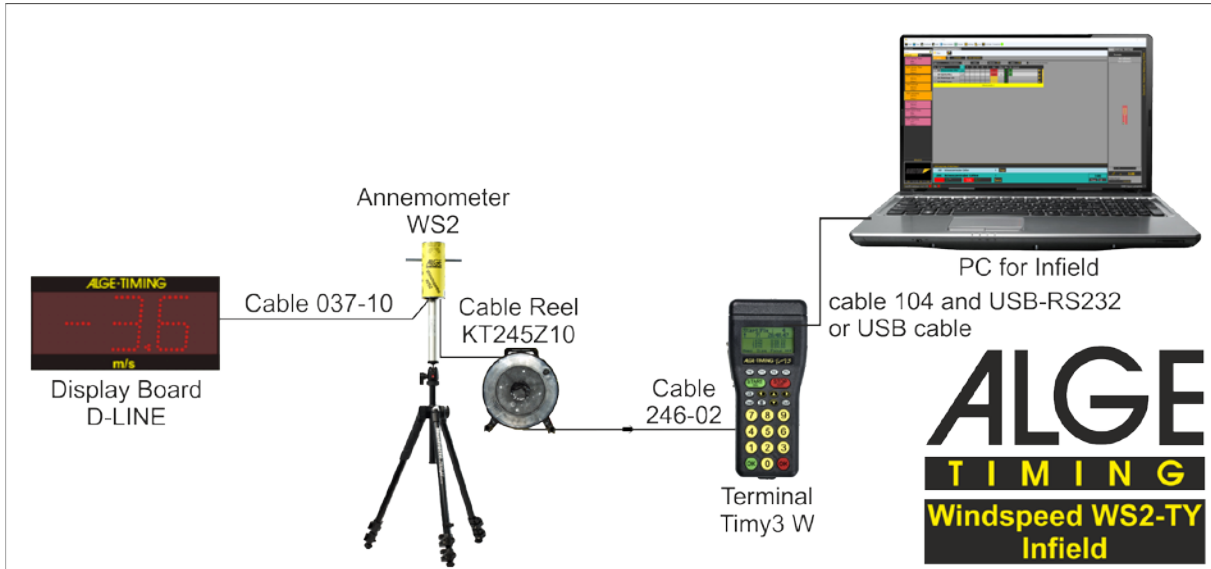
The anemometer WS2 communicates with the Timy3 W by radio. The power supply for the WS2 and WTN-WS comes from an external supply (e.g. Battery Backup Device BBG or 12V battery).





## 2.6 Anemometer for Infield-Events

The connection to the meet management Software is either by the display output or by the USB port of the Timy.



### 3 Mounting of the anemometer WS2

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

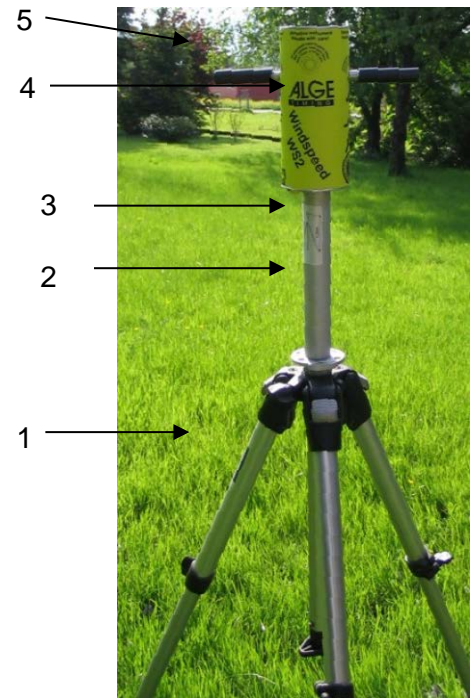
The tripod-middle-part (2) must be completely inserted

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 !!***



## 4 Timy Programs for Operation

The Timy has 2 different programs available for the wind measuring.

- **WINDSPEED**  
To measure the wind at track- and also at field events.
- **TRACKTIMER**  
not described in this manual, see the separate manual for Timy TRACKTIMER
- **FIELD-EVENT**  
for the multiple usage of the display as concentration-clock, wind-display and performance display. Only for Infield events!

For the detailed operation of the Timy see also the general Timy manual!

### 4.1 WINDSPEED

After choosing the program WINDSPEED you have to start the measurement manually as described below.

#### 4.1.1 Timy Display

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 wind speed (3). If a measurement is carried out, occurs the indication of the measurement period instead of „0.0 m/s“.



#### 4.1.2 Operation

**F0 Normal**

Measures the wind-speed continuously.

This mode you can use before the races or during breaks.

In the standard setting the continuous wind measurement is not shown on the Displayboard. If you like to show the wind on the display adjust the setting in the menu FIELD-EVENT – WS NORM MODE

**F1 10**

Measures the average wind for 10 seconds.

This mode is used for all sprint-runs from 75m on (except 100m hurdles or 110m hurdles).

**F2 13**

Measures the average wind for 13 seconds.

This mode is used for 100m hurdles or 110m hurdles.

**F3 5**

Measures the average wind for 5 seconds.

This mode is used for all sprint-runs under 75m and for the long- and triple-jump.

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

The display duration on the scoreboard for the wind you can adjust in the Timy menu DISPLAY-DELAYTIME 1 as described in detail in the general manual for the Timy.

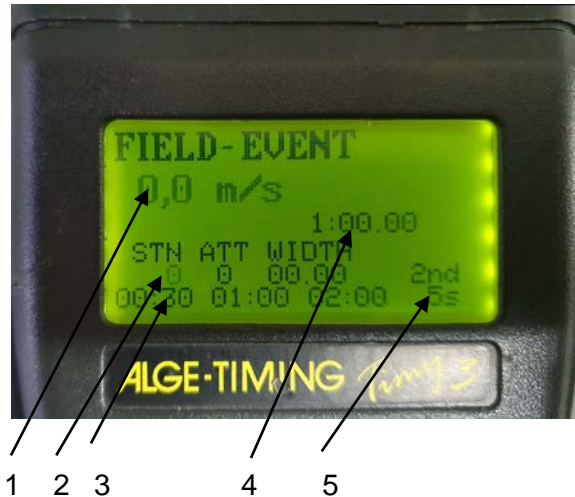
## 4.2 FIELD-EVENT

After choosing the program FIELD-EVENT you have to start the measurement manually as described below.

### 4.2.1 Timy Display

The display of the Timy is showing the following data:

1. Measured Wind
2. Start number, attempt and performance
3. Available concentration times
4. Actual concentration time
5. State for wind measuring



### 4.2.2 Operation

Depending on the display you are using you can show all the information on the display. In most cases you will only show the concentration time and the Windspeed.

The STN position is blinking:

- Enter a Startnumber with up to 4 digits and press the red ok button.
- Now you can enter the actual attempt and confirm again with the red ok button
- By choosing the actual concentration time with the buttons F0 to F2 you can show the actual concentration time.
- By pressing the button start the concentration time will start to count down
- As soon as the athlete is starting his attempt you can activate the wind measuring by pressing the button F3. The measured wind is automatically shown after 5 seconds of measuring time.
- The field for width should blink now. Enter the performance and confirm with red ok to send the result also to the display.

## 5 Settings for the Display board

Display boards which are showing all information are readjusted from the factory. There is no need to adjust anything on such displays.

You can show all information also on multiple display boards.

### 5.1 *Wind Speed*

Following settings you have to choose if you like to show only the wind speed.

#### 5.1.1 D-LINE Scoreboards

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

##### D-LINE with version 3.6 and higher:

###### 3-digit Scoreboard:

St2  
t00  
A00

##### D-LINE with version 3.6 and higher:

###### 6-digit Scoreboard:

SEt2  
t000  
Ad00

##### D-LINE with version 3.5 and lower:

###### 3-digit Scoreboard

S E2  
A 00  
1 15  
1:10  
2 16  
2:17  
3 18

##### 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

#### 5.1.2 GAZ Scoreboards

Adjust the thumb wheel switch to position 0. The toggle-switch has to be on middle position.

## 5.2 Concentration and performance

Following settings you have to choose if you like to show the concentration time and the performance.

### 5.2.1 D-LINE scoreboard

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

#### 3-digit Scoreboard:

SS2  
t00  
A02

#### 6-digit Scoreboard:

SES2  
t000  
Ad02

### 5.2.2 GAZ Scoreboard

Adjust the thumb wheel switch to position 2. The toggle-switch has to be on middle position.

## 5.3 Start number and Attempt

Following settings you have to choose if you like to show the start number and the attempt. You can use only D-LINE scoreboards!

### 5.3.1 D-LINE scoreboard

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








#### 6-digit Scoreboard:

SEE2  
t000  
Ad03  
1 01  
1:00  
2 02  
2:00  
3 03  
3:00  
4 04  
4:00  
5 05  
5:00  
6 00

## 5.4 Concentration time, Wind and Performance










### 5.4.1 3-digit D-LINE

Settings:

	Extended protocol, 2400 bps
	Device address 03
	First digit Byte 13
	First comma Byte 14
	Second digit Byte 15
	Second comma Byte 16
	Third digit Byte 17

### 5.4.2 4 digit D-LINE

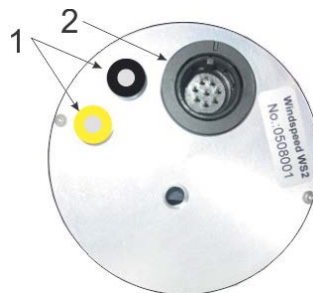
Settings:

	Extended protocol, 2400 bps
	Device address 03
	First digit Byte 11
	First comma Byte 12
	Second digit Byte 13
	Second comma Byte 14
	Third digit Byte 15
	Third comma Byte 16
	Fourth digit Byte 17

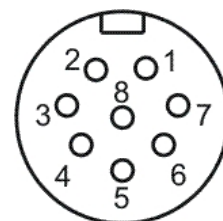
## 6 Technical details

### 6.1 Connections

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



#### Pin Assignment:



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

## 7 Treatment of the sensor

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

### 7.1 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.