

# Measuring Transducer TW

Instruction for use 4.3348...



## 1. General Information

The Measuring Transducer TW is used in conjunction with wind transmitter, Order No. 4.3308.10.000 to detect wind velocity and direction (for example in tunnels) and to emit these as standard electrical signs.

There are two analog outputs on the Measuring Transducer TW available for this:

1. wind velocity with direction determination, through offset of the electrical output.
2. wind velocity without direction.

In addition wind velocity is signalled by 2 relays (forwards/reverse relays).

For optimal system adjustment, the following settings are possible on the measuring transducer TW via a code switch:

1. Measuring range adjustment relative to the analog outputs.
2. Delay times to smooth the analog signals.
3. Relay switch delay to suppress switching processes during brief periods of turbulence.

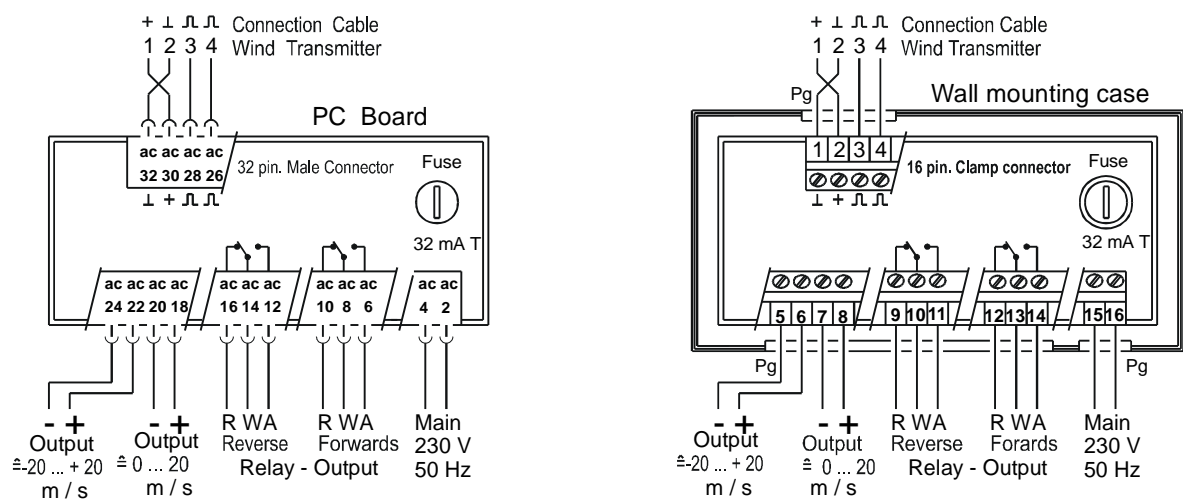
## 2. Models Available

Order- No.	Electr. Output	Model
4.3348.00.040	0...20 mA (max. 600 Ohm)	Wall mounting case with 5 x Cable gland (Pg 9)
4.3348.00.041	4...20 mA (max. 600 Ohm)	Wall mounting case with 5 x Cable gland (Pg 9)
4.3348.00.060	0... 1 V	Wall mounting case with 5 x Cable gland (Pg 9)
4.3348.00.061	0...10 V	Wall mounting case with 5 x Cable gland (Pg 9)
4.3348.00.941	4...20 mA (max. 600 Ohm)	Wall mounting case with 3 x Cable gland (Pg 11)
4.3348.10.040	0...20 mA (max. 600 Ohm)	PC-board with 32 pol. Connection strip
4.3348.10.041	4...20 mA (max. 600 Ohm)	PC-board with 32 pol. Connection strip
4.3348.10.060	0... 1 V	PC-board with 32 pol. Connection strip
4.3348.10.061	0...10 V	PC-board with 32 pol. Connection strip

## 3. Technical Data

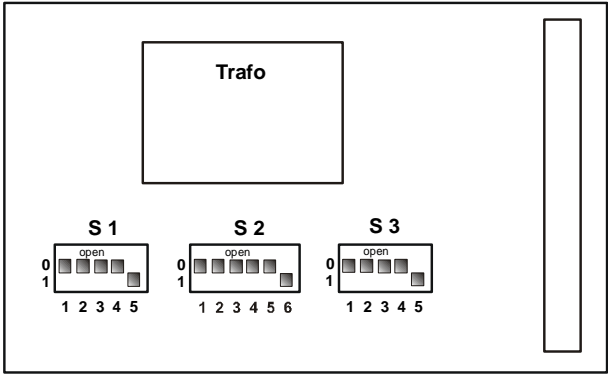
Measuring range : 5 ; 10 ; 20 ; 30 ; 40 ; 50 m/s  
Delay time, mean value: 0 ... ca. 240 s, codable  
Relay output : 1,5 ... 45 s  
Relay load : max. 2000 VA / 250 V AC / 8 A AC  
Signal input : 2 x rectangular signal (phase shifted)  
Amplitude 12 ... 15 V  
Analog output : output 1, direction-dependent (f.e. 0 ... 10 ... 20 mA = -20 ... 0 ... 20 m/s)  
output 2, direction-independent (f.e. 0 ... 20 mA = 0 ... 20 m/s)  
Accuracy : output 1: <  $\pm 1\%$  of mr. / output 2:  $\pm 2\%$  of mr.  
Ambient temperature : 0 ... +40 °C  
Operating voltage : 230 V AC  
Protection : IP 65  
Dimension (PC board) : 100 x 170 mm  
( case ) : 120 x 200 x 75 mm  
Weight : 0,65 kg

4. Connection Diagram



5. Setting the code Switch

Position of the code switch on the circuit board



Switch Group S1  
Delay Analog Output

Here you can set the delay times for example, for individual adjustment to a continuous-line-recording instrument.

Switch ON = 1  
Switch OFF = 0 (open)

Time	Switch				
	1	2	3	4	5
0 s	0	0	0	0	1
24 s	0	0	0	1	0
48 s	0	0	1	0	0
120 s	0	1	0	0	0
240 s	1	0	0	0	0

Switch Group S2  
Measuring Range

here you can set the measuring range. It is advisable to select the measuring range such that it is in conformity with the maximum wind velocities, as this also influences the resolution.

Switch ON = 1  
Switch OFF = 0 (open)

Meas. range	Switch					
	1	2	3	4	5	6
5 m/s	1	0	0	0	0	0
10 m/s	0	1	0	0	0	0
20 m/s	0	0	1	0	0	0
30 m/s	0	0	0	1	0	0
40 m/s	0	0	0	0	1	0
50 m/s	0	0	0	0	0	1

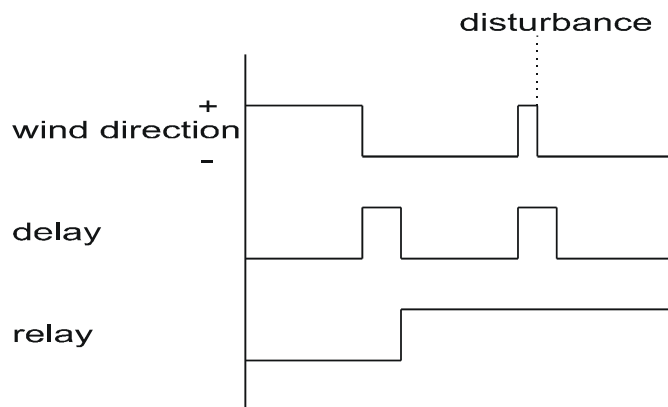
## Switch Group S3

### Relay Delay Time

Here you can determine the time at which the relay responds to the reversal of current direction. This is to prevent the relay from constant switching or fluttering everytime there is a brief change (for example turbulence, interference).

**Only one directional relay is switched on at any given time.**

### For Example



**Switch ON = 1**

**Switch OFF = 0** (open)

Delay time-	Switch				
	1	2	3	4	5
1,5 s	1	0	0	0	0
3 s	0	1	0	0	0
6 s	0	0	1	0	0
9 s	0	1	1	0	0
12 s	0	0	0	1	0
15 s	0	1	0	1	0
18 s	0	0	1	1	0
21 s	0	1	1	1	0
24 s	0	0	0	0	1
27 s	0	1	0	0	1
30 s	0	0	1	0	1
33 s	0	1	1	0	1
36 s	0	0	0	1	1
39 s	0	1	0	1	1
42 s	0	0	1	1	1
45 s	0	1	1	1	1

### Remark

**The instrument has to be installed by experts only.**

**Please switch off voltage supply before setting or opening of the instrument.**



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