

ANEMO 4403

WIRELESS WINDSPEED METER



INSTALLATION PROCEDURE

The complete Anemo Wireless Wind Speed system has been pre-assembled and the following guide will aid in the installation process.

SYSTEM COMPONENTS:

- Anemo 4403 Anemometer
 - Head unit (with vanes) & 150mm Cable with connector
 - Mild steel powder coated bracket with oilon bush and washer
 - IP67 Enclosure with wireless communication board & Size D 3.6V Lithium battery.
- Mounting pole (M10 threaded bar) with mounting foot, lock nuts & washers.
- WM 44-P RF Display Unit in mild steel powder coated enclosure with buzzer, mounting bracket & 5 meters of 2 core cable for power supply.

MOUNTING INSTRUCTIONS:

MOUNTING WM 44-P RF DISPLAY UNIT:

1. The display unit must be mounted in an easily viewable and accessible place. The display is mounted using the mounting bracket which is attached to the display housing. The display can either be mounted on the dash (facing up - factory pre-assembled) or to the top of the cab (facing down). To face the unit down loosen the gland at the back of the display unit, remove the two M3 socket head cap screws on either side of the display with a 2.5mm Allen key. Slide the display out of the housing, making sure that the cable has free movement. Carefully turn it 180° then slide it back into the housing. Screw the two M3 screws back into the housing, pull the cable through the gland carefully and tighten the gland around the cable.
2. Utilise the supplied mounting bracket and mark two mounting holes. Drill two 7mm holes and fasten using two M6 x 35 socket cap screws and nuts. Fasten the screws through the bracket with a 10mm spanner and a size 5 Allen key.
3. Find a suitable 24VDC power source to power the display unit. Route the two core cable to the power source and connect the wires as indicated; wire #1 to the supply and #2 to the ground.

MOUNTING THE ANEMO 4403 ANEMOMETER:

1. The wireless wind speed unit is pre-assembled, please confirm with or without battery. If there is no battery fitted please see the instructions on changing the battery.
2. The head unit will need to be mounted at the furthest point possible ensuring that the “wind vanes” of the head unit are ABOVE the highest obstructive point i.e. on mobile cranes the unit should be mounted on the tip section above the level of the top of the boom so even when the boom is at its highest point the wind speed meter head is still above the boom head.
3. The mounting pole must be cut to the correct length, we recommend as short as possible to eliminate the possibility of the unit getting damaged or knocked off. The unit should be positioned correctly and have complete freedom of movement when swinging. The wind speed unit has a green bush & washer where the pole slides through, this is fastened by using two M10 Nylock nuts & washers on either side of the spacer using two 17mm spanners. Ensure the following:
 - a. DO NOT tighten the nuts together too tightly as the wind speed meter will not be able to swing freely & self-level with the movement of the boom
 - b. Ensure that the threaded bar is flush (inline) with the inner nut so that the threaded bar does not touch the cable i.e. if the threaded bar protrudes from the nut it will damage the cable.
4. Once a suitable mounting place has been found, weld the mounting foot to the crane's boom. The wind speed meter is isolated and the bracket may be welded while the wind speed meter is attached to the pole. If the wind speed meter has been removed from the pole refit the wind speed unit as in point #3.
5. Make sure the MY and DL numbers on the display unit and the windspeed meter unit correspond as the display unit and the wind speed unit have been factory “paired” and will work immediately.

REPLACING 3.6V BATTERY IN WIND SPEED METER:

TOOLS REQUIRED:

- 1 x Medium sized Phillips screwdriver
- 1 x Size D 3.6V Lithium Battery

PROCEDURE:

1. Loosen the four screws in the lid and remove the lid / cover of the IP 67 box situated underneath the wind speed unit.
2. If there is no battery inside the battery compartment, then you will need to slide the battery into the compartment, making sure you have matched the positive pole of the battery to the positive side of the compartment, and the same for the negative pole. The battery is clearly marked on either side with a + (positive) and – (negative) and the compartment is also clearly marked with the same.
3. If you are replacing the battery, remove the old battery carefully and follow step #2.
4. Make sure all wires and the battery compartment are fitted neatly inside the box and close the box by tightening the four lid screws.

REPLACING THE ANEMO 4403 WIND SPEED METER HEAD UNIT:

TOOLS REQUIRED:

1 x Medium sized Phillips screwdriver

1 x 3mm Allen Key

PROCEDURE:

1. Loosen the four screws in the lid and remove the lid / cover of the IP 67 enclosure situated underneath the wind speed unit.
2. Loosen the M20 gland cap at the top of the enclosure, unscrewing the gland “cap” until it is hanging loose.
3. The cable side connector must be carefully disconnected from the circuit board connector by first pushing the tab on the connector as the plug is pulled away from the circuit board.
4. Remove the two Phillips screws that fasten the circuit board to the enclosure and lift the board carefully i.e. lift the side furthest from the gland first before removing board.
5. Remove the wind speed “head unit” from the self-levelling bracket by removing the three M4 cap screws with the 3mm Allen Key.
6. Carefully pull the cable with the Molex plug (unplugged in Step 3) through the M20 gland and the hole in the self-levelling bracket. Completely remove the wind speed “head unit” to be replaced.
7. Place the new wind speed “head unit” on top of the self-levelling bracket and fasten the wind speed unit to the bracket with the three M4 cap screws, tighten using the 3mm Allen Key making sure the cable is through the centre.
8. Gently pull the cable with the Molex plug through the M20 gland from outside to inside the enclosure.
9. Replace the circuit board carefully by first placing the gland side into the box. Replace the two Phillips screws and tighten.
10. Plug the Molex connector on the board inside the IP 67 box. It can only be connected in one direction. Make sure the upper and lower clips are on the same side and the pins line up correctly.
11. Tighten the cap of the M20 gland around the cable.
12. Close the lid of the IP67 enclosure and fasten the four screws in the lid.

PROGRAMMING

To access the programming push-buttons, insert a flat-head screwdriver into the groove marked as “open to program” and lever downwards to remove the front cover.

To enter program mode press “ENTER” and “ESCAPE” simultaneously for 2 seconds.

BUTTON FUNCTIONS IN PROGRAM MODE

Button	Function
UP	Increase program steps (P00, P01..), options or thresholds to program.
DOWN	Decrease program steps, options or thresholds to program.
ENTER	Enters the program step currently displayed, validates options and values and exits program step
ESC	Returns to program steps. Selects the digit to be modified

PROGRAM STEPS:

- P00:** (1) Exit program mode without saving data, (2) Exit program mode saving data , (3) Exit program mode loading “preset user configuration” data, (4) Pressing “ENTER” for more than 10 seconds, exit program mode saving data as “preset user configuration”. (0)
- P01:** (0) Programming in km/h , (1) Programming in MPH. < 0 >
- P04:** ALARM1 operation. (0) Disable, (1) OUT1 Rel closes NO contact, (2) OUT1 Rel opens NO contact. <1>
- P05:** ALARM1 activation threshold (1 - 999). <50>
- P06:** ALARM1 mode. (0) Continuous mode, (1) Intermittent mode. <1>
- P07:** ALARM1 time ON in intermittent mode (P06=1). Tenths of a second (1-999). <10>
- P08:** ALARM1 time OFF in intermittent mode (P06=1). Tenths of a second (1-999). <50>
- P09:** ALARM2 operation. (0) Disable, (1) OUT2 Rel closes contact , (2) OUT2 Rel opens contact . <1>
- P10:** ALARM 2. Same as P05 but for ALARM2. <70> (When this value is exceeded, the displayed value blinks as a warning).
- P11:** ALARM 2. Same as P05 but for ALARM2. <0>
- P12:** ALARM 2. Same as P05 but for ALARM2. <5>
- P13:** ALARM 2. Same as P05 but for ALARM2. <5>
- P14:** ALARM2 Latch configuration. (0) Non-latching, (1) Latching. <0> (To release a latched alarm, WM44-P RF has to be powered off).
- P15:** Analogue output configuration. (0) Analogue output disabled, (1-999) Introduced value will match maximum analogue output. <120>
- P16:** Timeout data reception. (5-99) Maximum time in seconds without receiving data from Anemo4403 RF. <12>
- P17:** Alarm status with Timeout error. (0) Alarms deactivation, (1) ALARM1 activation, (2) ALARM2 activation. <2>
- P02 & P03** do not exist

Notes:

- Factory default values are enclosed in angle brackets “< >”.
- Pre-configured factory values in compliance with ITC MIE-AME-2:
 - Wind speed sensor model: Anemo 4403 RF or Anemo 4403 RF BAT.
 - ALARM1 is triggered at 50km/h, ALARM1 activation closes the relay contact, ALARM1 is intermittent (ton=1sec, toff=5 sec).
 - ALARM2 is triggered at 70km/h. ALARM2 close contacts NO. ALARM2 is continuous.
- Users may program WM44-P RF to comply with local safety regulations



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