

Anemometer with alarm function



WM44-P

The WM44-P wind speed and alarm unit, combines a highly accurate indicator with dual set point alarm relays. Specially designed to work with 4403 3-cup rotor, it's also compatible with most common wind sensors. Two programmable set points (ALARM1 & ALARM2). This instrument can be easily mounted in any instrument panel, cabinet doors, and various industrial enclosures. Specially developed for the tower crane sector.

- Button to rapidly switch between km/h and Mph
- 3 digit LED display
- 4 button-keyboard to perform various functions
- 2 independent alarm set points
- Compatible with most common wind sensors
- The 96x48mm case is particularly suitable for mounting in mosaic panels or insulative panels

PANEL VIEW

- 3 digit LED display (14 mm digit height).
- 2 LED alarm status indicator (AL1 & AL2)
- LED speed unit indicator (Mph or Km/h)
- Press the "select" button on the unit to switch between a readout in Mph or Km/h

Each set point, offers a user adjustable time delay to determine when the relay should operate after the set point has been exceeded so if the wind speed drops below the set point speed before the time delay expires, then the alarm relay will not be activated. When the wind speed falls and remains below the alarm set point also for a brief period of time, the alarms will be deactivated. The activation of ALARM 2, deactivates ALARM 1. When ALARM 2 is on, the displays reading flashes to warn the operator of imminent danger.

Selectable alarm type : intermittent, continuous, latched. The alarm relays are equipped with free-voltage contacts. Each output relay, can be normally energized or de-energized at tripping. In the latching mode, the alarm 2 relay energizes when the wind speed set point is exceeded and remains energized until the equipment is switched off.

ANEMOMETRICS SENSOR

Compatible with most common wind sensors:

- Sensor power supply: 20V or 10Vdc
- Type : 3 or 2 wires (see the wiring diagram)
- RECOMMENDED working with our Anemo 4403 sensor device

USER PREDEFINED INSTALLING CONFIGURATION

Apart from user programmed parameters, you can save another alternative configuration, and you can recover it as many times you want, going back to P00 program step (option 4).

PROGRAMMING

To access the configuration buttons, lever up the frontal cover in the lower crack indicated by “open to program”.

To enter the configuration mode, press Enter and Escape buttons simultaneously for more than 2 seconds.

Function buttons 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	Enter into the program step where it is located, validate options and thresholds and escapes to step program.
← ESC	Return to program steps. In range, it selects the digit to modify

Program steps:

P00: (1) Exit program mode without saving data, (2) Exit program mode saving data, (3) Exit program mode saving data as “preset user configuration”, (4) Exit program saving “preset user configuration” data by pressing “Enter” for more than 10 sec.

P01: (0) Programming in Km/h, (1) Programming in MPH, (2) Programming in m/s <0>

P02: Reference speed value (1-999) <100>

P03: Hz corresponding to the reference speed value P02 (1-999) <121>

P04: Speed-Hz ratio offset (0-999) <3>

P05: ALARM1 (0) Disabled, (1) OUT1 Relay closes NO contact, (2) OUT1 Relay opens NO contact <1>

P06: ALARM1 Trigger value (1-999) <50>

P07: ALARM1 Mode (0) Continuous mode, (1) Intermittent mode <1>

P08: ALARM1 Only for intermittent mode (P07=1). Alarm ON time in tenths of seconds (1-99) <10>

P09: ALARM1 Only for intermittent mode (P07=1). Alarm OFF time in tenths of seconds (1-99) <50>

P10: ALARM2 operation, (0) Disabled, (1) OUT2 Relays closes contact, (2) OUT2 Relay opens contact <1>

P11: ALARM2 Same as P06 Alarm1 <70> (When this value is exceeded, the displayed value blinks as a warning)

P12: ALARM2 Same as Alarm1 P07 <0>

P13: ALARM2 Same as Alarm1 P08 <5>

P14: ALARM2 Same as Alarm1 P09 <5>

P15: ALARM2 Configuration latching (0) Non-latching (1) Latching <0> (power off to release)

P16: Analogue output (only for those devices that have it). (0) Disable, (1-999) Wind speed value corresponding to the highest value of the 10V or 20mA analogue output.

P17: Alarm1 activation delay in seconds (0-999). <2>

P18: Alarm1 deactivation delay in seconds (0-999). <5>

P19: Alarm2 activation delay in seconds (0-999). <2>

P20: Alarm2 deactivation delay in seconds (0-999) <5>

NOTES:

-The values between brackets <X> are those configured in factory by default.

-Preconfigured factory value in compliance with ITC MIE – AEM – 2:

.Wind speed sensor model: Anemo4403

.ALARM1 is triggered at 50km/h, ALARM1 activation closes the relay contact, ALARM is intermittent (ton=1sec, T=5 sec)

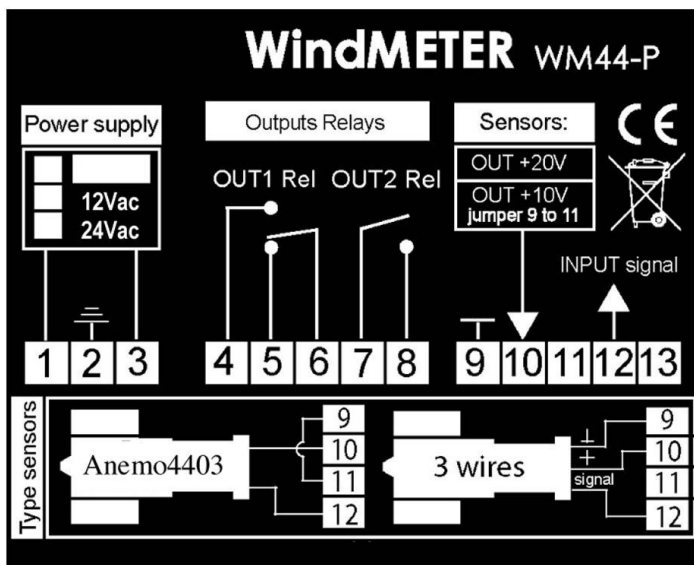
.ALARM2 is triggered at 70 km/h, ALARM close contacts NO. ALARM2 is continuous.

.Users may program WM44P to comply with local safety regulations.

Technical Features

- Available input voltage Vac 24 o 110/220 – Vdc 12 o 24
- Power consumption <3,5 VA
- Input signal sine, square, triangle, periodic waveforms signals from 1 to 750mHz – from 5 to 35 Vcc or from 4 to 24Vca
- Input impedance for Anemo4403 o Namur: 1000Ω / direct output signal: 10Kohm
- Direct output signal: 10Kohm
- Input types: 2 wire sensor (like Anemo4403) –3 wire sensors (pnp,npn...) – Namur – Direct output signal
- Output sensor power supply 10 or 20Vcc (±10%)
- Working temperature da 0° a 60°C
- Reading resolution (100hz=100km/h) ±1
- Maximum speed 999km/h – 620MPH
- Relay contacts 4A 250Vca
- Non condensable relative humidity according to IEC 68-2-3 ND IEC 68-2-27
- Impacts according to IEC 68-2-27
- Vibrations according to IEC 68-2-6
- Range protection IP50
- Weight 0,350 kg
- Measures dimension: 90x44 mm hole containment - Display Size WxHxD mm 96x48x129 + 8 (terminals)

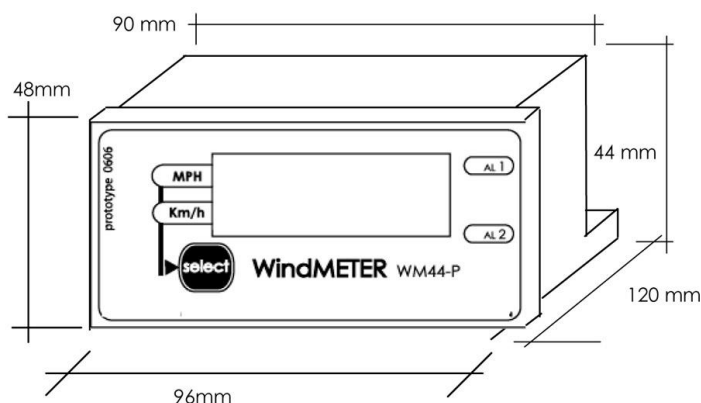
Electrical Features



Wiring Diagram

Power supply:

- On DC version the positive (+) is on 1 clamp
- On DC version the negative (-) is on 3 clamp
- Namur sensor has the same connection of Anemo 4403.
- Direct output external signal: terminals 9 and 13
- Don't connect two input types at the same time



Dimensions

Accessories

Screw connectors

The connection of displays is made through the practical numbered connectors with screw terminal



Support spring

The panel mounting is facilitated by a retaining spring that is placed in the back panel

Optional Items

Protective Screen

IP65 with protective glass cover.



Cabin case

It's available a case in aluminum with articulated arm to install inside of cabins cranes and mobile cranes.

External enclosure in stainless steel

As a container for optional external enclosure is available in stainless steel with transparent porthole that allows to see the internal display.



Optional Items

On request, are available pre-assembled equipment for crane consists of:

- Anemometer SAG105WR with pulse output or ANEMO4403
- Box stainless steel exterior with transparent window for display view
- Display
- Warning lights for the alarm
- Component wiring



ANEMO4403



SAG105WR



RED LED fixed

ORANGE flash

Buzzer

