

Vaisala Multichannel Wind Display WIND50 for Aviation Application



Benefits

- Multichannel
- High contrast with automatic brightness control
- Night-time visible scale
- Desktop, panel or wall mounting
- On-line configurable

Clear display of data

The Vaisala Multichannel Wind Display WIND50 is especially designed for aviation applications with a lot of processing power and a super bright display. All the static display elements are back illuminated ensuring night-time visibility.

Different parameters, such as instant values, averages and extremes of wind speed and direction are presented digitally. The wind direction and its variation are indicated also by an analog LED circle. The inner circle presents instantaneous direction and the outer circle shows direction variation over the selected averaging time.

The site or runway identification as well as the display's operation mode are user configurable and displayed on a 16-character alphanumeric dot matrix element. The cross winds are automatically calculated and displayed based on runway direction.

User-friendly interface

The ergonomical user interface has just two push buttons and a rotating switch. The buttons are used for switching between extreme and cross wind calculations, or for alarm control. The rotating switch selects between different data presentation pages, i.e. data from different sites.

Versatile communication

The display can collect data from several sites and distribute data forward to other displays or host processors such as PCs. The display can also receive pre-calculated data as text strings to be shown on the display fields.

Up to two add-on communication modules can be attached to expand the display's communication capabilities. One RS-232 port is the default communication channel.

The display is online configurable with a VT-100 compatible terminal program or a PC. EMC as well as overvoltage protection are standard features of Vaisala displays.

Technical data

General

Features	Automatic brightness control Back illuminated scale Desk top, panel or wall mounting (stand included) Online configurable
Material	Aluminum frame, ABS case, grey
Dimensions	144 × 144 mm, depth 65 mm Body design allows 115×133 mm panel mounting
Weight	0.8 kg

User Interface

Wind speed	3-digit 7-segment LEDs with decimals
Speed unit	Selectable m/s, knots, km/h and miles/h
Min/max/cross/tail	3-digit 7-segment LEDs with decimals
Wind direction	3-digit 7-segment LEDs with decimals Analog, 36 discrete LEDs in a circle
Viewing angle	±60°, any direction
Operation control	2 push buttons For extreme/cross winds and alarm control Rotating switch for display page selection

Input/Output

Serial I/O

- An RS-232C with CTS and RTS signals on board (preferred configuration PC-connection)
- 2 slots for communication modules (isolated RS485, modem, dual RS-232C)

Sensor excitation supply

An isolated 24 VDC or 48 VDC (nom.) output for WT-series digital wind transmitters. Floating from unit case 100 VDC max. Short circuit current limit of the excitation supply 40...70 mA.

Alarm relay	1 change-over relay, 1 A, 50 VDC/AC max. Floating from unit case 100 VAC/DC max.
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Audible alarm	Internal connector for a 12 V beeper
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Sensor inputs

No direct sensor inputs. Wind sensors are connected via WT-series digital wind transmitters.
Serial data input via isolated RS485 module DSI485 or modem module DMX501. In addition WIND30 displays (or a PC) can be used to measure the sensors directly and convert data to serial format for WIND50.

Power Supply

Supply voltage	Isolated power supply for 24 VDC operation Min. 18 VDC, max. 32 VDCC
Power consumption	35 W max.

Alarms

Wind speed	Selectable wind speed & direction
Diagnostics	Self diagnostics with an error indication

Environmental

Storage temperature	-40 ... 60 °C
Operating temperature	+5 ... +55 °C
Humidity	2 ... 100 %RH
EMC	CE compliant
Vibration	According to MIL-STD-167-1

Note: The display unit is provided with an internal cooler operating under software control. Do not install it into an enclosure without efficient air circulation.