

## Vaisala DigiCORA® Sounding System MW31 for Portable Applications



The Vaisala DigiCORA® Sounding System MW31 integrates the control of sounding, archiving of sounding data and the coding of meteorological messages. Automated data handling and a variety of interface options make the message transmission easy in all conditions.

Meteorological parameters are measured by a radiosonde attached to a free flying balloon. Pressure, temperature and humidity are measured by the sensors integrated in the radiosonde. Wind speed and direction is determined by means of GPS navigation satellites, optionally, a radiotheodolite can be connected to the system.

### Portable and Easy to Deploy

The MW31 for defence has a rugged laptop and it can be equipped with a portable antenna set designed for field conditions. The MW31, with its peripheral equipment, is easy to transport, and quick to deploy. Only one person is needed to operate it. The transportation cases are made to carry the MW31, a few radiosondes, balloons and other necessary equipment.

### Optional Graphical Tools

The optional METGRAPH software module provides you with graphical presentation of meteorological data.

### Benefits

- Flexibility for multiple applications
- NATO STANAG meteorological messages
- WMO meteorological messages
- Transportation cases designed for ease of portability

The Vaisala DigiCORA® Sounding System MW31 is a sounding receiving station for meteorological and defence applications. It provides meteorological profile data for artillery ballistic preparation and numerical weather prediction models. In addition, the atmospheric profile is useful for e.g. for aviation, CBRN and naval applications.

# Technical Data

## Vaisala DigiCORA® Sounding System MW31

### SOUNDING WORKSTATION

Pentium® M 1.6 GHz minimum ruggedized laptop PC  
RAM 2 GB minimum  
Hard disk 80 GB minimum  
DVD+/-rw  
13.3" TFT display  
Operating system Microsoft Windows® pre-installed  
DigiCORA Sounding software, pre-installed:  
Standard software  
STANAG software (optional)  
METGRAPH software (optional)

### VAISALA SOUNDING PROCESSING SUBSYSTEM SPS311

Supports all Vaisala radiosondes

#### Windfinding options:

Code correlating GPS  
P(Y) codeless GPS  
Radio-direction finding (with Vaisala Radiotheodolite RT20A)

### ANTENNAS

Portable antenna on a tripod for UHF and GPS  
Omni-directional UHF antenna (fixed or vehicle installations)  
GPS antenna (fixed or vehicle installations)  
Directional UHF antenna (automatic direction control)  
for fixed installation

### RADIOSONDE CABLE

For frequency and timer setting and reconditioning of  
Vaisala RS92 radiosondes  
See separate Technical Description for details

## Telemetry

Frequency range	400 ... 406 MHz, electronically adjustable
Tuning step	10 kHz, user adjustable
Error detection and correction	Reed-Solomon (with digital radiosondes)
Telemetry range	150 km with portable CG31 antenna and RS92-SGP radiosonde Up to 350 km (with directional antenna and RS92-SGP radiosonde)

## Meteorological Messages

### AVAILABLE IN STANAG SOFTWARE:

STANAG 4082 METCM Standard Artillery Computer  
Meteorological Message  
STANAG 4061 METB3/2 Standard Ballistic  
Meteorological Message  
STANAG 4140 METTA Standard Target Acquisition  
Meteorological Message  
STANAG 2103 METFM Standard Fallout Meteorological Message  
METSRSound Ranging Meteorological Message

### AVAILABLE IN STANDARD SOFTWARE:

TEMP FM35-XI, TEMP SHIP FM36-XI, TEMP MOBIL FM38-XI  
PILOT FM32-XI, PILOT SHIP FM33-XI, PILOT MOBIL FM34-XI  
CLIMAT TEMP FM75-XII  
BUFR 3'09'052 (for TEMP data)  
BUFR 3'09'050 and BUFR 3'09'051 (for PILOT data)  
BUFR 3'09'054 (for CLIMAT TEMP data)

## Environmental Requirements

### INDOOR EQUIPMENT:

Operating temperature	0 ... 45 °C
Operating humidity (non-condensating)	10 ... 90 %RH
Storage temperature	-40 ... +65 °C
Storage humidity	5 ... 95 %RH

### OUTDOOR EQUIPMENT:

Operating temperature	-40 ... +55 °C
Operating humidity	0 ... 100 %RH
Operating wind speed	0 ... 65 m/s
Operating precipitation	Unlimited
Storage temperature	-50 ... +71 °C
Storage humidity	0 ... 100 %RH

## Transportation Case Dimensions

Vaisala Sounding System MW31	990 x 450 x 410 mm
Vaisala Portable Antenna Set CG31	1380 x 355 x 385 mm

# VAISALA

For more information, visit  
[www.vaisala.com](http://www.vaisala.com) or contact  
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