

Digital 4-Parameter Display unit

OMC-934

Users Manual
Ver. No. 1.20

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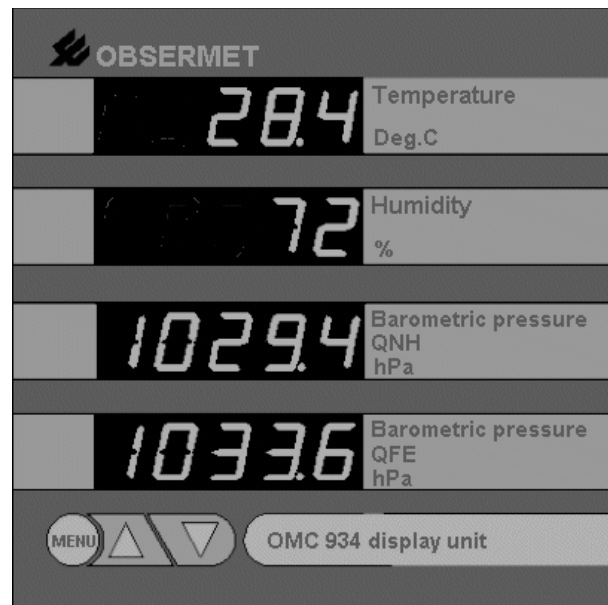
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1. General

The Obsermet digital display OMC-934 is a digital display with four 5 digit displays. The display has one serial input which will accept RS422 level signals or a switched current signal. When the currentloop input is used, the display will provide the current for the loop.

The display unit has one digital input which will accept a pulse signal, this input can be used for windspeed or counter, further more one analogue input is available which can be used for potentiometer input. Reference voltage for potmeter provided by the display.

The front panel is provided with three buttons for adjusting the brightness of the LED's. testing all the LED display's and entering a set menu for adjusting display settings.



The OMC-934 will accept the output-signals directly from the series OMC-18x signal conversion units, without the need of additional interfaces. It provides one 15 Volt 100 mA output for sensor supply if needed.

As an option, the OMC-934 can provide analogue output signals for speed and direction. Those can be 4...20 mA or 0...1 volt.

The display is housed in a 144x144 mm. DIN-size casing suitable for flush mounting in a console, or display panel. Unit depth is 63 mm.

Data summary,

Power supply	: 220Vac. 115Vac and 24Vdc selectable via wire bridges
Power supply optional	: 12 Vdc
Displays	: four 5 digit 7 segment LED display 14.3 mm height
Input signal	: RS422 or Currentloop with ASCII information speed 300 to 9600 bps
Input optional	: Pulse and Potmeter or voltage 0...2500 mV.
Output	: Daisy chain
Output (optional)	: Two 4...20 mA, RS232
Dimensions	: 144x144x94 mm
Weight	: approx. 800 gr
Scale	: Interchangeable legends
Brightness control	: From the front panel (optional on distance)
Readout units	: Interchangeable legends

2. Installation

2.1. Mechanical

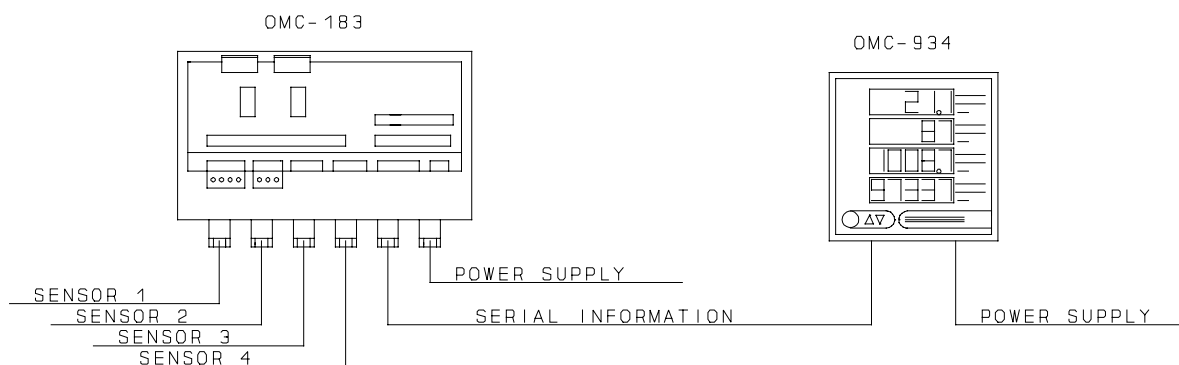
Panel mounting of the OMC-934 display requires a panel cut-out of 137 mm square. Maximum panel thickness 5 mm. Rear access must be provided, for fixing of the tightening clamps and connecting the electric cabling. The depth of the unit is 63 mm and an additional clearance of 8 mm should be allowed for the cable connections.

2.2. Electrical

All Obsermet displays utilize a common terminal strip for the connections to the sensors signals and the ancillary displays and/or recorders. The signal cable between sensor and display is a 4-core cable with 2 cores for power to the sensor and 2 cores for signal transmission. To reduce interference the cable must have a common screen. This screen should be grounded to earth in the junction box of the wind sensor. In this way the cable may run distances up to 1 kilometer.

Recommended cable: 2 (or 3) twisted pairs with common screen, core size 0.75 mm².

The OMC-934 display unit provides the 15 Volts DC. power supply which can be used by a sensor. The power consumption of that sensor must not be more than 100 mA.



2.2.2 Power supply settings

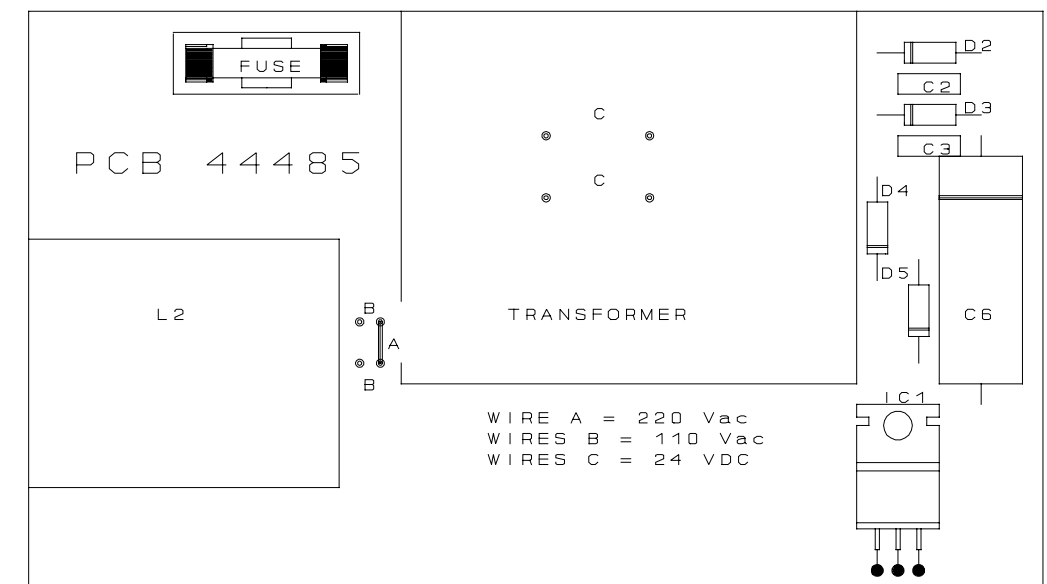
The OMC-934 will be delivered with the power supply set as required by the customer. If no power supply is mentioned in the official ordering papers the OMC-934 power supply will be set for 230 Vac.

If during installation is found that the supply setting is wrong two things can be done, the unit can be returned to the factory for modification or the user will modify the unit himself.

To modify the display unit for a different power supply proceed as follows,

On the power supply board, the Pcb with the terminal connection on the rear side, there is installed a transformer. The transformer offers the possibility of 115 or 230 Vac. The supply depends on the jumper settings between the filter transformer and the supply transformer. (see Pcb layout) If the wired marked "B" are installed the unit is set for 115 Vac, If the wire "A" is installed the unit is set for 230 Vac.

For 24 Vdc power supply the transformer TR1 has to be removed from the printed circuit board. When the transformer has been removed two wire connection can be made (marked with "C")



As an option the OMC-934 can be delivered for 12 Vdc, If the unit has to be modified to work with 12 Vdc the transformer has to be removed. With the transformer removed it becomes possible to install a DC/DC converter on the location of the transformer. The DC/DC converter converts the 12 Volt supply voltage up to 24 Vdc.

2.2.3. Connections

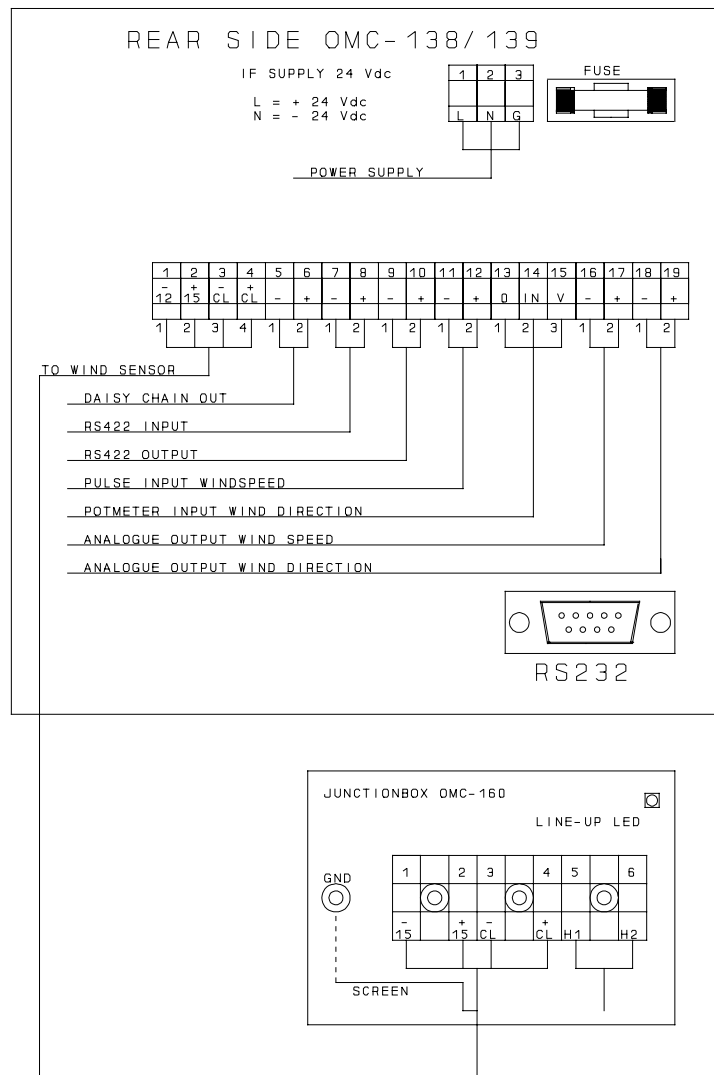
All connections to the OMC-934 display are made to the rear of the display as shown on the drawing on the right.

If an Obsermet signal conversion unit is used, the terminals 3 and 4 for currentloop input or the terminals 7 and 8 for RS422 input are used.

Daisy chaining to the next instrument is done on the terminals 5 and 6.

If a sensor is used providing a pulse signal for windspeed connections must be made to terminals 1 and 2.

If for wind direction a sensor is used with a potentiometer connections must be made to the terminals 13, 14 and 15.

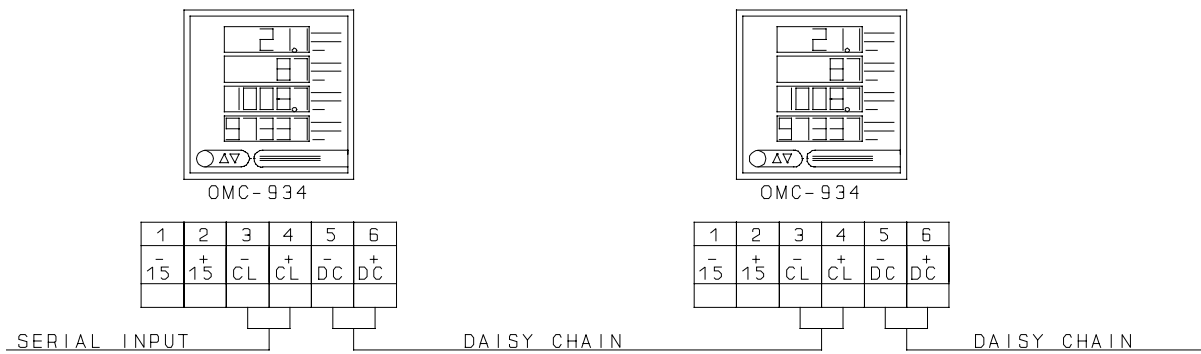


- 1 = -15 Vdc sensor supply
- 2 = +15 Vdc sensor supply
- 3 = - serial currentloop input
- 4 = + serial currentloop input
- 5 = - daisy chain output
- 6 = + daisychain output
- 7 = - RS422 input
- 8 = + RS422input
- 9 = - RS422 output
- 10 = + RS422 output
- 11 = - pulse input (windspeed) (*)
- 12 = + pulse input (windspeed) (*)
- 13 = 0 Volt reference supply potmeter (winddirection)
- 14 = input signal potmeter
- 15 = + reference signal potmeter 2500 mV
- 16 = - analogue speed output 4..20 or 0..1 Volt
- 17 = + analogue speed output 4..20 or 0..1 Volt
- 18 = - analogue direction output 4..20 mA or 0..1 Volt
- 19 = + analogue direction output 4..20 mA or 0..1 Volt

*) it is possible to use the pulse input for windspeed to adjust the brightness of the display from a remote location. This is optional and must be ask for when the instrument is ordered.

2.2.4. Daisy chaining

The daisy-chain output is used to transfer the serial information to a second display. The cable length depends on the type of cable used. Depending on the total capacity of the cable a distance up to 1000 meter is possible. The cable should be screened, and the screen should be grounded at 1 point only.



Recommended cable: 1 twisted pair with common screen, core size 0.75 mm².

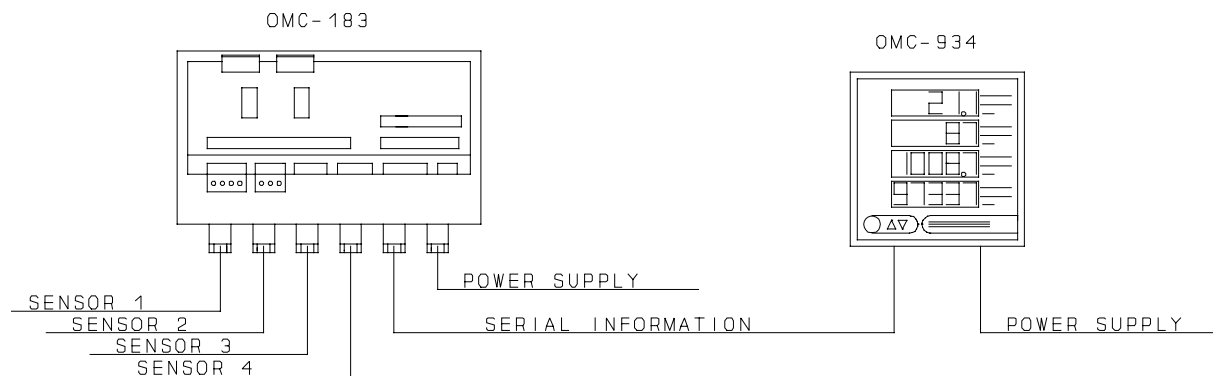
3. Commissioning

Before switching ON the mains, check that the power supply is correct as indicated on the identification label on the rear of the equipment.

With no signal cable connected, switch on the display and observe the front panel LED,s. The system will perform a led test all led are switched on and off one by one. When the test is finished the display shows on all the displays only "-----" . This is because no sensor information is received by the display.

3.1 OMC-934 with information from the OMC-183 (standard version)

The OMC-934 receives in most cases its data via a serial line from a transmitting device. This transmission device will be in most cases the OMC-183 signal conversion unit. This unit can interface 8 analogue sensor signals. All sensor information is than transmitted on RS422 or currentloop level to the OMC-934 display unit.

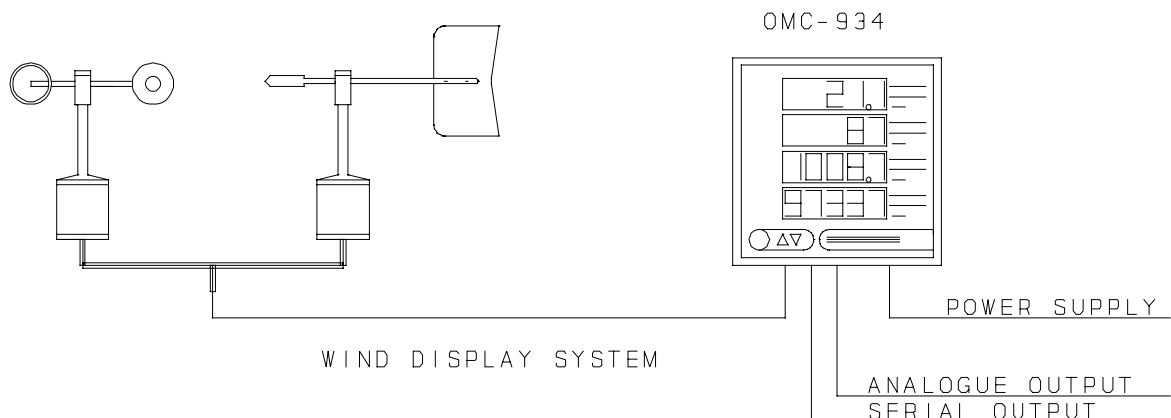


If more than 4 sensor are connected a second OMC-934 can be connected via the daisy chain output of the first display.

3.2 OMC-934 used as wind information display

The display can be used to show numeriek wind information of direction and speed. The sensors that can be used must have a pulse, for wind speed and a potentiometer, for wind direction. The layout is shown in the drawing below.

De wind speed sensor has to be connected to the terminals [11] and [12], the wind direction potentiometer has to be connected to the terminals [13] = 0 volt, [14] = signal and [15] = 2.5 Volt.



The range of the potentiometer and the pulse must be set in the factory or by the customer using the RS232 port at the rear of the instrument. When "Analogue input range settings" has been selected the values for windspeed and the potentiometer for wind direction can be set. The upper display is used to show the information. Due to the fact that the led displays only have 8 segments it might be a little bit difficult to read. (see translation table)

2	= 2 min average
10	= 10 minute average
USER	= user average

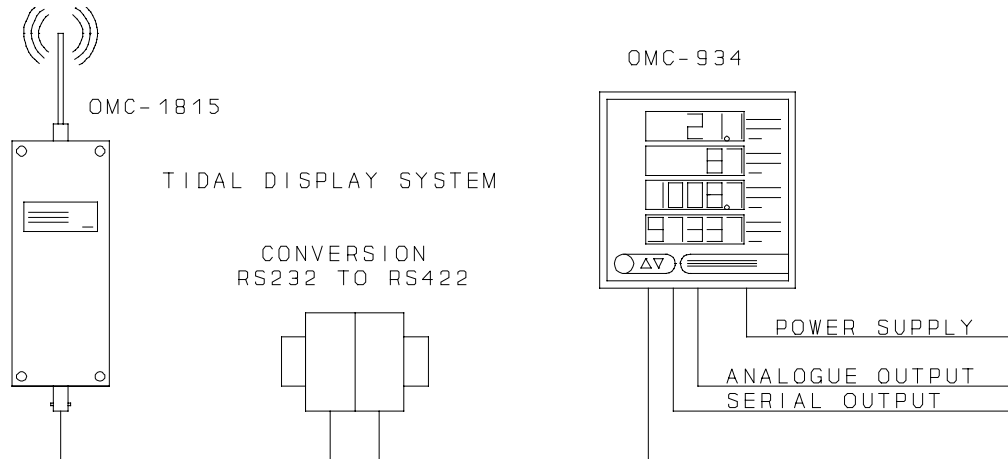
The units wind speed is shown can be set via the front buttons. Pressing the "menu" button once shows the average interval time the windspeed and direction is shown in. When this time have to be changed use the "arrow up" and the "arrow down" button. It is possible to select 2, 10 or a users set interval time. The users set interval time has to be set via the RS232 port at rear of the instrument.

M/S	= m/s
K/H	= k/h
KNOTS	= knots
MPH	= mph
BFT	= bft

Pressing the "menu" button twice shows the units the wind speed is displayed in. The following units can be selected, m/s, k/h, knots, mph and beaufort. The selection is made using the "arrow up" and arrow down" buttons.

3.3 OMC-934 used as tidal display

The receiving part of the tidal receiver is build as shown in the diagram,



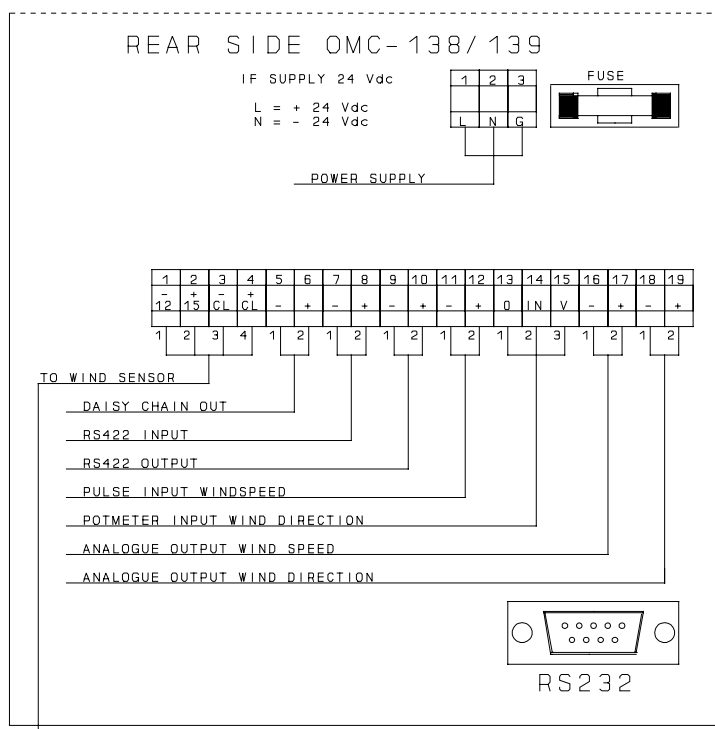
3.3.1 Commissioning

Check the voltage at terminals [1] and [2] on the rear panel this should be 15 Volts DC. The 15 Volt DC is used as supply voltage for the radio. The power consumption of the radio receiver is under normal circumstances 80 mA.

The output of the receiver is an RS232 signal which can not be directly connected to the OMC-934. The output signal from the radio must be converted into a currentloop or RS422 signal. This is done using a OMC-3994 signal conversion module.

The output of this module has to be connected to the terminals, [7] and [8] when the signal is RS422, of the OMC-934 display unit.

With all cabling correctly connected and the correct software setup, the display will show the tidal information as transmitted by the tidal transmitter.



With all connections made the mains can be applied to the display. The display will start-up with a led test. As soon as the test is finished on all display the "-----" are shown. When the first message has been received from the transmitter the display will show the waterlevel (Tidal) as transmitted by the transmitter, the station number and the transmission interval time the fourth display is used for messages.

The tidal information is available on a 4...20 mA output. The range of this output is standard set to -10 meter to + 10 meters. For higher accuracy the range can be set different using the RS232 connector on the rear of the instrument. The analogue output for tidal is available on the port indicated as windspeed (terminals 16 and 17). The analogue output on the port indicated as wind direction can be used for alarm purposes. When the battery on the transmission side is loaded the output is 4 mA. As soon as the battery is low the analogue output will raise to 20 mA.

When the display is not receiving three messages on a row, the tidal display starts to flash indication that there is a failure in receiving the tidal information from the transmitter. At the same time a timer, showing the time in minutes, is activated on the lower display on the left two digits. This will give the user some information regarding the time the last reliable tidal information was received. The 4...20 mA output signal will be kept on the value of the last reliable information that has been received.

The right digit of the lower display is also used to indicated a low battery on the transmitter side. The digit will show the letter "L" when the battery is low.

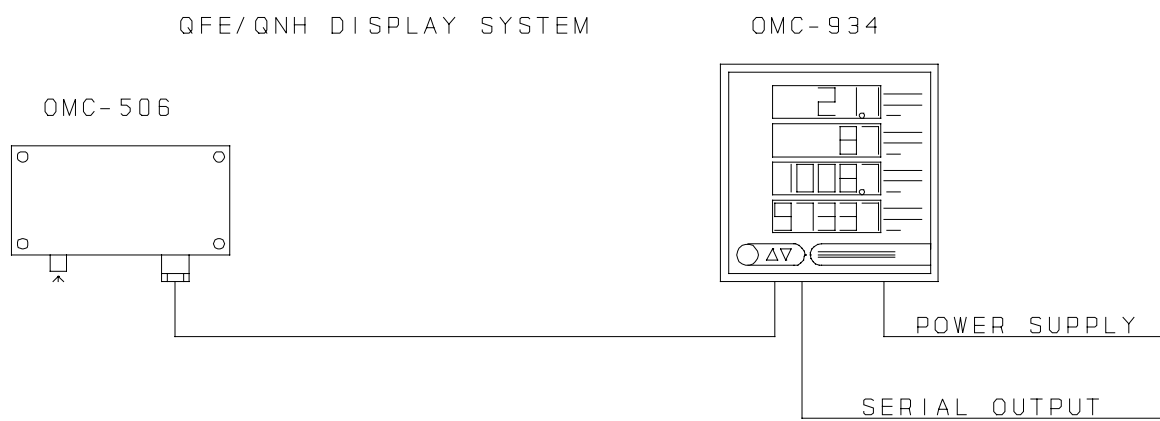
There are a lot of settings that can be changed, but for the tidal indicator only two settings are of any importance, this is the baudrate and the analogue output scaling. The baudrate is standard set to 1200 baud (depends on the radio's used) and the analogue output range is set to the full output of the sensor used in the transmission part of the system.

3.4 OMC-934 used as QFE/QNH display

Check the voltage at terminals [1] and [2] on the rear panel this should be 15 Volts DC. This 15 Volt DC is used as supply for the OMC-506 barometric pressure sensor. The power consumption is under normal circumstances 65 mA.

The output signal of the barometric pressure is a dc voltage signal from 0 to 2500 with a range of 850 to 1100 hPa on the OMC-934 connected to the terminals [13] = negative signal and [14] = positive signal.

With all cabling correctly connected and the correct software setup, the display will show the Barometric pressure and the calculated QFE and QNH pressure.



Parameters needed to calculate the QFE and the QNH can be set via the RS232 port on the rear of the instrument or via the buttons on the front panel. When the buttons "arrow-up" and "menu" are pressed simultaneously the instrument switches to the setup parameter mode. In the upper display the number of the parameter is shown, the second display shows the parameter digits for the decimal point the third display shows the parameter digits behind the decimal point.

As soon as the display shows the parameter a digit can be selected with the "arrow down" button the selected digit will flash. The flashing digit can be changed using the "arrow up" button.

Parameter 1 is the height of the barometric sensor with as reference the held deck (runway), parameter 2 is the height of the helideck above sealevel.

3.5 Internal hardware settings

3.5.1 Analogue output

The OMC-934 provides two analogue output signals. This is optional and not as standard available.

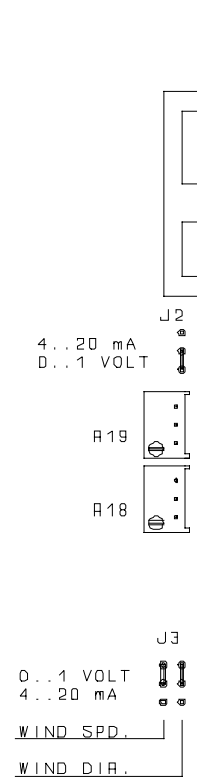
On the processor board (middle board) there are some jumper settings to select a current or an voltage output signal. There are three jumpers that have to be set in the correct position. In the drawing the selection for a voltage output is set. In jumper field J3 de position 2-3 is selected and in jumper field J4 the jumper settings 1-3 and 2-4 are selected.

To get a 4...20 mA output the jumpers must be set as follows,

Jumper field J3 set 1-2
 Jumper field J4 set 3-5 and 4-6

The Potmeters R18 and R19 are used to set the range of the analogue output signals.

For analogue output the following IC,s must be placed in the sockets, IC16, IC17, IC18 and IC20.



3.5.2 Serial in/output

The OMC-934 has two different serial in/output ports. Port 1 is used to receive serial information and to transmit information on the currentloop or RS422 output. Port 2 is used to communicate via the RS232 port on the rear of the instrument.

Receive information port 1

The OMC-934 has the possibility to receive information on different levels, the possibilities are RS422, RS485 and Currentloop. A selection is made with the jumper field J1 in the following way.

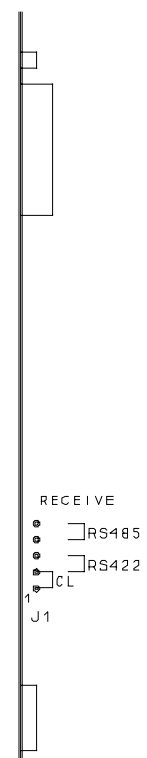
Jumper field J1	RS485 set jumper 4-5
Jumper field J1	RS422 set jumper 2-3
Jumper field J1	Currentloop set jumper 1-2

Transmit information Port 1

The OMC-934 provides the possibility to transmit information on different signal levels. Those levels are RS422 and Currentloop.

Transmit and receive Port 2

Port 2 is the 9-pin D-connector at the rear of the instrument. This port can be used for setting up the instrument or to output the wind information (optional). The baudrate for this port is standard set to 9600 bps. But with the menu options this can be changed.



Currentloop output OMC-160 message format

The currentloop output is normally used to transport the collected data from the currentloop input. Using the system in this way it is not necessary anymore to output the data as analogue signals which upgrade the performance and the accuracy. The data is transmitted with the same speed as data is received from the windsensor. 300 baud 8N1.

If the currentloop output signal from the OMC-160 is repeated by the OMC-934 the message looks as follows,

```
<LF>D125<sp>V234<sp>>cscs<CR>
```

In the above message the transmitted wind direction is the number shown after the indent "D" 125 degrees. the windspeed in the message is shown after the indent "V" 234 is 23.4 m/s. The windspeed is transmitted without decimal point and must therefor be divided by 10 to get the correct windspeed.

The checksum is all information in the string added, the least significant byte is divided into high and low nibble and both nibbles are incremented by hexadecimal 30. This information is sent out as a checksum.

OMC-2900 message format

Sometimes the data is transmitted in the OMC-2900 format. This format is used when more parameters are transmitted.

The wind data transported in the OMC-2900 format looks as following,

```
<SOT> <LF>V21.2<SP>CSCS< CR>  
      <LF>D156<SP>CSCS<CR> <EOT>
```

Every message starts with a start of text character after this the messages are transmitted. All messages start with a line feed followed with the identifier for the data, then the data and then a checksum for protection reasons, the message end with a carriage return.

All input channels can be transmitted in this way every second to any receiving station.

RS232/RS422 in/output channel

The OMC-2900 and the OMC-160 format on the RS232/RS422 looks the same as the format used in the currentloop output described paragraph 3.2.2.2

There are two possibilities to transmit data in the NMEA output, windspeed can be transmitted in m/s or in knots, both messages are shown below.

SIIMWV,123,R,5.8,N,A*24 Windspeed in knots

SIIMWV,123,R,5.8,M,A*27 Windspeed in meters per seconds

The transmission speed is the same as the communication speed of the windsensor used, if this is the OMC-160 it will be 300 bps 8N1.

If the currentloop input is not used the speed can be set from 300 to 9600 bps.

3.6 Settings via frontpanel

On the frontpanel of the display there are three pushbuttons. The buttons are marked "MENU", arrow up and arrow down. Under normal conditions the buttons marked arrow up and down are used to adjust the brightness of the display.

When the buttons are not touched for 5 seconds the display will return to the normal operation mode.

3.6.2 Lamp test

With both arrow buttons pressed all the displays and led's start flashing (lamp test) When the interval time for gust is set to 0 seconds the Gust must be reset manually. this has to be done by pressing the menu and the arrow down button at the same time.

4. Maintenance

The Obsermet OMC-934 digital display unit has no moving parts, and requires no routine maintenance. If required, the perspex display front can be cleaned with a cloth, slightly moistened with a soft detergent. Care must be taken that no liquid enters the display unit. Solvents should not be used, and scratches should be avoided.

Fuses: Glass fuses 5x20 mm,

40 mA T for 230 Vac.

80 mA T for 115 Vac

250 mA T for 24 Vdc

The fuse can be reached as follows:

Switch of the main supply and disconnect all the wiring on the rear of the display.

Remove the four 2.5 mm screws on the rear of the display.

Remove the front window, pull on a corner with both hands.

With holding the front down, the whole case can be removed now.

The fuse can be reached now. The fuse is placed on the PCB where all the wires are connected to.

5. Setting up procedure

During final testing in the factory the OMC-934 is setup for the system it is manufactured for.

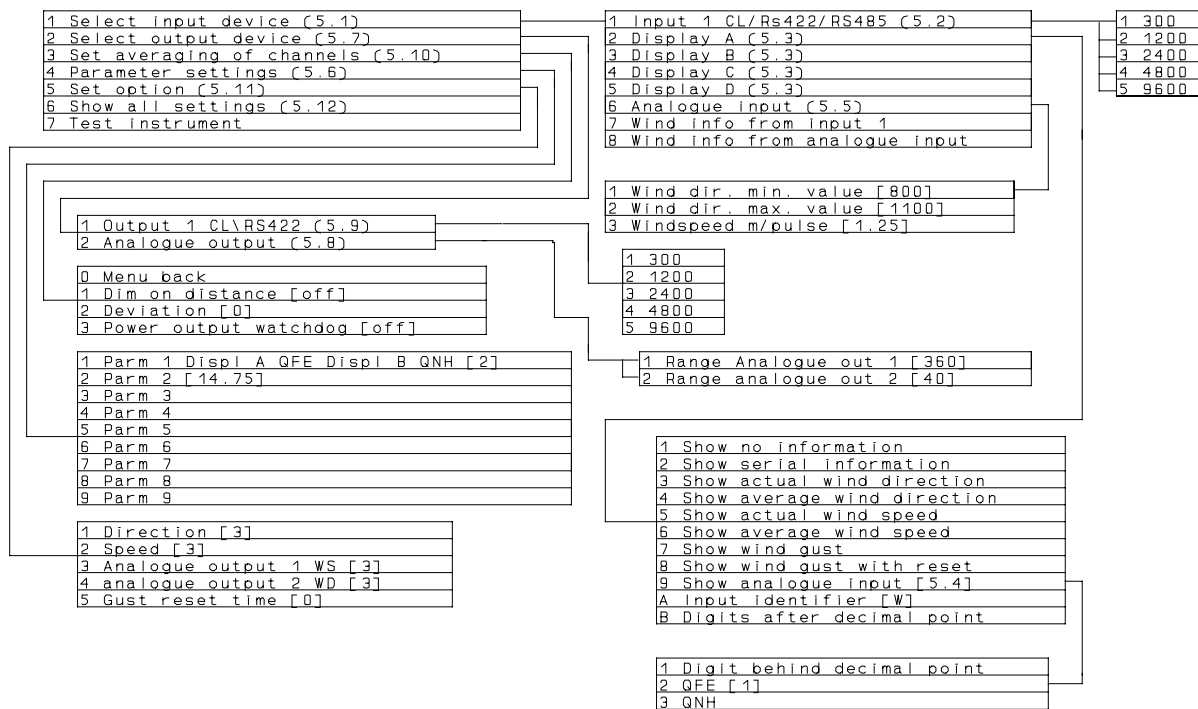
If at a later stage the settings have to be changed then this can be done by the user in the following way.

Connected a cable to the RS232 connector at the rear of the instrument. Connected the other end of the cable to a PC.

Start on the PC a terminal program like "Terminal" under Windows or "Hyper terminal" under windows 95.

Select the proper transmission speed, the speed is as a standard set to 9600 bps. This setting might be set differently, if no response from the instrument when pressing the ENTER button on the keyboard try a different transmission speed.

The OMC-934 provides a menu stucture as shown below, every block with information is shown on your computer screen. Selecting a number brings you to the next window or allow to input certain parameters. The paragraph number are shown in the drawing below to make it easy to find the explaining text in this manual.



When contact is established with the display the above shown menu will appear on your computer screen.

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Serial nr. 00000000

- 1 - Select input device.
- 2 - Select output device.
- 3 - Set averaging of channels.
- 4 - Parameters settings.
- 5 - Set options.
- 6 - Show all settings.
- 7 - Test instrument.

5.1 Input device

With the given options the OMC-934 can be set to customers requirements.

If "Select input device" is selected the menu on the right will appear on the screen. The menu shows the actual setting (asterisk in front of the option) and it shows the options that are not available because they were not ordered. That option are followed by the word disabled.

In the menu shown on the right the vector sensors are selected as input.

OMC-934 Obsermet 4 sensor display unit
Software version 1.2

Serial nr. 00000000

Instrument input device.

- 0 - menu back.
 - 1 - input 1 cl/RS422/RS485.
 - 2 - Display A.
 - 3 - Display B.
 - 4 - Display C.
 - 5 - Display D.
 - 6 - Analogue input.
 - 7 - Windinformation from input 1.
 - 8 - Windinformation from analog input.
- Select option :

5.2 Input 1 settings

With the menu option "Input 1 settings" it is possible to select the transmission speed for the serial input port.

The possibilities are shown in the window on the right. The selected speed is marked with an asterisks in front of the transmission speed.

The other transmission parameters are always set to 8N1 and can not be changed.

OMC-934 Obsermet 4 sensor display unit
Software version 1.2

Serial nr. 00000000

Input 1 settings.

0 - menu back.
1 - 300 baud.
2 - 1200 baud.
3 - 2400 baud.
4 - 4800 baud.
5 * 9600 baud.
Select option :

5.3 Display A, B, C or D settings

The display has 4 digital display, for every display it is possible to select what should be shown on a display. The possibilities are shown in the window shown on the right.

If there is no information to show for the selected display, option 1 should be selected.

When option 8 has been selected the Gust on the shown on the display stays there until a user reset. This reset is done by pressing the buttons "menu" and "arrow down" at the same time.

When option 2 is selected two extra options are added to the menu. The new window is shown on the next page.

OMC-934 Obsermet 4 sensor display unit
Software version 1.2

Serial nr. 00000000

Display A settings

0 - menu back.
1 - Show no information.
2 - Show external sensor.
3 - Show actual wind direction.
4 - Show average wind direction.
5 - Show actual wind speed.
6 - Show average wind speed.
7 - Show wind gust.
8 - Show wind gust with user reset.
Select option :

When the option "Show external sensor" has been selected the window shown on the right will appear.

There are three extra options shown under "9", "A" and "B".

With option "9" the identifier of the parameter must be set. The parameter with that identifier will then be shown on the selected display.

A second option under "A" gives the possibility to set the decimal point in the selected parameter.

The third option under "B" gives the possibility to set the number of digits behind the decimal point of the value shown on the display.

The selected values are shown between brackets.

OMC-934 Obsermet 4 sensor display unit
Software version 1.2

Serial nr. 00000000

Display A settings

0 - menu back.
1 - Show no information.
2 - Show external sensor.
3 - Show actual wind direction.
4 - Show average wind direction.
5 - Show actual wind speed.
6 - Show average wind speed.
7 - Show wind gust.
8 - Show wind gust with users reset.
9 - Show analog input .
A - Input identifier [W].
B - Digits after decimal point [1].
Select option :

5.4 Analogue input information

The OMC-934 has one analogue input which is normally used for wind direction input. It can also be used for any sensor giving a voltage output of 0 to 2500 mV.

The scaling for this input signal must be set in the analogue input range settings window. The min. value is used by zero mV input the max value by 2500 mV input.

It is also possible to use the input signal in a formula to calculate other parameters.

If the input signal on the analogue input represents a barometer signal it is possible to calculate from that signal the QFE and the QNH values. Both values can then be selected and put on a display. To perform the calculation certain extra parameters are necessary those parameter can be set in the main menu under parameter settings. It is also possible to set those parameters via the front panel buttons in combination with the displays.

As soon as QFE has been selected the next question will be the number (1 to 10) of the parameter holding the sensor height. This means that via the parameter setting in the main menu the sensor height with reference to the helideck (runway) must be given. The next parameter will be the helideck height with reference to sealevel.

OMC-934 Obsermet 4 sensor display unit
Software version 1.2

Serial nr. 00000000

Display A analog input settings.

0 - menu back.
1 - Number of digits behind decimal point [1].
2 - No calculation.
3 - QFE.
4 - QNH.
Select option :

5.5 Analogue input range settings

The analogue input range settings are used to set the sensor output voltage to an engineering value. The numbers should comply with the sensor output signal, min stands for the value at 0 mV and max for the value at 2500 mV.

The values shown in the window on the right are for a potentiometer input from a Vector wind direction sensor.

When the display is used as QFE/QNH display the range of the baro sensor is set under option 1 (850 hPa) and option 2 (1100 hPa). Depending on the sensor range.

OMC-934 Obsermet 4 sensor display unit
Software version 1.2

Serial nr. :00000000

Analog input range settings.

0 - menu back.

1 - Wind direction min. value [1.75].

2 - Wind direction max. value [358.25].

3 - Wind speed m/pulse [1.25].

Select option :

5.6 Parameters settings

Due to the possibility that the display is able to show calculated values certain variables are used. Those variables can be set in the window shown on the right. There is a possibility to set 9 different variables of which two are used for the calculation of QFE and QNH.

Parameter 1 is used in the formula to calculate QFE and QNH the value set there is the distance the sensor has been installed from the helideck, in this case 2 meters.

The second parameter is the distance of the helideck from the sealevel, in this case 14.75 meters.

This parameter is always the next parameter after the setting for sensor height.

For future purposes there are 7 other possibilities to set parameter values.

OMC-934 Obsermet 4 sensor display unit
Software version 1.2

Serial nr. :00000000

Parameter settings

0 - menu back

1 - parm. 1 Displ A QFE Displ B QNH [2]

2 - parm. 2 [14.75]

3 - parm. 3

4 - parm. 4

5 - parm. 5

6 - parm. 6

7 - parm. 7

8 - parm. 8

9 - parm. 9

Select option :

5.7 Instrument output device

The instrument provides two output possibilities. There is a serial output and two analogue outputs which are optional.

The serial output can be a currentloop output or a RS422 output. The choice for this has to be made when the instrument was ordered. It is possible for the user to select the output. see paragraph 3.6.2.

The same goes for the analogue output, when this option was ordered there is the possibility to have a voltage or a current output. Selection can be made by the user see paragraph 3.6.1.

For the serial output it is possible to set the baudrate, for the analogue output the range can be set.

OMC-934 Obsermet 4 sensor display unit

Software version 1.2

Serial nr : 00000000

Instrument output device

0 - menu back.

1 - output 1 CL/RS422.

2 - Analog output 1.

3 - Analog output 2.

Select option :

5.8 Analogue output settings

The OMC-934 provides two analogue outputs. Those outputs are optional. The two analogue outputs can be used for the windspeed, for winddirection, or for any other of the displayed parameters. With jumper settings on the middle pcb if is possible to select current or voltage. See paragraph 3.5.1

The menus "Analog output 1" or "Analog output 2" are used to set the source and the scaling for each of the analog outputs.

In the example shown on the right, analog output 1 represents the value on the third display ("sensor C"). In this example, this could be the ambient temperature. The output range is set to -40...+60 degrees C over the full output swing of the current or voltage signal. The user can change this to meet his requirements.

OMC-934 Obsermet 4 sensor display unit

Software version 1.2

Serial nr. 00000000

Analog output 1 settings

0 - menu back.

1 - input from sensor A.

2 - input from sensor B.

3 * input from sensor C.

4 - input from sensor D.

5 - wind direction.

6 - wind speed.

5.9 Output 1 settings

For the serial output it is possible to set a transmission speed. The speed that can be selected are shown in the window on the right.

The selected speed is marked with an astriks.

OMC-934 Obsermet 4 sensor display unit
Software version 1.2

Serial nr. 00000000

Output 1 settings.

0 - menu back.

1 - 1200 baud.

2 - 2400 baud.

3 - 4800 baud.

4 * 9600 baud.

Select option :

5.10 Averaging of channels

On the front of the display a selection can be made for the averaging of the wind information. A choice can be made between 2 minutes, 10 minutes and user select. With the menu shown the user select parameters can be filled-in.

1. Direction is the average time for the actual direction indication. (red circle)

2. Variation direction is the average time for the variation direction indication. (Yellow circle)

3. Speed is the average time for the speed display.

4. Average time of the analogue output for wind direction can be set.

5. Average time of the analogue output for wind speed can be set.

OMC-934 Obsermet 4 sensor display unit
Software version 1.2

Serial nr. 00000000

Averaging of channels.

0 - menu back.

1 - Direction [0].

2 - Variation direction [0].

3 - Speed [0].

4 - Analog output direction [60].

5 - Analog output speed [60].

6 - Max wind speed reset [600].

Select option :

Enter new value : 60

6. Maximum wind speed (Gust) reset time can be set. If this is set to zero the maximum wind speed must be reset manually on the front panel. Maximum time setting is 600 seconds.

5.11 Device options

If possible with the existing hardware it is possible to change the software to customers specification. Those options can than be selected in the menu "Device options".

The option "Dim on distance" provide the possibility to adjust the brightness of the display on remote location. A push button must be connected to the pulse input normally used for pulsed wind speed information. A windsensor with a pulse output can not be used anymore.

The option "Deviation" is used to add an offset to the wind sensor measured value.

The sensor supply output is protected with by a watchdog function. This function is only in used when a sensor with a serial output is used. The supply voltage starts switching when no serial information is received from the sensor. When this supply voltage is used for an analogue sensor the watchdog function must be disabled.

OMC-934 Obsermet 4 sensor display unit
Software version 1.2

Serial nr. 00000000

Device options

- 0 - menu back.
- 1 - Dim on distance [off].
- 2 - Deviation [355].
- 3 - Power output watchdog [off].

5.12 Show all settings

```
OMC 934 Obsermet 4 sensor display unit
Software version 1.2

Serial nr. : 00000000

Input 1 CL/RS422 baudrate : 9600
Output 1 CL/RS422 baudrate : 9600
Sensor 1 show Extern ID = T   Digits after dp = 1
Sensor 2 show Extern ID = H   Digits after dp = 1
Sensor 3 show Extern ID = N   Digits after dp = 1
Sensor 4 show

Average direction              : 60 sec
Average variation direction    : 60 sec
Average speed                  : 60 sec
Average analog out direction  : 60 sec
Average analog out speed      : 60 sec
Max wind speed reset time     : 0 sec

Dim on distance disabled

Deviation                      : 0 deg

Press a key.
```

When this option is selected the above shown screen is displayed showing most of the settings.