



Datasheet

OMC-140 Multifunctional TFT Display (sw-version 2.4 & >)

Wherever you need to visualise your critical measurement information on a dedicated instrument, the OMC-140 can be used. Whether it concerns presenting wind information (wind speed and direction, gust and variation, true or relative) or an indication of other meteorological parameters (temperature, humidity, barometric pressure, visibility and cloud base), the OMC-140 is the ideal instrument. Because of its multifunctional character, the unit is also suitable for other purposes, such as GPS and Gyro, speed log indicator, echo sounder display, etc. On an 8.5" (long-life, low powered) LED backlight, industrial grade, LCD screen your data will be indicated with a true viewing angle of 170°.

Features

- Touch screen display and 8.5" Super Wide Viewing Angle 170° LCD with long-life and low power LED backlight
- Power supply between 90 and 250 Vac
- DC version (24 Vdc) to be ordered as OMC-140-24
- 2 RS422 NMEA inputs, status LED available
- 2 pcs power supply for connected sensors, status LED available
- 1 pce NMEA output, status LED available
- Can be set to transmit data to TurboWin+ through serial and LAN connector
- Alarm handling, high and high-high, audible and visible, acceptance possible (conform BAM)
- Multiple dimming possibilities through manual slide bar, auto by means of light sensitive element or central through DDC
- Three option slots available for additional I/O and functionality
- Memory card facility, logger functionality (MESCAQ requirement)
- RJ45 LAN connection, NMEA over Ethernet conform IEC 61162-450
- Suitable for 144x144 instrument replacement (portrait or landscape)
- DNV-GL Type approval certificate: TAA00001B5
- CCS Type approval certificate: LT18T00001

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General

In 2015, Observator supplied her first OMC-140 Multifunctional TFT displays, as the successor of the popular LED display line OMC-13X/93X. At the time of release, the OMC-140 was provided with firmware for basic displays of meteo data and some other non-meteorological parameters. This did not stop the development activities of this Multifunctional TFT display. More functionalities were added to the software, while additional hardware items and changes were made as well. Years of accumulated know-how in indication technology and valuable customer feedback can be found in the OMC-140.

Choosing your indicator and hardware

In 'the old days' each application required a different indicator. In this new era, Observator just has two types in her portfolio:

- OMC-140
Multifunctional TFT Display suitable for 90..240 Vac
- OMC-140-24
Multifunctional TFT Display suitable for 24 Vdc



Screw terminals for power supply (green stands for AC and grey for DC)

The two serial RS422 NMEA inputs, together with the LAN port, are in most cases sufficient to have a suitable display for each application. For met-systems, we do advice our MeteoLink solution, which comes with one combined NMEA output for a basic parameter, such as wind speed and direction, temperature, humidity, dew point, baro pressure (QFE and QNH), solar radiation. Obviously, cloud base, as well as visibility and present weather, and other crucial parameters can be added to MeteoLink.

The OMC-140 is provided with comprehensive alarm handling possibilities. In case these alarms should be available for external devices, such as horns and warning lights, the OMC-140-02 may be applied. This unit comes with two relay outputs, which can be set as n/o or n/c. This is a commonly used module in MESCAQ configurations on board tankers and installed in the CCR. A SD Card, which may be ordered as OMC-140-53, may be placed into the display and offers the possibility to log all measurements, something which is required within MESCAQ as well.



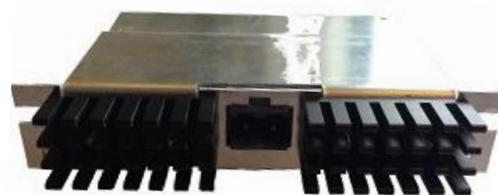
OMC-140-02 remote control & relay output module

This same unit is required to connect a remote-control panel, which can be used for dimming and other basic functions, in case the display is harder to reach.



OMC-140-02-P remote control panel.

A third extension module is available, making it possible to use the display in an AC power-configuration, with auto switch to a DC power back-up. The same module can be used in case the only power supply available is 12 DC.



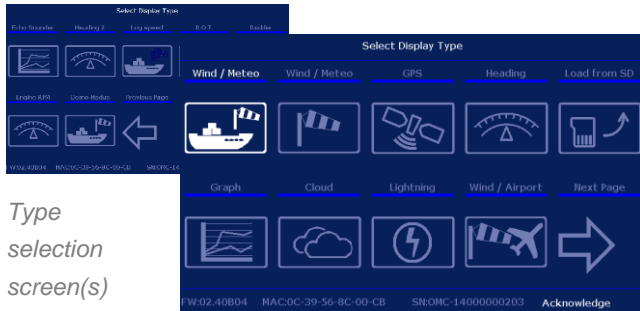
OMC-140-01 12..24 Vdc power supply module

Other available hardware options:

- OMC-140-20 Bracket for wall/ceiling mounting
- OMC-140-21 Spacer for 144x144 cut-out (retrofit)
- OMC-140-22 Cable relief clamps
- OMC-140-50 Mini USB cable (programming purposes)
- OMC-140-99 Cleaning kit

Choosing your display

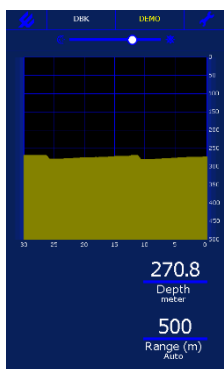
When powering up the OMC-140 the first time, a selection screen appears in which you can choose your typical application:



A variety of display types may be selected: standard meteo/wind, meteo/wind for ship applications, meteo/wind airports, graphs, cloud base, lightning, GPS, heading, echo sounder, speed log, R.O.T., rudder, RPM, etc. Furthermore, some customised OEM versions are available (password protected).



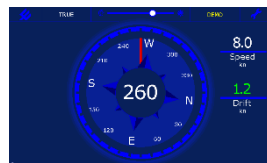
Display for wind/meteo on airfields. Wind information is shown relative to the north, as well as to the runway. Runway heading may be adapted (during installation), while parameters are indicated conform ICAO regulations.



Echo sounder



Speed log



Gyro repeater

Choosing your parameters

After a display type is selected and the data is gathered, either through one of the serial NMEA inputs or by the LAN connection, a setup of the display can be made. Each offered and known parameter may be positioned on the display, by selecting these in the advanced menu (password protected).

Specifications

Inputs/outputs

- 2 NMEA0183 inputs
- 1 NMEA0183 output
- Micro USB (programming purposes)
- RJ45 LAN connector, NMEA over ethernet conform IEC 61162-450

Electrical

- 100..240 Vac, 50/60 Hz, max 50 VA
- DC version (24 Vdc) to be ordered as OMC-140-24
- Sensor 1 and 2 power output 15..16.5 Vdc max 1.5 W
- Connections, pluggable screw terminals for max 2.5 mm²

Environmental specifications

- Operating temperature -15°C..+55°C
- Storage temperature -30°C..+80°C
- Humidity 10..93 %RH
- Vibration IEC 60068-2-6 test Fc
- IP rating IP22

Dimming possibilities

- From 0,5..700 cd/m²
- Day and night pallet selectable
- Manual (slide bar), automatic (ambient light sensor) or NMEA DDC

Alarms

- Build-in alarms on parameters and system functioning
- Outputs, potential free relay outputs through OMC-140-2

In accordance with

- EMC directive 2014/30/EU
- LV directive 2014/35/EU
- RoHS directive 2011/65/EU
- Electrical safety: IEC 61010:2010 including EN IEC 61010-1/C1:2011 and /C2:2013
- EN IEC 60945:2002 including EN IEC 60945/C1:2008
- EN IEC 61326-1:2013
- EN 50581:2012
- DNV-GL type approval certificate: TAA00001B5
- CCS type approval certificate: LT18T00001

More specifications? See next page.

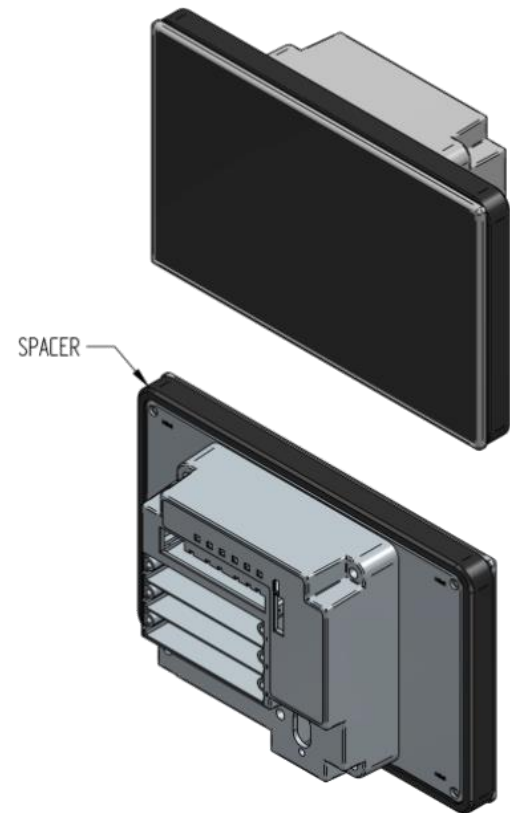
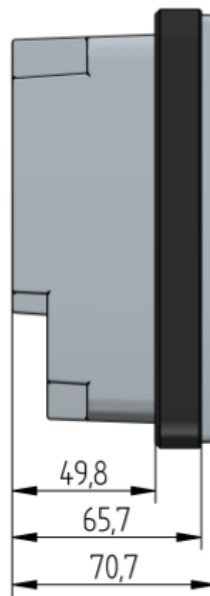
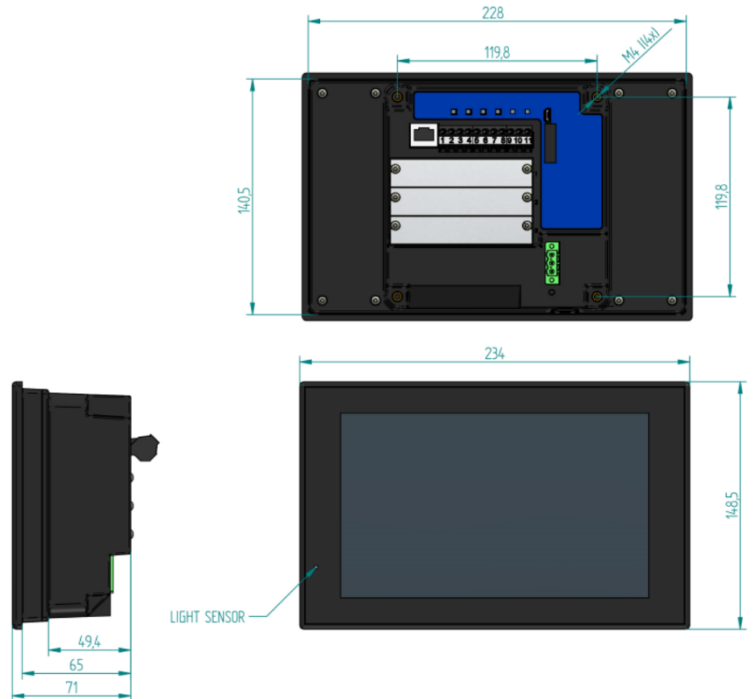
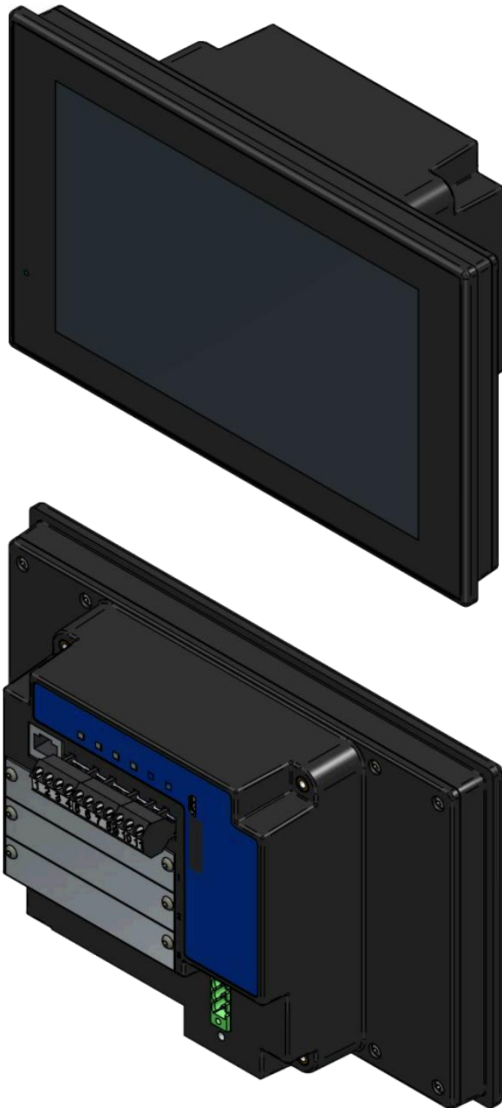
Specifications

TFT touch screen

- 8,5" super wide viewing angle 170° LCD with long life and low power LED backlight
- Active display area 184.8 x 110.9 mm
- Resolution WVGA 800x480

Dimensions

- Packing 40 x 20 x 12 cm
- Weight 1.2 kgs (excl packing)
- Weight 3 kgs (incl packing, mounting materials)



Welcome to the world of Observator

Since 1924 Observator has evolved to be a trend-setting developer and supplier in a wide variety of industries. Originating from the Netherlands, Observator has grown into an internationally

oriented company with a worldwide distribution network and offices in Australia, Germany, the Netherlands, Singapore and the United Kingdom.

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