

# METEOROLOGICAL MEASUREMENT SYSTEM



Meteorological Measurement System provides control of meteorological measurement sensors on the ship and data communication between them. It displays the data measured with the 10.1" touch screen on it. High speed full duplex RS422 is used for communication, providing an error-free and fast data transfer.

- ◆ Rs422 NMEA0183, at least 100 Mbit/s Ethernet data communication
- ◆ 8 high speed full duplex RS422 NMEA0183
- ◆ Compliance with environmental conditions
- ◆ EMI/EMC compatibility
- ◆ Data recording and playback
- ◆ 10.1" Color touch screen
- ◆ Port setting on the screen
- ◆ Display night mode

Meteorological Measurement System is an ideal system for ships that need meteorological measurement.

It consists of various meteorological sensors and a central processing unit.

It transmits the meteorological data calculated with the measured values from the sensors and the data received from external sources to the systems that need it.

## MEASURED PARAMETERS

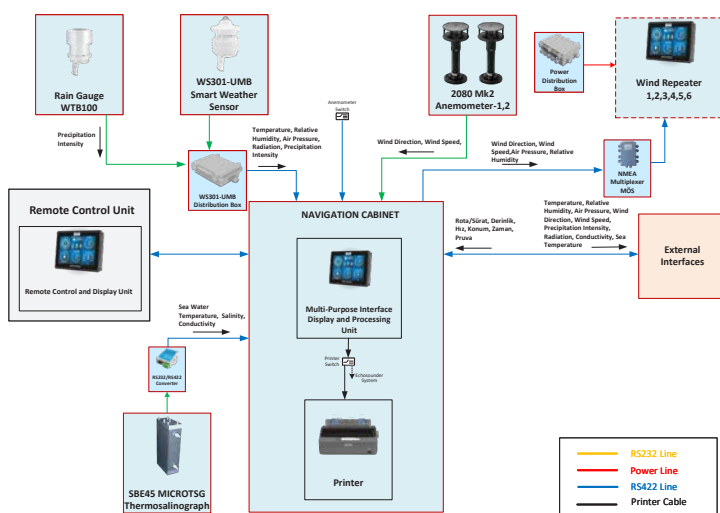
Temperature, Relative Humidity, Air Pressure, Radiation, Wind Intensity, Wind Direction, Precipitation Intensity, Rain Amount, Sea Temperature, Salinity, Conductivity.

## PARAMETERS RECEIVED FROM EXTERNAL SOURCES

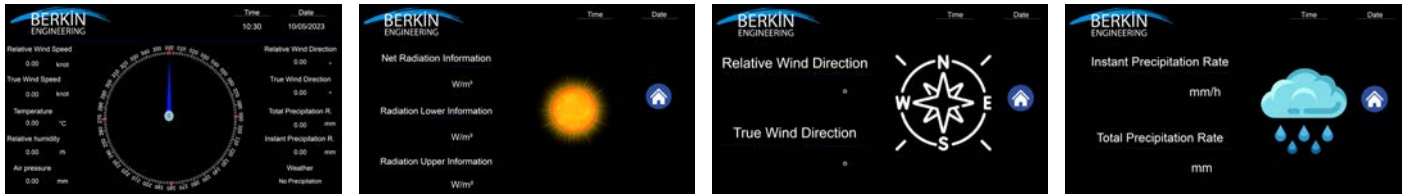
Heading, Speed, Depth, Position, Time, Bow

## CALCULATED PARAMETERS

Cloud Bottom Base, Genuine Wind



# METEOROLOGICAL MEASUREMENT SYSTEM



## TECHNICAL SPECIFICATIONS

|  |   |
|--|---|
| Screen                                     | 10.1"   |
| Interface                                  | 8 x RS422 NMEA018   |
| Operating Temperature Range                | -20°C ~ +50°C   |
| Operating Humidity Range                   | 95%   |
| IP-Class                                   | IP64  |
| Environmental Conditions                   | MIL-STD-810   |
| EMI/EMC                                    | MIL-STD-461   |
| Ergonomics                                 | MIL-HDBK-1472   |
| Vibration                                  | DOD-STD-167-1   |
| Mechanical Shock                           | MIL-S-901D  |
| Boxing                                     | MIL-STD-108   |
| Power Supply                               | MIL-STD-1399 (STANAG 1008)  |
| <b>SEA TEMPERATURE AND SALINITY SENSOR</b> |   |
| Conductivity Accuracy                      | ± 0,0003 s/m  |
| Operation Pressure Range                   | 34,5 dB (50 psi) max  |
| Temperature Accuracy                       | ± 0,002 °C  |
| Temperature Range                          | -5 wth +35 °C   |
| Flow Rate                                  | 10 - 30 ml/sn (0.16 - 0.48 gal/dk)  |
| Sampling Rate                              | Sampling from 1 second to 9 hours   |
| Temperature Stability                      | 0.0002 °C per month   |
| <b>SMART AIR SENSOR</b>                    |   |
| Temperature                                | Measurement method: NTC   Measuring Range: -50 ... 60 °C<br>Accuracy: ±0.2 °C (-20...50 °C) and ±0.5 °C (>-30 °C) |
| Relative humidity                          | Measurement method: Capacitive   Measuring Range: 0 ... 100 % RH<br>Accuracy: ±2 % RH                             |
| Air pressure                               | Measurement method: MEMS Capacitive<br>Measuring Range: 300 ... 1200 h   PaAccuracy: ±0.5 hPa (0...40 °C)         |
| Radiation                                  | Response Time: (95%): < 18 s   Measuring Range: 2000 W/m²<br>Spectral Range: 300...2800 nm                        |
| <b>RAIN DISPLAY SENSOR</b>                 |   |
| Accuracy                                   | ± 2 %   |
| Resolution                                 | 0,2   |
| Max. Intensity                             | 144 mm/s  |
| <b>WIND SPEED AND DIRECTION SENSOR</b>     |   |
| Wind Speed Measurement                     | Measuring Range: 0-120 knots   Accuracy: ±2 %   Stability: 0,01 knots   |
| Wind Direction Measurement                 | Measuring Range: 0° - 359°   Accuracy: ±3°   Stability: 0,1   |