

# DSM410 *4.1" High Bright Color Display*

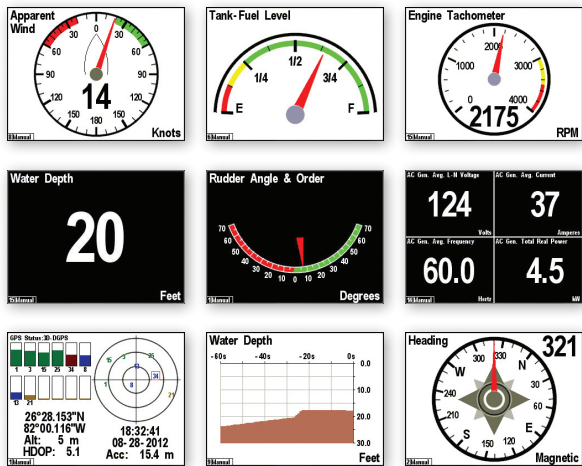
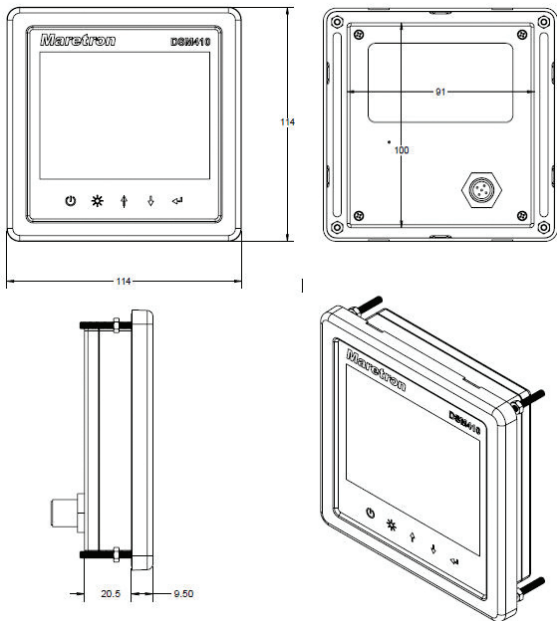
Maretron's DSM410 is a 4.1" high-resolution sunlight viewable color display that interprets and displays NMEA 2000® instrument, navigation, and vessel monitoring data. The DSM410 is a user friendly dedicated marine display with custom screen configurations and an easy-to-use five-key illuminated keypad. In addition to the monitoring and display capabilities, the DSM410 features an alert/ alarm package and electrical switching capability. Unlike traditional single-display units, DSM410 users can choose numeric, gauge, bar or graph formats in single or multiple displays, with cycling options possible for a wide range of favorite data. These multiple display options conserve mounting space and reduce overall system cost. The DSM410 will directly connect with any NMEA 2000® network and with the exception of AIS data will display any or all information captured throughout the vessel. Various audio and visual alarms are also programmable. The DSM410 displays a multitude of information including AC power, anchor status, battery, depth, electrical



distribution, engine, environment, fuel management, GPS, heading, navigation, pressure/vacuum, rudder, speed, status indicators, tanks, temperature, time, transmission, water makers, weather, wind and more. Maretron's DSM410 is engineered and manufactured to the highest standards (IEC 60945 Maritime Navigation and Radiocommunication Equipment). Its compact waterproof housing will provide years of reliable performance.

## Products

PART NUMBER	DESCRIPTION
DSM410-01	4.1" High Bright Color Display



DSM410 Screen Shots

**Specifications**

Parameter	Value	Comment
NMEA 2000® Connector	DeviceNet Micro-C	
Display Technology	Active Matrix TFT LCD	Sunlight Readable
Display Resolution	320 x 240 Pixels	QVGA Resolution
Display Viewable Area	82.56mm W x 61.92mm H	4.1" Diagonal
Display Backlighting	LED	3 User-Programmed Levels 0-100%
Body Construction	Anodized Aluminum	
Keyboard	5 Capacitive Touch Pads	LED Backlighting
Languages Supported	English, Dutch (Nederlands)	User Selectable

**Certifications**

Standard	Comment
NMEA 2000® Standard	
Maritime Navigation and Radiocommunication Equipment & Systems	IEC 61162-3
Maritime Navigation and Radiocommunication Equipment & Systems	IEC 60945
FCC and CE Mark	Electromagnetic Compatibility

**Supported Data Display Types**

Instrument Type	Data Types
AC Power	Average Frequency, Average L-N Voltage, Average L-L Voltage, Phase A Frequency, Phase A L-N Voltage, Phase AB L-L Voltage, Phase B Frequency, Phase B L-N Voltage, Phase BC L-L Voltage, Phase C Frequency, Phase C L-N Voltage, Phase CA L-L Voltage
Anchor	Watch
DC	Current, Voltage, Battery Temperature, Battery State of Charge, Battery Time Remaining, Ripple Voltage, Power
Depth	Water Depth, Water Below Transducer, Transducer Offset
Electrical	Resistance
Elec. Distribution	Switch/Breaker, Breaker Current, Hardware OFF Counter, Hardware ON Counter, Hardware ERROR Counter, Hardware ON Timer, Hardware OFF Timer, Hardware ERROR Timer
Engine Monitor	Boost Pressure, Hours, Coolant Pressure, Coolant Temp., Exhaust Gas Temp., Fuel Pressure, Fuel Rate, Oil Pressure, Oil Temp., Tachometer, Tilt/Trim, Voltage, Fuel Economy, Fuel Consumption, Percent Load, Percent Torque, Trip Fuel Used, Warning Indicators
Environment	Barometer, Heat Index, Humidity Inside, Humidity Outside, Moon Phase, Sunrise, Sunset, Dew Point, Temp. Engine Room, Temp. Inside, Temp. Main Cabin, Temp. Outside, Temp. Sea, Twilight AM, Twilight PM, Weather, Wind Chill
Fluid Flow	Flow Rate, Trip Volume
Fuel Management	Distance to Empty, Time to Empty, Total Fuel Capacity, Total Fuel Level, Total Fuel Consumption, Total Trip Fuel Used, Total Fuel Economy, Total Fuel Rate, Total Fuel Remaining
GPS	COG, Lat/Lon, SOG, DOP, Satellites, Time, Accuracy
Heading	Heading, Rate of Turn, Variation
Humidity	Inside, Outside, User Defined
Indicator	Status, Hardware OFF Counter, Hardware ON Counter, Hardware ERROR Counter, Hardware ON Timer, Hardware OFF Timer, Hardware ERROR Timer
Mechanical	dB, Force, Strain
Motion	Acceleration, Angle, Angular Velocity, Angular Acceleration, Distance, Rotational Rate, Velocity
Navigation	BOD, BTW, COG, XTE, DTW, ETA, Lat/Lon, Rolling Road, Sel/Drift, SOG, TTG, VMG, Waypoint Number & Name
Pressure/Vacuum	Altimeter, Barometric, Compressed Air, Engine Boost, Engine Coolant, Engine Fuel, Engine Oil, Hydraulic Oil, Steam, Transmission Oil, User Defined, Water
Rudder	Angle & Order
SMS	Status, Signal Strength, Indicator
Speed	Through Water, Over Ground, Total Log, Trip Log
Tanks	Capacity, Level, Remaining
Temperature	Bait Well, Battery, Engine Coolant, Engine Oil, Engine Room, Exhaust Gas, Freezer, Heat Index, Heating System, Inside, Live Well, Main Cabin, Outside, Refrigeration, Sea, Transmission Oil, User Defined, Wind Chill
Time	Local Date, UTC Date, Moon Phase, Sunrise, Sunset, Local Time, UTC Time, Twilight AM, Twilight PM
Transmission	Gear, Oil Pressure, Oil Temperature, Warning Indicators
Vessel	Heave, Pitch, Roll, Trim Tabs, Keel
Watermaker	Sea Recovery Status Display
Wind	Apparent Direction and Speed, True Direction and Speed, Ground Direction and Speed

**Electrical**

Parameter	Value	Comment
Operating Voltage	9 to 30 Volts	DC Voltage
Power Consumption (Maximum)	250mA	
Load Equivalence Number (LEN)	5	NMEA 2000® Spec. (1LEN = 50 mA)
Reverse Battery Protection	Yes	Indefinitely
Load Dump Protection	Yes	Energy Rated per SAE J1113

**Mechanical**

Parameter	Value	Comment
Size	4.49" (H) x 4.49" (W) x 0.37" (Forward D) x 0.81" (Rear D) 114mm (H) x 114mm (W) x 9.5mm (Forward D) x 20.5mm (Rear D)	
Weight	12.2 oz. (346 g)	
Mounting	Flush Mount	

**Environmental**

Parameter	Value
IEC 60945 Classification	Exposed
Degree of Protection	IP67
Operating Temperature	-20°C to 70°C
Storage Temperature	-30°C to 80°C
Relative Humidity	93%RH @40° per IEC60945-8.2
Vibration	2-13.2Hz @ ±1mm, 13.2-100Hz @ 7mm/s <sup>2</sup> per IEC 60945-8.7
Rain and Spray	12.5mm Nozzle @ 100liters/min from 3m for 30min per IEC 60945-8.8
Solar Radiation	Ultraviolet B, A, Visible, and Infrared per IEC 60945-8.10
Corrosion (Salt Mist)	4 times 7 days @ 40°C, 95%RH after 2 hour Salt Spray Per IEC 60945-8.12
Electromagnetic Emission	Conducted and Radiated Emission per IEC60945-9
Electromagnetic Immunity	Conducted, Radiated, Supply, and ESD per IEC 60945-10
Safety Precautions	Dangerous Voltage, Electromagnetic Radio Frequency per IEC 60945-12