

# VITALS

## VESSEL SYSTEM MONITORING & SMART ALARM DEVICE (highly configurable)



**KOBELT** introduces the next generation in vessel monitoring.



Vitals provides advanced warning of potential equipment failures with an array of SMART alarms that alert you to potential problems before they become catastrophic. The specific benefit of this centralized monitoring and alarm system is that it can be easily configured to suit *your* specific boat. Be it the temperature of a critical bearing or the cycle times of your bilge pumps, Vitals will monitor your vessel's critical systems and alert you when any piece of monitored equipment is outside of its defined running parameters.

With Vitals, you can set early warning signals at thresholds relevant to the specific equipment that needs monitoring. This improves the accuracy of alarms and avoids nuisance notifications. When an alarm is activated, the Vitals menu will accurately pinpoint exactly what the alarm pertains to, and corrective action can be taken immediately, with no wasted downtime trying to identify the problem.

Vitals is designed to suit a vessel of any size, and is easy and intuitive to set up and configure. Most importantly, Vitals offers an early warning system that can prevent an otherwise simple problem from resulting in an expensive repair, downtime, and the lost enjoyment of your vessel. Enjoy your voyage knowing that you are protecting your investment *and* protecting the safety of those on board with Vitals.

### Features

- Capacitive colour touch screen
- NMEA 2000, NMEA 0183, digital, analog & frequency inputs
- Eight digital inputs
- Four 0-32 volt DC analog inputs
- Two additional analog input channels
- Two frequency inputs
- Smart Temperature bus can connect up to twelve temperature sensors
- One programmable solid state relay output
- Optional input expansion modules are available

### Benefits

- Easy & intuitive to set up and configure
- Highly configurable (can monitor anything)
- SMART functions (will customize your warning thresholds & alarms)
- Full featured engine monitoring
- Monitors battery voltage, oil pressure, water temperature, turbo boost, transmission pressure and much more
- Also monitors tank levels with standard tank level float sensors
- Measures RPM on two engines
- Integrated alarm speaker and also capable of visual alarms (Strobe light)
- Temperature sensors can measure alternators, pumps, hydraulic tanks and engine compartment

# VITALS | TECHNICAL SPECIFICATIONS

PARAMETER	VALUE	UNITS	COMMENTS
<b>Display and I/O</b>			
Display Size	177.40 (7.0)	mm (inches)	Diagonal
Display Resolution	800 x 480	pixels	-
Display Type	TFT-LCD / Transmissive	-	Color 65K
Contrast Ratio (Typical)	500:1	ratio	Viewing - Left:75 / Right:75 / Up:75 / Down:60
Dot (Pixel) Size	0.0642 W x 0.1790 H	mm	Use the provided template
Digital Inputs*	8	ports	On/Off active high or active low signal
Analog Inputs*	4	ports	0V to 32V DC with 0.01V accuracy
Special Inputs**	2	ports	High accuracy 0V to 5V measurement or 0-1,000 Ohm resistance measurement
SMAR Temperature Bus	0 to 12	sensors	Multiple smart digital temperature probes
Temperature Sensors***	-55 to +125 (-67 to +257)	Celsius (°F)	±0.5°C accuracy from -10°C to +85°C
NMEA 2000	1	ports	Bi-directional communication
NMEA 0183	1	RS422 port	Bi-directional communication
Relay Output****	1	Solid State	Programmable, for connecting external Buzzer or Strobe light
Alarm Speaker Output	2	Watt	One Speaker output for audible alarms
<b>Mechanical</b>			
Overall Width	221 (8.7)	mm (inches)	-
Overall Height	134 (5.28)	mm (inches)	-
Overall Depth	52 (2.03)	mm (inches)	Not including connecting cables
Mounting Opening	186 x 110 (7.32 x 4.43)	mm (inches)	Use the provided template
Enclosure Material	ABS Plastic - Dark Grey	-	With additional UV additives
Unit Weight	643 (1.42)	grams (lbs)	-
<b>Environmental</b>			
Operating Temperature	-20 to +70 (-4 to +158)	Celsius (°F)	-
Storage Temperature	-30 to +80 (-22 to +176)	Celsius (°F)	-
Operating Humidity	95	%	Non Condensing
Storage Humidity	75	%	Non Condensing
IP Rating	IP66 IP42	front back	EN 60529; BS EN 60529:1992; European IEC 60529)

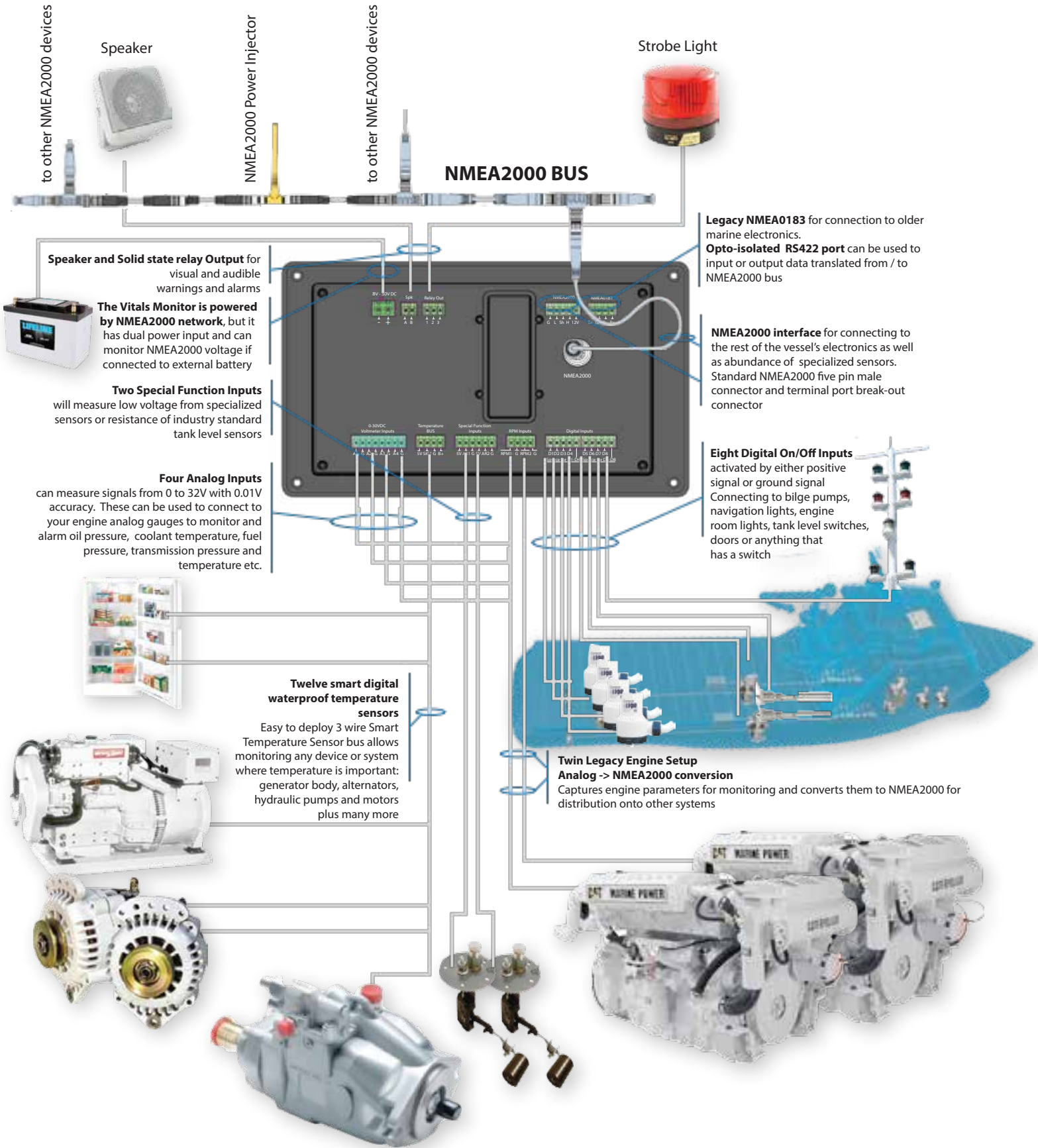
\* On "Activate on High", the input will be triggered with +5VDC or more. On "Activate on Low", 0VDC ground connection is shared with the unit; ground must be provided.

\*\* Consult with the Installation Manual about properly configuring the Special Inputs.

\*\*\* Optional components. Not included with the purchase of Vitals.

\*\*\*\* Solid State Relay is limited to 60VDC and 300mA current. Exceeding these parameters will void the warranty.

# VITALS | FUNCTIONAL DIAGRAM



to other NMEA2000 devices

Speaker

NMEA2000 Power Injector

to other NMEA2000 devices

NMEA2000 BUS

Strobe Light

**Speaker and Solid state relay Output** for visual and audible warnings and alarms

**The Vitals Monitor is powered by NMEA2000 network**, but it has dual power input and can monitor NMEA2000 voltage if connected to external battery

**Two Special Function Inputs** will measure low voltage from specialized sensors or resistance of industry standard tank level sensors

**Four Analog Inputs** can measure signals from 0 to 32V with 0.01V accuracy. These can be used to connect to your engine analog gauges to monitor and alarm oil pressure, coolant temperature, fuel pressure, transmission pressure and temperature etc.

**Twelve smart digital waterproof temperature sensors**

Easy to deploy 3 wire Smart Temperature Sensor bus allows monitoring any device or system where temperature is important: generator body, alternators, hydraulic pumps and motors plus many more

**Twin Legacy Engine Setup Analog -> NMEA2000 conversion**

Captures engine parameters for monitoring and converts them to NMEA2000 for distribution onto other systems

**Legacy NMEA0183** for connection to older marine electronics.

**Opto-isolated RS422 port** can be used to input or output data translated from / to NMEA2000 bus

**NMEA2000 interface** for connecting to the rest of the vessel's electronics as well as abundance of specialized sensors. Standard NMEA2000 five pin male connector and terminal port break-out connector

**Eight Digital On/Off Inputs**

activated by either positive signal or ground signal. Connecting to bilge pumps, navigation lights, engine room lights, tank level switches, doors or anything that has a switch

# VITALS | DIMENSIONAL DRAWINGS

