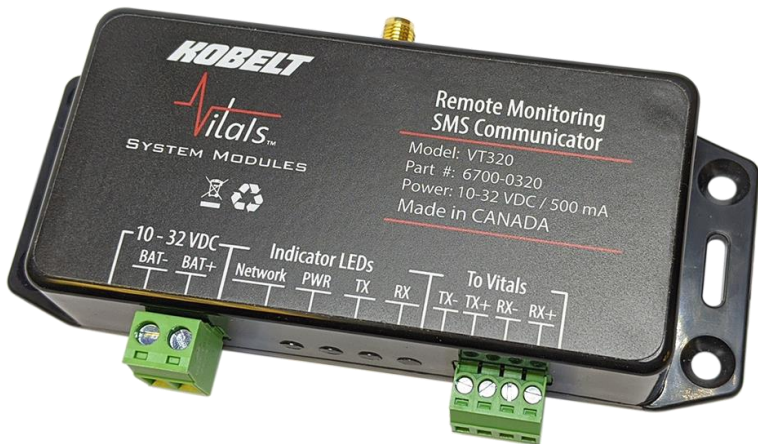


KOBELT

SMS Communications Module

VT320

Owner's Installation Manual



May 2020
(Rev A)



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1 INTRODUCTION

1.1 CONTACT

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This document is intended to clearly present comprehensive product data and provide technical information to assist the end user in design applications. Kobelt reserves the right, without notice, to change the design, or construction, of any products and to discontinue or limit distribution of any products. Kobelt also reserves the right to change, or update, without notice, any technical information contained within this document.

Kobelt recommends that customers visit our website to check for updates to this Manual. Once a product has been selected for use, it should be tested by the user to ensure proper function in all possible applications. For further instructions, please contact our distributors or visit our website.

1.2 COMPLIANT USE

Vitals is an aid only and should not be used as the sole method of decision making. Vitals will not protect the systems that it is monitoring. Vitals utilizes digital and analog data and electronic information from the various marine electronic instruments or sensors on-board the vessel. This device is only intended for use by persons trained in operating marine systems and only as an operational aid.

The installer shall:

- Only use non-defective products.
- Check the safety of operation and the condition of the device before each use.
- Verify that the product is operational at all times and keep it in good working conditions.

Only Kobelt Manufacturing Co. Ltd. Authorized Dealers or Authorized Technicians are to repair Vitals.

1.3 COPYRIGHTS & TRADEMARKS




All product names, logos and brands are property of their respective owners. All company, product and service names used in this manual are for identification purposes only. Use of these names, logos, and brands does not imply endorsement.

2 SAFETY

Throughout this manual, the following symbols are used to alert the installer to special instructions concerning a service or operation that may be hazardous if performed incorrectly or carelessly. The associated risk levels are

2.1 SAFETY ALERTS

Throughout this manual, the following symbols, and their accompanying explanation, are used to alert the user to special instructions concerning a service or operation that may be hazardous if performed incorrectly or carelessly. The associated risk levels are stated below.

 DANGER	This symbol indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
 WARNING	This symbol indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION	This symbol indicates a hazardous situation, which if not avoided, could result in minor or moderate injury.
NOTICE	This symbol informs the reader of events not related to personal injury but which there is a risk of damage to property or equipment.
SAFETY INSTRUCTIONS	This symbol informs the reader of safety-related instructions or procedures.

2.2 NOTICE TO INSTALLER

Disregarding the following safety measures can result in an accident causing severe injury to personnel and damage to material assets.

- Only use the product as directed in this manual.
- Never put the product into service if there is evidence of visible damage.
- Never put the product into service before fully completing installation and commissioning.
- Do not carry out any modifications to the product.
- Only use authentic Kobelt spare parts.
- Observe all local regulations, directives and laws during the installation of this product.
- All installation, commissioning, and maintenance work must only be conducted by qualified personnel. (For the purpose of this manual, qualified personnel are persons who are familiar with the assembly, installation, commissioning, and operation of the product and who have the qualifications necessary for their occupation.)
- Observe all specifications in this manual. If these guidelines are not followed and damage occurs, the warranty will be voided.

2.3 PRODUCT HAZARDS



WARNING

Disconnect Power: Turn off power at distribution panel before beginning installation to protect installer from electrical hazards.



CAUTION

Voltage and Current Compatibility: Confirm that the power source is compatible with the maximum voltage and current ratings of is product variant. Failure to do so could result in damage or fire.

3 ABOUT THE SMS COMMUNICATIONS MODULE

3.1 PRODUCT DESCRIPTION

The SMS Communications Module connects to the Vitals System Monitoring Panel to provide support for broadcasting of system status over SMS messaging. Management and configuration of messages is handled directly through the Vitals System Monitoring Panel.

3.2 INTENDED USE

Vitals is designed to aid the installer to quickly identify possible issues and malfunctions of systems on the vessel, thus help the installer make a timely decision to protect equipment from sudden failure.

3.3 TECHNICAL DATA

Table 1: SMS Communications Module Technical Data

Electrical	
Operating Voltage	12 VDC and 24 VDC Nominal
Operating Current	Less than 500mA.
Short Circuit Protection	Yes.
Reverse Battery Protection	Yes. Indefinite.
Voltage Surge Protection	Yes.
Interfaces	RS-422
Connectors	1x Battery Connector 1x Vitals Communications Connector
Region Support	North America (Canada & USA Only) / Europe (based on installed SIM Card)
Mechanical	
Physical Dimensions (L x W x H)	126 mm x 50 mm x 35 mm [5.0" x 2.0" x 1.4"]
Mounting Dimensions (L x W)	113.4 mm x 31.8 mm [4.465" x 1.252"] 4.5 mm [0.17"] Thru-Holes
Product Weight	0.1 kg [0.22 lbs]
Enclosure Material	Plastic, Polycarbonate
Shipping Dimensions (L x W x H)	216 mm x 140 mm [8.5" x 5.5"]
Shipping Weight	0.2 kg [0.44 lbs]
Environmental	
Operating Temperature	-20°C to 55°C [-4°F to 131°F]
Storage Temperature	-30°C to 70°C [-22°F to 158°F]
Operating Humidity	95% Non-condensing
Storage Humidity	75% Non-condensing
IP Rating	IP40

4 UNPACKING THE PRODUCT

When unpacking the box containing the SMS Communications Module, the box should include the following additional items:

- 1x SMS Communications Module
- 1x Cellular Antenna (Kobelt P/N: 6700-0322)
- 1x Module to Vitals Connection Cable (2 Metre Length)
- 1x Quick Start Guide

If any of these items are missing or damaged, please contact Kobelt to arrange replacements.

5 MECHANICAL INSTALLATION

5.1 CHOOSING THE INSTALLATION LOCATION

The installer should consider the following parameters when choosing a mounting location:

1. The Module should be protected from direct water exposure.
2. The Module should be mounted near the main Vitals unit.
3. The Module should be mounted away from any AC cabling or power sources.
4. The Module should be mounted away from any large sources of Electromagnet Interference (EMI).
5. Wiring between the Module and the main Vitals unit should not run parallel to high voltage or high current carrying wires or cables.

5.2 MOUNTING THE PRODUCT

Securing the SMS Communications Module is a crucial step in the installation process. This ensures safety to the product while providing ease of access to the installer.

There are two steps to securing the SMS Communications Module:

1. Ensure that there is enough room to accommodate the depth of the product and the attached cables and antenna.
2. Use recommended M4 or #8-32 screws to secure it into place at each side. Do not over-tighten the screws as it can lead to damaging the enclosure.

5.3 3D MODEL REFERENCE

A 3D Model of the unit is available on the Kobelt product page for download (<http://www.kobelt.com/products/6700-0320/>).

6 CONNECTING THE ELECTRICAL

The SMS Communications Module requires cables to connect all the required instruments to the appropriate connectors on the unit. Cables are supplied separately and are available through a Vitals dealer or local marine installer.

6.1 ELECTRICAL CONNECTORS

Connectors are indicated as ① to ③. All connections are required for basic operation.

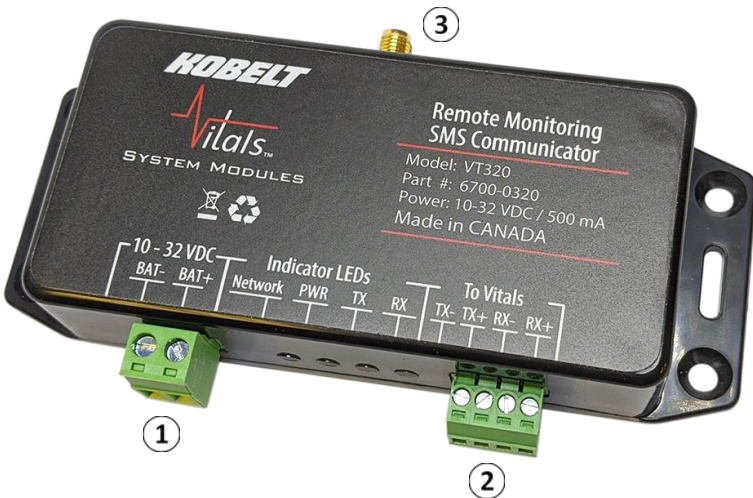


Figure 1: SMS Communications Module Connector Layout

Table 2: SMS Communications Module Connectors

No.	Connector Name
1	Power Connector
2	Vitals Communications Connector
3	Antenna Connector

6.1.1 Power Connector

The Power Connector provides power to the SMS Communications Module. A power source with voltage from 10-32 VDC must be connected for operation.

Table 3: Power Connector

1 Power Connector			
Pin #	Pin Designator	Pin Type	Function
1	BAT-	Power	Battery Connection, Negative
2	BAT+	Power	Battery Connection, Positive

6.1.2 Vitals Communication Connector

The Vitals Communication Connector is used to communicate with the Vitals Display.

Table 4: Vitals Communication Connector

2 Vitals Communications Connector			
Pin #	Pin Designator	Pin Type	Function
1	TX-	Comms	Differential signal (-) from SMS Communications Module to Vitals Display
2	TX+	Comms	Differential signal (+) from SMS Communications Module to Vitals Display
3	RX-	Comms	Differential signal (-) from Vitals Display to SMS Communications Module
4	RX+	Comms	Differential signal (+) from Vitals Display to SMS Communications Module

6.1.3 Antenna Connector

The Antenna Connector is used to connect the recommended antenna.

Table 5: Antenna Connector

3 Antenna Connector			
Pin #	Pin Designator	Pin Type	Function
Tip	--	Signal	
Shield	--	Power	

6.2 LED INDICATORS

The SMS Communications Module has four (4) status LEDs to indicate its status to the user. The status LEDs are indicated as ① to ④.

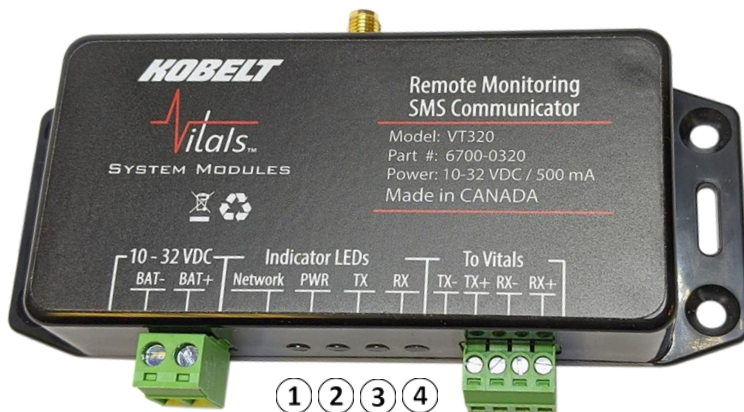


Figure 2: SMS Expansion Module LED Indicators

6.2.1 Network LED

The network LED ① displays the status of the cellular network.

- Blinks fast when the unit is trying to connect to the cellular provider.
- Blinks slow when connection is established.

The status of SMS Communication can be seen on the SMS Setup Screen within the Vitals Monitor Panel.

6.2.2 PWR LED

The PWR LED ② displays the status of the battery power. It lights up when an appropriate power source is connected.

6.2.3 TX LED

The TX LED ③ blinks when there is communication to the Vitals Monitor Panel.

6.2.4 RX LED

The RX LED ④ blinks when there is communication to the SMS Communication Module from the Vitals Monitor Panel.

6.3 CONNECTING TO THE VITALS DISPLAY

The SMS Communications Module can be configured in many ways, for a minimal installation, a connection to a Vitals Display, power, and an antenna are required.

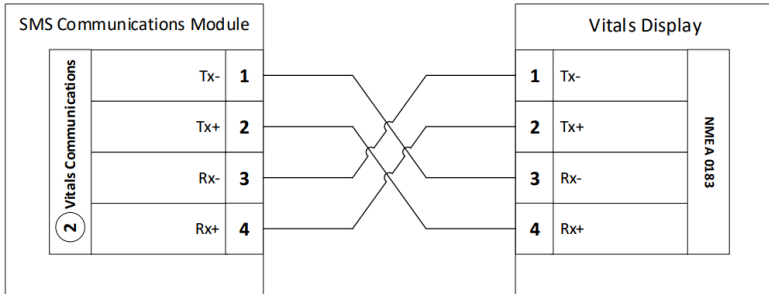


Figure 3: Vitals Display Connection with Provided Cable

6.4 CABLING RECOMMENDATIONS

Follow recommended wiring practices and standards as per relevant local codes.

7 CONFIGURATION & OPERATION

Once connected, the module can be configured through the Vitals Monitoring Panel.

Further instructions are found in the Vitals Owner's Operation Manual for configuration of the SMS Communicator on your Vitals Monitor Panel by accessing the menu Settings >> System >> SMS Configuration >> Help Menu.

Manual available on the Kobelt product page for download (<http://www.kobelt.com/products/6700-0320/>).

8 TROUBLESHOOTING

If you encounter problems with the operation of your product, please refer to the troubleshooting suggestions before contacting Kobelt for assistance. If the steps below do not resolve your issue, please reach out either Kobelt directly or our Dealers in your area.

Table 6: Common Solutions

Problem (Issue encountered)	Cause (What it means)	Corrective Action (What to do)
No Power LED	Module power not supplied	<ol style="list-style-type: none"> 1. Check that power connection is correct. 2. Confirm with Multimeter if power is present at connector.
No Power LED	Internal failure	Contact manufacturer
Network light blinking fast	The SMS communicator is not connected to the network service provider	<ol style="list-style-type: none"> 1. Unplug power for 10 seconds and plug back in. Wait for few minutes and confirm the network status again 2. Make sure that there is cellular signal available for the Cellular network provider in the area. SMS Communicator will talk to Sprint in USA and Rogers in Canada 3. Confirm with manufacturer that the SIM in the SMS communicator has been activated with the cellular network provider
Network light blinking slow but no communication with the module (Tx and Rx LEDs are not blinking)	Serial communication between the SMS Communicator and Vitals is not taking place	<ol style="list-style-type: none"> 1. Cable is disconnected or it is wrong. Fix or replace the cable 2. SMS communicator is not enabled in Vitals setup. Disable the NMEA0183 connection, and enable SMS communications 3. SMS Communicator internal failure. Contact manufacturer

9 WARRANTY

Kobelt Manufacturing Co. Ltd. (“Kobelt”) warrants the Products and Parts manufactured by Kobelt to be free from defects in workmanship or material and that said products are designed mechanically and functionally to perform to specifications.

This warranty is effective providing:

- The equipment is used within the intended operating conditions and in accordance with Kobelt recommendations
- The equipment is installed according to equipment diagrams, specifications and recommendations which Kobelt has provided

This warranty becomes invalid if the factory supplied serial number has been removed or altered on the product. This warranty does not cover cosmetic damage or damage caused by an act of God, accident, misuse, abuse, negligence or modification of any part of the product. This warranty does not cover damage due to improper operation or maintenance, connection to inappropriate equipment or attempted repair by anyone other than an authorized Kobelt representative.

Upon identification of a potential issue or defect with a Kobelt Product or Part, the Warranty Applicant (“Applicant”) must immediately contact Kobelt and describe the issue in writing, by letter, fax, email or other electronic conveyance. Kobelt will then assess the cause of the defect and determine warranty applicability and appropriate remediation.

If any part is found to be defective, Kobelt will replace said part FOB the Kobelt factory provided that any such defective part is returned by the Buyer with freight and applicable forwarding charges prepaid by the Buyer. Kobelt’s sole obligation to the Applicant will be to repair or replace the defective part with same or similar product, to a maximum value of the list price of the product or part. The Kobelt warranty does not cover labour charges, travel or any other associated expenses.

All Products and Parts manufactured by Kobelt, are subject to a warranty against manufacturer’s defects in materials or workmanship for a period of two (2) years from the date of purchase.

Kobelt will be responsible for all Products or Parts sold by Kobelt but manufactured by 3rd party manufacturing companies. However, these products and parts are subject to applicable 3rd party warranties and may not be the same as the Kobelt warranty.

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