

NaviComm Unit

Faulted Circuit Indicator Receiver

Description

Sensus Distribution Automation (DA) has partnered with Power Delivery Products to develop the NaviComm™ self-contained communicating faulted circuit indicator (FCI) unit for overhead distribution lines. The NaviComm unit is an integrated FCI receiver and communications device that monitors and controls up to 12 wireless Power Delivery Products Smart Navigator FCIs, which provide fault current magnitude and load metrics. The NaviComm unit's unique load monitoring and reporting capabilities give utilities access to critical operational and planning information in real, time along with traditional fault indication. NaviComm units communicate using GSM cellular networks or Sensus FlexNet™ communication networks.



Features

APPLICATIONS

NaviComm units are ideally suited for smart grid distribution automation applications on overhead distribution lines. NaviComm units provide the ability to monitor and control Smart Navigator FCIs.

Fault information is delivered to utility supervisory control and data acquisition (SCADA) or Outage Management Systems using DNP 3.0/IEEE 1815 protocol. Simultaneously, distribution engineers, planners and field technicians can receive the same information directly from Sensus PowerVista™ software via text message, email or pager. Additional information can be obtained from PowerVista software using a standard PC browser.

FlexNet models incorporate all of the standard FlexNet system security features. Cellular models use standard cellular authentication

and encryption which is augmented with additional security features at Sensus.

Sensus DA provides the end-to-end communication link via secure, private connections to leading cellular carriers in North America so the product works 'out of the box' anywhere within the extensive North America coverage area. No license or local cellular account is required. FlexNet system enabled models also work 'out of the box' on FlexNet systems.

FEATURES AND BENEFITS

- Monitors up to 12 wireless Smart Navigator FCIs
- Can be configured locally or remotely (cellular only)
- Load current reports are configurable from 15 minute to 240 hour averages (10 day with maximum and minimum values for the average period)
- Reports fault magnitude with

timestamp

- Reports fault duration
- Internal Smart Navigator temperature average for load current period with maximum and minimum values for the period
- Remote firmware update capability
- Battery backup to report faults following control power outages

Communication is initiated in three ways:

- Automatic report upon digital and analog change (user configurable)
- Time-scheduled reports from once every 15 minutes to once every 14 days
- Users may request reports through the Sensus PowerVista application or utility SCADA system

Features

FEATURES AND BENEFITS

Continued

Remote Control and User Notification:

PowerVista software can be used to configure rule-based actions and user notifications that are performed based on NaviComm unit reports.

Examples include:

- Notify a designated utility person or group of people of a fault event
- Notify a customer by e-mail, pager or text messaging with data from the NaviComm unit such as current load information, location, feeder name or number.

POWERVISTA™ APPLICATIONS

The PowerVista software application is a powerful and flexible suite of tools for managing communications and distribution system equipment.

- Access equipment status from any PC using a standard browser
- Each customer has a secure account that provides access to their equipment
- Data is secure and password protected
- No master software or local cellular account is required.
- Manage equipment, communications and users.
- Monitor and control field equipment.
- Automated user notifications (by email, text message or pager) can provide immediate information on events such as momentary or permanent faults and high load

conditions.

- Device history logs all communications with equipment.
- Request equipment status and analog values at any time.
- Tools for communications diagnostics and data volume monitoring.
- Server authentication using 128-bit encryption
- E-mail, text messages and pager notifications are included at no extra cost
- PowerVista software is available as a hosted application at the Sensus DA data center or can be placed in a customer data center

SCADA INTERFACE

All Sensus DA devices can be monitored and controlled through an existing SCADA or DMS system via DNP3.0/IEEE 1815 protocol.

- PowerVista application and SCADA-Xchange™ software operate simultaneously.

See the SCADA-Xchange software datasheet for more details.

Specifications

Communications

Local Configuration Port

- USB 2.0 compliant, full speed

Cellular Data Network

- Two-way communications — all communications are acknowledged
- Transmit power: 1mW to 1.2W
- Frequency: 850/1900 MHz
- Antenex Phantom® antenna

FlexNet Communications Network

- Two-way communications — all communications are acknowledged
- Transmit power: 2W
- Frequency: 900 MHz band, Primary licensed
- Antenex Phantom antenna

Processor

- 32 bit microcontroller, 72 MHz
- 8MB Flash
- 32MB Ram

Operating Power

- 100-135VAC, 60Hz

Environmental Data

- Operating temperature Range: -40° to +70°C (FlexNet) -30° to +70° C (cellular)
- Humidity: 5-95% non-condensing
- Electrical Transient Immunity: ANSI/IEEE C37.90.1; ANSI/IEEE 62.41, 6kV
- Surge Suppression: EN61000-4-4 & EN61000-4-5
- Radiated Emissions: FCC Part 15 Class B, EN 55022

Enclosures

The non-metallic, fiberglass reinforced polyester enclosure features include:

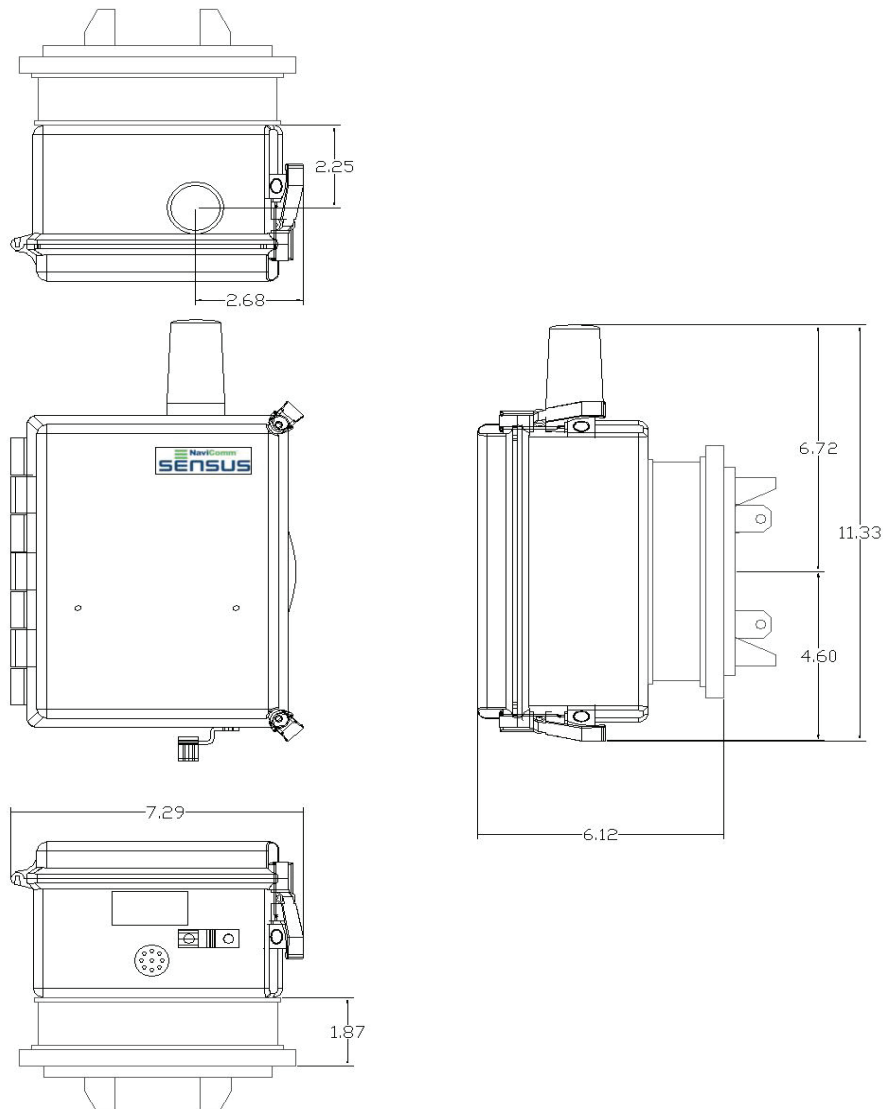
- NEMA 3R rating
- Suitable brackets for pole mounting on wood, steel and concrete poles
- External ground connector
- Hinged door with padlocking provisions
- Optional Meter socket mount
- Dimensions: 10.5"H x 8.5"W x 8.5"D
- Weight: 5 lbs

Model	Radio	Frequency	Protocol	Mount
NAVI-GSM-BKT	GSM	850/1900MHz	DNP	Bracket
NAVI-GSM-SKT	GSM	850/1900MHz	DNP	Socket
NAVI-FLX9-BKT	FlexNet	900MHz	DNP	Bracket
NAVI-FLX9-SKT	FlexNet	900MHz	DNP	Socket

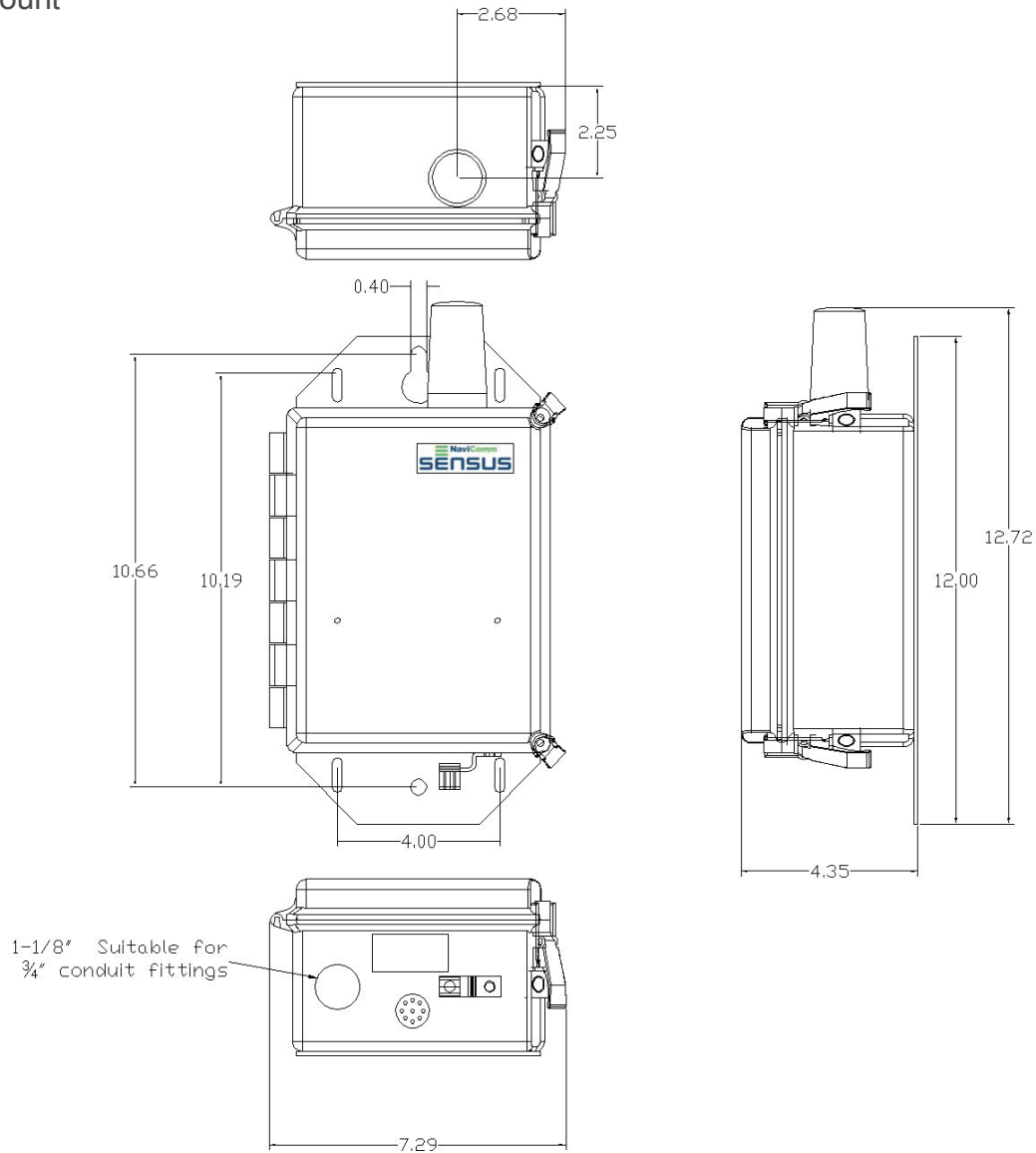
Models

- Models with GSM/GPRS radios communicate using General Packet Radio Service (GPRS) over the AT&T GSM cellular data network. The units can be installed anywhere AT&T GPRS service is available, including AT&T's roaming partners.
- Models with FlexNet SmartPoint™ radio transmitters communicate using packet data over Sensus FlexNet communications networks. The units can be installed on any FlexNet system that uses Sensus RNI Flexware™ software version 2.0.1 or higher.

Socket Mount



Additional device drawings on back page.

Bracket Mount

For more information, visit us at www.sensus.com

2011 Sensus. NaviComm, SCADA-Xchange, SmartPoint, FlexNet and PowerVista are trademarks of Sensus. All products purchased and services performed are subject to Sensus' terms of sale, available at either; <http://na.sensus.com/TC/TermsConditions.pdf> or 1-800-METER-IT. Sensus reserves the right to modify these terms and conditions in its own discretion without notice to the customer.

This document is for informational purposes only, and SENSUS MAKES NO EXPRESS WARRANTIES IN THIS DOCUMENT. FURTHERMORE, THERE ARE NO IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, WARRANTIES AS TO FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY. ANY USE OF THE PRODUCTS NOT SPECIFICALLY SET FORTH HEREIN ARE PROHIBITED.