Dranetz 5530T, 5536

Dranetz BMI DataNode Series 5500 Model 5530T 5536 Voltage Module User Manual

Your Guide to Installation, Operation, and Maintenance

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of the Dranetz BMI DataNode Series 5500, specifically covering Model 5530T and the associated 5536 Voltage Module. The DataNode Series 5500 is designed for advanced data acquisition and power quality monitoring in industrial and commercial applications. Adherence to the instructions in this manual is crucial for ensuring safe and efficient operation of the equipment.

2. PRODUCT OVERVIEW

The Dranetz BMI DataNode Series 5500 is a robust data acquisition system. When paired with the 5536 Voltage Module, it is capable of precise voltage measurements. The system is designed for reliability and accuracy in demanding environments.

Figure 2.1: The Dranetz BMI DataNode Series 5500 (Model 5530T) shown with the 5536 Voltage Module connected via cables, illustrating a typical setup for data acquisition.
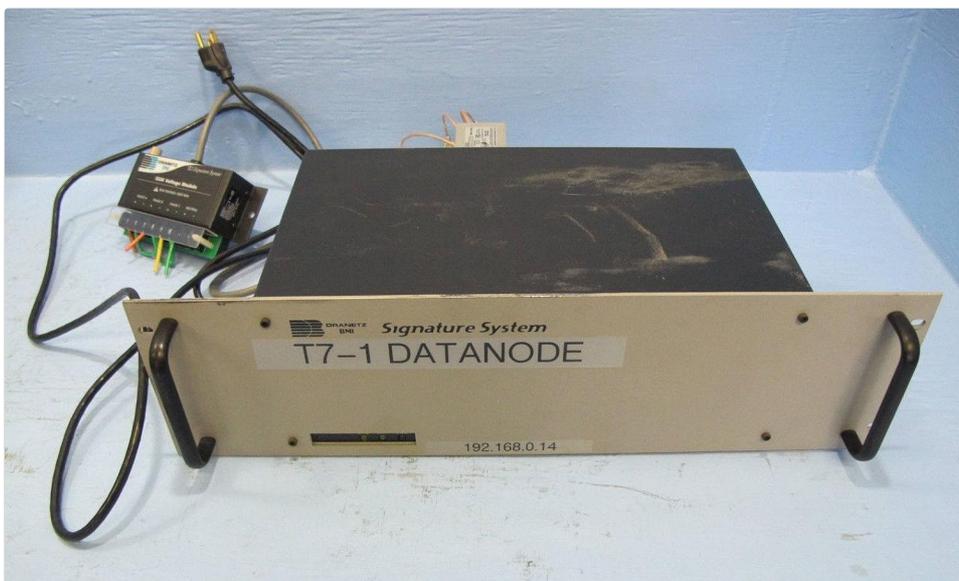

Figure 2.2: Front view of the Dranetz T7-1 DataNode unit, displaying its model designation and an IP address, indicating its network capability.
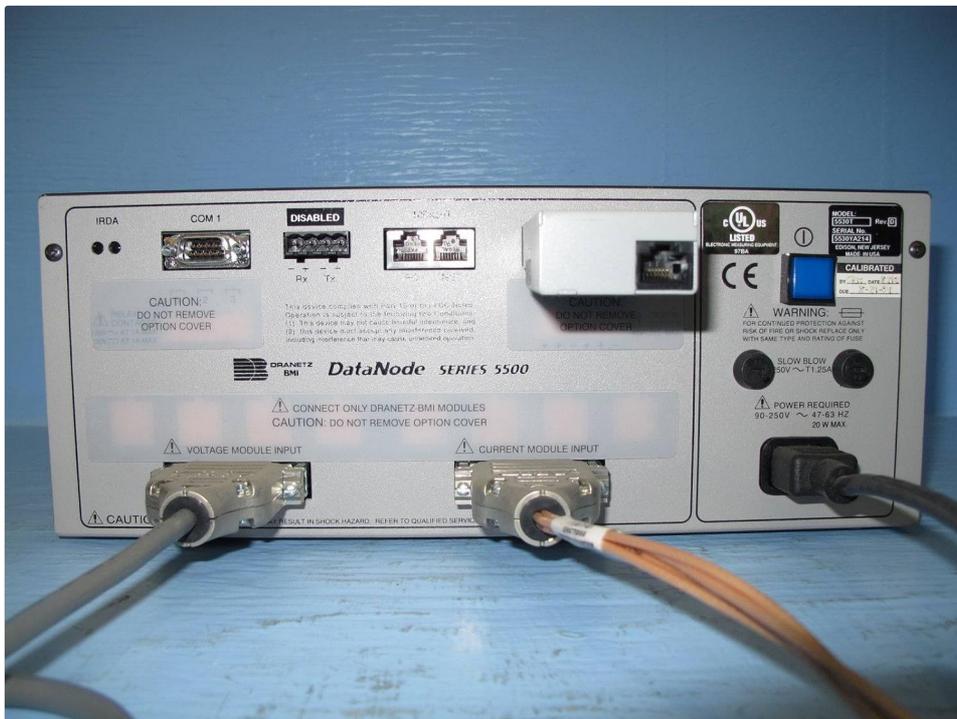
Figure 2.3: Rear panel of the Dranetz DataNode Series 5500, highlighting the IRDA, COM1, PC, and NET ports, along with dedicated inputs for Voltage Module and Current Module. Safety warnings regarding option covers are also visible.

Figure 2.4: Detailed view of the Dranetz Model 5530T label, showing serial number, manufacturing location (Edison, New Jersey, USA), UL and CE certifications, power requirements (90-250V, 47-63Hz, 20W max), and fuse specifications (Slow Blow 250V ~ T1.25A).

Figure 2.5: Close-up of the label for the Dranetz Model 5536, indicating its model number and serial number.
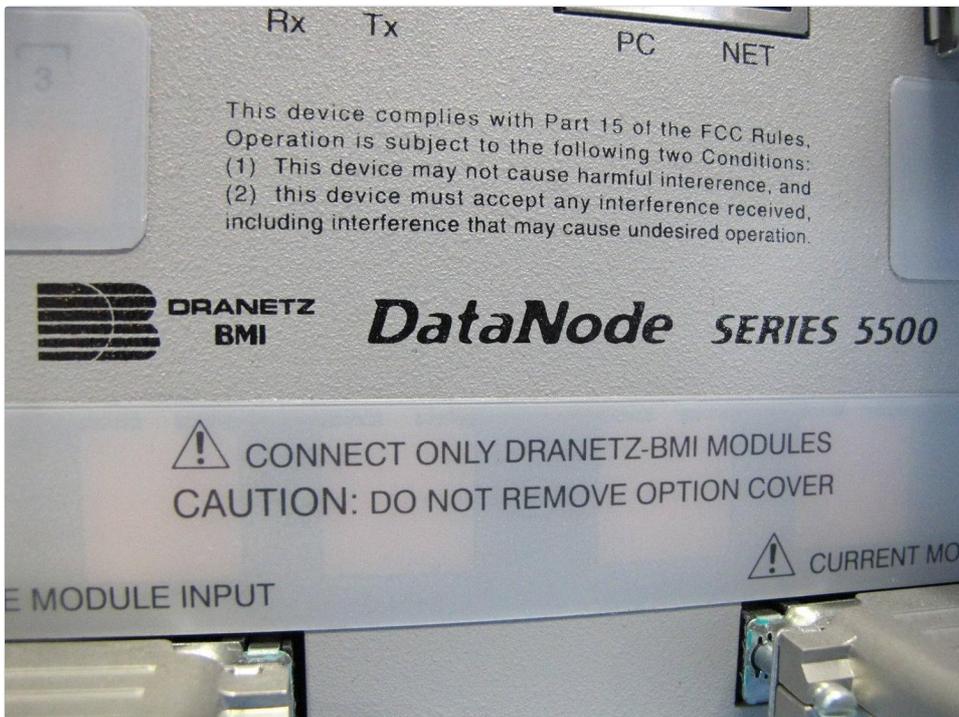

Figure 2.6: Branding for Dranetz BMI DataNode Series 5500, accompanied by the FCC compliance statement regarding device operation and interference.

Figure 2.7: The Dranetz 5536 Voltage Module, clearly showing its input terminals for Phase A, Phase B, Phase C, and Neutral, along with a critical warning for a maximum rating of 600V RMS.

3. SETUP

Proper setup is critical for accurate measurements and safe operation. Always ensure the unit is powered off before making any connections.

3.1 Connecting the 5536 Voltage Module

1. Locate the 'VOLTAGE MODULE INPUT' port on the rear panel of the DataNode Series 5500.
2. Connect the cable from the 5536 Voltage Module to this input port. Ensure the connection is secure.
3. Connect the voltage measurement leads from your system to the appropriate terminals (Phase A, Phase B, Phase C, Neutral) on the 5536 Voltage Module. Observe proper polarity and safety guidelines for high voltage connections.

3.2 Power Connection

1. Ensure the power switch on the DataNode is in the 'OFF' position.
2. Connect the power cord to the power input on the rear panel of the DataNode.
3. Connect the other end of the power cord to a suitable AC power source (90-250V, 47-63Hz).
4. Verify that the correct fuse (Slow Blow 250V ~ T1.25A) is installed.

3.3 Network and Communication Setup

The DataNode Series 5500 supports various communication interfaces. Refer to the specific software documentation for detailed instructions on configuring network (NET) or serial (COM1) connections for data retrieval and control.

4. OPERATING INSTRUCTIONS

Once the DataNode and Voltage Module are properly set up, you can begin data acquisition.

4.1 Powering On

1. After all connections are secure, switch the power button on the rear panel to the 'ON' position.

2. Observe the indicator lights on the unit to confirm power-up.

4.2 Data Acquisition

The DataNode Series 5500 is typically operated via dedicated Dranetz software (not included with this manual). This software allows you to:

- Configure measurement parameters (e.g., sampling rate, measurement duration).
- Start and stop data recording.
- View real-time data.
- Download recorded data for analysis.

Refer to your Dranetz software manual for detailed instructions on configuring and initiating measurements with the 5536 Voltage Module.

5. MAINTENANCE

Regular maintenance ensures the longevity and accuracy of your Dranetz equipment.

5.1 Cleaning

- Keep the unit clean and free from dust and debris.
- Use a soft, dry cloth for cleaning the exterior. Do not use abrasive cleaners or solvents.
- Ensure ventilation openings are clear to prevent overheating.

5.2 Inspection

- Periodically inspect all cables and connectors for signs of wear or damage.
- Ensure all connections are secure before operation.
- Check the fuse periodically and replace only with the specified type and rating (Slow Blow 250V ~ T1.25A).

5.3 Calibration

For optimal performance and accuracy, periodic calibration by qualified personnel is recommended. Refer to Dranetz service information for calibration schedules and procedures.

6. TROUBLESHOOTING

This section provides basic troubleshooting steps for common issues. For more complex problems, contact Dranetz technical support.

6.1 No Power

- Verify the power cord is securely connected to both the unit and the power outlet.
- Check the power outlet with another device to ensure it is live.
- Inspect the fuse on the rear panel. If blown, replace it with a fuse of the exact same type and rating (Slow Blow 250V ~ T1.25A).

6.2 No Data Acquisition

- Ensure the 5536 Voltage Module is correctly connected to the 'VOLTAGE MODULE INPUT' port.
- Verify that the voltage measurement leads are properly connected to the 5536 Voltage Module and the source.
- Check the communication link (network or serial) between the DataNode and your control computer.
- Consult the Dranetz software manual for correct configuration settings.

7. SPECIFICATIONS

Parameter	Specification
Model	DataNode Series 5500 (Model 5530T), 5536 Voltage Module
Manufacturer	Dranetz
Power Required	90-250V AC, 47-63 Hz, 20W Max
Fuse	Slow Blow 250V ~ T1.25A
5536 Voltage Module Max Ratings	600V RMS
Package Dimensions (approx.)	24 x 17 x 15 inches
Date First Available	March 13, 2014
ASIN	B00J2FSL2I

8. SAFETY INFORMATION

WARNING: For continued protection against risk of fire or shock, replace fuse only with same type and rating.

- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- Connect only Dranetz-BMI modules to the designated input ports.
- Do not remove option covers unless instructed by qualified service personnel.
- Refer to qualified service personnel for all servicing. There are no user-serviceable parts inside.
- Always disconnect power before making or breaking connections to the unit or modules.
- Be aware of high voltage when working with the 5536 Voltage Module. Maximum ratings are 600V RMS.

9. WARRANTY AND SUPPORT

For detailed warranty information, please refer to the documentation provided with your purchase or visit the official Dranetz website. Dranetz provides technical support for their products. If you encounter issues not covered in this manual or require advanced assistance, please contact Dranetz customer service or your authorized distributor.

Contact information can typically be found on the Dranetz official website:www.dranetz.com