



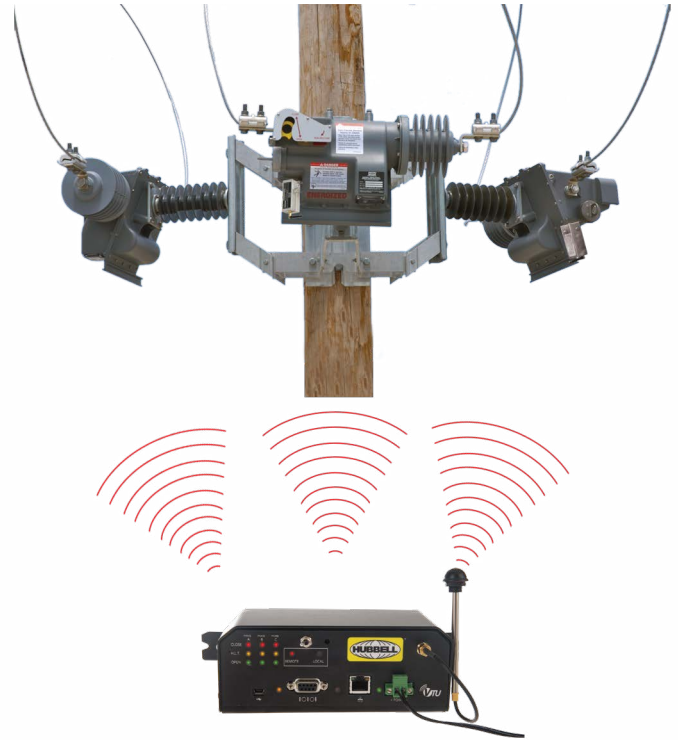
Versa-Tech[®] Terminal Unit



Catalog 10F February 2023

Versa-Tech® Terminal Unit

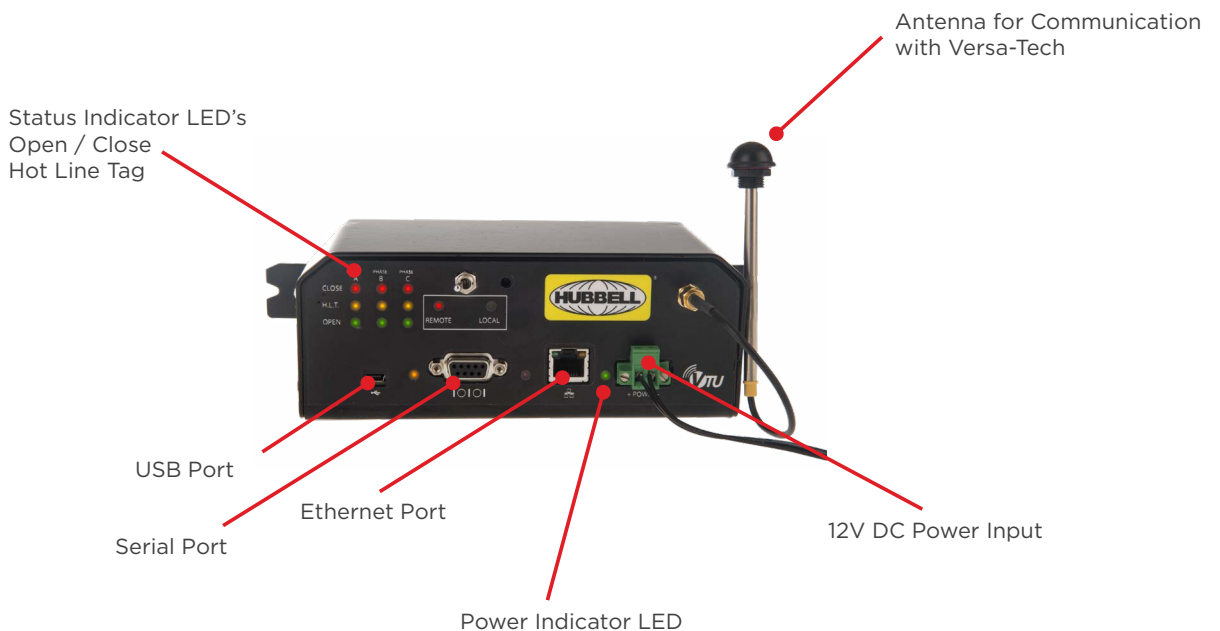
FEATURES	BENEFITS
Versa-Tech SCADA Communication	Provides SCADA communications to a maximum of three Versa-Tech Reclosers.
Flexible Communications Options	Communication with the SCADA can be accomplished via fiber optic adapter, radio or cellular modem through the VTU serial or ethernet port.
Flexible I/O DNP Point Mapping	Select I/O options to meet your system requirements.
Local Communications	Communicates with Versa-Tech Recloser(s) using Digi radio or WiFi.



Description

The Versa-Tech Terminal Unit (VTU) allows any Versa-Tech to communicate with a SCADA System using DNP3 protocol. The VTU mounts in a customer supplied enclosure, and communicates with the Versa-Tech via radio or WiFi. Communication with the SCADA system is via a customer supplied communication system (fiber optic, radio or cellular modem). The VTU is tested for Vibration, Shock and Immunity to IEC standards.

The front panel of the VTU is shown below. Once the power supply (customer supplied) and communication means to the SCADA system is connected, the VTU is ready to be configured and used.



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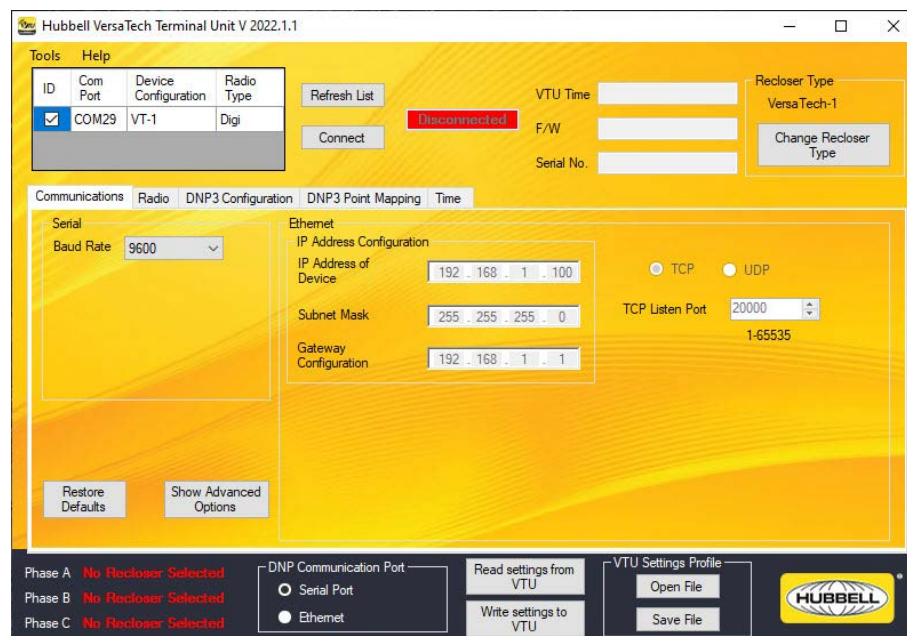
VTU Configuration

The VTU is easily configured using the VTU Programmer.

- Connect the VTU to the +12V power supply.
- Connect one end of the USB 2.0 A Mini-B Cable to the VTU and the other end to the PC.



- Open the Hubbell VTU Programmer



- Follow the instructions in the Quick Start Guide or Instructions Manual.

DNP Points and Defaults

Binary Inputs			
SI No	DNP3 Point	Description	Available in VTII/ VTXC
0	Dummy	May be mapped multiple times for any given phase. This is a placeholder for customer mapping purposes. It will always return '0'	Yes
1	Battery Voltage Status	0 - Good, 1 - Schedule to change	Yes
2	Lockout Status	Status of Recloser Manual Handle (yellow), if in Lockout or not. 0 - Not in Lockout, 1 - Recloser is in Lockout State	Yes
3	Recloser Contacts Status	Status of the Recloser Contacts if they are Tripped or Closed. 0 - Contact Tripped, 1 - Contact Closed	Yes
4	Recloser Connected Status	Communication status with the recloser. 0 - Not connected, 1 - Connected to Recloser	Yes
5	Recloser Configured Status	Recloser Assigned to VTU. 0 - Recloser not assigned, 1 - Recloser assigned	Yes
6	HLT Status	Hot Line Status. 0 - HLT Off, 1 - HLT On	Yes
7	Non-Reclose Status	Non Reclose Mode Status 0 - NR Off, 1 - NR On	Yes
8	Beacon Flash Status	Status of the Beacon Flashing. 0 - Beacon On, 1 - Beacon Off	Yes
9	Current Less than 15A	Status of INOW if below 15A or not. 0 - INOW >15A, 1 - INOW <=15A.	Yes
10	Fault Detected	"This will be set whenever recloser sees a fault (includes Sequence Coordination events). This flag is cleared automatically when the VTU Successfully Reports this DNP point to the SCADA Master."	Yes
11	Retry Attempts Lock	Login retry attempts lock disables (communications on) or enabled (communications off). 0-Disabled. 1-Enabled.	Yes
12	Momentary Overcurrent Fault Detected	This will be set whenever recloser sees a momentary overcurrent. This flag is cleared automatically when the VTU successfully reports this DNP point to the SCADA master.	Yes

Binary Output Status/Control Relay Output Points			
SI No	DNP3 Point	Description	Available in
			VTII/ VTXC
0	Dummy	May be mapped multiple times for any given phase. This is a placeholder for customer mapping purposes. It will always return '0'	Yes
1	VT Open	Opens reclosers contacts. Does NOT lockout recloser. i.e. does not drop yellow handle; recloser can be remotely closed from this state.	Yes
2	VT Close	Close Recloser Contacts	Yes
3	VT Lockout	Trip Recloser Contacts and drop the Manual Handle (Yellow). NOTE: Once SCADA Master issues this command there is no way of closing back the contacts remotely from SCADA Master	Yes
4	Enable NR	Enable Non Reclose Mode	Yes
5	Disable NR	Disable Non Reclose Mode	Yes
6	Enable HLT	Enable HLT mode	Yes
7	Disable HLT	Disable HLT mode	Yes
8	Begin Beacon Flash	Flash Beacon for 1 minute	Yes
9	End Beacon Flash	Turn off beacon flashing	Yes
10	Connect to Recloser	Establish connection with Recloser. SCADA master will be able to send commands to and poll data from recloser.	Yes
11	Disconnect from Recloser	Disconnect from Recloser. SCADA master will not be able to send commands or poll data from recloser.	Yes
12	Clear Resettable Operation Counters	Clear all temporary operation event counters ("This Count"), including 1-4th shot counters for the VT2 and VTXC only	Yes

Analog Input Points								
SI No	DNP3 Point	Description	Available in	Transmitted Value		Deadband		Units
			VTII/ VTXC	Min	Max	Range	Default	
0	Dummy	May be mapped multiple times for any given phase. This is a placeholder for customer mapping purposes. It will always return '0'	Yes	0	0	0	0	NA
1	RMS	Real Time Load Current (RMS)	Yes	0	400	0-399	30	A
2	Average RMS	Average Load Current (RMS) over the last hour	Yes	0	8000	0-7999	30	A
3	Peak RMS	Maximum Load Current (RMS) over the last hour	Yes	0	8000	0-7999	30	A
4	Fault Current 1	RMS value of first fault current	Yes	0	8000	0-7999	30	A
5	Fault Current 2	RMS value of second fault current	Yes	0	8000	0-7999	30	A
6	Fault Current 3	RMS value of third fault current	Yes	0	8000	0-7999	30	A
7	Fault Current 4	RMS value of fourth fault current	Yes	0	8000	0-7999	30	A
8	MINTRIP	Minimum Trip Setting in Recloser	Yes	30	800	0-799	10	A
9	RFADDRESS	Radio Address of the remote radio on the recloser	Yes	0	FFFF	0-FFFF	0	NA
10	Momentary Overcurrent Fault 1	RMS value of first momentary overcurrent fault	Yes	0	8000	0-7999	30	A
11	Momentary Overcurrent Fault 2	RMS value of second momentary overcurrent fault	Yes	0	8000	0-7999	30	A
12	Momentary Overcurrent Fault 3	RMS value of third momentary overcurrent fault	Yes	0	8000	0-7999	30	A
13	Momentary Overcurrent Fault 4	RMS value of fourth momentary overcurrent fault	Yes	0	8000	0-7999	30	A
14	Fault Pattern	"Indicates if shot was momentary/overcurrent. 0-momentary fault. 1-overcurrent fault."	Yes	0	8000	0-7999	30	A

Counters			
SI No	DNP3 Point	Description	Available in
			VTII/ VTXC
0	Dummy	May be mapped multiple times for any given phase. This is a placeholder for customer mapping purposes. It will always return '0'	Yes
1	Total Fault Interruptions	Total Overcurrent Operations is the total number of "OVERCURRENT" Operations seen in the recloser life after production. This counts anytime the bottle opens on a fault (NR, HLT, Min Trip, Cold Load)	Yes
2	Total Operations	Total Operations, including Sequence Coordination events, seen in the recloser life after production.	Yes
3	Total Mechanical Operations	Total Mechanical Operations (anything that has opened the bottle, including manual opening).	Yes
4	Resettable Operation	Temporary Operation event counter counts overcurrent and sequence coordination events from its last reset.	Yes
5	Resettable 1st shot event counter	Number of first shots occurred	Yes
6	Resettable 2nd shot event counter	Number of second shots occurred	Yes
7	Resettable 3rd shot event counter	Number of third shots occurred	Yes
8	Resettable 4th shot event counter	Number of shot fourth shots occurred	Yes
9	Resettable Momentary	Temporary momentary operations event counter	Yes
10	Events Since Last Reset	Number of events since last reset expiry period	Yes

Versa-Tech[®] Terminal Unit



This is a typical field installation, Hubbell only supplies the VTU.

General Specifications

Rated Voltage.....+12V DC
 Current Limit.....500mA
 Operating Temperature.....-40 deg C to +60 deg C
 Height.....2.65 inches
 Width.....8.8 inches
 Depth.....3.75 inches
 Weight.....2 lbs (905 grams)

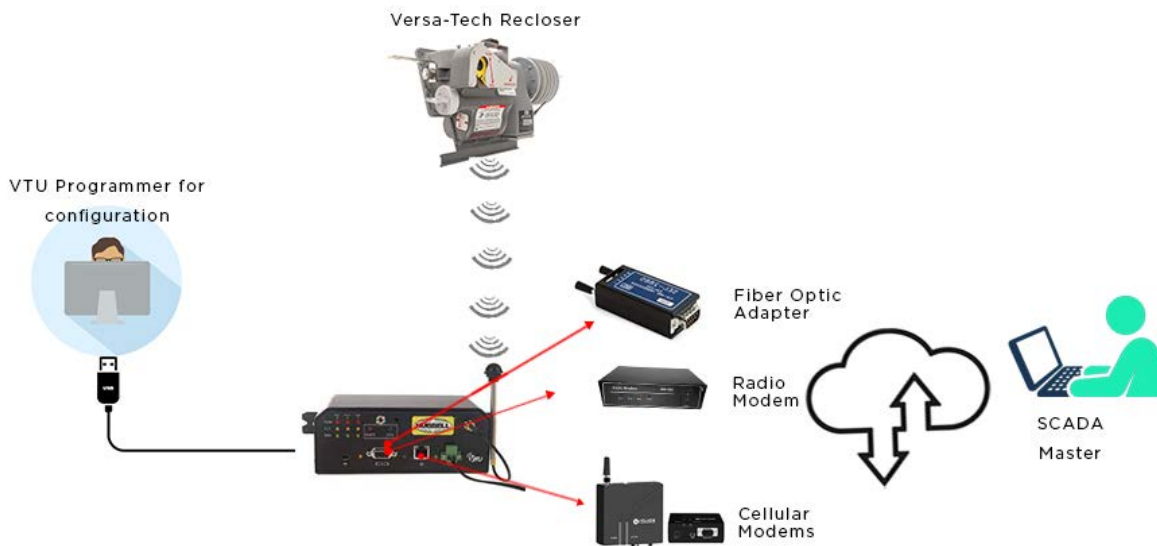
Serial Communication Port
 Connectors.....9-pin D-Sub Connector (Female)
 Ethernet Communication Port
 Connector.....Standard RJ45 Connector

Recloser Requirements
 # of reclosers.....Up to 3 (units)
 Versa-Tech[®] II / XC FW.....v1.0 & above
 Continuous line current.....above 10A

Ordering Information

Catalog No.	Description
PSC86205005	VTU for VTII with WiFi
PSC86205006	VTU for VTXC with WiFi
PSC86205007	VTU for VTXC with Digi

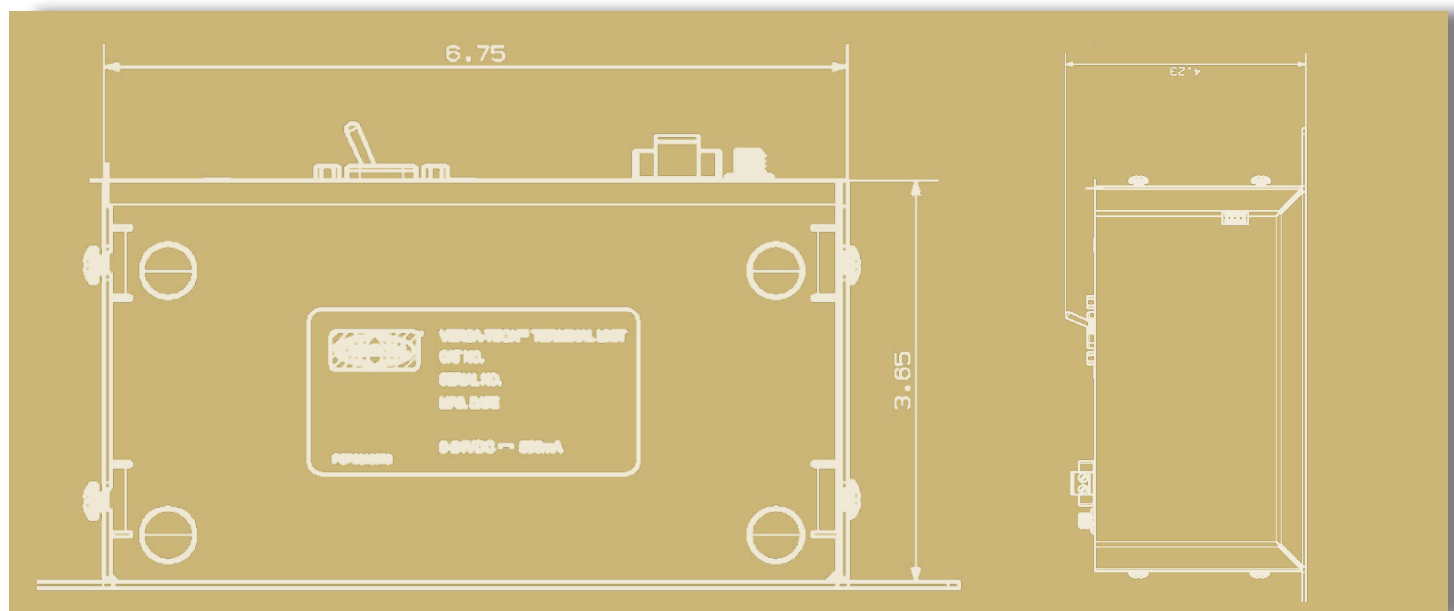
VTU Communication with SCADA Network



Contents

1. Versa-Tech Terminal Unit
2. Phoenix power connector for the 12V DC Supply
3. Null Modem Adapter
4. Antenna (900 Mhz for Digi Units or 2.4 Ghz for WiFi Units)
5. Antenna Extension cable (only provided for Digi Units)
6. USB 2.0 A to Mini-B Cable
7. Hubbell Flash Drive
8. Quick Start Guide

The following pictures are provided to show the contents in the VTU packaging box.



HUBBELL®

Power Systems

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NOTICE: For the latest revision of our Catalog and Literature, click here or visit our web site: www.hubbelpowersystems.com

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