



The DNP Receiver V4.0 is part of a fault indication and monitoring system used in conjunction with Power Delivery Products Smart Navigator 2.0 Faulted Circuit Indicators for overhead distribution or transmission lines.

A single DNP Receiver V4.0 can manage up to 12 Smart Navigator 2.0 FCIs. Data communication between the receiver and the Smart Navigator 2.0 FCIs is performed through a 915 MHz RF wireless link, which allows all fault and status data to be transmitted and received in “near-real” time.

All fault and status data is made available to 3rd party applications in a DNP3 format. This information is fully configurable and includes the data below (dependent on FCI type):

**Event Based Data:**

- ***Fault Detection***
- ***Fault Current Magnitude (Amps RMS)***
- ***Fault Duration (msec.)***
- ***Fault Direction (optional)***
- ***Fault Type: (Permanent / Momentary)***
- ***Last Known Load Current***
- ***Loss of Current / Normal Current***

**Time Scheduled Data:**

- ***Peak Load Current (per interval)***
- ***Average Load Current (per interval)***
- ***Minimum Load Current (per interval)***
- ***Instantaneous Current***
- ***Load Flow Direction***
- ***FCI Ambient Temperature***
- ***Trip Level Value***
- ***Counter Value: (# of Permanent & # of Momentary Trips)***
- ***Battery Status***

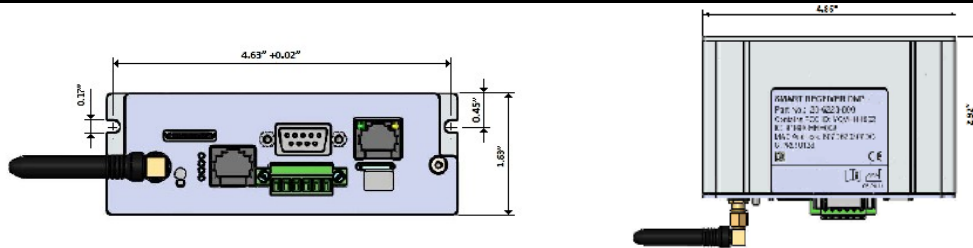
The DNP Receiver V4.0 is connected to external communication equipment (e.g. Cellular modems, radios, or RTUs) via an RJ45 Ethernet port, a Serial RS232, or a Serial RJ45 port. The DNP3 points list is customizable (i.e. enabling/disabling points, assigning classes, edit addressing, etc.) through the no-charge Configuration Software. Also provided with the DNP Receiver V4.0 is a DNP3 Device Profile and Implementation Table to help with integrating the receiver into existing DA systems.

***Supported Products***



**PDP Smart Navigator 2.0  
Faulted Circuit Indicators**

Smart DNP Receiver - Technical Data	
<b>General Data</b>	
<b>Short Range Radio</b>	<ul style="list-style-type: none"> <li>Frequency: 915 MHz; Transmit Power: 10 dBm (10 mW)</li> <li>Encryption: AES-128</li> <li>Range approx. 300 feet (100m) line-of-sight</li> </ul>
<b>Interfaces</b>	<ul style="list-style-type: none"> <li>6-Pin Connector (DC power supply &amp; Two General purpose Inputs (GPIs A &amp; B))</li> <li>Serial Port RS232; DB9 and RJ45 plug, DCE for DNP3/Serial</li> <li>Ethernet RJ45 10/100 Port for DNP3/IP; PoE (option)</li> <li>USB 2.0 Mini B (local access &amp; configuration only)</li> <li>Micro SD Card Slot (up to 4GB; card not included)</li> <li>Interface to PMU (Power Management Unit)</li> <li>SMA connector for 915 MHz antenna (Radio Link)</li> </ul>
<b>Power Supply</b>	<ul style="list-style-type: none"> <li>12 - 24 V DC <math>\pm 10\%</math> (consumption <math>&lt; 100\text{mA}</math>)</li> <li>Power over Ethernet (PoE):               <ul style="list-style-type: none"> <li>48V passive (<math>&gt; 44\text{V}</math>)</li> <li>According to IEEE802.3af (44—57 V) handshake</li> <li>Isolation voltage: 1 kV/1 minute</li> </ul> </li> </ul>
<b>Indication (LED's)</b>	<ul style="list-style-type: none"> <li>Open: (Blue LED) not used</li> <li>RF: (Red LED) for RF Communication</li> <li>I/O: (Yellow LED) for I/O Communication</li> <li>ON: (Green LED) for external power supply active</li> </ul>
<b>Protocols</b>	<ul style="list-style-type: none"> <li>DNP3 Level2+ compliant outstation</li> <li>Distributed Network Protocol [DNP3/IP] &amp; [DNP3/Serial]</li> </ul>
<b>Network Services</b>	<ul style="list-style-type: none"> <li>DNP3 IP Service or Client mode (Port 20000)</li> <li>System/DNP3 configuration interface (Port 30000)</li> <li>DHCP client or fixed IP-address; ARP (RF826)</li> </ul>
<b>General Purpose Inputs (GPIs A&amp;B)</b>	<ul style="list-style-type: none"> <li>2 Potential free external contacts</li> <li>Voltage inputs: Threshold (low <math>&lt; 9.2\text{V}</math>; high <math>&gt; 9.2\text{V}</math>) or</li> <li>Analog voltage inputs (Range 0—24 V DC)</li> <li>GPIs Input Impedance: 90 k<math>\Omega</math> II 100 nF</li> </ul>
<b>Environmental</b>	<ul style="list-style-type: none"> <li>Operating Temperature <math>-40^{\circ}\text{C}</math> to <math>+85^{\circ}\text{C}</math></li> <li>EMC: CE Standards</li> </ul>
<b>Mechanical</b>	<ul style="list-style-type: none"> <li>Housing Material: Aluminum, with two holes for wall mounting</li> <li>Size (L x W x H) 4.8"/4.3" x 1.6" x 2.9" / (mm: 122/110 x 41 x 74)</li> <li>Weight: 0.8lbs (350 g)</li> </ul>
<b>Approvals</b>	<ul style="list-style-type: none"> <li>FCC: Part 15.247, FCC ID: OA3MRF89XAM9A</li> </ul>



Catalog Number Selection			
<b>28</b>	<b>6223</b>	<b>4</b>	<b>00</b>
Smart Receiver	DNP3 Receiver	4 = Version 4.0 Used with Smart Navigator 2.0 products	