The DPS-100D Digital RF Power Measurement System includes a precision directional coupler ordered by EIA line size, and DPS-100D Digital RF power meter electronics package with onboard backlit LCD display. This system is suitable for measuring analog or digital RF signals with accuracy within +/- 5% of reading. Use the DPS-100D as a standalone power monitor/antenna protection system or use more than one DPS-100D to create a monitor system for master antenna applications or for complete RF facility site monitoring. The DPS-100D is part of a larger family of site monitoring products available from Broadcast Devices, Inc.

**DPS-100D Key Features Include:**

- Phantom Powered RS-485 Communications bus for easy interconnection of other sensors using industry standard category 5 cabling or SWP series supervisory chassis available from BDI - Operate standalone or part of a larger system with up to 255 additional DPS-100D sensors
- Analog 0-5 VDC scaled outputs of power indication for remote control input, 8 Programmable General Purpose inputs for interlock lock out tag out status, remote reset etc.
- 2 – Form C programmable relays for interlock and alarm indication

* Second temperature indication requires the use of BDI P/N TMP-100 temperature sensor

** Requires use of the BDI P/N PSW-100 pressure sensor and requires a suitable gas termination such
as the ERI gas barrier assemblies. These gas barrier assemblies are available in many line sizes including 1-5/8”, 3-1/8”, 4-1/6”, 6-1/8”, 8-3/16” and 9” EIA transmission line sizes. (See table below for gas barrier data)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Line Size</th>
<th>Impedance</th>
<th>Diameter</th>
<th>Dimension A</th>
<th>Dimension B</th>
<th>Dimension C</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td>RLA050-16</td>
<td>7/8</td>
<td>50</td>
<td>2.25</td>
<td>57.15</td>
<td>1.125</td>
<td>28.575</td>
<td>2.00</td>
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<tr>
<td>RLA150-16</td>
<td>1-5/8</td>
<td>50</td>
<td>3.50</td>
<td>88.90</td>
<td>1.375</td>
<td>34.925</td>
<td>2.575</td>
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<tr>
<td>RLA350-16</td>
<td>3-1/8</td>
<td>50</td>
<td>5.19</td>
<td>131.83</td>
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<td>25.400</td>
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<tr>
<td>RLA450-16</td>
<td>4-1/16</td>
<td>50</td>
<td>6.19</td>
<td>157.23</td>
<td>1.740</td>
<td>44.196</td>
<td>4.080</td>
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<tr>
<td>RLA650-16</td>
<td>6-1/8</td>
<td>50</td>
<td>8.12</td>
<td>206.25</td>
<td>1.630</td>
<td>41.402</td>
<td>4.046</td>
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<tr>
<td>RLA675-16</td>
<td>6-1/8</td>
<td>75</td>
<td>8.12</td>
<td>206.25</td>
<td>1.630</td>
<td>41.402</td>
<td>4.051</td>
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<tr>
<td>RLA775-16</td>
<td>7-3/16</td>
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<td>9.50</td>
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<td>1.630</td>
<td>41.402</td>
<td>4.375</td>
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<td>RLA875-16</td>
<td>8-3/16</td>
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<td>11.00</td>
<td>279.40</td>
<td>1.630</td>
<td>41.402</td>
<td>4.792</td>
</tr>
</tbody>
</table>

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GUI Screen Shots

DPS-100D Digital RF Power Sensor

**FORWARD POWER**

6.50KW

**REFLECTED POWER**

4.11W

**INTERNAL TEMP**

86 F

**EXTERNAL TEMP**

78 F

**PRESSURE**

3 PSI

**SWITCH INPUTS**

- INPUT 1
- INPUT 2
- INPUT 3
- INPUT 4
- INPUT 5
- INPUT 6 - LOTO

**CURRENT TIME & DATE**

10:08:44 03 APR 12

PTT
Specifications

**Frequency Range:**
Sensor: 50 MHz to 860 MHz

**Power Range:**
Sensor: Linear Range -40dbm to +10dbm. No damage to +23dbm
Directional Coupler: See table below

**Coupler Common Features**

**Coupler Sizes available:**
Type N, DIN, 7/8”, 1-5/8”, 3-1/8”, 4-1/16”, 6-1/8”

**Coupler Loss:**
-60 dB

**Through Line VSWR:**
1.03:1 or better

**Coupled Port Directivity:**
30 dB or better

**Frequency Range:**
50 to 860 MHz

**Through Line Impedance:**
50 ohms

**Measurement Type:**
True RMS – Suitable for CW, multi carrier and high crest factor digital RF signals such as COFDM, 8 VSB, DVB, etc.

**Accuracy:**
+/- 5% of reading.

**Dynamic Range:**
40db Linear Dynamic Range. Measurements possible over 50db with reduced accuracy.

**Power Measurement Range**
0 – 1 Mega watt– Coupler Line Size Dependent

**Measurement Capabilities:**
Forward and Reflected RF Power,
Transmission line temperature (Deg F / Deg C user selectable)
1 – External Temperature and line pressure sensors.
6 – User configurable closure inputs.
(typically patch panels, lock-out/tag-out)

**Integrated Digital Display:**
2 Line x 16 character LCD display of Fwd/Ref RF Power, Temperature (x2), Line Pressure
Dedicated Icons for VSWR fault, Alert Status, Communications Status, RF Power High/Low thresholds, DC power input status and LAN connection status.

**Communications Interfaces:**
Ethernet, RS-485, CAN, USB

**Network Protocols:**
SNMP, SMTP, TCP/IP, UDP, SNTP, HTTP

**Remote Control Interface**
2 – Configurable VDC proportional power outputs,
2 – Form C configurable interlock/status relays/On/off
2 – Configurable External GP inputs for fault reset

**12 Position Terminal Block:**
6 – Configurable General Purpose Inputs for lock out tag out, patch panel, external interlock strings, etc.

**Ext. Temperature Sensor Input**
3 – Position terminal block mates with BDI TMP-100 T Temperature Sensor

**Ext. Pressure Sensor Input:**
3 Position terminal block mates with BDI PSW-100 Pressure Sensor

**DC Input:**
12VDC Power Supply Available from BDI or phantom powered by BDI SWP Series Supervisory Chassis
DPS-100D Digital RF Power Measurement System is available in all EIA standard transmission line sizes and includes 4-1/16”, N and DIN -7/16,

Flange to Flange Coupler Lengths:

- 7/8”   6.25”
- 1-5/8”  6.50”
- 3-1/8”  7.00”
- 4-1/16” 7.00”
- 6-1/8” 10.50”