# TRUE RMS RF POWER METER
# DPS-100D


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:**

Simultaneous Forward/Reflected Power Indication, Onboard Backlit LCD Display with proprietary 3 strike protection system for sustained high VSWR conditions, Onboard Web Server for remote interrogation of parameters, Transmission Line Surface Temperature Indication – Second Temperature Sensor input available* - Transmission Line , Pressure indication** 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.

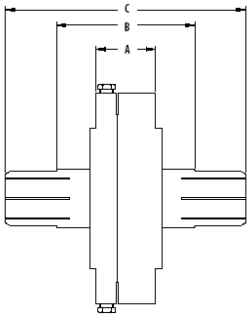

2 – Form C programmable relays for interlock and alarm indication

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

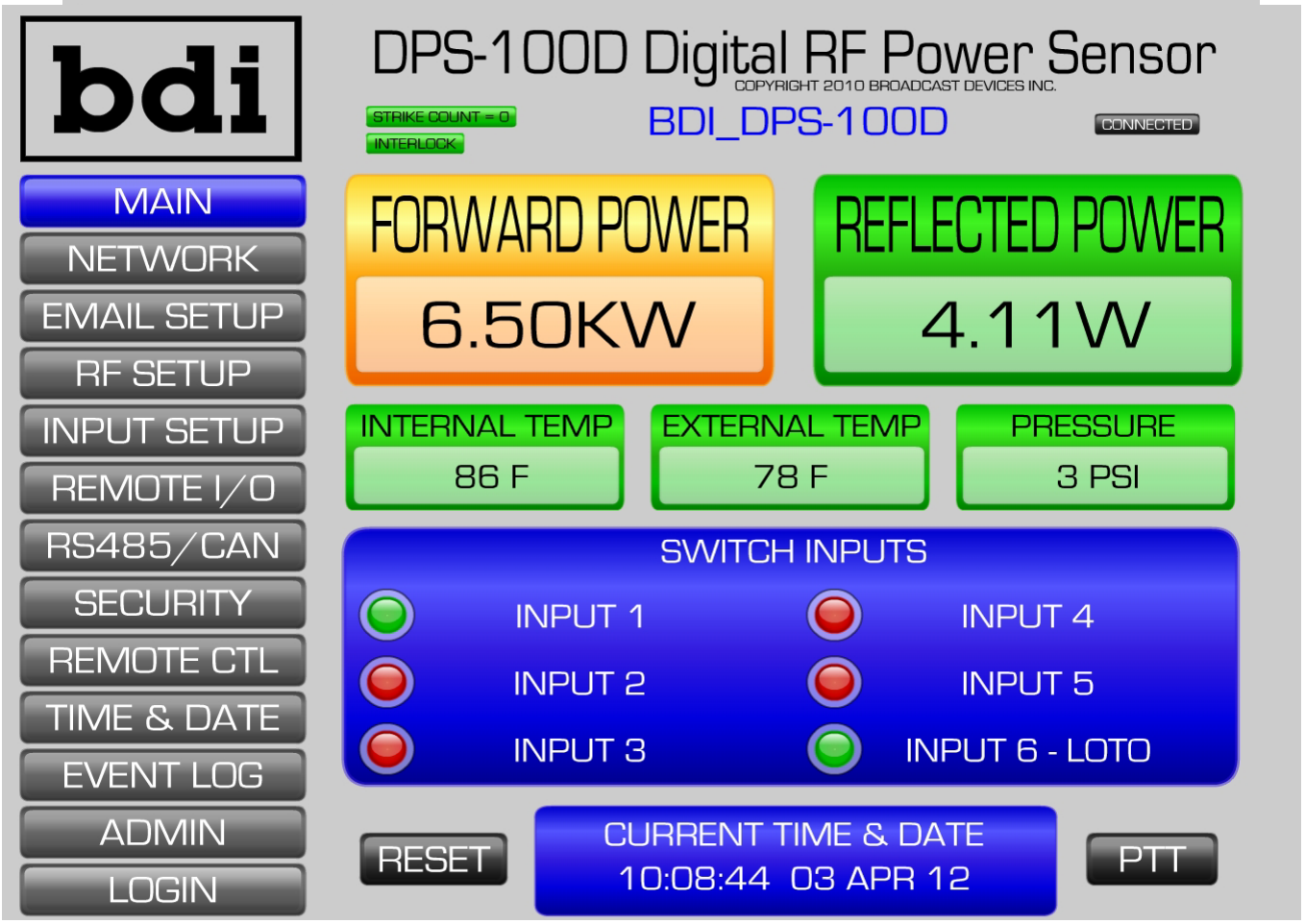
** Requires use of the BDI P/N PSW-100 pressure sensor and requires a suitable gas termination such

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)

| Part Number | Line Size | Impedance | Diameter | | Dimension A | | Dimension B | | Dimension C | | Weight | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in | Ohm | in | mm | in | mm | in | mm | in | mm | lbs | kg |
| RLA050-16 | 7/8 | 50 | 2.25 | 57.15 | 1.125 | 28.575 | 2.00 | 50.80 | 3.062 | 77.775 | | |
| RLA150-16 | 1-5/8 | 50 | 3.50 | 88.90 | 1.375 | 34.925 | 2.575 | 65.405 | 3.701 | 94.005 | | |
| RLA350-16 | 3-1/8 | 50 | 5.19 | 131.83 | 1.00 | 25.400 | 2.735 | 69.469 | 5.160 | 131.064 | 4.8 | 2.2 |
| RLA450-16 | 4-1/16 | 50 | 6.19 | 157.23 | 1.740 | 44.196 | 4.080 | 103.632 | 7.080 | 179.832 | 10.0 | 4.5 |
| RLA650-16 | 6-1/8 | 50 | 8.12 | 206.25 | 1.630 | 41.402 | 4.046 | 102.768 | 7.109 | 180.569 | 19.4 | 8.8 |
| RLA675-16 | 6-1/8 | 75 | 8.12 | 206.25 | 1.630 | 41.402 | 4.051 | 102.895 | 7.055 | 179.197 | 19.4 | 8.8 |
| RLA775-16 | 7-3/16 | 75 | 9.50 | 241.30 | 1.630 | 41.402 | 4.375 | 111.125 | 7.750 | 196.850 | 13.6 | 6.2 |
| RLA875-16 | 8-3/16 | 75 | 11.00 | 279.40 | 1.630 | 41.402 | 4.792 | 121.717 | 8.172 | 207.569 | 20.0 | 9.1 |




# GUI Screen Shots



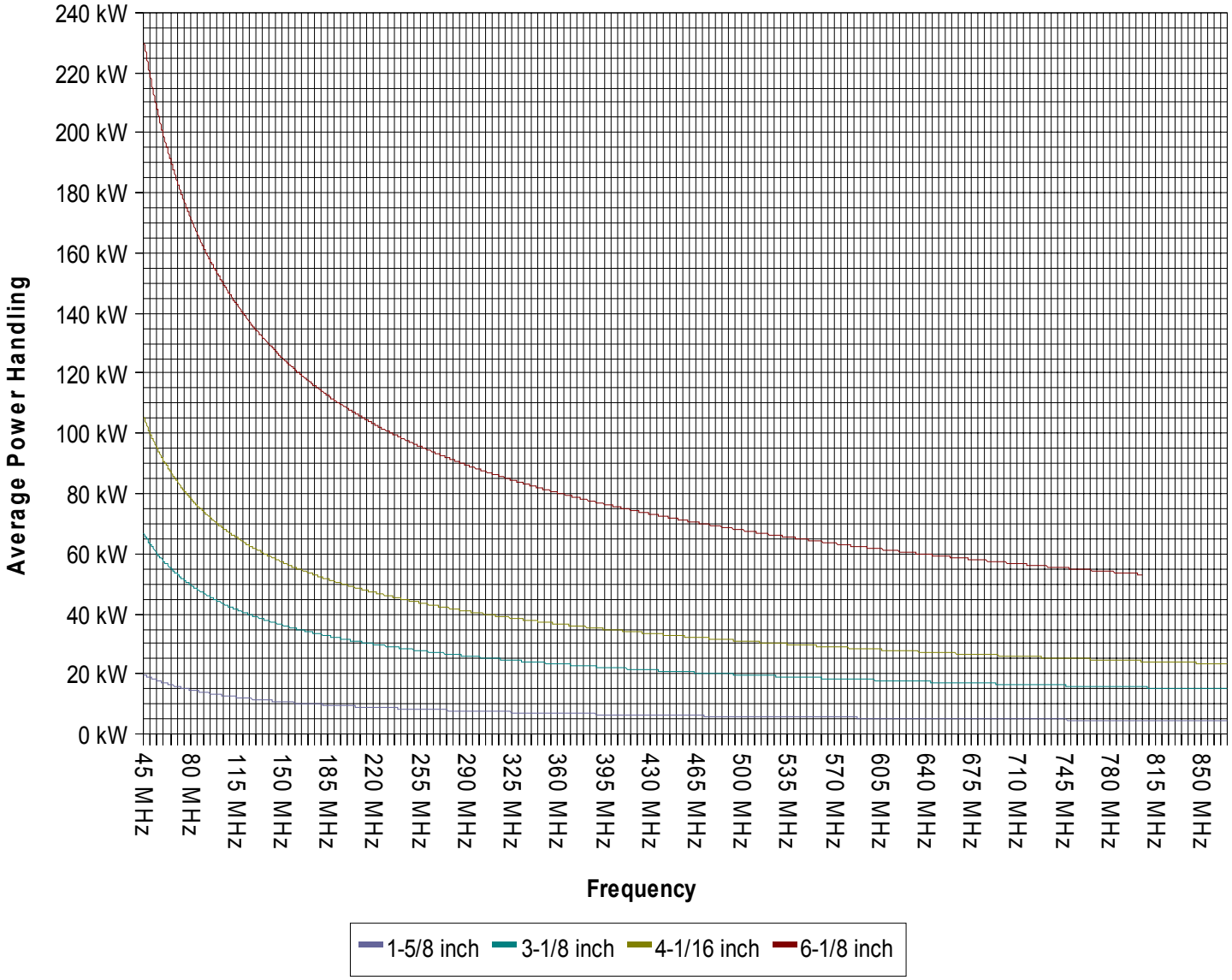
## Specifications

| | |
|---|---|
| **Frequency Range:** | Sensor: 50 MHz to 860 MHz |
| **Power Range:** | Sensor: Linear Range -40dbm to +10dbm. No damage to +23dbm<br>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,<br>Transmission line temperature (Deg F / Deg C user selectable)<br>1 – External Temperature and line pressure sensors.<br>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<br>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,<br>2 – Form C configurable interlock/status relays/On/off<br>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 |

## Frequency versus Power Handling




**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"** |


**Broadcast Devices, Inc.**
**Tel. (914) 737-5032 Fax. (914) 736-6916**
**www.broadcast-devices.com**
**sales@broadcast-devices.com**