TASC SYSTEMS INC.

Bi-directional Power Sensor

The patented design of the TASC Bi-directional power sensor (BPS) is the most precise measurement device of its type currently available with broadband capability. The performance of the device has been proven in many installations across various cellular and land mobile radio sites.

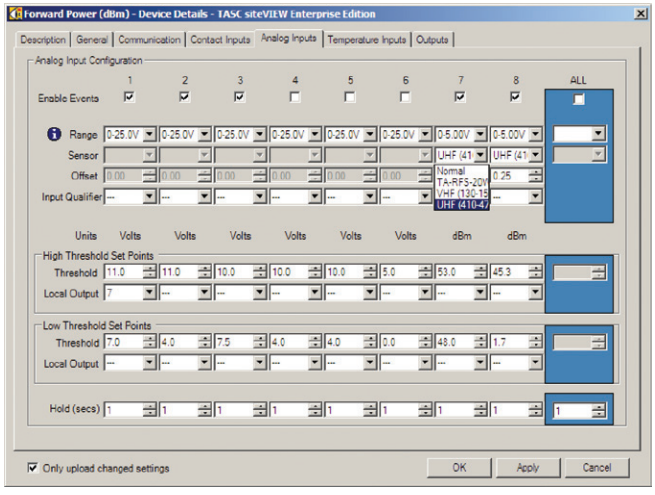
The BPS is a precision tool for measuring and monitoring forward and reflected power. The device provides highly accurate forward and reflected power measurements in real time with forward power levels up to 500 Watts average power regardless of the modulation scheme. The device can be connected to any existing radio system for immediate, reliable monitoring. The device is built utilizing a unique, patented, proprietary airline multi-section dual directional coupler with extremely low insertion loss and low passive intermodulation levels.

The BPS connects to the analog inputs of TASC's site monitoring devices (siteRSM, SPL, siteCOMMANDER). siteVIEW Enterprise 2.0/ SCCU/SPCU provide the GUI used to monitor and set the alarm points for the forward and reflected power levels. VSWR can be calculated very easily using the forward and reflected power values. By including an input qualifier such as PTT, power levels and alarms will only be reported when the radio is transmitting and an alarm condition is present.

Product Highlights & Benefits

Some of the unique features of the device are:

- insertion loss of less than 0.1 dB
- the power sensors are calibrated over a 35 dB dynamic range at 0.5 dB increments to ensure that the directivity of this novel coaxial structure is fully exploited
- reduced downtime through real-time, accurate forward and reflected power measurements
- simple integration into new or existing radio systems
- wide frequency range 40-2000MHz



It is important to know the strength of the radio signal in order to make sure the system is ready to perform when called upon. The BPS from TASC will be able to inform you if the antenna has been compromised by reporting back an alarm. Armed with this information, the appropriate action can be taken to remedy the problem.

BPS Specifications

General	
Directivity:	> 22 dB
Frequency Range:	40 – 2000 MHz
Measurement Range:	2 – 500 Watts Average Power
Insertion Loss:	< 0.1 dB
Input VSWR:	1.12:1 Maximum
Power Handling:	> 500 watts Average Power
Passive Intermodulation:	<-160 dBc IM3 2 tones @43 dBm
Power Requirements:	7 – 25 VDC @ 10 mA
Measurement	
Power Accuracy:	+ / - 0.5 dB
User Interface	
Hardware:	Linear Analog Output (0-2 VDC)
Mechanical	
RF Connectors:	N type F-F
Power/Output Connector:	2-3pin press lock. Analog Output, GND, VDC In
Operating Temperature:	-40 to + 50 degrees C
Humidity:	98% non-condensing
Dimensions:	200mm X 90mm X 40mm (8" x 3.5" x 1.5")
Weight:	1.25 kg
Housing Material:	Aluminum, iridite coating

TASC Systems Inc. is continuously working to improve system performance and expand product capabilities. Specifications are subject to change without notice.
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