The **RF** Experts

POWER SENSORS
Ethernet

4042E & 4043E SERIES

Maximize Up-Time

A powerful approach to antenna and power monitoring for smaller radio communications systems and paging networks. Designed for smaller sites where the Bird 3141 Channel Power Monitor would be under-utilized, and connecting directly to the Internet or private IP network, they can be accessed remotely for both set-up and monitoring.

Bird's Power Sensor Monitors provide reliable remote site monitoring to maximize uptime of mission critical communications. Unlike competitive solutions, the 4042E and 4043E can monitor for and alarm in the event of a reduced antenna VSWR. This provides an early warning of increased losses in the transmission line resulting from water ingress, damage, or deterioration.

Installed post-combiner, the 4042E and 4043E can generate alarms according to pre-configured parameters for forward power and minimum/maximum VSWR, then communicated to users with SNMP traps. The 4043E provides composite power monitoring while the 4042E is a channelized power sensor allowing for the individual monitoring up to 16 radios.

A powerful monitoring solution for smaller radio networks.

4042E CHANNEL POWER SENSOR MONITOR

- Frequency range 30 to 200 MHz, 100 MHz to 1000 MHz
- Monitor antenna failure and radio output simultaneously
- In-line directional RF true average power by channel or composite power by scanning channels

4043E DIRECTIONAL POWER SENSOR MONITOR

- Frequency range includes 8 bands between 118 and 940 MHz
- Provides composite power monitoring

APPLICATIONS

Commercial, industrial, and government land-mobile-radio (LMR) wireless-communications systems including:

- Public Safety
- Marine/Coast Guard
- Private Networks
- Railroad
- Civil Aviation

Bird

POWER SENSORS ETHERNET

4042E SERIES, 4043E SERIES

Specifications

MEASUREMENT

Measurement Type	
4042E Series	One PTT Input
4043E Series	True Average Forward and Reflected Power VSWR
Channel Bandwidth	
4042E Series	6.25, 12.5, 25 kHz selectable
4043E Series	N/A
Forward Power Measurement Range	**4042E** 10 W to 500 W **4043E** 0.25 W to 5 W, 2.5 W to 50 W, 25 W to 500 W
Reflected Power Measurement Range	**4042E** 1 W to 50 W **4043E** 0.025 W to 0.5 W, 0.25 W to 5 W, 2.5 W to 50 W
Impedance	50 Ohms nominal
Insertion Loss	0.2 dB max
Insertion VSWR	1.15 max
Directivity	25 dB min
Peak/Average Ratio	12 dB max
Measurement Accuracy	± 5% of reading

CONNECTORS

Interface	Ethernet 10/100/1000BASE-T (auto-sensing) Version 2.0/IEEE 802.3
RF Connectors	**Input:** See selection guide below **Output:** See selection guide below

SYSTEM

Supported Protocols	TCP/IP Hosted web page, SNMP v2.0 Client
Power Supply	5.5-25 VDC, 3W max, 0.08 in (2 mm) power jack. 15 VDC adapter included
Operating Position	Any
Push-to-Talk input (PTT) for spurious alarm suppression	NO or NC logic (software selectable) 3.5mm terminal push-lock, optically isolated

ENVIRONMENTAL

Humidity	95% max, noncondensing
Altitude	15,000 ft (4,572 m) max
Operating Temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage Temperature	-40 °C to 80 °C (-40 °F to 176 °F)

PHYSICAL

Size (without connectors)	5.2 in x 3.8 in x 1.4 in (13.2 cm x 9.7 cm x 3.6 cm)
Weight	0.5 lb (0.23 kg)

CERTIFICATIONS

Certifications	CE, ROHS

SENSOR SELECTION GUIDE

Model Number	Frequency Range (ff)	Forward Power (ww)	Communication Interface (xx)	Input Connector (yy)	Output Connector (zz)
4042E-1-ffwwxx-yyzz	41 = 30 to 200 MHz 43 = 100 to 1000 MHz	05 = 10 W to 500 W	03 = Ethernet	01 = N(f) 02 = N(m) 03 = 4.3/10(f) 04 = 4.3/10(m) 05= 7/16 DIN(F) 06= 7/16 DIN(M)	01 = N(f) 02 = N(m) 03 = 4.3/10(f) 04 = 4.3/10(m) 05= 7/16 DIN(F) 06= 7/16 DIN(M)
4043E-1-ffwwxx-yyzz	42 = 118 MHz to 144 MHz 44 = 144 MHz to 244 MHz 45 = 380 MHz to 450 MHz 46 = 450 MHz to 512 MHz 47 = 762 MHz to 806 MHz 48 = 806 MHz to 869 MHz 49 = 896 MHz to 940 MHz 50 = 225 MHz to 400 MHz*	02 = 0.25 W to 5 W 03 = 2.5 W to 50 W 05 = 25 W to 500 W	03 = Ethernet	01 = N(f) 02 = N(m) 03 = 4.3/10(f) 04 = 4.3/10(m) 05= 7/16 DIN(F) 06= 7/16 DIN(M)	01 = N(f) 02 = N(m) 03 = 4.3/10(f) 04 = 4.3/10(m) 05= 7/16 DIN(F) 06= 7/16 DIN(M)

*225 MHz to 400 MHz = Military Band

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