

# 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.

#### 4042E CHANNEL POWER SENSOR MONITOR

- Frequency range 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 7 bands between 118 and 940 MHz
- Provides composite power monitoring

A powerful monitoring solution for smaller radio networks.

#### APPLICATIONS

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

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

# 4042E SERIES, 4043E SERIES

## Specifications

### MEASUREMENT

<b>Measurement Type</b> 4042E Series	One PPT Input
<b>4043E Series</b>	True Average Forward and Reflected Power VSWR
<b>Frequency Range</b> 4042E Series	100 to 1000 MHz
<b>4043E-1-420503-yyzz</b>	118 MHz to 136 MHz
<b>4043E-1-440503-yyzz</b>	144 MHz to 174 MHz
<b>4043E-1-450503-yyzz</b>	380 MHz to 450 MHz
<b>4043E-1-460503-yyzz</b>	450 MHz to 512 MHz
<b>4043E-1-470503-yyzz</b>	762 MHz to 806 MHz
<b>4043E-1-480503-yyzz</b>	806 MHz to 869 MHz
<b>4043E-1-490503-yyzz</b>	896 MHz to 940 MHz
<b>Channel Bandwidth</b> 4042E Series	6.25, 12.5, 25 kHz selectable
<b>4043E Series</b>	N/A
<b>Forward Power Measurement Range</b>	<b>4042E</b> 10 W to 500 W <b>4043E</b> 25 W to 500 W
<b>Reflected Power Measurement Range</b>	<b>4042E</b> 1 W to 50 W <b>4043E</b> 2.5 W to 50 W
<b>Impedance</b>	50 Ohms nominal
<b>Insertion Loss</b>	0.2 dB max
<b>Insertion VSWR</b>	1.15 max
<b>Directivity</b>	25 dB min
<b>Peak/Average Ratio</b>	12 dB max
<b>Measurement Accuracy</b>	± 5% of reading

### CONNECTORS

<b>Interface</b>	Ethernet 10/100/1000BASE-T (auto-sensing) Version 2.0/IEEE 802.3
<b>RF Connectors</b>	<b>Input:</b> N(m), 4.3/10(m) <b>Output:</b> N(f), 4.3/10(f)

### CONNECTION OPTIONS FOR 4042E SERIES & 4043E SERIES

Max Forward Power Measurement	Comm	Input Connector (yy)	Output Connector (zz)
05 = 500 W	03 = Ethernet	01 = N(f) 02 = N(m) 03 = 4.3/10(f) 04 = 4.3/10(m)	01 = N(f) 02 = N(m) 03 = 4.3/10(f) 04 = 4.3/10(m)

### SYSTEM

<b>Supported Protocols</b>	TCP/IP Hosted web page, SNMP v2.0 Client
<b>Power Supply</b>	5.5-40 VDC, 3W max, 0.08 in (2 mm) power jack. 15 VDC adapter included
<b>Operating Position</b>	Any
<b>Push-to-Talk input (PTT) for spurious alarm suppression</b>	NO or NC logic (software selectable) 3.5mm terminal push-lock, optically isolated

### ENVIRONMENTAL

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

### PHYSICAL

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

### CERTIFICATIONS

<b>Certifications</b>	CE, ROHS
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[birdrf.com/products](http://birdrf.com/products)

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