

CHANNEL POWER SENSOR MONITOR

Ethernet

4042E-PTT



Inputs That Adapt, Alarms That Deliver

The Bird 4042E-PTT is designed to optimize multi-channel RF systems with 16 Push-To-Talk (PTT) inputs and expanded I/O capabilities—streamlining operations, eliminating false alarms, and ensuring seamless integration in complex environments.

- **PTT Inputs:** Activate alarms only during active transmissions, reducing unnecessary alerts.
- **Expanded I/O Capabilities:** Includes user-defined inputs and hard contact alarms for customized monitoring and alerting.
- **Real-Time Management:** SNMP support and a secure web-based GUI streamline operations and improve system visibility.

Built on the proven reliability of the 4042E series, this model offers greater flexibility for channel-specific monitoring and alarm configurations—delivering trusted performance in demanding RF environments.

Smarter Antenna Monitoring for
Maximum System Reliability

KEY SPECIFICATIONS

- **Frequency Range:** 100 to 1000 MHz
- **Power Handling:** Forward: 500 W, Reflected: 10 dB below forward
- **Connectivity:** RJ-45 Ethernet, SNMP compatible
- **PTT Inputs:** 16 terminals (3.3 VDC supplied)
- **User Inputs:** 2 terminals (3.3 VDC supplied)
- **HCA Outputs:** 2 terminals, NC/NO configurations
- **Interface:** Web-based GUI with password protection
- **Alarms:** Configurable for forward & reflected power, VSWR, and user inputs

APPLICATIONS

- **Public Safety:** Reliable operation for emergency communication networks.
- **Telecom:** Continuous diagnostics and alarm management in RF environments.
- **Industrial:** Customizable monitoring for complex RF systems.
- **Medical:** Dependable RF monitoring for healthcare systems.
- **Marine:** Supports maritime communication and navigation.
- **Aviation:** Ensures seamless air traffic and ground communications.
- **Utilities:** Monitors RF systems in infrastructure networks.

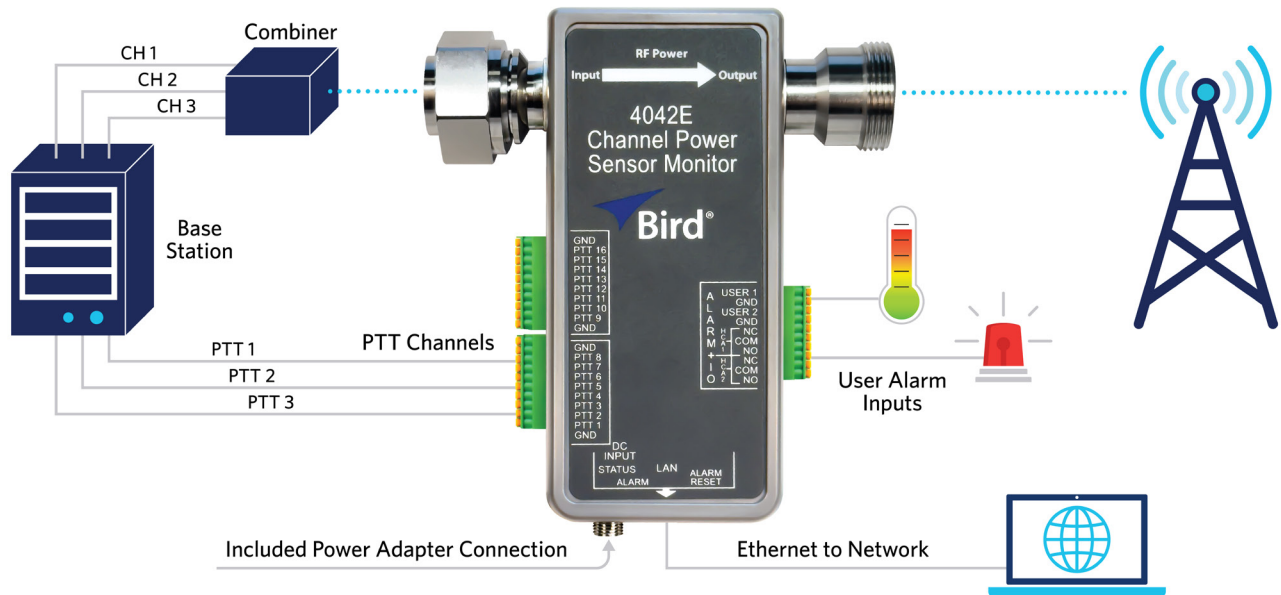
Essential Features for Advanced RF Systems

Designed to Elevate Performance and Reliability

The Bird 4042E-PTT is engineered to meet the demands of modern multi-channel RF environments with innovative capabilities, including 16 Push-To-Talk (PTT) inputs and expanded I/O options. These features provide:

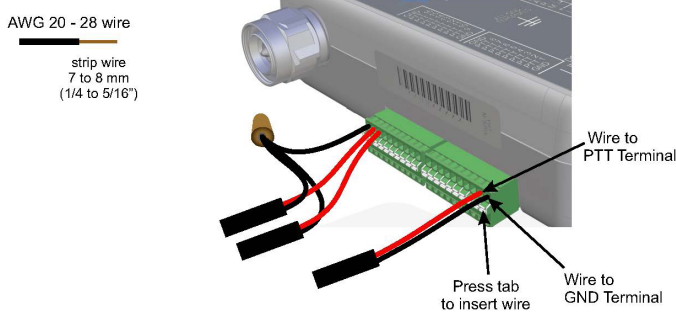
- **False Alarm Prevention:** PTT inputs activate alarms only when transmitters are engaged, reducing noise and enabling rapid, accurate responses.
- **Seamless Integration:** Customizable inputs and hard contact outputs connect effortlessly to external sensors, alarms, or facility systems.
- **Effortless Management:** SNMP compatibility and a user-friendly web-based GUI streamline real-time monitoring and configuration.

Maximize your RF system performance with the 4042E-PTT, delivering unparalleled visibility by precisely measuring both single-channel and aggregate power across multiple channels—ensuring nothing goes unnoticed.



4042E-PTT

Key Features



16 Push-To-Talk PTT Inputs

- Prevent false alarms by ensuring detection only during transmitter activity. Configurable for open/closed logic for precise control.
- Each PTT input corresponds to an individual RF channel, enabling monitoring of single-channel or aggregate power.
- Users can configure the system to trigger alarms per channel or based on total combined power.

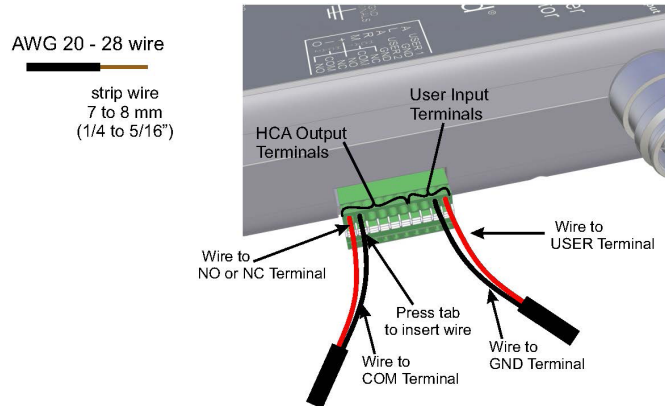
Alarm + I/O Connector

User Inputs:

- Two user inputs available for connecting sensors/contacts of the customer's choice.
- Supports automated monitoring.
- Configurable as normally open (NO) or normally closed (NC) connections

HCA Outputs:

- Two outputs for connecting indicators, audible alarms, facility alarm panels, or other devices.
- Provides flexible alarm configurations for various monitoring needs.



| Sensor Name: 4042E-PTT | | | | |
|------------------------|----------------------|-----------------|------|-----------|
| Forward | 0.0 W | | | |
| Reflected | 0.0 W | | | |
| VSWR | 1.00 | | | |
| Temperature | 52.6 °C | | | |
| Uptime | 0:00:15:02 | | | |
| User Input 1 | Alarm State Disabled | | | |
| User Input 2 | Alarm State Disabled | | | |
| Channel Name | Forward Power | Reflected Power | VSWR | PTT State |
| 100 MHz | 0.0 W | 0.0 W | 1.0 | Disabled |

Web-based GUI

- Allows real-time monitoring of both individual channel power and total aggregate power.
- Configurable alarm thresholds for single-channel or composite power conditions.
- Secure, remote access for system adjustments and diagnostics.

MEASUREMENTS

| | |
|--|--|
| Frequency Range | 100 to 1000 MHz |
| Measurement Type | In-Line, Directional RF True Average Power by Channel, or aggregate Power (by scanning channels) |
| Channel Bandwidth | 6.25, 12.5, 25 kHz selectable |
| Forward Power Measurement Range | 10W to 500W Single Channel or Aggregate Forward Average Power |
| Reflected Power Measurement Range | 1W to 50W Single Channel or Aggregate Reflected Average Power |
| 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

| | |
|---|---|
| Interfaces | Ethernet 10/100/1000BASE-T (auto-sense) Version 2.0/IEEE 802.3 |
| User I/O Connectors Terminal block, push-in (3) 2.5mm pitch, 20-28AWG wire range | 16 Push-to-talk (PTT), 2 User Inputs & Ground, 2 NO/NC alarm relay switches |
| RF Connectors | Input: See selection guide below Output: See selection guide below |

SYSTEM

| | |
|------------------------------|--|
| User I/O Push-to-Talk | 16 channels, 3.3V, 10k internal pull-up, NO or NC logic (UI selectable) |
| User Input | 2 channels, 3.3V, 10k internal pull-up, NO or NC logic (UI selectable) |
| Alarm Relay | 2 Form-C hard-contact alarm relay switches, NO/NC/COM, 110 VDC/125 VAC, 1A Max. contact rating |
| Power Supply | 5.5-25 VDC, 3W max, 0.08 in (2 mm) power jack. 15 V AC adapter included |
| Operating Position | Any |

ENVIRONMENTAL

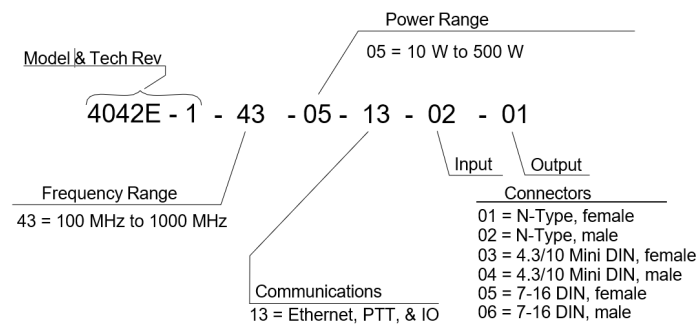
| | |
|-------------------------------------|------------------------------------|
| Humidity Sensor | 95% max, non-condensing |
| AC Adapter | 80% max, non-condensing |
| Altitude | 15,000 ft (4,600 m) max |
| Operating Temperature Sensor | 0 °C to 50 °C (32 °F to 122 °F) |
| AC Adapter | 0 °C to 40 °C (32 °F to 104 °F) |
| Storage Temperature Sensor | -40 °C to 80 °C (-40 °F to 176 °F) |
| AC Adapter | -20 °C to 80 °C (-4 °F to 176 °F) |

PHYSICAL

| | |
|----------------------------------|--|
| Size (without connectors) | 5.4 in L x 3.8 in W x 1.4 in H (137 mm x 97 mm x 36 mm) |
| Weight | 0.6 lb (0.27 kg) |

CERTIFICATIONS

| | |
|-----------------------|----------|
| Certifications | CE, ROHS |
|-----------------------|----------|



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