Accutech BR10

Wireless Base Radio

Product at a glance

At the heart of any Accutech™ wireless instrument network is the wireless base radio. The Accutech BR10 automatically communicates with deployed instrumentation field units attached to it in a local area star network and makes the field data available to an existing control system through a local serial Modbus interface. A third-party Modbus TCP/IP converter can also be employed to add Ethernet connectivity. The product is powered by readily available 9...38 Vdc and is self-contained for use in extreme environments.

One base radio can communicate with up to a maximum 100 field units. With the capability to scale up to as many as 256 base radios, Accutech wireless instrumentation easily accommodates your expansion plans.

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Specifications - Accutech BR10

General

Device	Base Radio
Location	Interfaced with controller or PC
Frequency Range	900 MHz and 2.4 GHz license-free bands

Features

Output Options	• RS-485 digital communications with conversion to RS-232 or USB for interface with PC or server and Accutech Manager. • Serial Modbus RTU (Binary) over RS-485 • Modbus over TCP/IP (via optional converter)
Operating Ambient Environment	-40...+85 °C (-40...+185 °F) rated for industrial use
Materials of Construction	Epoxy-painted aluminum
Power	10...30 Vdc
Certifications	North America HAZLOC: • cCSAus • Explosion Proof (only with integral NEMA 4X antenna cover): • Class I, Div. 1, Groups A, B, C & D, T4 • Class I, Div. 2, Groups A, B, C, & D, T4 EMC & Radio: • North America: FCC, IC • Australia: C-Tick
Local Configuration Interface	Integrated LCD with membrane-switch buttons
Remote Configuration Interface	Accutech Manager, Windows®-based GUI software, providing network-wide monitoring and performance-management features and field unit configuration capabilities
Network Capacity	• Max. 100 field units per base radio • Max. 256 base radios per network
RF Characteristics	900 MHz: • 902...928 MHz Frequency Hopping Spread Spectrum (FHSS), FCC certified ISM license-free band • 915...928 MHz (Australia) • Data Rates: 19.2 kbps, and 76.8 kbps • Typical Electrical Transmit Power: 0.4 W maximum 2.4 GHz: • 2400...2483.5 MHz license-free band Frequency Hopping Spread Spectrum (FHSS) Radio • Data Rates: 50/100 kbps (FSK Modulation) • Typical Electrical Transmit Power: +10.6 dBm • Typical Receive Sensitivity (0.1 % BER): - 102 dBm @ 50 kbps, - 99 dBm @ 100 kbps • Typical CW Receiver Blocking Rejection: 64 dB for CW @ +/- 5 MHz, 74 dB for CW @ +/- 30 MHz
Operating Shock and Vibration	Tested per IEC 60068-2-6 (vibration) and IEC 60068-2-27 (shock)
Electromagnetic Compatibility	Operates within specification in fields from 80 to 1,000MHz with field strengths to 30V/m. Meets IEC 61000-6-2 General Immunity Standard

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Model Code - Accutech BR10

TBUABR10-TX21N00 represents a typical part number.

Model	Type
TBUABR10	Wireless Base Radio

Code	Select: RF Module Type
T	902...928 MHz band (FCC / IC)
D	915...928 MHz band (Australia)
F	2.4 GHz band

Code	Select: Certifications
X	CSA: Explosion Proof - see certification details on previous page, for Integral Antenna BR10 only
G	General Purpose - Non-Hazardous locations only, required for remote antenna configurations

Code	Select: Housing
2	NEMA 4X Aluminum Housing

Code	Select: Protocol
1	Modbus and Streaming output for Accutech Manager and output modules

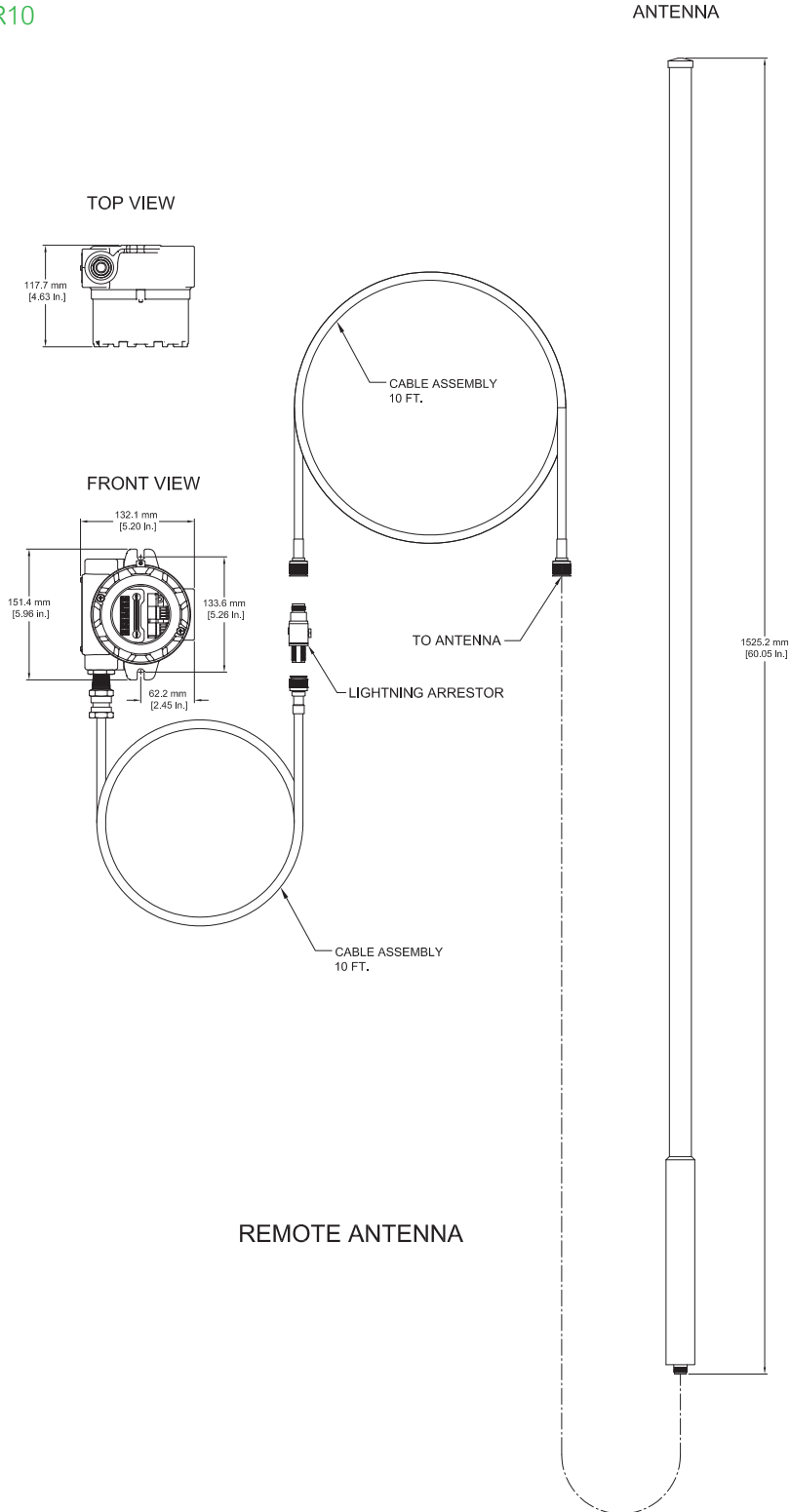| Code	Future Option
N	None

Code	Select: Integral Antenna or Cable & Connector Interface
00	Integral Antenna with NEMA 4X Antenna Cover (meets Xproof Div 1/ Div 2)
10	10 ft. (3.05 m) cable with N-Male connector for remote antenna configurations (non-hazardous locations only)
25	25 ft. (7.62 m) cable with N-Male connector for remote antenna configurations (non-hazardous locations only

Accutech BR10
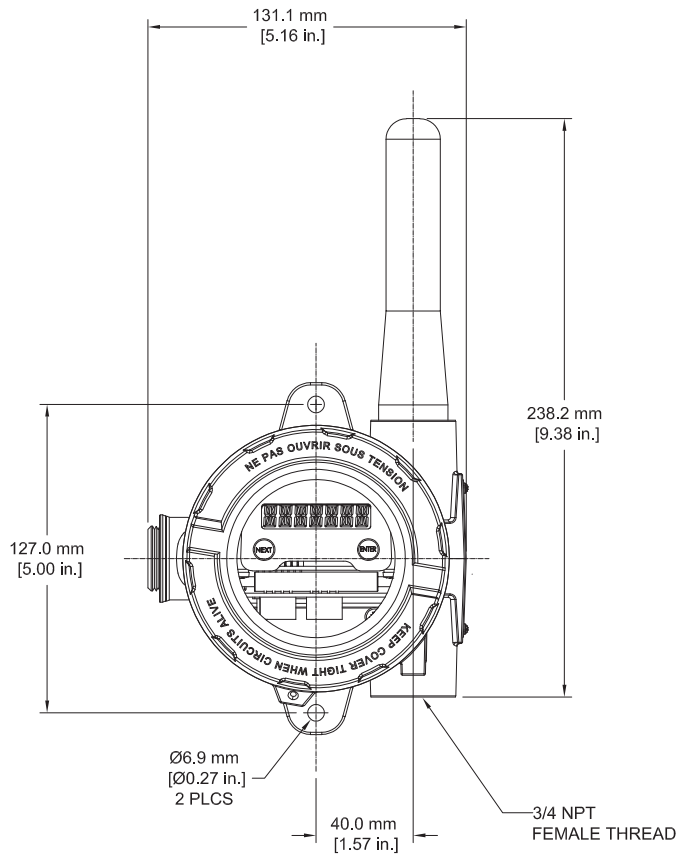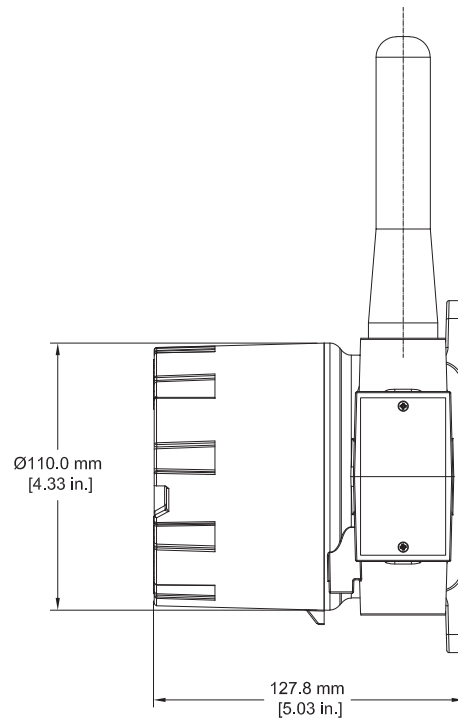## Wireless Base Radio

Dimensions - Accutech BR10

ANTENNA

TOP VIEW

117.7 mm
[4.63 In.]

FRONT VIEW

132.1 mm
[5.20 In.]

151.4 mm
[5.96 in.]

133.6 mm
[5.26 In.]

62.2 mm
[2.45 In.]

CABLE ASSEMBLY
10 FT.

TO ANTENNA

LIGHTNING ARRESTOR

CABLE ASSEMBLY
10 FT.

1525.2 mm
[60.05 In.]

REMOTE ANTENNA

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Dimensions - Accutech BR10 (cont'd)

FRONT VIEW

SIDE VIEW

131.1 mm
[5.16 in.]

238.2 mm
[9.38 in.]

127.0 mm
[5.00 in.]

Ø6.9 mm
[Ø0.27 in.]
2 PLCS

40.0 mm
[1.57 in.]

3/4 NPT
FEMALE THREAD

Ø110.0 mm
[4.33 in.]

127.8 mm
[5.03 in.]

Note: This product is RoHS-compliant.

Disclaimer: Schneider Electric reserves the right to change product specifications. For ordering information call direct worldwide: +1 (613) 591-1943; Toll Free within North America: +1 (888) 267-2232 or Email: orderstrss@se.com. For more information visit www.se.com.

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