Accutech AP10

Wireless absolute pressure field unit

Schneider Electric

The Accutech™ AP10 wireless absolute pressure field unit provides pressure data in a variety of ranges from 30 to 250PSIA. With its integrated and highly sensitive sensor design, the product may be configured to sample and transmit updates between once per second and once per minute. Transmit rate changes can also be triggered based on events that are defined in terms of measurement limits or rates of movement. This function allows for maximisation of battery life.

Accutech field units automatically report field data to a centralised Accutech base radio over distances of up to 3000ft (~1000m). Each field unit is self-contained, featuring an integrated 900MHz or 2.4GHz (license-free band), frequency hopping, spread-spectrum transceiver and antenna, and long-lasting battery that offers 5+ years of maintenance-free service (up to 10 years depending on data rates and battery options). Accutech networks are highly scalable with the possibility of 100 field units per base radio and 256 base radios per installation. Accutech field units are housed within a weather-resistant NEMA 4X enclosure with options for a remote sensor and remote antenna on select models. Field units are available in a wide range of certifications and come with a 3-Year warranty (parts and labor).

Product Data Sheet Accutech AP10
Specifications

	Accutech AP10
Functional	
Sensor Type	Absolute Pressure
Location	Field Unit
Frequency Range	900MHz and 2.4GHz license-free bands
Power	Integrated battery
Network Capacity	• Max. 100 field units per base radio • Max. 256 base radios per network
Features	
Remote Configuration Interface	Accutech Manager, Windows®-based GUI software, providing network-wide monitoring and performance-management features and field unit configuration capabilities
Local Configuration Interface	• Integrated LCD with membrane-switch buttons • Display provides pressure reading and error messages, if applicable • Configure sampling and RF parameters locally using membrane-switch buttons.
Sensor	
Accuracy	• ± 0.25% of full-scale at 20°C (68°F) • ± 0.5% of sensor URL including combined effects of linearity, hysteresis, repeatability, and temperature. Addition of seals will reduce accuracy due to thermal effects of fill fluid.
Stability	Combined zero and span stability: less than ± 0.1% of sensor URL per year at 21°C (70°F)
Output Resolution	24-bit Analog to Digital conversion
Absolute Pressure Ranges	30, 250psia (2, 17BAR)
RF Characteristics	900MHz: • 902 to 928MHz Frequency Hopping Spread Spectrum (FHSS), FCC certified ISM license-free band • 915 to 928MHz (Australia) • Data Rates: 4,800, 19,200 or 76,800bps • 0.4W maximum 2.4GHz: • 2400 to 2483.5MHz ISM license-free band Frequency Hopping Spread Spectrum (FHSS) Radio • Data Rates: 50/100kbps (FSK Modulation) • Typical Electrical Transmit Power: +10.6dBm • Typical Receive Sensitivity (0.1% BER): - 102dBm @ 50kbps, - 99dBm @ 100kbps • Typical CW Receiver Blocking Rejection: 64dB for CW @ +/- 5MHz, 74dB for CW @ +/- 30MHz
Self-Diagnostics	• Low battery notification – indicates the need to replace the battery (approximately one month advance notification) • Contains software and hardware that continuously monitors operation. Any sensor or device parameter that is out of spec is identified and reported
General	
Operating Ambient Environment	• -40°C to +121°C (-40°F to +250°F), process temperature, steady-state • -40°C to +110°C (-40°F to +230°F) ambient temperature sensor • -40°C to +85°C (-40°F to +185°F) electronics • -40°C to +85°C (-40°F to +185°F) display (below -20°C LCD visibility reduced) • Humidity: 0 to 95%, non-condensing
Materials of Construction	• Fittings: 316L Stainless Steel • Epoxy coated Aluminum enclosure
Power	• Self-contained power • 1: D Cell, Lithium Thionyl battery • Battery life up to ten years of service, depending on configuration
Operating Shock and Vibration	Tested per IEC 60068-2-6 (vibration) and 2-27 (shock)
Random Vibration Characteristics	Tested to withstand 6 g's, 15 minutes per axis from 9 – 500Hz
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 and IEC 61000-6-4 compatibility emissions standard
Certifications	North America HAZLOC: • cCSAus • Intrinsically Safe: Exia IIC; AEx ia IIC • Class I, Div. 1, Groups A, B, C & D, T3 • Class II, Div. 1, Groups E, F and G, T3 • Class III, T3 • Class 1, Zone 0, AEx ia IIC, T3 • Class I, Div. 2, Groups A, B, C & D, T4 • Class II, Div. 2, Groups F and G, T4 • Class III, T4 ATEX/IECEx HAZLOC: • LCIE • Intrinsically Safe: Ex ia IIC T3 EMC & Radio: • North America : FCC , IC • Europe : CE Mark (R&TTE) • Australia : C - Tick

Disclaimer: Schneider Electric reserves the right to change product specifications. For more information visit www.schneider-electric.com.

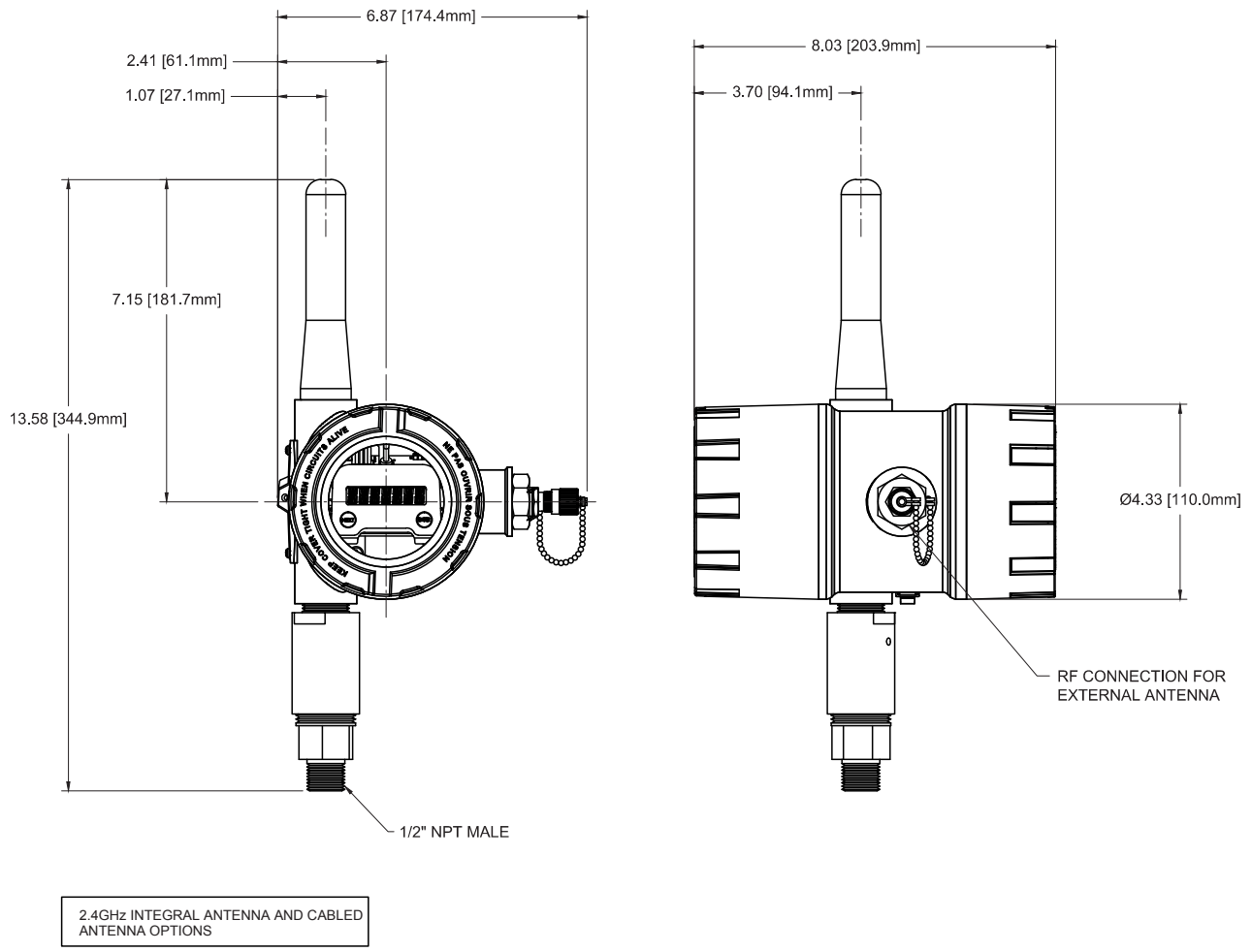
Product Data Sheet Accutech AP10
Model Code

	TBUAAPTJ1N00S030A represents a typical part number.
Model	Type
TBUAAP	Wireless Absolute Pressure Field Unit
Code	Select: RF Module Type
T	902MHz - 928MHz band (FCC / IC)
D	915MHz - 928MHz band (Australia)
F	2.4GHz
Code	Select: Certifications
J	Intrinsically Safe Protection cCSA us: see specifications page
Q	ATEX/IECEx: see specifications page
Code	Select: Housing & Battery Pack
1	NEMA 4X Housing with 1 D Cell
Code	Select: Future Option
N	None
Code	Select: Integral Antenna
00	Integral Antenna (2.4GHz unit comes default with integral antenna and exter nal antenna connector)
04	External Antenna connector (900MHz only, antenna and cables purchased separately)
Code	Select: Sensor Mounting
S	Integral
R	Remote Sensor with 10ft. (3.05m) cable
Code	Select: Sensor Range

	Upper Range Limit (URL)		Proof Pressure		Burst Pressure	
	PSIA	(BAR)	PSIA	(BAR)	PSIA	(BAR)
030	30	(2)	60	(4)	500	(34)
250	250	(17)	500	(34)	1500	(103)

Code	Select: Future Option
A	None

Product Data Sheet Accutech AP10
Dimensions



2.4GHz INTEGRAL ANTENNA AND CABLED ANTENNA OPTIONS

Foxboro by Schneider Electric
38 Neponset Avenue
Foxboro, Massachusetts 02035 USA
Direct worldwide: +1-508-549-2424
Toll free within North America: 1-866-746-6477
Email: systems.support@schneider-electric.com
www.schneider-electric.com

© 2015 Schneider Electric. All Rights Reserved. Schneider Electric and Accutech are trademarks and the property of Schneider Electric SE, its subsidiaries and affiliated companies. All other trademarks are the property of their respective owners. Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries - March 2016