Green Premium™ Product

Life Is On | Schneider Electric

Accutech AP10

Wireless Absolute Pressure Field Unit

Product at a glance

The Accutech™ AP10 wireless absolute pressure field unit provides pressure data in 30 and 250 PSIA. 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 battery life optimization while providing only the data you need to record process events.

Accutech field units automatically report field data to a centralized Accutech base radio over distances of up to 3000 ft. (~1000 m). Each field unit is self-contained, featuring an integrated 900 MHz or 2.4 GHz (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.

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Specifications - Accutech AP10

General

Sensor Type	Absolute Pressure
Location	Field Unit
Frequency Range	900 MHz and 2.4 GHz license-free bands

Functional

Pressure Sensor	
Absolute Pressure Ranges	30 PSIA and 250 PSIA (2 BAR and 17 BAR)
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)
Operating Ambient Environment	• -40...+121 °C (-40...+250 °F), process temperature, steady-state • -40...+110 °C (-40...+230 °F) ambient temperature sensor • -40...+85 °C (-40...+185 °F) electronics • -40...+85 °C (-40...+185 °F) display (below -20 °C LCD visibility reduced) • Humidity: 0...95%, non-condensing
Materials of Construction	• Fittings: 316L Stainless Steel • Epoxy-coated Aluminum enclosure
Power	• Self-contained power with integrated battery • 1: D-cell Lithium Thionyl battery • Battery life up to ten years of service, depending on configuration
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

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Common Accutech Field Unit Specifications

Features

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
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
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 specification is identified and reported
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)
Random Vibration Characteristics	Tested to withstand 6 G, 15 minutes per axis from 9...500 Hz
Electromagnetic Compatibility	Operates within specification in fields from 80...1,000 MHz with field strengths to 30 V/m. Meets IEC 61000-6-2 General Immunity Standard and IEC 6100-6-4 compatibility emissions standard
Output Resolution	24-bit analog-to-digital conversion

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Model Code - Accutech AP10

TBUAAPTJ1N00S030A represents a typical part number.

Model	Type
TBUAAP	Wireless Absolute Pressure Field Unit

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
	Intrinsically Safe Protection
J	CSA - see certification details on previous page
Q	ATEX & IECEx - see certification details on previous page

Code	Select: Housing & Battery Pack
1	NEMA 4X Housing with 1 D-cell

Code	Select: Future Option
N	None

Code	Select: Antenna
00	Integral Antenna (2.4 GHz unit comes default with integral antenna and external antenna connector)
04	External Antenna connector (900 MHz only, antenna and cables purchased separately)

Code	Select: Sensor Mounting
S	Integral
R	Remote Sensor mounting with 10 ft. (3.05 m) cable

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Model Code - Accutech AP10 (cont'd)

TBUAAPTJ1N00S030A represents a typical part number.

Code	Select: Sensor Range					
	Upper Range Limit (URL)		Proof Pressure		Burst Pressure	
	PSIA	BAR	PSIA	BAR	PSIA	BAR
030	30	2	60	4	150	10
250	250	17	500	34	1250	86

Code	Future Option
A	None

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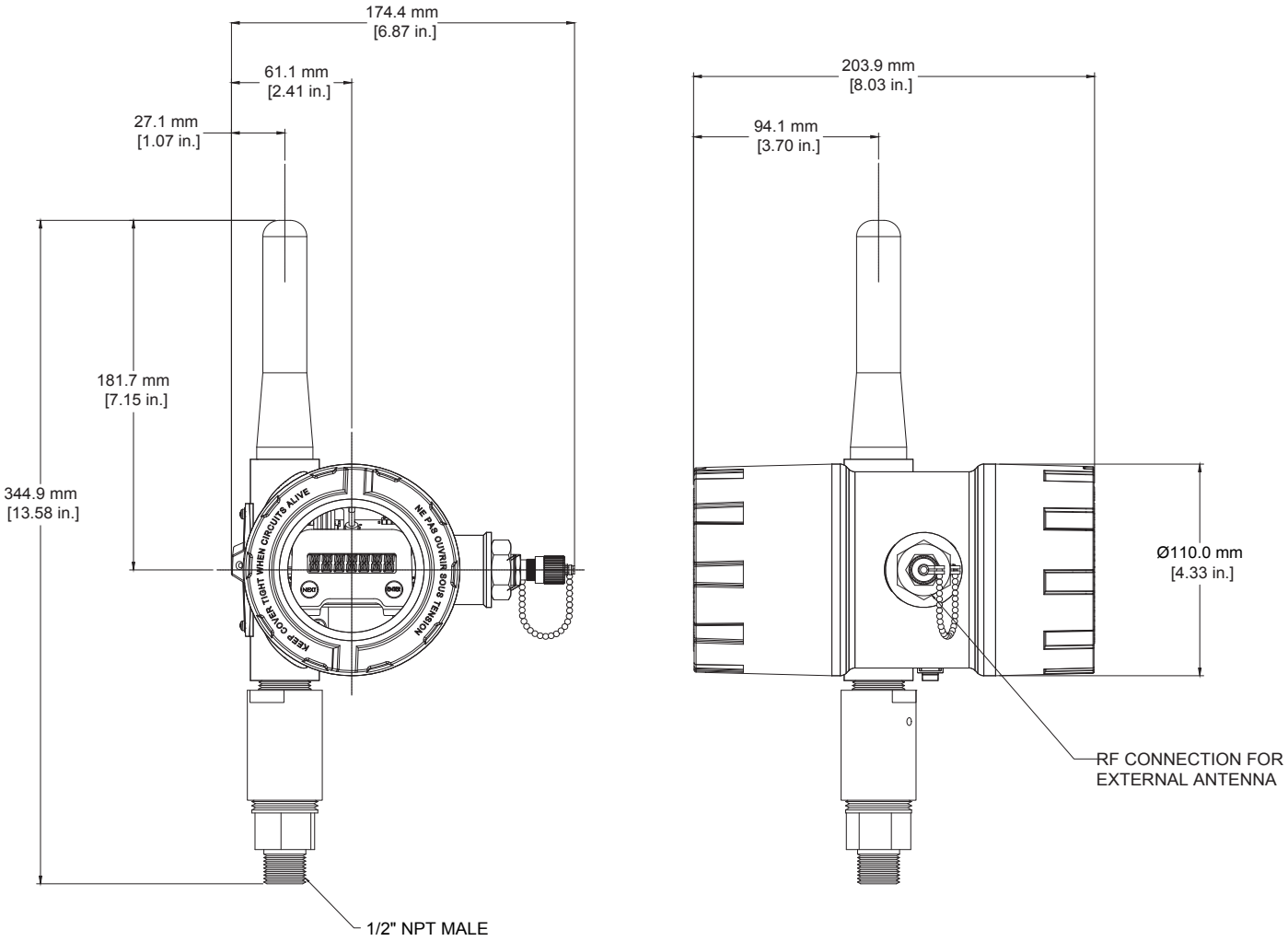
Dimensions - Accutech AP10



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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