Accutech GP10

Wireless Gauge Pressure Field Unit

Product at a glance

The Accutech™ GP10 wireless gauge pressure field unit provides pressure data in a variety of ranges from 15 to 15000 PSIG. 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 GP10

General

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

Functional

Pressure Sensor

	Upper Range Limit (URL)		Proof Pressure		Burst Pressure	
	PSIG	**BAR**	**PSI**	**BAR**	**PSI**	**BAR**
Range	15	1	30	2	75	5
	30	2	60	4	150	10
	100	7	200	14	500	34
	250	17	500	34	1250	86
	1000	70	2000	138	5000	345
	2500	170	5000	345	12500	862
	5000	350	10000	689	20000	1379
	10000	700	20000	1379	30000	2068
	15000	100	30000	2068	40000	2758

	Sensor Range psig	Accuracy
Accuracy	15	± 0.5% of full-scale reading over temperature range
	30	± 0.5% of full-scale reading over temperature range
	100	± 0.5% of full-scale reading over temperature range
	250	± 0.5% of full-scale reading over temperature range
	1000	± 0.5% of full-scale reading over temperature range
	2500	± 0.3% of full-scale reading over temperature range
	5000	± 0.3% of full-scale reading over temperature range
	10000	± 0.5% of full-scale reading over temperature range
	15000	± 0.25% of full-scale reading over temperature range
Stability	Combined zero and span stability: less than ± 0.1% of sensor URL per year at 21 °C (70 °F)	

Operating Ambient Environment	• -40...+85 °C (-40...+185 °F) electronics • -40...-20 °C (-40...-4 °F) display (with reduced visibility) • Humidity: 0...95%, non-condensing
Materials of Construction	• Type 316 stainless steel base and diaphragm • Standard 1.25 cm (0.5 in.) MNPT (other options available, see Model Code section) • 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

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Common Accutech Field Unit Specifications

Features

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
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 • 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 GP10

TBUAGPTJ1N00S005A represents a typical part number.

Model	Type
TBUAGP	Wireless Gauge 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**
	For 15 to 10K PSI Sensors
S	Integral Sensor mounting with 1/2 in. NPT fitting
R	Remote Sensor mounting with 10 ft. cable and 1/2 in. NPT fitting

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Model Code - Accutech GP10 (cont'd)

TBUAGPTJ1N00S005A represents a typical part number.

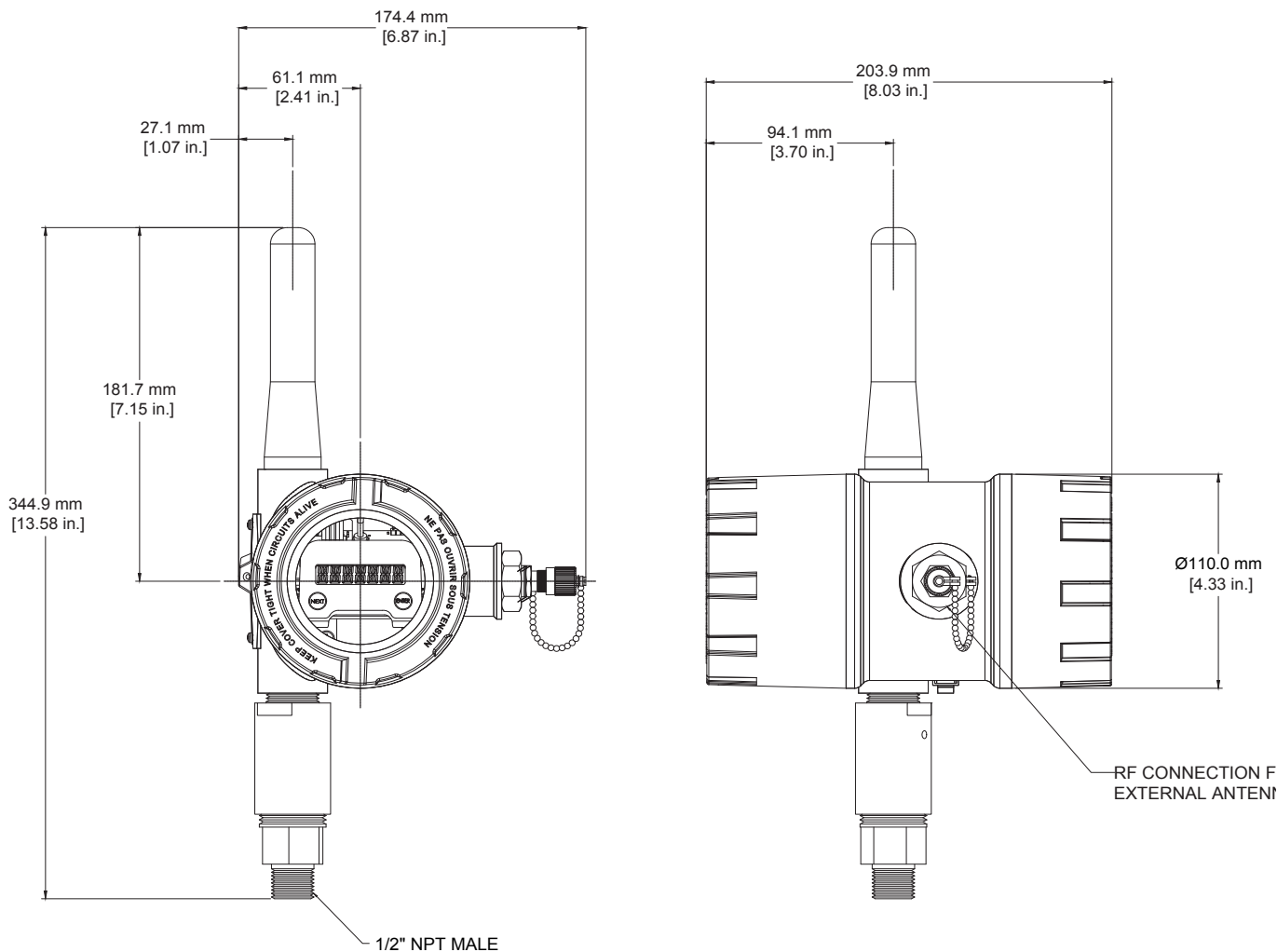| Code	Select: Sensor Mounting (cont'd)
	For 15K PSI Sensors
	F250 Fitting
E	Remote Sensor mounting with 3.01 m (10 ft.) cable and F250 fitting
	NPT Fitting - consult factory for delivery
R	Remote Sensor mounting with 3.01 m (10 ft.) cable and 1/4 in. NPT fitting

Code	Select: Sensor Range					
	Upper Range Limit (URL)		Proof Pressure		Burst Pressure	
	PSIG	(BAR	PSI	(BAR	PSI	(BAR
015	15	1	30	2	75	5
030	30	2	60	4	150	10
100	100	7	200	14	500	34
250	250	17	500	34	1250	86
1K0	1000	70	2000	138	5000	345
2K5	2500	170	5000	345	12500	862
5K0	5000	350	10000	689	20000	1379
10K	10000	700	20000	1379	30000	2068
15K	15000	1030	30000	206	40000	2758

Code	Future Option
A	None

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Dimensions - Accutech GP10

174.4 mm [6.87 in.]
61.1 mm [2.41 in.]
27.1 mm [1.07 in.]
181.7 mm [7.15 in.]
344.9 mm [13.58 in.]
1/2" NPT MALE

203.9 mm [8.03 in.]
94.1 mm [3.70 in.]
Ø110.0 mm [4.33 in.]
RF CONNECTION F EXTERNAL ANTEN

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.