

Accutech GL10

Wireless Gauge Level Field Unit



Product at a glance

The Accutech™ GL10 wireless gauge level field unit is designed to measure hydrostatic level in a vented tank and is equipped with an extended sensor, allowing for improved positioning of the wireless transceiver without compromising the sensor's measurement accuracy. Specific-gravity correction and multiple units of level measurement are supported.

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 GL10

General

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

Functional

Pressure Sensor

Absolute Pressure Range	15 PSIA (1.034 BAR), 30 PSIA (2.068 BAR)
Accuracy	<ul style="list-style-type: none"> • $\pm 0.25\%$ of full-scale at 20 °C (68 °F) • $\pm 0.5\%$ of sensor URL over temperature range -40...+85 °C (-40...+185 °F)
Stability	Combined zero and span stability: less than $\pm 0.1\%$ of sensor URL per year at 21 °C (70 °F)
Extended Sensors	The extended sensors enable installation of the electronics and wireless unit in an elevated, unobstructed location to enhance transmission range and isolate electronics from process vibration.
Operating Ambient Environment	<ul style="list-style-type: none"> • -40...+121 °C (-40...+250 °F) steady-state process temperature • -40...+85 °C (-40...+185 °F) electronics ambient temperature • -40...+85 °C (-40...+185 °F) display (below -20 °C LCD visibility reduced) ambient temperature • Humidity: 0...95%, non-condensing
Materials of Construction	<ul style="list-style-type: none"> • Fittings: 316L Stainless Steel • Epoxy-coated Aluminum enclosure
Power	<ul style="list-style-type: none"> • Self-contained power with integrated battery • 1: D-cell Lithium Thionyl battery • Battery life up to ten years of service, depending on configuration
Certifications	<p>North America HAZLOC:</p> <ul style="list-style-type: none"> • 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 <p>ATEX/IECEX HAZLOC:</p> <ul style="list-style-type: none"> • LCIE • Intrinsically Safe: Ex ia IIC T3 <p>EMC & Radio:</p> <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Max. 100 field units per base radio • Max. 256 base radios per network
Self-Diagnostics	<ul style="list-style-type: none"> • 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	<p>900 MHz:</p> <ul style="list-style-type: none"> • 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 <p>2.4 GHz:</p> <ul style="list-style-type: none"> • 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 GL10

TBUAGLTJ1N00S015A represents a typical part number.

Model	Type
TBUAGL	Wireless Gauge Level 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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Wireless Gauge Level Field Unit

Model Code - Accutech GL10 (cont'd)

TBUAGLTJ1N00S015A represents a typical part number.

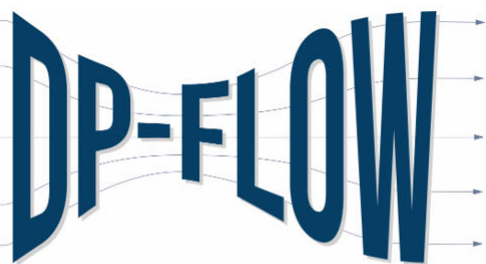
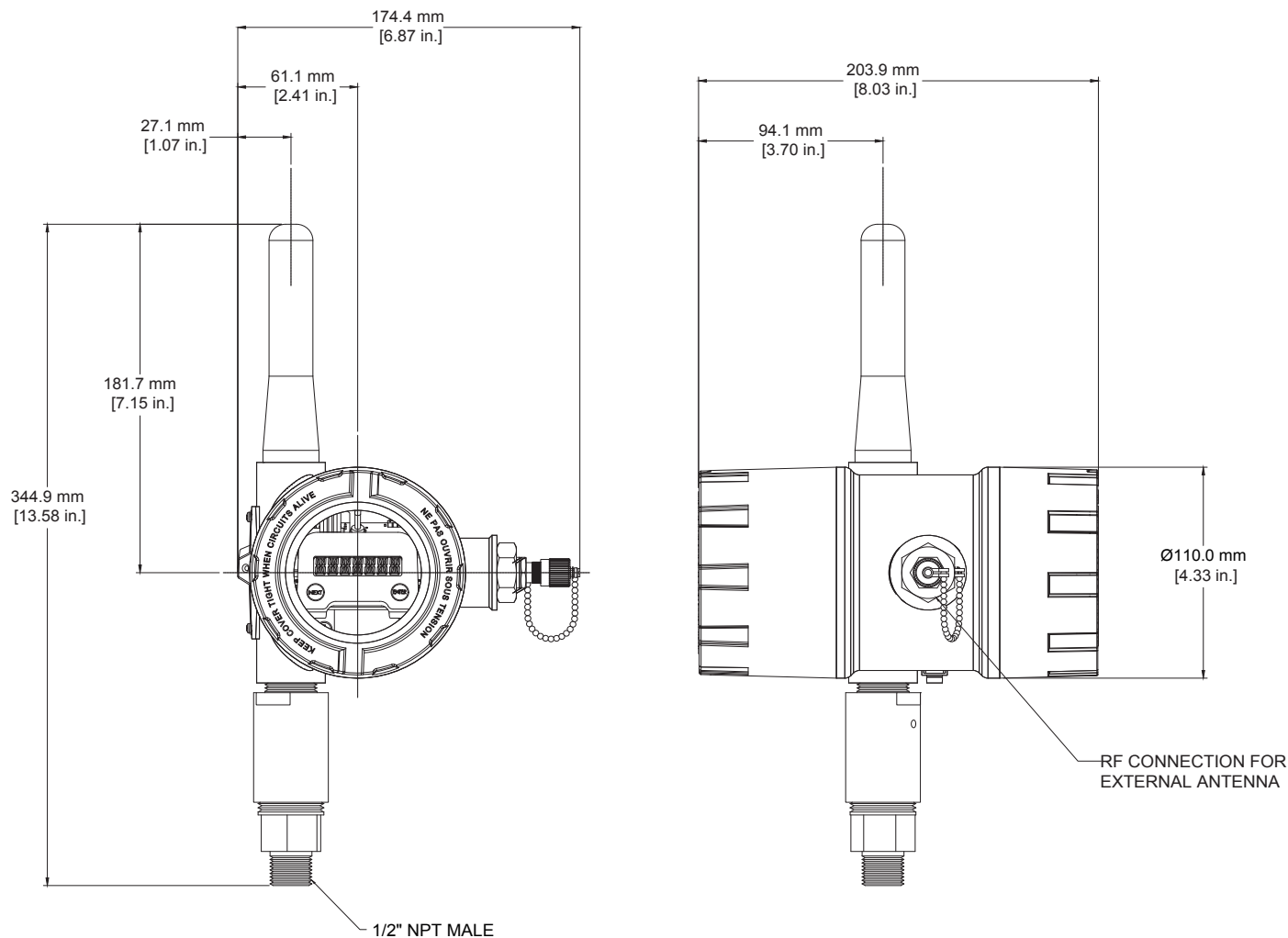
Code	Select: Sensor Range					
	Upper Range Limit (URL)		Proof Pressure		Burst Pressure	
	PSIA	BAR	PSIA	BAR	PSIA	BAR
015	15	1.034	30	2.068	500	34.5
030	30	2.068	60	4.137	500	34.5

Code	Future Option
A	None

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Dimensions - Accutech GL10



email: sales@dp-flow.co.uk
 sales +44(0)1608 [544222](tel:544222)

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