Accutech GL10

Wireless gauge level field unit

Schneider Electric

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 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 GL10
Specifications

>	Accutech GL10
Functional	
Sensor Type	Gauge Level
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	
Accuracy	• ± 0.25% of full-scale at 20°C (68°F) • ± 0.5% of sensor URL over temperature range -40 to +85°C (-40 to +185°F)
Stability	Combined zero and span stability: less than ± 0.1% of sensor URL per year at 21°C (70°F)
Sampling and Transmission Characteristic	The level field unit samples pressure at regular intervals. The data may then be transmitted to the base radio for centralized monitoring and data acquisition. The user specifies how frequently the process is monitored and how often data is transmitted. • Level – user designates low rate and high rate conditions • Sampling rate – user selectable from 1 to 60 seconds (low rate) and from 1 to 30 seconds (high rate) • Transmission rate – user selectable from 1 second to 60 seconds (low and high rate) Accutech Manager can be used for real-time monitoring of the process information. The user can set thresholds to represent “alarm” or abnormal conditions.
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.
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
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 to +121°C (-40 to +250°F) steady-state process temperature • -40 to +85°C (-40 to +185°F) electronics ambient temperature • -40 to +85°C (-40 to +185°F) display (below -20°C LCD visibility reduced) ambient temperature • 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

Specifications continue on next page

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Specifications

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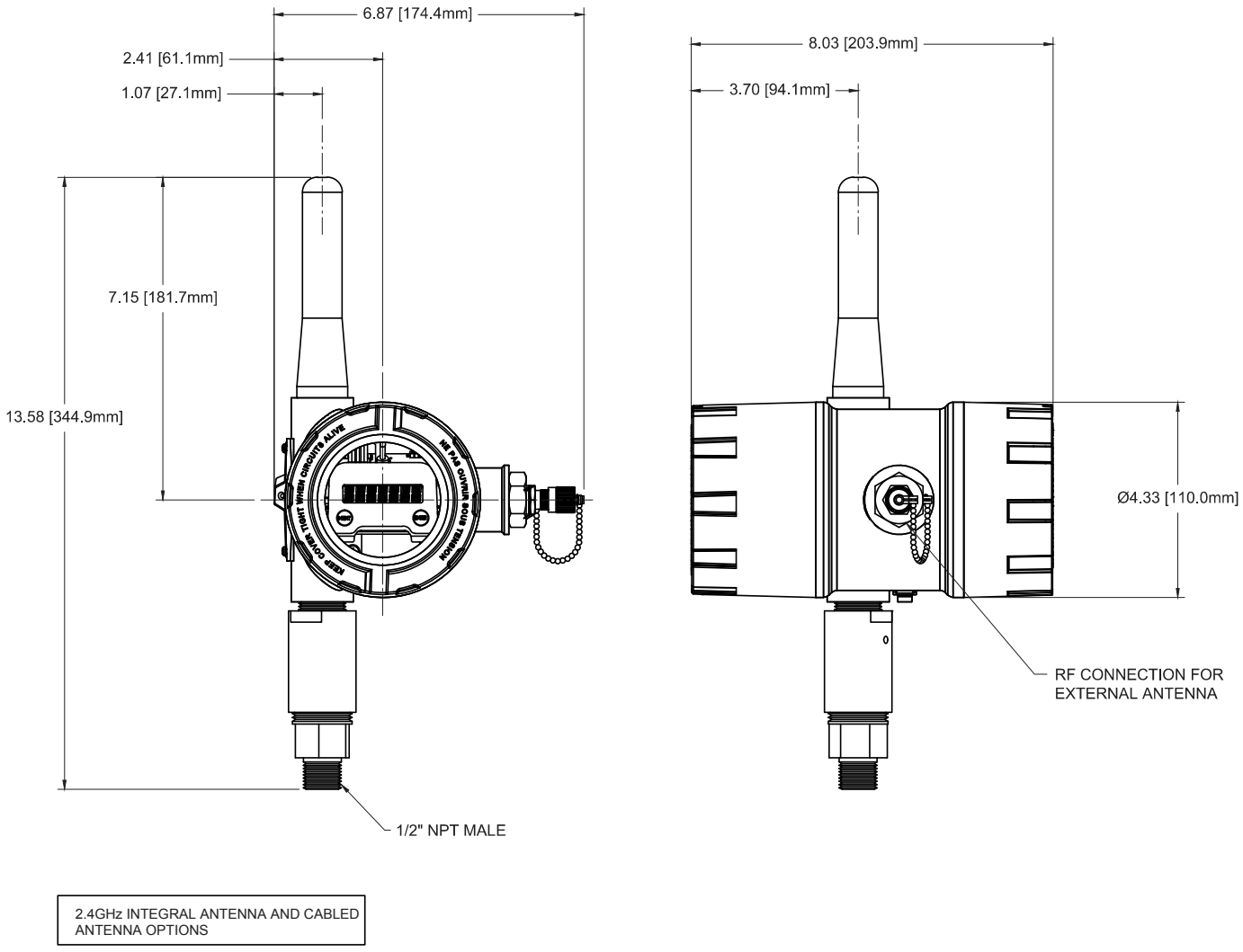
General	
Operating Shock and Vibration	Tested per IEC 60068-2-6 (vibration) and 2-27 (shock)
Random Vibration Characteristics	• Level data only • Smart smoothing • User-configurable 22-point linearisation curve of level for non-linear (asymmetrical) reservoirs • Configurable 'rate of change' threshold, when exceeded, causes radio to immediately report data to base radio
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 6100-6-2 General Immunity Standard and IEC 61000-6-4 compatibility emissions standard.
Safety 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 GL10
Model Code

	TBUAGLTJPN00S015A represents a typical part number.					
Model	**Type**					
TBUAGL	Wireless Gauge Level 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 cCSAus: Intrinsically safe protection: see specifications page					
Q	ATEX/IECEx: Intrinsically safe protection: 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 or Cable & Connector Interface**					
00	Integral Antenna (2.4GHz unit comes default with integral antenna and external 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**	
	PSIG	**(BAR)**	**PSI**	**(BAR)**	**PSI**	**(BAR)**
015	15	(1.034)	30	(2.068)	500	(34.5)
030	30	(2.068)	60	(4.137)	500	(34.5)
Code	**Select: Future Option**					
A	None					

Product Data Sheet Accutech GL10
Dimensions



2.4GHz INTEGRAL ANTENNA AND CABLED ANTENNA OPTIONS

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