

Accutech GL10

Wireless gauge level field unit





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 more advantageous positioning of the wireless transceiver without compromising the sensor's measurement accuracy. Specific gravity correction and multiple units of level measurement are supported.

All 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 869MHz (license-free band), frequency hopping, spread-spectrum transceiver and antenna, and long-lasting battery that offers 3+ 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 compact and weather-proof NEMA 4 enclosure with options for a remote sensor and remote antenna on select models. Field units are available in a wide range of certifications and are protected by an industry-leading 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 869MHz (Europe) license-free bands
Power	Integrated battery
Network Capacity	<ul style="list-style-type: none"> Max. 100 field units per base radio Max. 256 base radios per network

Features

Accuracy	$\pm 0.1\%$ of sensor URL over temperature range -40 to $+85^{\circ}\text{C}$ (-40 to $+185^{\circ}\text{F}$)
Stability	Combined zero and span stability: less than $\pm 0.1\%$ of sensor URL per year at 21°C (70°F)
Sampling and Transmission Characteristic	<p>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.</p> <ul style="list-style-type: none"> 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) <p>Accutech Manager can be used for real-time monitoring of the process information. The user can set thresholds to represent “alarm” or abnormal conditions.</p>
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 fault and performance-management features and field unit configuration capabilities.
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
RF Characteristics	<ul style="list-style-type: none"> 902MHz - 928MHz band (FCC/IC) 915MHz - 928MHz band (Australia) 915MHz - 921MHz band (New Zealand) 869MHz (Europe) Up to 3000ft (~1000m) typical range with obstructions The RF module in each field unit is individually tested and calibrated over the full temperature range to ensure reliable wireless operation Transmit Power: +13dBm Receive Sensitivity: -113dBm Adjacent Channel Rejection: 48dBc Alternate Channel Rejection: 62dBc
Self-Diagnostics	<ul style="list-style-type: none"> Low battery alarm – indicates the need to replace the battery (approximately one month warning) Contains extensive self-checking 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	<ul style="list-style-type: none"> -40 to $+121^{\circ}\text{C}$ (-40 to $+250^{\circ}\text{F}$) steady-state process temperature -40 to $+85^{\circ}\text{C}$ (-40 to $+185^{\circ}\text{F}$) electronics ambient temperature -20 to $+70^{\circ}\text{C}$ (-4 to $+158^{\circ}\text{F}$) display (full visibility) ambient temperature -40 to $+85^{\circ}\text{C}$ (-40 to $+185^{\circ}\text{F}$) display (with reduced visibility) ambient temperature Humidity: 0 to 95%, non-condensing
Materials of Construction	<ul style="list-style-type: none"> Base Plate: 304 Stainless Steel Cover: GE Lexan®, V-0 rating and UV stable Process Connection: 1/2" MNPT
Power	<ul style="list-style-type: none"> Self-contained power 1: 'C' Cell Standard Accutech field units include a single C-Cell lithium battery that offers 3+ years of maintenance-free service (up to 10 years depending on data rates and battery options).

Specifications continue on next page

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Specifications



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General

Operating Shock and Vibration	Certified per IEC 60068-2-6 (vibration) and 2-27 (shock)
Random Vibration Characteristics	<ul style="list-style-type: none"> • 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
Operating Shock and Vibration	Certified per IEC 60068-2-6 (vibration) and 2-27 (shock)
Random Vibration Characteristics	Certified 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 EN 50082-1 General Immunity Standard and EN 55011 compatibility emissions standard.
Safety 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/New Zealand: C-Tick

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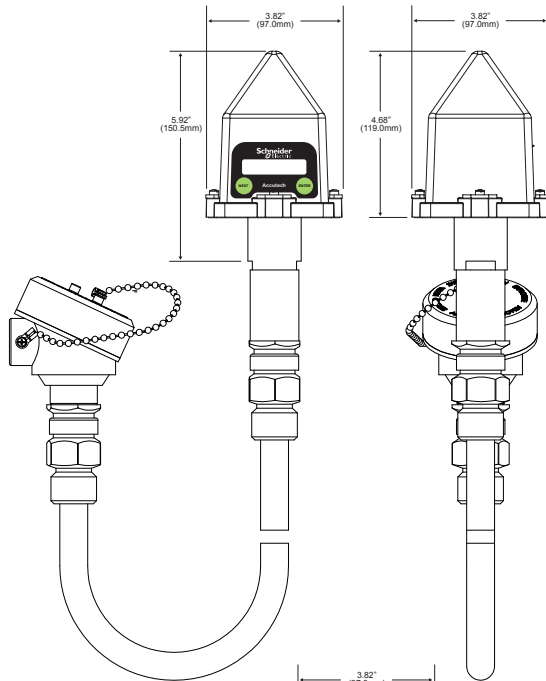
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Model Code

	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)					
N	915MHz - 921MHz band (New Zealand)					
E	869MHz (Europe)					
Code	Select: Safety Certifications					
J	cCSA _{US} : Intrinsically safe protection: see specifications page					
Q	ATEX/IECEX: Intrinsically safe protection: see specifications page					
Code	Select: Housing & Battery Pack					
P	NEMA 4 Polycarbonate Housing with 1 Cell (Available with Intrinsically Safe Rating)					
Code	Select: Future Option					
N	None					
Code	Select: Integral Antenna or Cable & Connector Interface					
00	Integral Antenna with Antenna Cover					
01	External Yagi antenna, 6dB, attached to base of unit					
10	10ft. (3.05m) cable with N-Male connector for remote antenna configurations					
25	25ft. (7.62m) cable with N-Male connector for remote antenna configurations					
Code	Select: Sensor Mounting					
S	Integral					
R	Remote Sensor with 10ft. (3.05m) cable					
Code	Select: Sensor Range					
	Upper Range Overload Safety Limit (URL)		Overload Limit		Safety Limit	
	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: Junction Box					
A	No Junction Box					

Product Data Sheet Accutech GL10 Dimensions

Internal OMNI Antenna



Remote YAGI Antenna Option

