

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 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 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-resistant NEMA4 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 | <ul style="list-style-type: none"> Max. 100 field units per base radio Max. 256 base radios per network |
| Features | |
| Accuracy | <ul style="list-style-type: none"> ± 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 | <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 monitoring 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 | <p>900MHz:</p> <ul style="list-style-type: none"> 902 to 928MHz Frequency Hopping Spread Spectrum (FHSS), FCC certified ISM license-free band 915 to 928MHz (Australia) 921 to 928MHz (New Zealand) Data Rates: 4,800, 19,200 or 76,800bps 0.4W maximum <p>2.4GHz:</p> <ul style="list-style-type: none"> 2400 to 2483.5MHz ISM license-free band Frequency Hopping Spread Spectrum (FHSS) Radio Data Rates: 50/100kbps (FSK Modulation), 200kbps (GFSK Modulation) Typical Electrical Transmit Power: +10.6dBm Typical Receive Sensitivity (0.1% BER): - 102dBm @ 50kbps, - 99dBm @ 100kbps, - 99dBm @ 200kbps Typical CW Receiver Blocking Rejection: 64dB for CW @ +/- 5MHz, 74dB for CW @ +/- 30MHz |
| 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 spec is identified and reported |
| General | |
| Operating Ambient Environment | <ul style="list-style-type: none"> -40 to +121°C (-40 to +250°F) steady-state process temperature -40 to +85°C (-40 to +185°F) electronics ambient temperature -20 to +70°C (-4 to +158°F) display ambient temperature -40 to +85°C (-40 to +185°F) display (extreme cold can reduce LCD 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 Standard Accutech field units include a single C-Cell (900MHz) or D-Cell (2.4GHz) lithium battery that offers battery life up to ten years of service, depending on data rates and battery options. |
| Specifications continue on next page | |

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Specifications



Accutech GL10

General

| | |
|----------------------------------|---|
| Operating Shock and Vibration | Tested 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 |
| 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 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 |

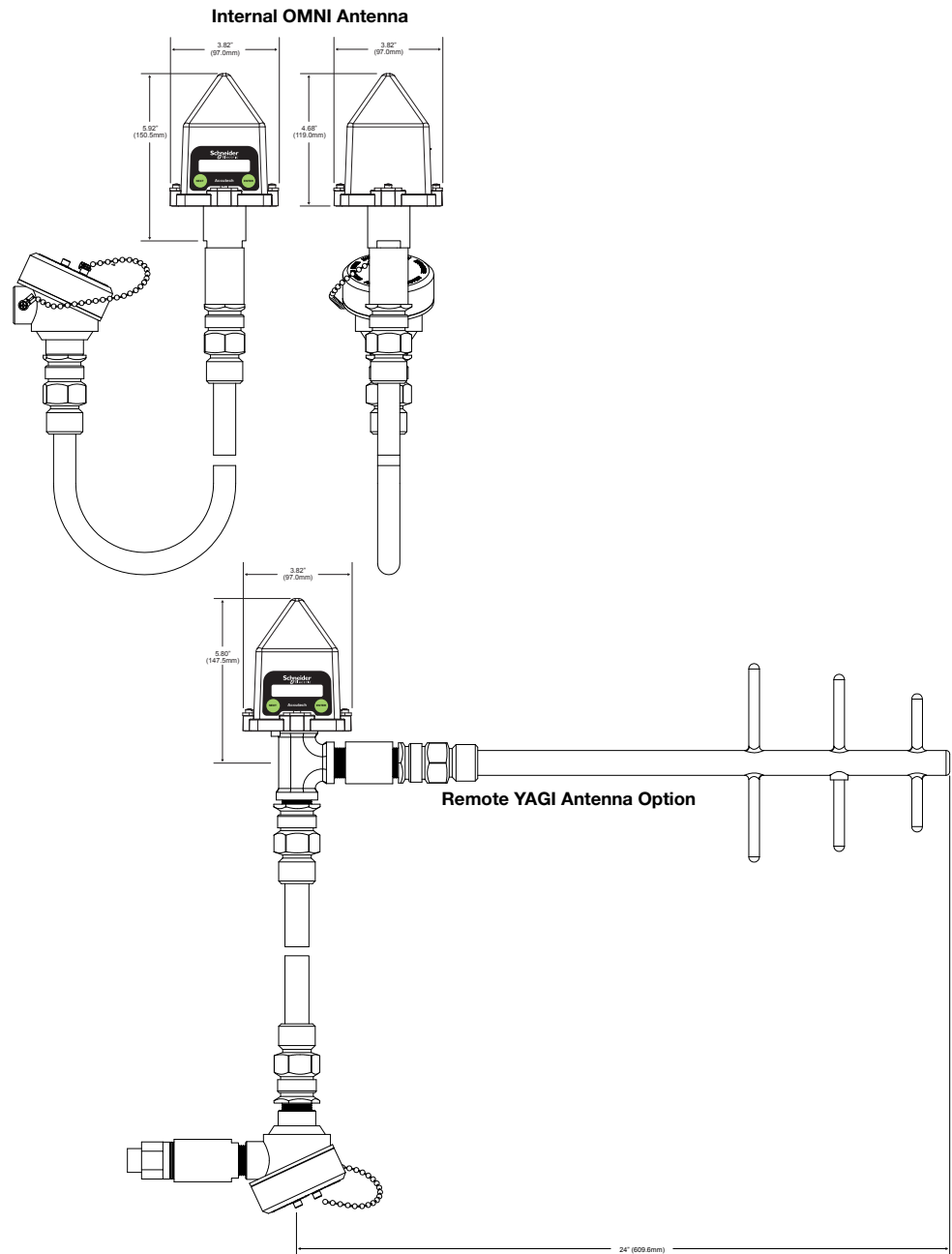
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Product Data Sheet Accutech GL10 Model Code

| | | | | | | |
|--------------|---|--------------|---------------------------|--------------|-------------------------|--------------|
| | 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) | | | | | |
| N | 915MHz - 921MHz band (New Zealand) | | | | | |
| 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 | | | | | |
| P | NEMA4 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, the 2.4GHz NEMA4 unit also comes with an external antenna connector | | | | | |
| 01 | For 900MHz RF Module Systems – or – the 2.4GHz in a NEMA4X Aluminum Housing External YAGI Antenna, 6db, attached to base of unit (not available with 2.4GHz RF NEMA4 unit) | | | | | |
| 10 | 10ft. (3.01m) cable with N-Male connector for remote antenna configurations (not available with 2.4GHz RF NEMA4 unit) | | | | | |
| 25 | 25ft. (7.62m) cable with N-Male connector for remote antenna configurations (not available with 2.4GHz RF NEMA4 unit) | | | | | |
| 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: Future Option | | | | | |
| A | None | | | | | |

Product Data Sheet Accutech GL10
Dimensions

900MHz RF and Battery Unit
(Sensor and external antenna option shown)



2.4GHz RF and Battery Unit
(Sensor and external antenna not shown for clarity)

