

Accutech SL10 Wireless Submersible Level Field Unit

Accutech field units eliminate costly hard wired installations by providing an easy-to-install and secure wireless link between field-based process instrumentation and control infrastructure. They are intended for use in extreme environments where typical wired communication is not feasible or economical. Field units are configured locally through a LCD/keypad or remotely with Accutech Manager, which also provides a user-friendly environment for wireless network diagnostics and management. A wide range of process types are supported with a maximum of 100 field units possible per base radio network.

SL10 Features:

- Submersible Hydrostatic continuous level sensor
- Specific-gravity correction and all common level units
- User-defined low-rate and high-rate conditions

The Accutech SL10 wireless submersible level field unit measures hydrostatic level in a vented tank or well. The product samples and reports pressure readings at specified intervals and allows for user-defined low-rate and high-rate conditions. The sensor is cable-mounted and submersed in the tank liquid, dropping in from the top of the tank, pool or well. Specific-gravity correction and all common level units of measure are supported.

All Accutech field units automatically report field data to a centralized Accutech base radio over distances of up to 5000ft (1524m). Each field unit is self contained, featuring an integrated 900MHz (license-free band), frequency hopping, spread-spectrum transceiver and antenna, and long-lasting battery for up to 10 years of maintenance-free operation. Accutech field units are housed within a compact and weather-proof NEMA 4 enclosure with options for a NEMA 4X or explosion-proof enclosure, 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).



SLTO Specifications

Functional	
Sensor Type	Submersible Hydrostatic Level
Location	Field Unit
Frequency Range	902-928MHz
Power	Integrated battery
Features	
Accuracy	± 0.5 % of sensor URL over temperature range -4 to +140°F [-20 to +60°C]
Stability	Combined zero and span stability: less than ± 0.5% of sensor URL per year at 70°F (21°C)
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>
Submersible Sensor Cable	The sensor cable and vent tube is encased in an extremely rugged, polyurethane jacket that is rated for use in many harsh environments. The vent tube is protected by a hydrophobic filter.
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) ■ The RF module in each field unit is individually tested and calibrated over the full temperature range to ensure reliable wireless operation
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"> ■ -4 to +140°F [-20 to +60°C] steady-state Process temperature ■ -4 to +140°F [-20 to +60°C] steady-state Ambient temperature ■ -4 to +140°F [-20 to +60°C] electronics (full display visibility) ■ Humidity: 0 to 95 %, non-condensing
Power:	<ul style="list-style-type: none"> ■ Self-contained power ■ One 'C' Cell ■ Up to ten (10) year battery life (depends on sample rate and RF-update rate)
Physical Characteristics:	<ul style="list-style-type: none"> ■ Type 316 stainless steel base and diaphragm ■ GE Lexan® cover. V-0 rating and UV stable ■ Sensor body 316L stainless steel with Buna-N seal
Operating Shock and Vibration:	Certified per IEC EN00068 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	
Safety Certifications:	<p>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.</p> <ul style="list-style-type: none"> ■ Explosion Proof: <ul style="list-style-type: none"> Div 1: CSA - Class I, Div. 1, Groups A, B, C and D; Class II, Div. 1, Groups E, F and G; Class III, Div. 1 Div 2: CSA - Class I, Div. 2, Groups A, B, C and D; Class II, Div. 2, Groups F and G; Class III ■ Intrinsically Safe: <ul style="list-style-type: none"> CSA - Exia IIC; AEx ia IIC: Class I, Div. 1, Groups A, B, C & D; Class II, Div. 1, Groups E, F & G; Class III, Div. 1

SL10

AC-SL10-TG11N25-R005 represents a typical part number.

Model	Type																																										
AC-GP10	Submersible 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)																																										
Code	Select: Safety Rating																																										
G	General Purpose (non-hazardous locations)																																										
	Explosion Proof Div 1																																										
A	Class I, Div. 1, Groups A, B, C and D; Class II, Div. 1, Groups E, F and G; Class III, Div. 1																																										
	Explosion Proof Div 2																																										
E	Div 2: CSA - Class I, Div. 2, Groups A, B, C and D; Class II, Div. 2, Groups F and G; Class III																																										
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Code	Select: Housing																																										
1	NEMA 4 - Available with general purpose or intrinsically safe ratings																																										
2	Aluminum - Available with all ratings. Required for explosion-proof safety rating																																										
Code	Select: Battery Pack																																										
1	One 'C' Cell																																										
Code	Future Option																																										
N	None																																										
Code	Select: Integral Antenna or Cable & Connector Interface																																										
00	Integral Antenna with Explosion Proof Antenna Cover (meets explosion-proof Div 1/ Div 2 & intrinsically safe rating)																																										
Y1	Integral N-Male connector for Remote Antenna (meets explosion-proof Div 2 & intrinsically safe rating)																																										
Y2	10ft. Cable with N-Male connector for remote antenna configurations (meets explosion-proof Div 2 & intrinsically safe rating)																																										
M2	25ft. Cable with N-Male connector for remote antenna configurations (meets explosion-proof Div 2 & intrinsically safe rating)																																										
Code	Select: Sensor Mounting																																										
R	Remote																																										
Code	Select: Sensor Range																																										
	<table border="1"> <thead> <tr> <th></th> <th colspan="2">Upper Range Limit (URL)</th> <th colspan="2">Proof Pressure</th> <th colspan="2">Cable Length</th> </tr> <tr> <th></th> <th>PSIG</th> <th>(BAR)</th> <th>PSI</th> <th>(BAR)</th> <th>Feet</th> <th>(Meters)</th> </tr> </thead> <tbody> <tr> <td>005</td> <td>5</td> <td>(0.345)</td> <td>10</td> <td>(0.689)</td> <td>15</td> <td>(4.6)</td> </tr> <tr> <td>010</td> <td>10</td> <td>(0.689)</td> <td>20</td> <td>(1.379)</td> <td>30</td> <td>(9.1)</td> </tr> <tr> <td>015</td> <td>15</td> <td>(1.034)</td> <td>30</td> <td>(2.068)</td> <td>40</td> <td>(12.2)</td> </tr> <tr> <td>030</td> <td>30</td> <td>(2.068)</td> <td>60</td> <td>(4.137)</td> <td>50</td> <td>(15.2)</td> </tr> </tbody> </table>		Upper Range Limit (URL)		Proof Pressure		Cable Length			PSIG	(BAR)	PSI	(BAR)	Feet	(Meters)	005	5	(0.345)	10	(0.689)	15	(4.6)	010	10	(0.689)	20	(1.379)	30	(9.1)	015	15	(1.034)	30	(2.068)	40	(12.2)	030	30	(2.068)	60	(4.137)	50	(15.2)
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