

Accutech SI10 Wireless Switch-Input 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/monitoring infrastructure. They are intended for use in extreme environments where typical wired installation 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.

SI10 Features:

- Dual contact-closure switch-input
- Input de-bounce filter
- Flying leads option

The Accutech SI10 wireless switch input field unit is ideal for determining the state of contact switches without running wiring in the field. Two switch contacts can be accommodated with a de-bounce filter being applied to each. All Accutech field units automatically report field data to a centralized Accutech base radio over distances of up to 5000ft (~1500m). 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 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).



SIO Specifications

Functional	
Sensor Type	Switch-Input
Location	Field Unit
Frequency Range	902-928MHz
Power	Integrated battery
Features	
Inputs	Two contact closures. (For installation in hazardous areas, the contacts must be simple devices with no energy storage capability).
Input Characteristics	<ul style="list-style-type: none"> ■ Max. switch impedance 1.0k Ω ■ Input Isolation between Input 1 to Input 2 = 20k Ω ■ The counter inputs support a maximum input frequency of 5 Hz with a 50% duty cycle. The input must be in a state for 100ms for the state to be recognized.
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 cycles through Switch 1, 2 and error messages, if applicable ■ Configure 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) ■ Up to 5000ft (~1500m) 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
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 +185°F (-40 to +85°C) electronics ■ -4 to +158°F (-20 to +70°C) display (full visibility) ■ -40 to +185°F (-40 to +85°C) display (reduced 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"> ■ Base Plate: 304 Stainless Steel ■ Cover: GE Lexan®, V-0 rating and UV stable
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:	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. <ul style="list-style-type: none"> ■ 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

SI10

AC-SI10-TJ11N00-A represents a typical part number.

Model	Type
AC-SI10	Dual Contact-Closure Switch Input 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)
	Intrinsically Safe
J	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
Code	Select: Housing
1	NEMA 4 - Available with general purpose or intrinsically safe ratings
Code	Select: Battery Pack
1	One 'C' Cell
Code	Future Option
	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. Cable with N-Male connector for remote antenna configurations
25	25ft. Cable with N-Male connector for remote antenna configurations
Code	Select: Junction Box
A	No Junction Box (exposed lead wires)
B	NEMA 4 - Aluminum Rear Entry
C	NEMA 4 - Epoxy Coated Cast Aluminum Rear Entry
D	NEMA 4X - Stainless Steel

