

Accutech VC10

Wireless valve controller field unit





The Accutech VC10 valve controller is a fully integrated valve controller and plunger arrival field unit. The product is rated for Class1 Div1 environments, is ideally suited for wellhead installations or may be used to wirelessly control pneumatic valves in general industrial applications. Its integrated pressure and plunger arrival sensors and power system optimise battery life, provide valuable diagnostics to operators and reduces maintenance and operational costs.

Features include:

- Battery-powered wireless pneumatic valve controller
- Self-powered with up to 50,000 actuations before battery replacement
- Pressure transducer used for closed-loop valve control
- Two digital inputs with one used as a counter for plunger arrival sensing
- Energy-efficient 3-way magnetic latching solenoid valve with self-optimising pulse width and retry logic
- Configurable valve control state for sensor power-up and default conditions

Product Data Sheet Accutech VC10

Specifications



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Functional

Sensor Type	Gauge Pressure, discrete digital inputs (including one with counter function)
Control Type	3-way magnetic latching solenoid valve
Location	Field Unit (fully certified for use in Class 1, Div 1 environments)
Frequency Range	900MHz license-free band
Power	Integrated battery

Features

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 magnetic switches Display provides pressure reading, valve state and switch states Configure sampling and RF parameters locally

Gauge Pressure Sensor

Accuracy	± 0.25% of full-scale (sensor card 0 to 125PSI) pressure reading over rated temperature range.
Stability	Combined zero and span stability: less than ± 0.1% of sensor URL per year at 21°C (70°F)
Output Resolution	24-bit Analog to Digital conversion
Gauge Pressure Ranges	250psi
RF Characteristics	<ul style="list-style-type: none"> 902MHz - 928MHz band (FCC/IC) 915MHz - 928MHz band (Australia) 915MHz - 921MHz band (New Zealand) Up to 1500m (~5000ft.) typical range with obstructions The RF module in each field unit is individually tested and calibrated Transmit Power: +13dBm Receive Sensitivity: -113dBm Adjacent Channel Rejection: 48dBc Alternate Channel Rejection: 62dBc
Self-Diagnostics	<ul style="list-style-type: none"> Low battery notification – indicates the need to replace the battery (approximately one month advance notification) 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

Digital Inputs

Inputs	Two contact closures. One input may be used in counter mode. (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 1.0kΩ Input Isolation between Input 1 to Input 2 = 20kΩ The counter input supports a maximum input frequency of 5Hz with a 50% duty cycle. The input must be in a state for 100ms for the state to be recognised. Detection of rising or falling edge or both edges.

Control Output

Valve Control	<ul style="list-style-type: none"> 3-way magnetic latching solenoid valve (ASCO 3/2 Series Maglatch: HV428342001) Remotely controlled by writing desired output state to base radio Modbus registers Configurable default state and power-up state
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General

Operating Ambient Environment	<ul style="list-style-type: none"> -30°C to +60°C (-22°F to +140°F), Humidity: 0 to 95%, non-condensing
Process Connection	<ul style="list-style-type: none"> 1/2" MNPT
Power	<ul style="list-style-type: none"> Self-contained power 4: 'D Cell' lithium batteries offer battery life up to ten years of service, depending on data rates and battery options.
Activations	Up to 50,000
Operating Shock and Vibration	Tested per IEC 60068-2-6 (vibration) and 2-27 (shock)
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
Certifications	<p>North America HAZLOC:</p> <ul style="list-style-type: none"> cCSAus (VC10 is certified for use in Canada and the US) Intrinsically Safe: Exia IIC; AEx ia IIC Class I, Div. 1, Groups A, B, C & D, T4 Class I, Div. 2, Groups A, B, C & D, T4 <p>EMC & Radio:</p> <ul style="list-style-type: none"> North America: FCC , IC

Disclaimer: Schneider Electric reserves the right to change product specifications. For more information visit www.schneider-electric.com.

Product Data Sheet Accutech VC10

Model Code

	TBUAVCTA4C00 represents a typical part number.
Model	Type
TBUAVC	Valve Controller Field Unit
Code	Select: RF Module Type
T	902MHz - 928MHz band (FCC / IC)
Code	Select: Certifications
A	<u>NEMA4X – Div 1</u> CSA – see product data sheet for certification details
Code	Select: Housing & Battery Pack
4	NEMA4X Aluminum Housing with 4 Cells
Code	Select: Future Option
C	None
Code	Select: Future Option
00	None

The VC10 is available in North America only

Product Data Sheet Accutech VC 10 Dimensions

