# Accutech VC10
## Wireless valve controller field unit

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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

| > Accutech VC10 | |
|---|---|
| **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 | • Integrated LCD with magnetic switches<br>• Display provides pressure reading, valve state and switch states<br>• 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 | • 902MHz - 928MHz band (FCC/IC)<br>• 915MHz - 928MHz band (Australia)<br>• Up to 1500m (~5000ft.) typical range with obstructions<br>• The RF module in each field unit is individually tested and calibrated<br>• Transmit Power: +13dBm<br>• Receive Sensitivity: -113dBm<br>• Adjacent Channel Rejection: 48dBc<br>• Alternate Channel Rejection: 62dBc |
| Self-Diagnostics | • Low battery notification – indicates the need to replace the battery (approximately one month advance notification)<br>• 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 | • Max. switch impedance 1.0kΩ<br>• Input Isolation between Input 1 to Input 2 = 20kΩ<br>• 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 | • 3-way magnetic latching solenoid valve (ASCO 3/2 Series Maglatch: HV428342001)<br>• Remotely controlled by writing desired output state to base radio Modbus registers<br>• Configurable default state and power-up state |
| **General** | |
| Operating Ambient Environment | • -30°C to +60°C (-22°F to +140°F) (below -20°C LCD visibility is reduced)<br>• Humidity: 0 to 95%, non-condensing |
| Process Connection | • 1/2" MNPT |
| Power | • Self-contained power<br>• 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) |
| Electromagnetic Compatibility | Operates within specification in fields from 80 to 1,000MHz with field strengths to 30V/m. Meets IEC 61000-6-2 General Immunity Standard and IEC 6100-6-4 compatibility emissions standard |
| Certifications | North America HAZLOC:<br>•  cCSAus (VC10 is certified for use in Canada and the US)<br>• Intrinsically Safe: Exia IIC; AEx ia IIC<br>• Class I, Div. 1, Groups A, B, C & D, T4<br>• Class I, Div. 2, Groups A, B, C & D, T4<br>EMC & Radio:<br>•  North America: FCC , IC |

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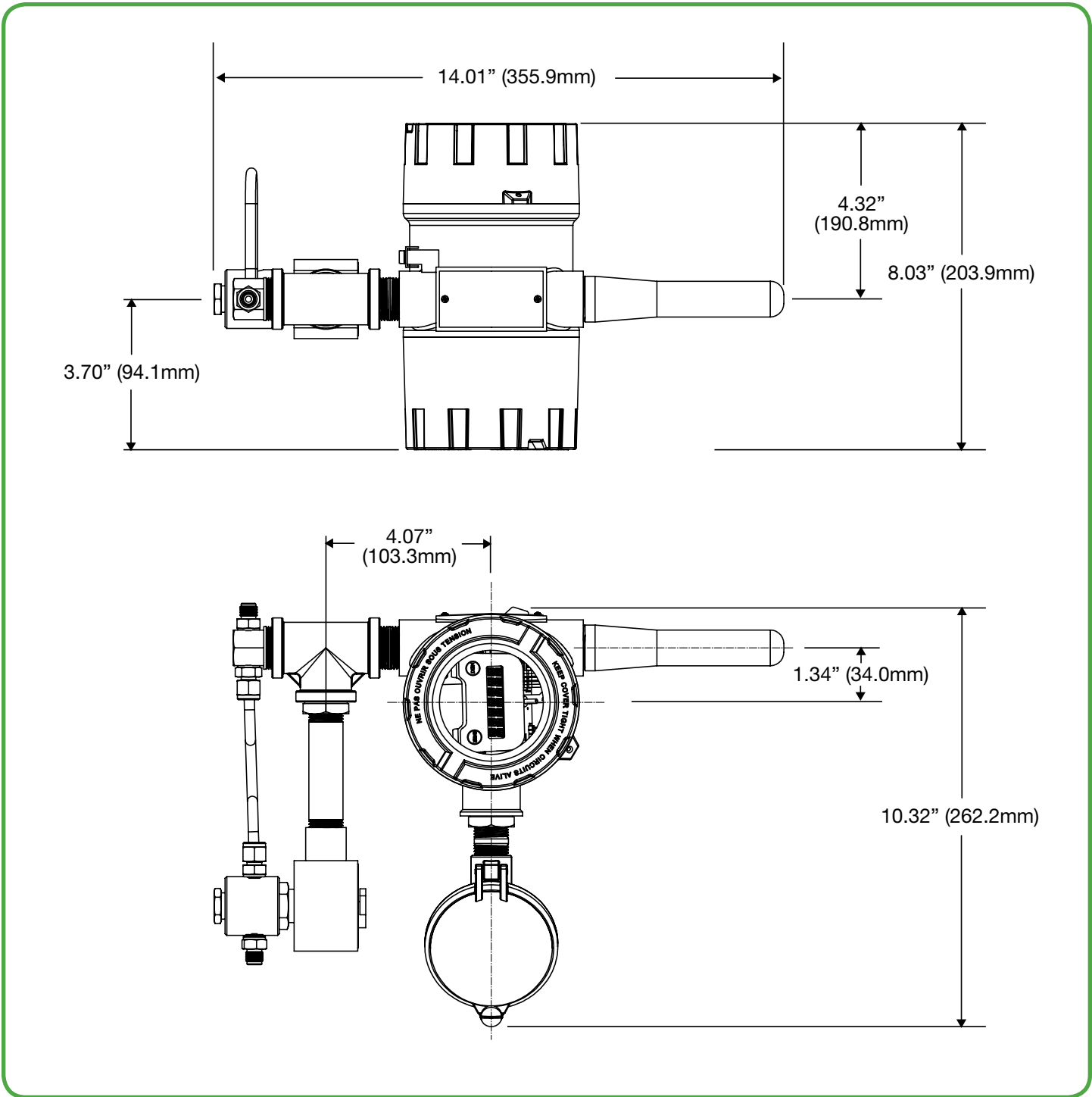# Product Data Sheet Accutech VC10
## Model Code

| | 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 | NEMA 4X – Div 1<br>CSA – see certification details on previous page |
| **Code** | **Select: Housing & Battery Pack** |
| 4 | NEMA 4X 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

14.01" (355.9mm)

4.32" (190.8mm)

8.03" (203.9mm)

3.70" (94.1mm)

4.07" (103.3mm)

1.34" (34.0mm)

10.32" (262.2mm)

Schneider Electric