

Self-Powered Wireless Instrumentation

Accutech

Rapid deployment wireless instrumentation solutions for telemetry and remote SCADA

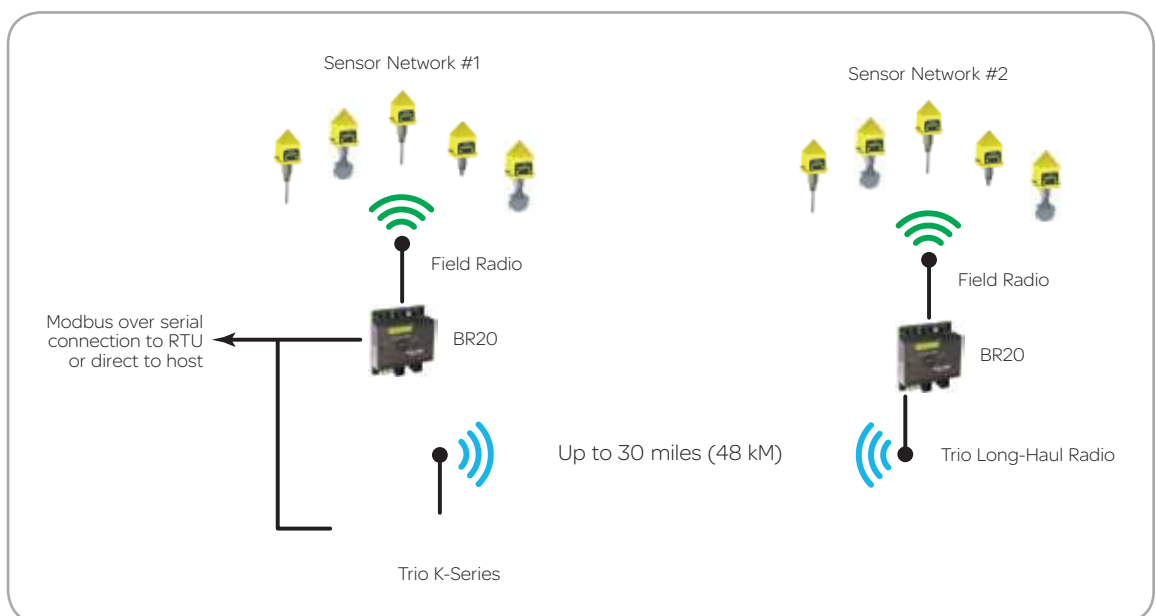


Make the most of your energySM

Schneider
Electric[™]

Employ cost-effective solutions for challenging applications.

Knowledge of your process is valuable, but without measurement there is no knowledge. Companies are increasingly forced to measure process variables that are difficult to reach and expensive to support. Distance, hazardous environments, and absence of power are just a few of the hurdles you face. With operational efficiency as the primary goal, the deployment of self-powered wireless instrumentation provides the knowledge you need at a price you can afford.



With a wide range of available instruments for temperature, pressure, flow, level, and more, Accutech is suited to many industrial applications, including upstream oil and gas, and remote plant applications in water and wastewater.

Accutech field instruments are easy to install being self-contained with power, radio, and sensor. The high-performance license-free radio and long-lasting battery reduce support costs while delivering your valuable data.



Take ownership of your field instrument network.

Installation of a complete wireless instrument network is easy with Accutech, including push-button configuration, integrated link tests, and rugged compact designs.

Reliable, self-powered, spread-spectrum radios (900 MHz and 2.4 GHz) provide effective network connectivity and long-term service.

Tested for use in hazardous locations, Accutech field instruments can function in extreme environments of temperature and humidity and come with a three-year warranty.

Flexible Wireless Communication

Accutech networks use 900 MHz or 2.4 GHz license-free, frequency-hopping, spread-spectrum radios, offering superior ranges of up to 3,000 ft. (~1,000 m) using standard integrated antennas. Extended-reach options include external directional antennas and an integrated Trio™ long-haul data radio that offers 256-bit AES encryption.

Easily Configured, Highly Scalable Deployment

Each Accutech base radio can support 100 field instruments with up to one second sampling on instruments. 256 base radios can coexist for extended scalability. Push-button configuration and simple-link test features allow entire networks to be deployed in hours.

Ease of Use, Low Maintenance

Standard Accutech field units include a single C-cell (900 MHz) or D-cell (2.4 GHz) lithium battery, and advance notification provides weeks of notice before a new field-replaceable battery is required.

Maximize ROI while improving efficiency and safety.

Engineered for challenging applications, Accutech networks help reduce costs and reduce holes in your operational data monitoring.

- **Reducing installation costs:** Eliminate cabling, trenching, and conduit costs. Self-powered means no regenerative power systems.
- **Increased productivity:** Monitor process variables you could not before. Accutech features quick configuration, instant connectivity, and little maintenance.
- **Enhanced Safety:** Integrated field units tested for hazardous locations enable data point monitoring in tough environments.

Industry Standard Connectivity

Accutech supports industry-standard, modbus protocol provide interoperability with a wide range of industrial equipment and host systems.

Certified and Durable

With NEMA 4 and NEMA 4X packaging options, Accutech products are designed for demanding applications and are certified CSA Class 1, Div 1, and ATEX/IECEx (-ai and -d). An external push-button interface enables configuration in hazardous environments.

Configure and Monitor from Base Radio

Accutech Manager configuration and management software provides a user-friendly commissioning interface for Accutech networks, offering remote configuration and firmware upgrades, enhanced diagnostics, field unit authentication to base radio, and trending/data collection.

Utilize a versatile toolset for your challenging applications.

Accutech offers a versatile selection of instruments and base radios with performance-enhancing options that can satisfy any application. Optional external sensor configurations allow installation in below-ground areas, or on-process equipment that is hard to reach. External high-gain antennas are available for complex environments where considerable obstructions and ultra-long reach are required.

With this kind of flexibility, Accutech becomes a key element in any challenging application:

- Wireless wellhead monitoring and control (including plunger arrival)
- Gas pipeline leak detection with acoustic monitors
- Tank level measurement (with dual-float liquid interface option)
- Environmental monitoring (storm water, irrigation, reservoirs ...)
- Pressure measurement in any process, from five psi to 10,000 psi.
- Monitoring remote sites with discrete input switches
- Delivering 4 – 20 mA signals from third-party instruments
- And more!



Where traditional instruments struggle with operational and budget goals, Accutech provides the solution.

Product Overview

Base Radio



BR10
Div 1, Zone 1
Base radio



BR20
Div 2, Zone 2
Base radio

Acoustic Monitor



AM20
Acoustic Monitor

Level



GL10
Gauge Level



SL10
Submersible Level



FL10
Float Level

IO



AI10 | AV10
Analog Input



SI10
Switch Input/Output



VC10
Valve Control



**4AO, 8SW,
4AO-8SW**
Output Modules

Pressure



AP10
Absolute Pressure



GP10
Gauge Pressure



DP20
Differential Pressure

Temperature



RT10
RTD Temperature



TC10
Thermocouple
Temperature

Flow



TM10
Turbine Meter
Totalizer

Specifications



BR10

Base Radio

- Supports 100 field units with 915 MHz or 2.4 GHz radio
- Serial modbus via RS-485
- Remote antenna option
- 10 – 30 VDC input power CSA Class 1, Div1 (xp)
- ATEX/IECEX –d



BR20

Base Radio

- DIN rail mount
- Supports 100 field units with 915 MHz or 2.4 GHz radio
- Optional Trio data radio for long haul connectivity with host
- Serial modbus via RS-485
- 11 – 30 VDC input power
- CSA Class 1, Div2
- ATEX/IECEX –n



AI10 | AV10

Current | Voltage Multi-Input Field Unit

- Accuracy: $\pm 0.1\%$ of full-scale reading at reference conditions
- Dual current (4 – 20 mA) or voltage (0 – 10 V) analog inputs
- Includes dual-contact closure inputs
- Remote antenna option
- NEMA 4 enclosure
- CSA Class 1, Div1
- ATEX/IECEX –ia



AM20

Acoustic Monitor Field Unit

- Acoustic sensor with 0 – 255 range count
- Remote antenna option
- NEMA 4 housing
- CSA Class 1, Div1 (IS)
- ATEX/IECEX –ia



AP10

Absolute Pressure Field Unit

- Accuracy:
 - $\pm 0.25\%$ of full-scale at 68 °F (20 °C)
 - $\pm 0.5\%$ of URL
- 30 psia and 250 psia max pressure options
- NEMA 4 housing
- Remote antenna and remote sensor option
- CSA Class 1, Div1 (IS)
- ATEX/IECEX –ia



DP20

Differential Pressure Field Unit

- Accuracy: $\pm 0.2\%$ of URL
- Available in five different pressure ranges:
 - +/- 100 in H2O
 - +/- 300 in H2O
 - -25 psi to 25 psi
 - -25 psi to 100 psi
 - -25 psi to 300 psi
- NEMA 4 housing
- Remote antenna option
- CSA Class 1, Div1
- ATEX/IECEX –ia



FL10

Float Level Field Unit

- For use with Siemens 1000 and 2000 series probes
- 1/4" and 1/2" resolution options
- Lengths up to 30 feet
- Single-float or dual-float for liquids interface
- NEMA 4 housing
- Remote antenna option
- CSA Class 1, Div1 (IS)



GL10

Gauge Level Field Unit

- Accuracy:
 - $\pm 0.25\%$ of full-scale at 68 °F (20 °C)
 - $\pm 0.5\%$ of URL
- 15 psig and 30 psig max pressure options
- Specific gravity correction and multiple units of measure selection
- NEMA 4 housing
- Remote antenna and remote sensor option
- CSA Class 1, Div1 (IS)
- ATEX/IECEX –ia

Specifications (continued)



GP10

Gauge Pressure Field Unit

- Accuracy:
 - $\pm 0.25\%$ of full-scale at 68 °F (20 °C)
 - $\pm 0.25\%$ of URL (15,000 psig)
 - $\pm 0.3\%$ of URL (2,500 & 5,000 psig)
 - $\pm 0.5\%$ of URL (5, 15, 30, 100, 250, 1000 and 10,000 psig)
- 5, 15, 30, 100, 250, 1,000, 2,500, 5,000, 10,000, 15,000 psig
- NEMA 4 housing
- Remote antenna and remote sensor option
- CSA Class 1, Div1 (IS)
- ATEX/IECEX –ia



RT10

RTD Temperature Field Unit

- Electronics accuracy: $\pm 0.1\%$ of reading
- 4 wire 100 or 1,000 ohm DIN RTD
- Integrated RTD or junction box option for customer supplied RTD
- NEMA 4 housing
- Remote antenna and remote sensor option
- CSA Class 1, Div1 (IS)
- ATEX/IECEX –ia



SI10

Switch Input Field Unit

- Dual contact closure switch input with counter function
- Counter frequency up to 5 Hz
- Optional dual-switch, dry-contact outputs capable of switching 1 A at 30 V
- Remote antenna option
- NEMA 4 or optional NEMA 4X enclosure
- CSA Class 1, Div1 (IS) for models without outputs
- Div 2 with outputs
- ATEX/IECEX –ia for models without outputs. IECEX-d for models with outputs



SL10

Submersible Level Field Unit

- Submersible hydrostatic pressure sensor
- Accuracy: $\pm 0.5\%$ of URL
- Pressure ratings up to 30 psi (2 Bar), lengths to 75' (15 m)
- Vent to atmosphere or to tank
- Remote antenna option
- NEMA 4 housing
- CSA Class 1, Div1 (IS)
- ATEX/IECEX –ia



TC10

Thermocouple Temperature Field Unit

- Types B, C, E, J, K, L, N, S, T, U
- Electronics accuracy: $\pm 0.1\%$ of full-scale reading
- Integrated single T/C or junction box option that supports dual, customer supplied T/Cs
- NEMA 4 housing
- Remote antenna option
- CSA Class 1, Div1 (IS)
- ATEX/IECEX –ia



TM10

Turbine Meter Totalizer Field Unit

- Interfaces most 2-wire magnetic pickups
- Instantaneous flow and totaled values
- Frequency 1 Hz to 10 KHz
- NEMA 4 housing
- Remote antenna option
- CSA Class 1, Div1
- ATEX/IECEX –ia



VC10

Valve Controller Field Unit

- Accuracy: $\pm 0.25\%$ of full-scale reading
- Sales valve actuation and control
- Control and monitoring of plunger lift systems
- Start-up and default configuration options
- Integrated pressure sensor for active control of solenoid pulse width
- Two digital inputs, for plunger arrival and discrete input applications
- CSA Class 1 Div 1, hazardous location certified



4AO, 8SW, 4AO-8SW

Output Modules

- Direct connection between Accutech base radios and DCS or process control systems
- Provides analog and discrete outputs from associated field units
- DIN rail mounted.
- Stackable (25 max, 100 AO, 200 DO)
- Three models available:
 - 4-channel analog output
 - 8-point contact closure
 - Combination of 4-channel analog/8-point contact

For more information, visit
www.schneider-electric.com/us
and enter key code **e291u**.

Enter key code

> OK



Schneider Electric USA

Automation and Control Center of Excellence
8001 Knightdale Blvd.
Knightdale, NC 27545
Tel: 888-778-2733
www.schneider-electric.us