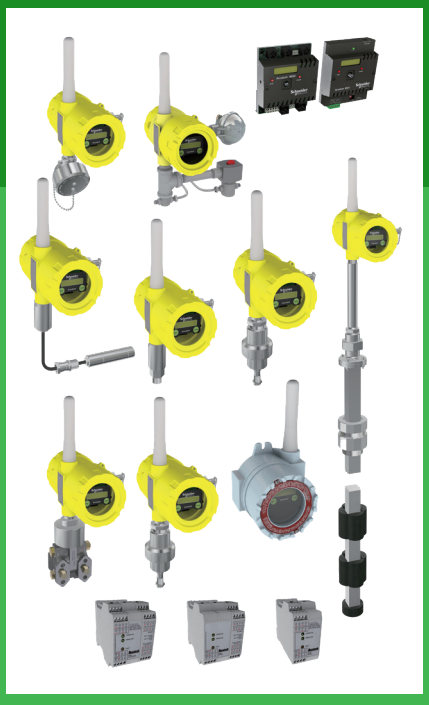
Life Is On | Schneider Electric

Self-Powered Wireless Instrumentation

Accutech



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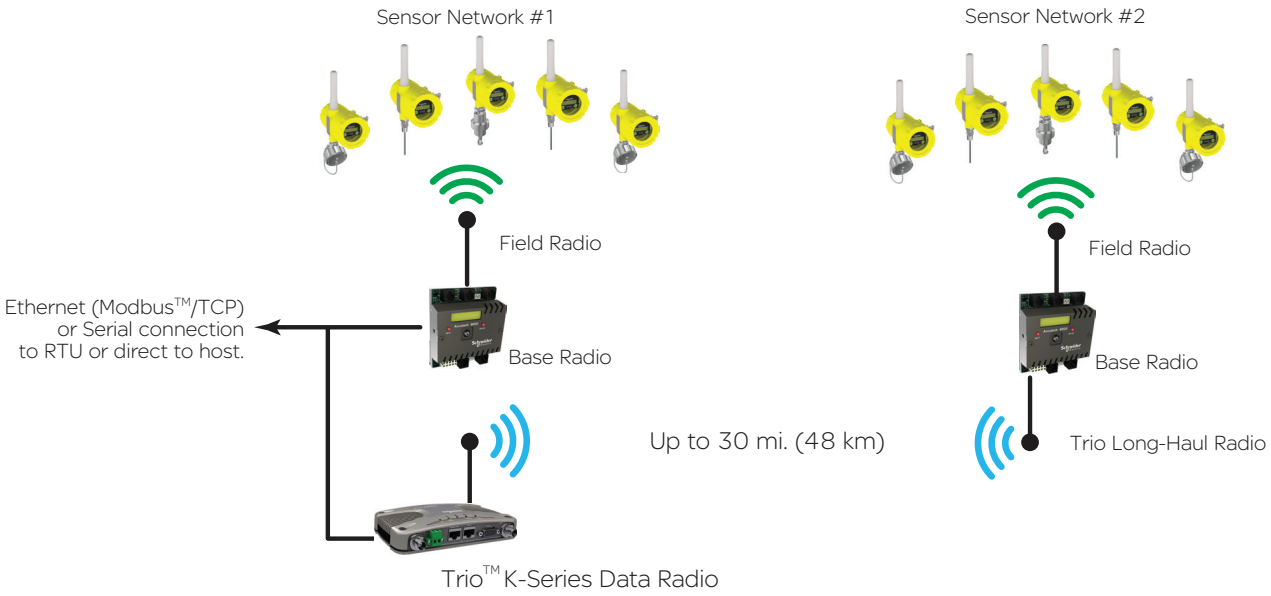
Process knowledge is valuable

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, harsh environments and absence of power are just a few of the hurdles faced. With operational efficiency as the primary goal, the deployment of self-powered wireless instrumentation provides the knowledge you need at a price you can handle.

With a wide range of available instruments for temperature, pressure, flow, level, and more, Accutech™ instrumentation is suited to many industrial applications, including upstream Oil & 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 cannot be easier than using Accutech instruments, with push button configuration, integrated link tests, and rugged compact designs.

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

Certified for use in harsh locations, Accutech field instruments can function in extreme environments of temperature and humidity.

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 (approx. 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 (available with 900 MHz models only).

Easily configured, highly scalable deployment

Each Accutech base radio can support up to 100 field instruments with up to 1 sec. 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 D-cell lithium-thionyl battery that offers up to 10 years of service, depending on field unit type, data rates and battery options. Advance notification provides an indication when a new field-replaceable battery is required.

Maximize ROI, improve efficiency, and help ensure safety

Engineered for challenging applications, Accutech networks help to reduce costs and loss of data in your monitoring network.

- Reducing installation costs: Reduce cabling, trenching, and conduit costs. Self-powered means no regenerative power systems.
- Increased productivity: Monitor process variables you could not before. Quick configuration, instant connectivity, and little maintenance.
- Help enhance safety: Integrated field units tested for harsh locations enable data point monitoring in tough environments.

Industry standard connectivity

Accutech instrumentation supports industry-standard Modbus protocol, providing interoperability with a wide range of industrial equipment and host systems.

Certified and durable

With NEMA 4X packaging, Accutech wireless products are designed for demanding applications and are certified CSA Class I, Div 1 and ATEX/IECEx (-ia and -Ex d). A push button interface enables configuration in harsh environments.

Configure and monitor from base radio

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

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

A toolset for challenging applications

With this kind of flexibility Accutech field instruments become a key element in any challenging application:

- Wireless wellhead monitoring and control (including plunger arrival)
- Tank level measurement (with dual float liquid interface option)
- Environmental monitoring (storm water, irrigation, reservoirs, etc.)
- Pressure measurement in any process, from 5...15,000 psi
- Monitoring remote sites with discrete input switches
- Delivering 4...20 mA signals from third-party instruments
- More … limited only by imagination

Product Overview

Base Radio

BR10
Div I, Zone 1
Base radio

BR20
Div 2, Zone 2
Base Radio

BR21
Div 2, Zone 2
Ethernet Base Radio

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 (915 MHz or 2.4 GHz radio)
- Serial Modbus
- Remote antenna option
- 10...30 Vdc input power
- CSA Class I, Div 1 (xp)
- ATEX/IECEx –d

BR20

Base Radio

- DIN rail mount
- Supports 100 field units (915 MHz or 2.4 GHz radio)
- Optional Trio data radio for long haul connectivity with host (915 MHz only)
- Serial Modbus
- 11...30 Vdc input power
- CSA Class I, Div 2
- ATEX/IECEx –n

BR21

Base Radio

- DIN rail mount
- Supports 100 field units (915 MHz or 2.4 GHz radio)
- Ethernet Modbus/TCP
- 11...30 Vdc input power
- CSA Class I, Div 2
- ATEX/IECEx –n

AI10 | AV10

Current | Voltage Multi-Input Field Unit

- Accuracy: ± 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 4X enclosure
- CSA Class I, Div 1 (IS)
- ATEX/IECEx –ia

AP10

Absolute Pressure Field Unit

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

DP20

Differential Pressure Field Unit

- Accuracy: ± 0.2% of URL
- Available in five different pressure ranges:
  - +/- 100 in. H2O
  - +/- 300 in. H2O
  - -25...+25 psi
  - -25...+100 psi
  - -25...+300 psi
- NEMA 4X housing
- Remote antenna option
- CSA Class I, Div 1 (IS)
- ATEX/IECEx –ia

FL10

Float Level Field Unit

- For use with Electrolab™ 2000-series probes
- ¼" and ½" resolution options
- Lengths up to 30 ft. (9.1 m)
- Single float or dual float for liquids interface
- NEMA 4X housing
- Remote antenna option
- CSA Class I, Div 1 (IS)
- Available in North America only

GL10

Gauge Level Field Unit

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

GP10

Gauge Pressure Field Unit

- Accuracy:
  - ± 0.25% of full-scale at 20 °C (68 °F)
  - ± 0.25% of URL (15000 psig)
  - ± 0.3% of URL (2500 & 5000 psig)
  - ± 0.5% of URL (5, 15, 30, 100, 250, 1000 & 10000 psig)
- 5, 15, 30, 100, 250, 1000, 2500, 5000, 10000, 15000 psig
- NEMA 4X housing
- Remote antenna and remote sensor option
- CSA Class I, Div 1 (IS)
- ATEX/IECEx –ia

RT10

RTD Temperature Field Unit

- Electronics accuracy: ± 0.1% of reading
- 4-wire 100 or 1000 ohm DIN RTD
- Integrated RTD or junction box option for customer supplied RTD
- NEMA 4X housing
- Remote antenna and remote sensor option
- CSA Class I, Div 1 (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 @ 30 V
- Remote antenna option
- NEMA 4X housing
- CSA Class I, Div 1 (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: ± 0.5% of URL
- Pressure ratings up to 30 psi (2 Bar), lengths to 75 ft. (15 m)
- Vent to atmosphere or to tank
- Remote antenna option
- NEMA 4X housing
- CSA Class 1I Div 1 (IS)
- ATEX/IECEx –ia

TC10

Thermocouple Temperature Field Unit

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

TM10

Turbine Meter Totaliser Field Unit

- Interfaces many 2-wire magnetic pickups
- Instantaneous flow & totalised values
- Frequency 1 Hz to 10 KHz
- NEMA 4X housing
- Remote antenna option
- CSA Class I, Div 1 (IS)
- ATEX/IECEx –ia

VC10

Valve Controller Field Unit

- Accuracy: ± 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 I, 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 analog outputs
  - 8 contact-closure digital outputs
  - Combination of 4 analog and 8 contact-closure outputs

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Schneider Electric

Foxboro by Schneider Electric
38 Neponset Avenue
Foxboro, Massachusetts 02035 USA
Direct worldwide: +1-508-549-2424
Toll free within North America: 1-866-746-6477
Email: systems.support@se.com
www.se.com

Document Number TBULM08003-66 V27

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