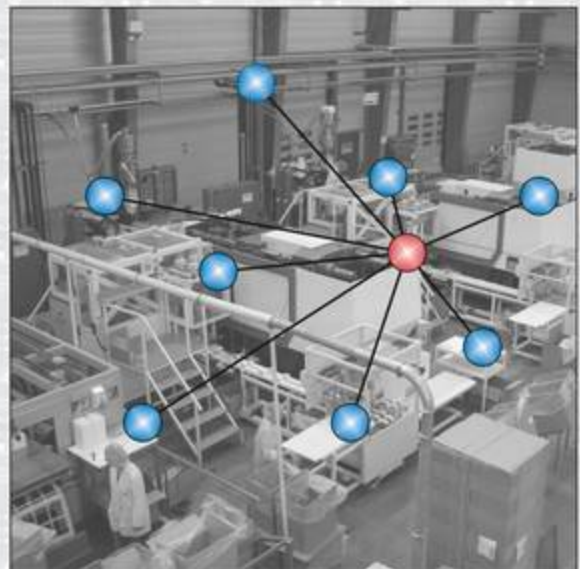


Wireless Sensor Network Components for Industrial Applications

Wireless networks can be used for sensor data transmission in many industrial processes. The wireless sensors are small, easy to install, reliable and self-configuring. Every data transmission is secured via check sum and acknowledged with a handshake.

Wireless technology allows the mounting of sensors on moving and difficult to access places. Temperature is one of the most important physical values that can be measured during technical processes. Similar to the temperature of our body this is the simplest means to examine the status of the system. We offer a range of industrial wireless temperature sensors. Moreover, based on our proven wireless network technology we are able to design your individual sensor and transmitter.






Wireless Sensor Network Technology

- Based on standard IEEE 802.15.4
- 2.4 GHz ISM band, license free operation
- 16 channels with intelligent frequency agility
- Direct sequence spread spectrum technology
- High noise immunity and interference avoidance
- +10dBm transmit power and -96dBm sensitivity
- Radio link distance up to 1000m in free space
- Distance can be extended by the use of routers
- Up to 64 wireless nodes per network
- Star and cluster tree network topologies
- Easy to install, self-configuring network
- Failsafe monitoring of every network node
- Several networks can co-exist in the same area
- Configurable transmission interval: 100ms - 1h
- Handshake for guaranteed data delivery

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Wireless Sensor Network Components for Industrial Applications

	Insertion / Injection Temperature Sensor and Transmitter Black handle – for general purpose industrial applications White handle – for food and pharmacy applications 15cm stainless steel needle (other sizes available on request) 15cm Teflon handle, internal antenna Food safe construction, protection class IP 65 Temperature range: 0°C to +100°C, resolution: 0.1°C Battery life time up to 2 years, activation button for burst transmissions
	Outdoor Insertion / Injection Temperature Sensor and Transmitter Stainless steel needle up to 2m (other sizes available on request) Temperature range: -20°C to +80°C, resolution: 0.1°C Plastic housed transmitter, protection class IP 65, internal antenna Two AA Lithium batteries, life time up to 6 years (one transmission per minute)
	Metallic Head Temperature Transmitter Measurement range: -200°C to +1000°C Thermocouple type K (other options available on request) Metallic housing, type B, external antenna connected via SMA connector *) Lithium battery, life time up to 4 years (one transmission per minute)
	Plastic Head Temperature Transmitter Measurement range: -200°C to +1000°C Thermocouple type K (other options available on request) Plastic housing, protection class IP 65, internal antenna Two AA Lithium batteries, life time up to 6 years (one transmission per minute)
	Conduit Attachment Temperature Sensor and Transmitter Temperature range: 0°C to +120°C, resolution: 0.1°C Plastic housing, size: 10cm x 6.5cm x 3.5cm, protection class IP 65 Two AA Lithium batteries, life time up to 6 years (one transmission per minute)
	Universal Configurable Wireless Transmitter Box Suitable for different types of sensors: thermocouples, thermistors and others Plastic housing, size: 10cm x 6.5cm x 3.5cm, protection class IP 65 Two AA Lithium batteries, life time up to 6 years (one transmission per minute)

	DIN Rail Receiver RS232 interface and RS485 interface for connection to automation bus 2 relay switched output contacts, 4 analog voltage outputs 0–10V Supply voltage: 9–35V, pushbutton and LED DIN rail mount housing, size: 9cm x 3.5cm x 6cm External antenna connected via SMA connector *)
	USB Box Receiver USB B connector as data output and PC connector, powered via USB Metallic housing, size: 8cm x 4cm x 2.5cm External antenna connected via SMA connector *)
	Receiver with Data Logger and SD Card Interface for Data Storage USB B connector as data output and PC connection Options available: 4 analog outputs 0–10V or 4–20mA, CAN bus interface Supply voltage: 9–35V (can be powered from stand-alone battery) Metallic housing, size: 10.5cm x 10.5cm x 4cm External antenna connected via SMA connector *)

*) Different antenna options or extension cables can be ordered separately.



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