rheonics

Getting Started with **WirelessHART**

WirelessHART for Rheonics Sensors enables wireless density and viscosity monitoring



WirelessHART is a radio communication protocol that extends the widely adopted HART standard by adding wireless capability while keeping full compatibility with existing HART devices.

The technology uses a self-organizing mesh network, where every device can act both as a measurement point and as a repeater.

WirelessHART for Rheonics Sensors enables wireless density and viscosity monitoring

Description



WirelessHART for Rheonics Sensors enables wireless density and viscosity monitoring using the standard HART communication protocol.

The system extends the functionality of Rheonics Smart Module Electronics (SME) by adding WirelessHART adapters, allowing reliable, secure, and cable-free data transfer from sensors installed in challenging or remote environments.

WirelessHART is based on a self-organizing mesh network where each node acts as both transmitter and repeater. It is fully compatible with existing wired HART devices.

Specifications

Parameter	Description
Supported Devices	Rheonics SRV and SRD sensors with SME-TRD electronics
Communication Protocol	WirelessHART (IEC 62591), fully HART 7 compatible
Network Type	Self-organizing, self-healing mesh topology
Comunication Range	Up to 220 m with Clear Line of Sight
Frequency Band	2.4 GHz ISM band.
Power Supply	Powered directly from the SME-TRD HART loop (no external power required).
Gateway Interfaces	Depends on the selected WirelessHART gateway.
Installation Accessories	Rheonics WirelessHART Adapter (for SME-TRD).
Security	AES-128 multi-tier encryption with device authentication
Environmental Rating	IP65 or higher (adapter and gateway enclosures)

Key Benefits

Full visibility of HART diagnostics and multivariable data

Access to remote or difficult-to-wire areas

Reduced cabling and installation costs.

Faster deployment of new measurement points.



Required Hardware

HART Device

WirelessHART Adapter

WirelessHART Gateway



Industrial Protocol: Modbus, EtherNet/IP, ETC. **WirelessHART**

Hardware Review

HART Device
Rheonics SME

Rheonics Smart Module Electronics (SME) are robust, high-speed electronics paired with Rheonics sensors. They convert probe signals into viscosity, density, and temperature, and transmit data via multiple protocols, including HART.



WirelessHART
Adapter

The HART Adapter connects to the SME and transmits the HART signal wirelessly within a Wire-lessHART network.



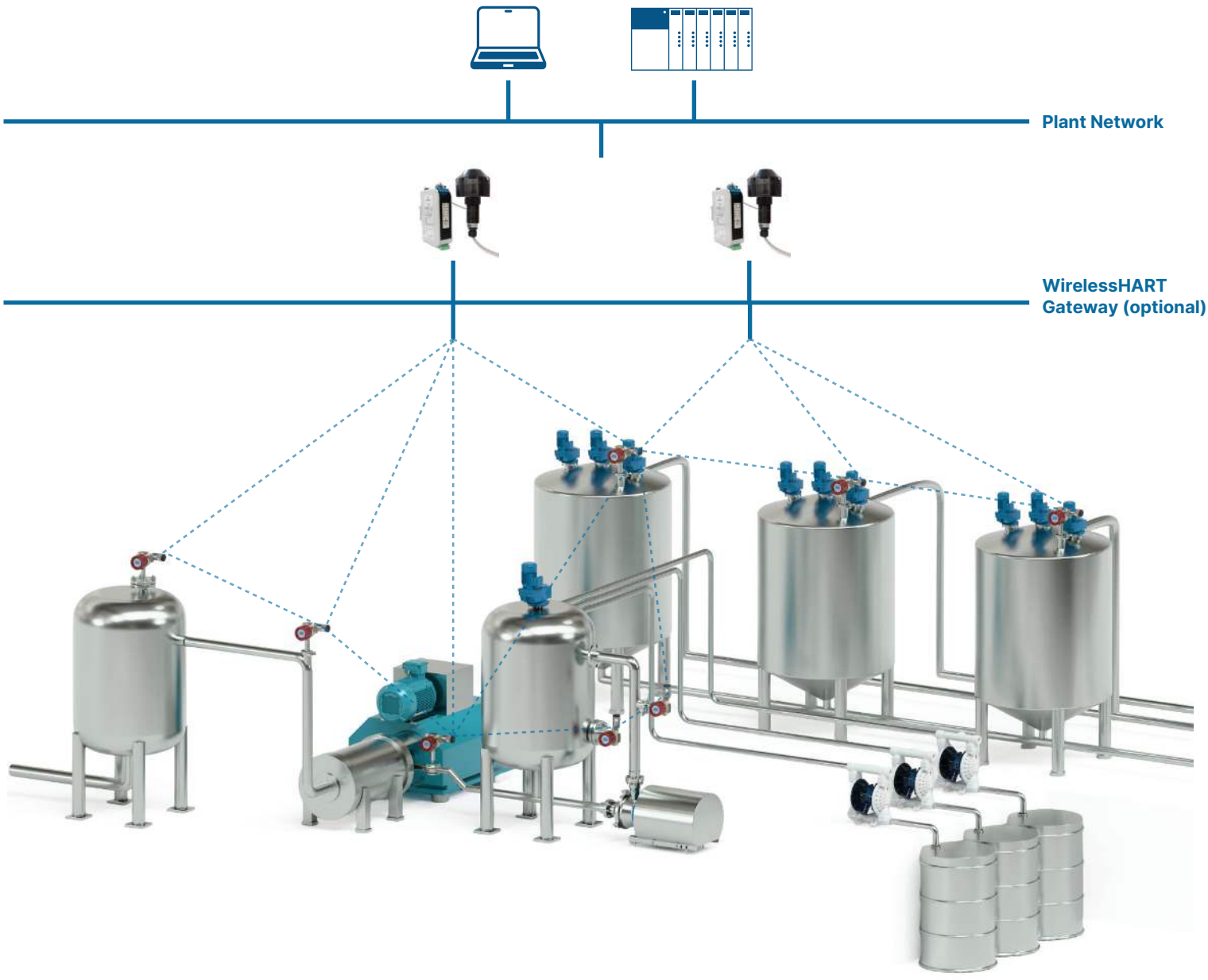
WirelessHART
Gateway

It collects data from WirelessHART devices and makes it available to control systems. The gateway translates WirelessHART into standard industrial protocols such as EtherNet/IP, or Modbus TCP, allowing PLCs, DCS, and SCADA systems to read sensor data without native HART support.



1: The WirelessHART adapter works with any gateway compliant with the WirelessHART (IEC 62591) standard; Rheonics can supply one if needed.

WirelessHART Installation



Request your WirelessHART quote today to maintain full control over your process ↓

rheonics
info@rheonics.com
+41 52 511 3200