WirelessHART components
Gateway and accessories
Measurement made easy
The ABB offering on WirelessHART accessories connect wireless sensors to the automation network and extend the range of the wireless communication easily.

—
Proven industrial quality

—
Key components for your wireless network

—
Installable with standard tools

—
Fast and easy commissioning

—
Allows one-stop orders
**Specification**

**WirelessHART gateway**

**MODBUS WirelessHART gateway**

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<th>Features</th>
<th>Graphical network analysis</th>
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<td>HART and MODBUS protocol via both interfaces</td>
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<tr>
<td>Temperature range</td>
<td>-20 to 60 °C ( -4 to 140 °F )</td>
</tr>
<tr>
<td>Input</td>
<td>Omnidirectional dipole antenna, removable WirelessHART</td>
</tr>
<tr>
<td>External bus</td>
<td>Interface 1: Ethernet, 10 BASE-T/100 BASE-TX, full galvanic isolation</td>
</tr>
<tr>
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<td>Protocols: HART UDP, MODBUS TCP</td>
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<td>Interface 2: RS485</td>
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<td>Protocols: HART, MODBUS RTU</td>
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<tr>
<td>Power supply</td>
<td>20 to 30 V DC SELV/PELV, &lt;5 W</td>
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<td>Cable gland</td>
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<td>Explosion protection</td>
<td>ATEX II 3G Ex na nC IIC T4 Gc</td>
</tr>
<tr>
<td></td>
<td>FM NI Class I, Div. 2, GPS A-D</td>
</tr>
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<td>NI Class II, Class III, Div. 2, GPS E-G</td>
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<tr>
<td></td>
<td>Ex nAc T4</td>
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<td>IP rating</td>
<td>IP 66 / IP 67</td>
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<td>Installation</td>
<td>Panel mounting</td>
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<td>Scope of delivery</td>
<td>WirelessHART gateway</td>
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<td>Antenna</td>
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<tr>
<td>Order number</td>
<td>3KDE998517L0001</td>
</tr>
</tbody>
</table>

**Power supply for gateway**

**Figure 2: Power supply**

- Typical efficiency of 86 %
- Low power dissipation and low heating
- Free convection cooling (no forced cooling with ventilators)
- Ambient temperature range during operation -35 to 70 °C (-31 to 158 °F)
- Open-circuit, overload and short-circuit stable
- Integrated input fuse

| Features          | 115 / 230 V AC (90 to 132 V AC, 180 to 264 V DC), 210 to 375 V DC, auto select  |
| Output            | 24 V DC, constant controlled output voltage output current 5 A output power 120 W  |
| Mounting          | DIN rail (IEC/EN 60715), snap-on mounting without any tool  |
| Order number      | 3KDE998504L0001  |

**Dimensions (W x H x D)**

- 63.2 x 123.6 x 123.6 mm
- (2.49 x 4.87 x 4.87 in.)
### Specification

**WirelessHART adapter**

**Features**
- Cast aluminum housing,
- Loop powered,
- Direct mounting on HART or 4 to 20 mA field device,
- Encapsulated antenna,
- Up to 8 field devices in multidrop

**Input**
- Connection:
  - 5 wires, 600 mm long, exiting from male ½ in. NPT thread
  - 1 external grounding point
- HART communication:
  - Protocol HART 7.1, backward compatible
  - Number of devices up to 8 HART field devices (depending on installation)

**Output**
- Omnidirectional integral antenna,
- WirelessHART communication

**Power supply**
- Rated voltage $U_0$ 7 to 32 V DC
- Rated current $I_0 < 1$ mA, max. 25 mA
- Voltage drop 1 to 2.5 V DC adjustable in steps of 0.5 V

**Cable gland**
- Male ½ in. NPT thread

**IP rating**
- IP 67

**Temperature rating**
- −40 to 85°C (−40 to 185°F)

**Explosion protection**

<table>
<thead>
<tr>
<th>Zone 1, 2</th>
<th>ATEX</th>
<th>FM</th>
<th>CSA</th>
<th>IECEX</th>
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<tr>
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<td>II 2G Ex db IIC T6...T5 Gb</td>
<td>XP Class I, II, III, Division 1, Groups A-G</td>
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<tr>
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<td>II 2D Ex tb IIC T95°C Db</td>
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<tr>
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<td>IS Class I, II, III, Division 1, Groups A-G</td>
<td>IS Class I, II, III, Division 1, Groups A-G</td>
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<td>Zone 0</td>
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<td>Ex ia IIC T95°C Da</td>
</tr>
</tbody>
</table>

**Order number**

- WirelessHART adapter non-ex: 3KDE998536L0011
- WirelessHART adapter Ex d: 3KDE998536L0010
- WirelessHART adapter Ex i: 3KDE998536L0009
Accessories

Antenna for gateway

- **Type**: Replacement antenna for WirelessHART gateway with 2.0 dBi antenna gain
- **Connection**: TNC plug
- **Order number**: 3KDE998517L0002

Surge protection for gateway

- **Type**: λ/4 surge protection according IEC 61643-21
- **Connection**: N socket to N socket
- **Order number**: 3KDE998535L0001

Coaxial cable

- **Type**: Coaxial cable, double shielded
- **Connection**: N plug to N plug
- **Order number**: Length 1 m: 3KDE998544L0001, Length 2 m: 3KDE998544L0002, Length 5 m: 3KDE998544L0006

Connecting adapters

<table>
<thead>
<tr>
<th>Pos.</th>
<th>Type</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>N socket to TNC socket</td>
<td>3KDE998536L0006</td>
</tr>
<tr>
<td>2</td>
<td>N socket to N socket</td>
<td>3KDE998536L0007</td>
</tr>
<tr>
<td>3</td>
<td>TNC plug to N socket</td>
<td>3KDE998536L0005</td>
</tr>
</tbody>
</table>

Connection example

- **Standard antenna 2 dBi**
- **Adapter 1**: TNC to TNC, NF to NM
- **Coaxial cable**: TNC to TNC, NF to NM
- **Adapter 2 or surge protector**: NF to NF
- **Coaxial cable**: NF to NF, NM to NM
- **Adapter 3**: TNC to TNC, NF to NM
- **WirelessHART gateway**: WHA-GW-*
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Trademarks

WirelessHART is a registered trademark of FieldComm Group, Austin, Texas, USA

Modbus is a registered trademark of the Modbus Organization
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