

ABB MEASUREMENT & ANALYTICS | DATA SHEET

# WirelessHART components

## Gateway and accessories



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## **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.

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### **Proven industrial quality**

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### **Key components for your wireless network**

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### **Installable with standard tools**

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### **Fast and easy commissioning**

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
### **Allows one-stop orders**

## Specification

### WirelessHART gateway



Figure 1: WirelessHART gateway

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

### Power supply for gateway



Figure 2: Power supply

Power supply for gateway	
Dimensions (W x H x D)	63.2 x 123.6 x 123.6 mm (2.49 x 4.87 x 4.87 in.)
Features	<ul style="list-style-type: none"> <li>Typical efficiency of 86 %</li> <li>Low power dissipation and low heating</li> <li>Free convection cooling (no forced cooling with ventilators)</li> <li>Ambient temperature range during operation -35 to 70 °C (-31 to 158 F)</li> <li>Open-circuit, overload and short-circuit stable</li> <li>Integrated input fuse</li> </ul>
Input	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



... Specification

WirelessHART adapter



Figure 3: WirelessHART adapter

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: <ul style="list-style-type: none"><li>5 wires, 600 mm long, exiting from male ½ in. NPT thread</li><li>1 external grounding point</li></ul> HART communication: <ul style="list-style-type: none"><li>Protocol HART 7.1, backward compatible</li><li>Number of devices up to 8 HART field devices (depending on installation)</li></ul>
Output	Omnidirectional integral antenna, WirelessHART communication
Power supply	Rated voltage $U_n$ 7 to 32 V DC Rated current $I_n < 1$ 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)

WirelessHART adapter	
Explosion protection	Zone 1, 21 Ex d
ATEX	II 2G Ex db IIC T6...T5 Gb II 2D Ex tb IIIC T95°C Db
FM	XP Class I, II, III, Division 1, Groups A-G Class I, Zone 1, AEx db IIC T6...T5 Gb Zone 21, AEx tb IIIC T95°C Db
CSA	XP Class I, II, III, Division 1, Groups A-G Ex db IIC T6...T5 Gb Ex tb IIIC T95°C Db
IECEX	Ex db IIC T6...T5 Gb Ex tb IIIC T95°C Db
Zone 0, 20 Ex i	
ATEX	II 1G Ex ia IIC T6...T5 Ga II 1D Ex ia IIIC T95 °C Da
FM	IS Class I, II, III, Division 1, Groups A-G Class I, Zone 0, AEx ia IIC T6...T5 Ga Zone 20, AEx ia IIIC T95°C Da
CSA	IS Class I, II, III, Division 1, Groups A-G Ex ia IIC T6...T5 Ga Ex ia IIIC T95°C Da associated apparatus [Ex ia]
IECEX	Ex ia IIC T6...T5 Ga Ex ia IIIC T95°C Da
Order number	
WirelessHART adapter non-ex	3KDE998536L0011
WirelessHART adapter Ex d	3KDE998536L0010
WirelessHART adapter Ex i	3KDE998536L0009



Accessories

Antenna for gateway

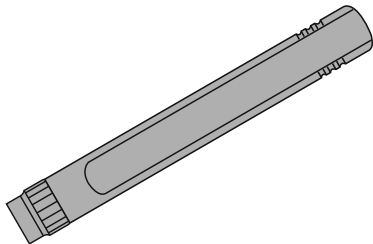


Figure 4: Antenna

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

Surge protection for gateway



Figure 5: Surge protection

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

Coaxial cable



Figure 6: Coaxial cable

Coaxial cable 1 m or 2 m	
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

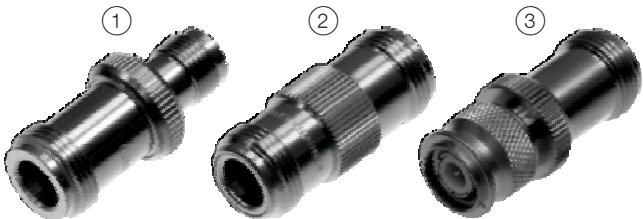


Figure 7: Adapters

Pos.	Type	Order number
①	N socket to TNC socket	3KDE998536L0006
②	N socket to N socket	3KDE998536L0007
③	TNC plug to N socket	3KDE998536L0005



Connection example

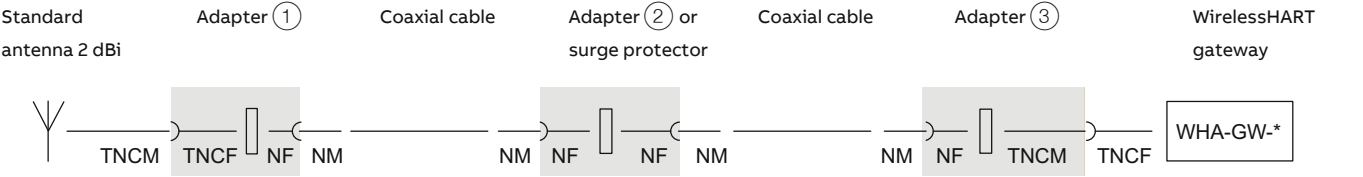


Figure 8: Connection diagram (example)



## 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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