

WirelessHART gateway - RAD-WHG/WLAN-XD - 2900178

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Gateway between WirelessHART field devices and 802.11b/g

Product Description


WirelessHART gateway to 802.11b/g Ethernet

Your advantages

- ✓ WirelessHART gateway supports 250 WirelessHART devices
- ✓ Completely meshed routing (self-organizing and self-healing network) with WirelessHART
- ✓ Easy programming and diagnostics using an integrated web server or HART programming device
- ✓ 802.11b/g client can be used as a WirelessHART backhaul connection with 802.11i (WPA2) 128-bit AES encryption
- ✓ WirelessHART uses "channel hopping" for interference tolerance



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 543569
GTIN	4046356543569
Weight per Piece (excluding packing)	310.300 g
Custom tariff number	85176200
Country of origin	United States
Note	Made to Order (non-returnable)

Technical data

Dimensions

Width	45 mm
Height	99 mm
Depth	114.5 mm
Width	45 mm
Height	99 mm

WirelessHART gateway - RAD-WHG/WLAN-XD - 2900178

Technical data

Dimensions

Depth	114.5 mm
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Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Degree of protection	IP20

Wireless path

Interface description	WLAN as per IEEE 802.11 b/g
Direction	Bi-directional
Frequency range	2.4 GHz ... 2.472 GHz
Transmit capacity, minimum	0 dBm
Transmit capacity, maximum	20 dBm
Channel distance	5 MHz
Number of channel groups	13
Antenna connection method	RSMA (female)
Interface description	WirelessHART
Note	Test loops connect HART programming tool
Antenna	External
Antenna connection method	RSMA (female)
Frequency range	2.4 GHz ... 2.4835 GHz
Transmit capacity, minimum	0 dBm
Transmit capacity, maximum	10 dBm
Channel distance	5 MHz
Number of channel groups	15

Serial interface

Connection method	RJ45
Serial transmission speed	10/100 Mbps

Supply

Supply voltage	24 V DC
Supply voltage range	9 V DC ... 30 V DC
Typical current consumption	125 mA (at 24 V DC)
Max. current consumption	300 mA (at 24 V DC)
Nominal power consumption	5.1 W (typical)

General

Mounting position	any
Assembly instructions	NS 35 in acc. with EN 60715
Housing material	Polyamide PA non-reinforced

Connection data

Conductor cross section solid min.	0.2 mm ²
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WirelessHART gateway - RAD-WHG/WLAN-XD - 2900178

Technical data

Connection data

Conductor cross section solid max.	4 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3

Standards and Regulations

Electromagnetic compatibility	Conformance with RED Directive 2014/53/EU
Interface description	WLAN as per IEEE 802.11 b/g
Channel distance	5 MHz
Interface description	WirelessHART
Channel distance	5 MHz
Conformance	CE-compliant
	FCC Directive, Part 15.247
	CE-compliant (RED Directive 2014/53/EU)
	ATEX 2014/34/EU
ATEX	Ex nA IIC T4 Gc; Sira 10ATEX4252X
IECEx	Ex nA IIC T4; IECEx CSA 10.0008X

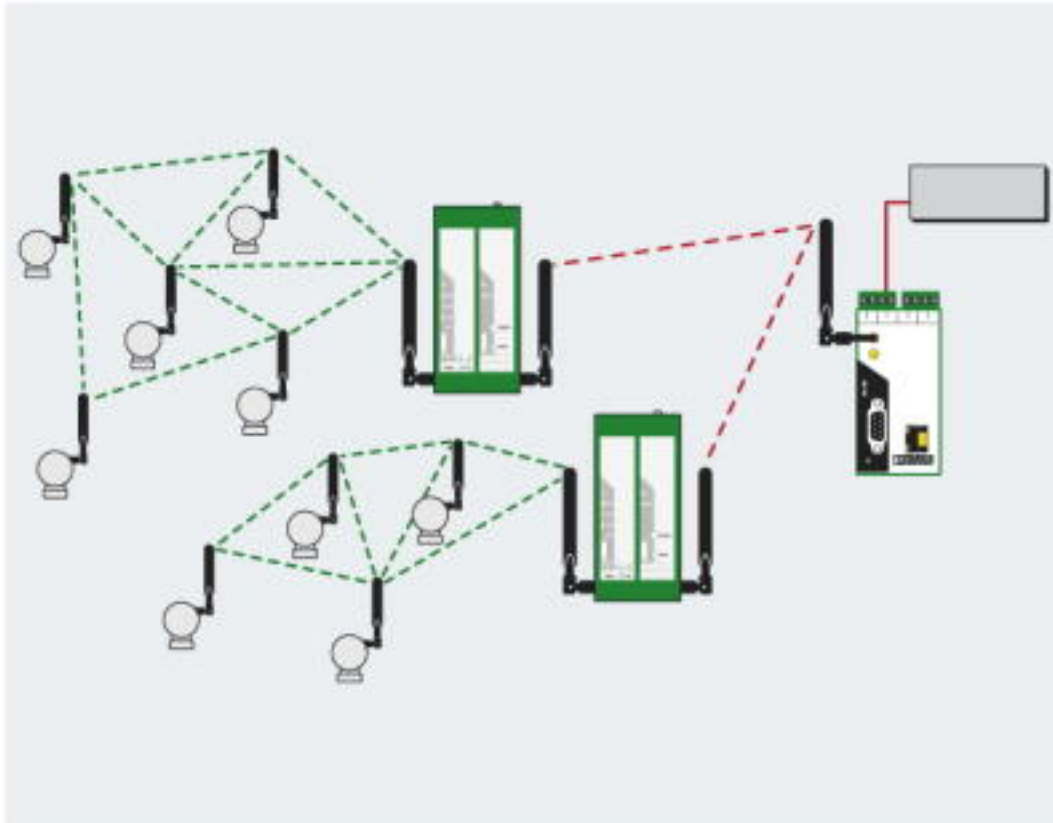
Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

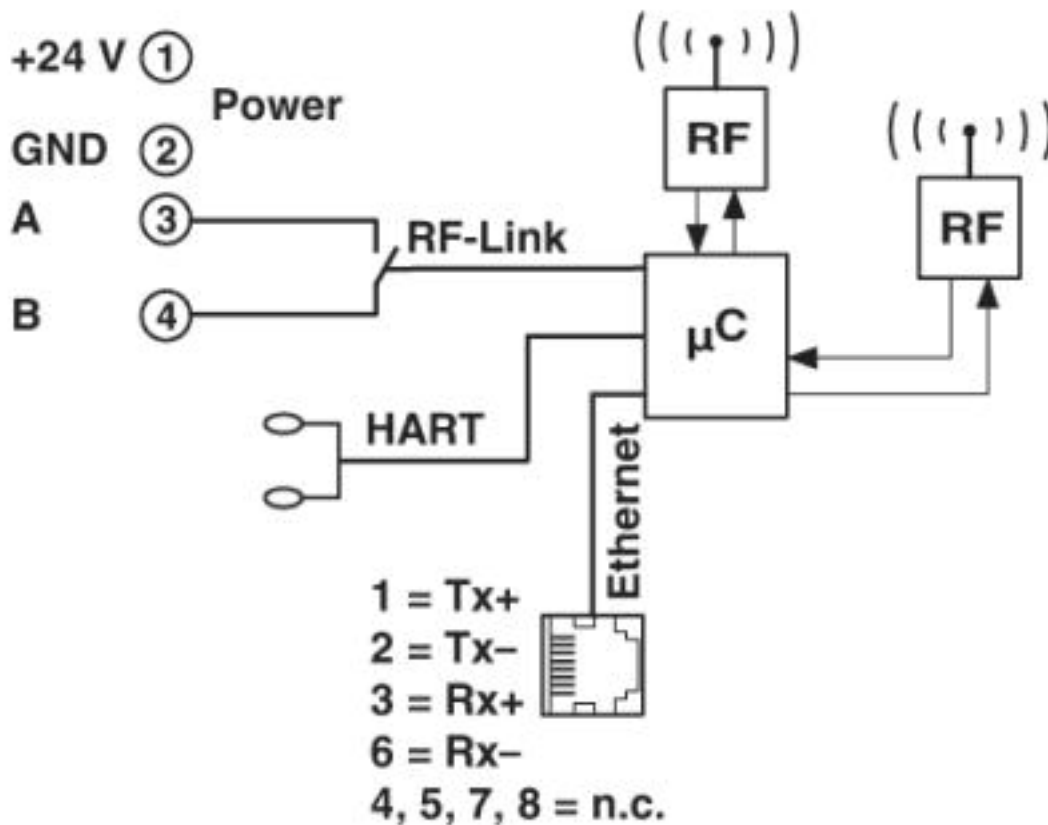
WirelessHART gateway - RAD-WHG/WLAN-XD - 2900178

Application drawing



WirelessHART gateway - RAD-WHG/WLAN-XD - 2900178

Block diagram



Classifications

eCl@ss

eCl@ss 10.0.1	19179290
eCl@ss 4.0	27250300
eCl@ss 4.1	27250300
eCl@ss 5.0	27242200
eCl@ss 5.1	27242200
eCl@ss 6.0	19179200
eCl@ss 7.0	19179290
eCl@ss 8.0	19179290
eCl@ss 9.0	19179290

ETIM

ETIM 2.0	EC000310
ETIM 3.0	EC000310
ETIM 4.0	EC000310
ETIM 5.0	EC000817
ETIM 6.0	EC000310

WirelessHART gateway - RAD-WHG/WLAN-XD - 2900178

Classifications

ETIM

ETIM 7.0	EC000310
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UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	43223108
UNSPSC 11	39121008
UNSPSC 12.01	43223108
UNSPSC 13.2	43222604
UNSPSC 19.0	43222604

Accessories

Accessories

Antenna

Antenna - RAD-ISM-2400-ANT-OMNI-6-0 - 2885919

Omnidirectional antenna, 2.4 GHz, gain: 6 dBi, polarization: linear, opening angle: h/v 360°/30°, degree of protection: IP67, seawater-resistant, connection: N (female), incl. mounting bracket and mast clips, ATEX and IECEx approval



Antenna - RAD-ISM-2400-ANT-VAN-3-0-RSMA - 2701358



Omnidirectional antenna with protection against vandalism, 2.4 GHz, gain: 3 dBi, polarization: linear, opening angle: h/v 360°/85°, degree of protection: IP55, connection: RSMA (male), for control cabinet mounting (optional wall mounting), incl. 1.5 m / 5 ft. connecting cable

Antenna - RAD-ISM-2400-ANT-OMNI-2-1-RSMA - 2701362



Omnidirectional antenna, 2.4 GHz, gain: 2 dBi, polarization: linear, opening angle: h/v 360°/75°, degree of protection: IP65, connection: RSMA (male), incl. 1.5 m / 5 ft. connecting cable and mounting bracket for wall mounting

Coaxial adapter

WirelessHART gateway - RAD-WHG/WLAN-XD - 2900178

Accessories

Antenna barrier - BAR-ANT-N-N-EX - 2702198



Antenna barrier for control cabinet feed-through, type of protection: Ex i, degree of protection: IP65, barrier installation: Zone 2 / 22, antenna installation: in dust and gas Ex area, frequency range: 0.3 GHz ... 6 GHz, connection: 2 x N (female), ATEX, EAC Ex and IECEx approval

Coaxial cable

Antenna cable - RAD-PIG-RSMA/N-0.5 - 2903263



Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 0.4 / 0.5 / 0.6 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 0.5 m (1.6 ft.)

Antenna cable - RAD-PIG-RSMA/N-1 - 2903264



Antenna cable, outside diameter: 5 mm (0.2 in.), inner conductor: solid, attenuation: 0.5 / 0.8 / 1.1 dB at 0.9 / 2.4 / 5.8 GHz, connection: N (male) -> RSMA (male), cable length: 1 m (3.3 ft.)

Antenna cable - RAD-CAB-EF393- 3M - 2867649



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: stranded, attenuation: 1.0 / 1.8 / 3.1 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2 x N (male), cable length: 3 m (10 ft.)

Antenna cable - RAD-CAB-EF393- 5M - 2867652



Antenna cable, outside diameter: 10 mm (0.4 in.), inner conductor: stranded, attenuation: 1.6 / 2.9 / 5.0 dB at 0.9 / 2.4 / 5.8 GHz, connection: 2 x N (male), cable length: 5 m (16 ft.)

Surge protection for transceiver systems

WirelessHART gateway - RAD-WHG/WLAN-XD - 2900178

Accessories

Surge protection device - CN-LAMBDA/4-5.9-BB - 2838490



Attachment plug with Lambda/4 technology as surge protection for coaxial signal interfaces. Connection: N connectors socket-socket