

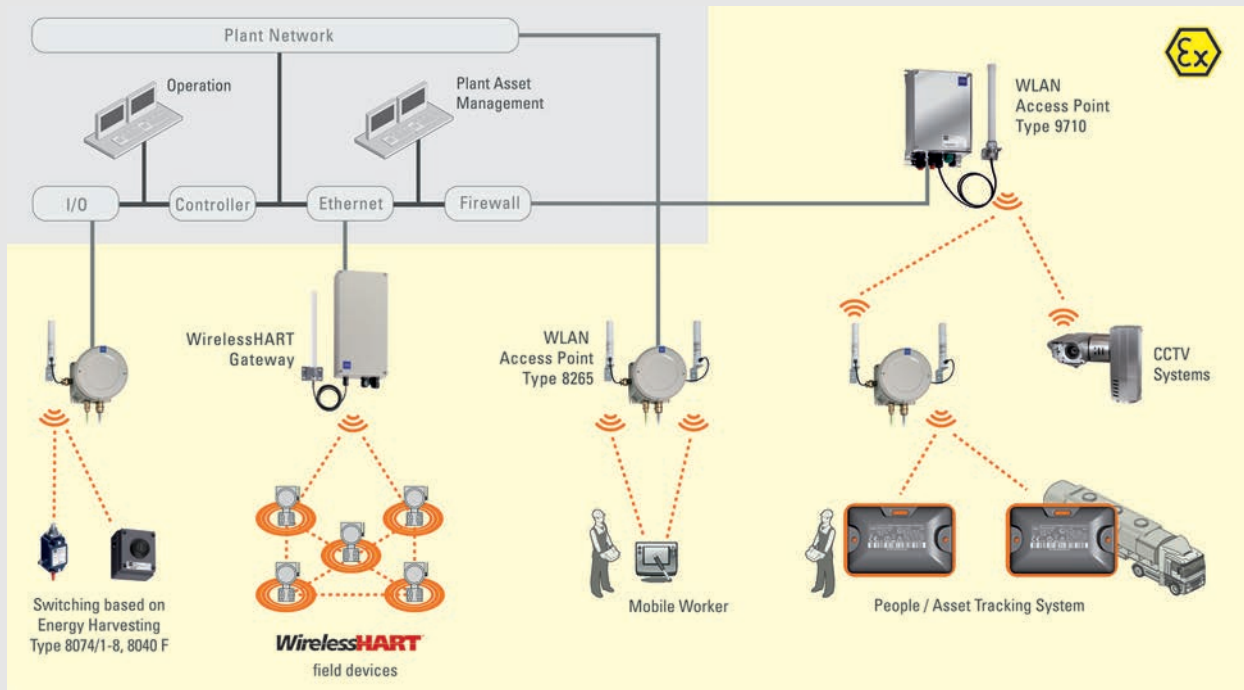


Wireless

Wireless

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WLAN Access Point - Zone 1	ISwireless	8265	146
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WirelessHART Gateway NEW	ISwireless	7145	150

Overview of the Portfolio



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Latest Wireless Technology in Process Automation

Application of wireless technology in the process industry offers new possibilities for plant operators to optimize production processes and to follow entirely new paths. This opens up a wide field of applications with a variety of solutions for the operator. R. STAHL takes this trend into account in various ways.

You have a wireless modem without Ex-approval and you want to use it in a hazardous area? Based on components like the HFisolator, we will take your wireless solution into the hazardous area.

The HFisolator converts common wireless signals into explosion-protected, intrinsically safe wireless signals. The signals are transmitted in a galvanically separated way between input and output. Furthermore, R. STAHL offers a number of products that are immediately applicable. This includes: WLAN Access Point for Zone 1 and Zone 2, WirelessHART Gateway and switch, which do not require a battery or a power supply.

Applications and Suitable Wireless Solution

Applications	Wireless solution
Position switch and switching without signal line and power supply	Position switch 8074F Control device 8040F Receiver and repeater
Wireless sensor and actor networks - WirelessHART	WirelessHART Gateway Series 7145
Data communication with portable or mobile devices Point-to-point connections for CCTV and HMI	WLAN Access Point 7145 for Zone 2 WLAN Access Point 8265 for Zone 1
Tracking of assets and individuals indoors and outdoors	Asset Tracking System based on active RFID



16718E00

- > Allows the use of standard antennas in hazardous areas
- > Compact design
- > Variants for 900 MHz, 2.4 and 5 GHz
- > Extremely wide temperature range
- > Flexible use


WebCode 9730A

	ATEX / IECEx					
Zone	0	1	2	20	21	22
Ex i interface	x	x	x	x	x	x

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Selection Table						
Version	Frequency band	Frequency range	Order number	Art. no.	PS	Weight kg
HFisolator Series 9730	900 MHz	860 ... 960 MHz	9730/12-11	240093	75	0.400
	2.4 GHz	2.4 ... 2.5 GHz	9730/13-11	240094 ◀	75	0.220
	5 GHz	4.9 ... 5.9 GHz	9730/14-11	240095	75	0.150
	2.4 & 5 GHz	2.4 ... 2.5 & 4.9 ... 5.9 GHz	9730/15-11	240096 ◀	75	0.450

Technical Data				
Explosion protection				
Global (IECEx)				
Gas, dust and mining	IECEx BAS 14.0160 X [Ex ia Ga] IIC [Ex ia Da] IIIC [Ex ia Ma] I			
Europe (ATEX)				
Gas, dust and mining	Baseefa 14 ATEX 0360 X ⊕ II (1) GD [Ex ia Ga] IIC, [Ex ia Da] IIIC ⊕ I (M1) [Ex ia Ma] I			
Certifications and certificates	IECEx, ATEX			
Safety data				
Isolation voltage	253 V AC			
Maximum input power	IIC 2 W IIB 3.5 W IIA 6 W I, III 6 W			
Design	9730/12-11	9730/13-11	9730/14-11	9730/15-11
Electrical data				
Insertion loss, typical	< 1.3 dB	< 1.4 dB	< 1.5 dB	< 1.85 & < 2.45 dB
Connection, coaxial	SMA socket (female)	SMA socket (female)	SMA socket (female)	SMA socket (female)
Mechanical data				
Dimensions	100 x 65 x 20 mm	100 x 25 x 20 mm	80 x 25 x 20 mm	150 x 67 x 20 mm
Degree of protection	IP40	IP40	IP40	IP40
Ambient conditions				
Operating temperature	-60 ... +80 °C			
Storage temperature	-60 ... +80 °C			
Relative humidity (no condensation)	≤ 95 %			



17350E00

- > Connect antennas in hazardous locations – standard N-type connector
- > Fast and easy installation
- > Extended temperature range -60 ... +150 °C
- > Compact design
- > High degree of protection IP66
- > Suitable for Offshore applications



WebCode 9731A

Zone	ATEX / IECEx					
	0	1	2	20	21	22
For use in		x	x		x	x

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Selection Table

Version	Connector		Thread	Order number	Art. no.	PS	Weight kg
	Outside	Inside					
Coax bushing Series 9731	N-Type female	SMA female	M20	9731 / 110 - 1	249456	75	0.400
			3/4" NPT	9731 / 110 - 2	249457	75	0.400

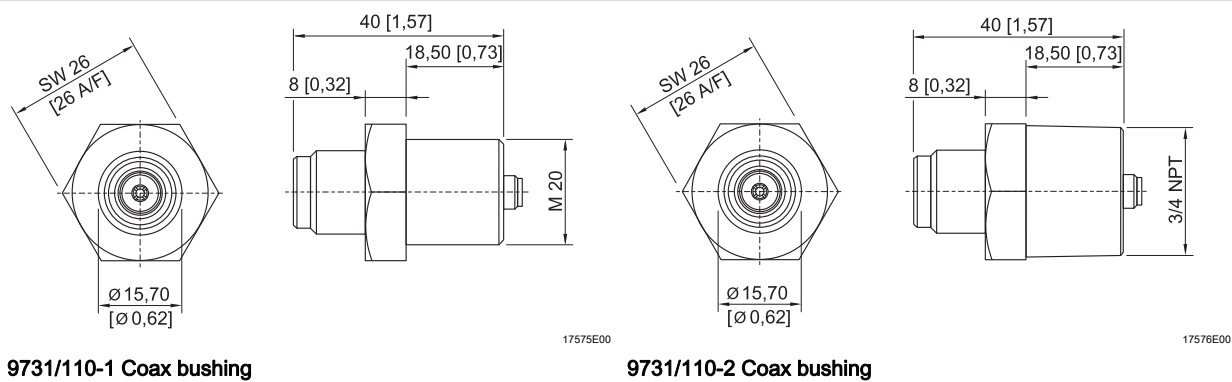
Technical Data

Explosion protection		
Global (IECEX)		
Gas, dust and mining	IECEX TRC 15.0001X Ex d IIC Gb Ex tb IIIC Db Ex d I Mb	
Europe (ATEX)		
Gas, dust and mining	TRAC15ATEX0001X ⊕ II 2 G Ex d IIC Gb ⊕ II 2 D Ex tb IIIC Db ⊕ I M2 Ex d I Mb	
Certifications and certificates		
Certificates	IECEX, ATEX	
Insertion loss	900 MHz	0.25 dB
	2.4 GHz	0.5 dB
	5 GHz	0.8 dB
Ambient conditions		
Operating temperature	-60 ... +150 °C	
Storage temperature	-60 ... +150 °C	
Relative humidity	0 ... 95 %, non condensing	
Mechanical data		
Degree of protection	IP65	
Material	Nickel plated brass	

Accessories and Spare Parts

Designation	Description	Frequency band	Order number	Art. no.	PS	Weight kg
HFisolator Series 9730	Converts a standard wireless signal into an intrinsically safe signal	900 MHz	9730/12-11	240093	75	0.400
		2.4 GHz	9730/13-11	240094 ◀	75	0.220
		5 GHz	9730/14-11	240095	75	0.150
		2.4 & 5 GHz	9730/15-11	240096 ◀	75	0.450

Dimensional Drawings (All Dimensions in mm [inches]) - Subject to Alterations



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17134E00

- > Robust, industrial Access Point for Zone 1
- > Based on ProSoft RLX2-IHW-E
- > Degree of protection IP66
- > For use from -40 ... +60°C
- > Standard: IEEE 802.11a/b/g
Solution for 802.11n on request




WebCode 8265C

Zone	ATEX / IECEx					
	0	1	2	20	21	22
Installation in		x	x		x	x

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Selection Table

Version	Basic version	Wire-line interface	Interface, antenna cable	Order number	PS
 WLAN Access Point Series 8265 17583E00	<ul style="list-style-type: none"> • Ex d enclosure 8265/5 • WLAN access point industrial design 	Ethernet 100BASE-T	N-type socket, intrinsically safe Ex ia	8265/5.	75

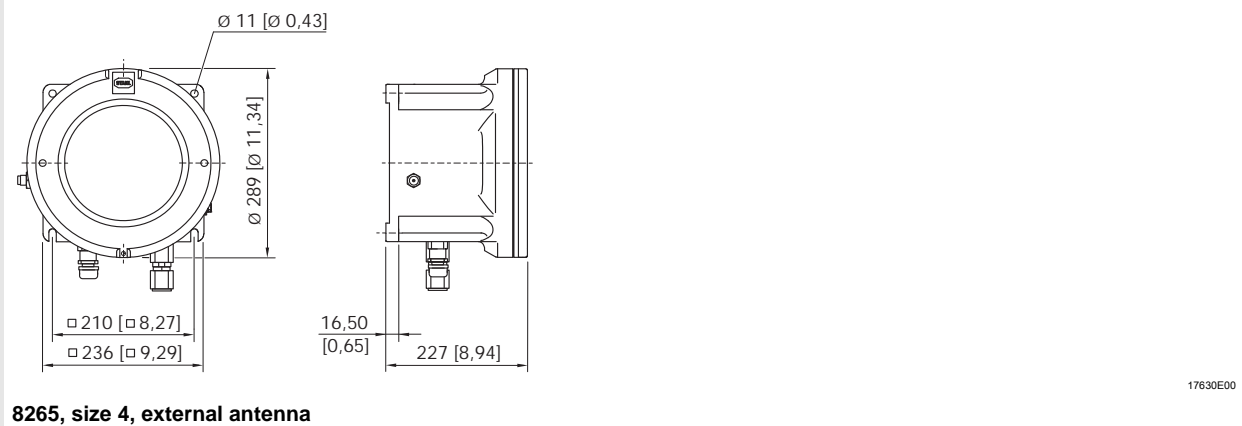
Technical Data

Explosion protection Global (IECEx) Gas and dust	IECEx PTB 07.0029 Ex d e [ia Ga] IIC T6 Gb Ex tb [ia Da] IIIC T80°C Db
Europe (ATEX) Gas and dust	PTB 06 ATEX 1077 ⊕ II 2 G Ex d e [ia Ga] IIC T6 Gb ⊕ II 2 D Ex tb [ia Da] IIIC T80°C Db
Certifications and certificates Certificates	IECEx, ATEX
Further parameters Installation	in Zone 1, 2 or Zone 21, 22

Technical Data	
Wireless	
Radio standards	802.11a, 802.11b, 802.11g, 802.11i or in addition optional 802.11n
Safety / Encoding	WPA2 - 802.11i with 128 bit AES-CCM WPA TKIP, WEP support MAC ID filter administrator password
Antenna diversity	yes (optional)
Operating modes	Access Point, Access Client or Repeater / Bridge
Configuration	via integrated web server
Auxiliary power	
Rated voltage	24 V DC
Ambient temperature	-40 ... +60 °C
Degree of protection	IP66

Accessories and Spare Parts					
Designation	Description	Art. no.	PS	Weight kg	
Antennas	omnidirectional, 2.4 GHz ISM band	6 dBi antenna gain	207405	75	0.370
	omnidirectional, 5 GHz ISM band	6 dBi antenna gain	207406	75	0.200
	omnidirectional, 2.4 / 5 GHz ISM band	6/8 dBi antenna gain	207407	75	0.370
	mounting kit for antenna		207408	75	0.160
	Antennas for use in the offshore applications are available on request.				
Coaxial cable	Order is based on your specification. Specify length, plug connector and cable type, if necessary.				

Dimensional Drawings (All Dimensions in mm [inches]) - Subject to Alterations



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12691E00

- > Compact WLAN access point enables communication with portable devices such as barcode scanner, cameras, PDAs in Zone 2
- > Open standard conforms to 802.11a/b/g (802.11 n on request)
- > Robust and compact design for use in industrial environment
- > Temperature range -40 ... +60 °C
- > Flexible design for use in Zones 2, 22
- > Field enclosures made of stainless steel with IP65



WebCode 7145D

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	ATEX					
Zone	0	1	2	20	21	22
Installation in			x			x

Note: NEC solution on request

Selection Table

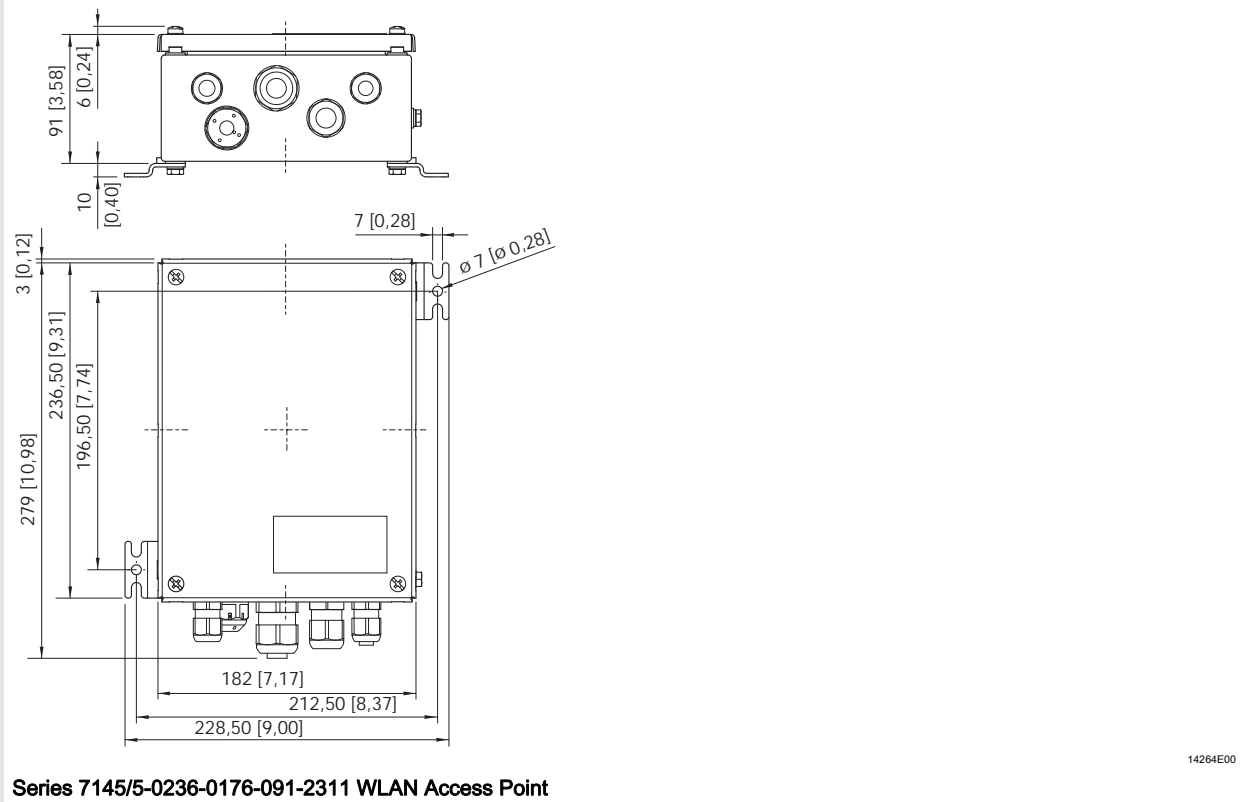
Version	Description	Field enclosure	Order number	Art. no.	PS	Weight kg
WLAN access point Series 7145/5	integrated in enclosure	made of stainless steel	7145/5-	207124	75	2.400

Technical Data

Explosion protection Europe (ATEX) Gas and dust	PTB 09 ATEX 1129 ⊕ II 3 G Ex nA IIC T5 Gc ⊕ II 3 D Ex tb IIIC T130°C Dc
Certifications and certificates Certificates	ATEX
Wireless Radio standards	802.11a, 802.11b, 802.11g, 802.11i
Safety / Encoding	WPA2 - 802.11i with 128 bit AES-CCM Legacy WPA TKIP, WEP support MAC ID filter administrator password
Antenna diversity	yes
Configuration	using the integrated web server
Auxiliary power Rated voltage	24 V DC
Ambient temperature	-40 ... +60 °C
Degree of protection Field enclosure	IP65

Accessories and Spare Parts					
Designation	Description	Art. no.	PS	Weight kg	
Antennas	omnidirectional, 2.4 GHz ISM band	6 dBi antenna gain	207405	75	0.370
	omnidirectional, 5 GHz ISM band	6 dBi antenna gain	207406	75	0.200
	omnidirectional, 2.4 / 5 GHz ISM band	6/8 dBi antenna gain	207407	75	0.370
	mounting kit for antenna		207408	75	0.160
	Antennas for use in the offshore applications are available on request.				
Coaxial cable		1.5 m	207411	75	0.110
		3 m	207410	75	0.110
		6 m	207409	75	0.110
Antenna barrier / HFisolator	Enclosure bushing and Exi limitation of antenna signal N-type socket for external connection The use of the antenna barrier requires a customer-specific adjustment of the enclosure: opening for n-type socket.	248629	75	0.173	

Dimensional Drawings (All Dimensions in mm [inches]) - Subject to Alterations





17254E00

- > Compact WirelessHART gateway for operating WirelessHART field devices
- > Ethernet interface for communication with DCS and Asset Management System
- > Intuitive operation via web server
- > Robust stainless steel enclosure with IP65 rated protection
- > Optional:
 - Intrinsically safe Ex ia antenna interface – to guarantee safety while working on the interface
 - Ethernet connection via FO, Ex op is explosion-protected



WebCode 7145C

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	ATEX					
Zone	0	1	2	20	21	22
Installation in			x			x

Selection Table

Version	Data interface	Field enclosure	Order number	Art. no.	PS	Weight kg
WirelessHART Gateway Series 7145	100Base-TX (copper)	Stainless steel, painted	7145/54-0360-0176-0091-0003	239977	75	5.500

Antennae and antenna cables are not included and must be ordered separately; see Accessories.

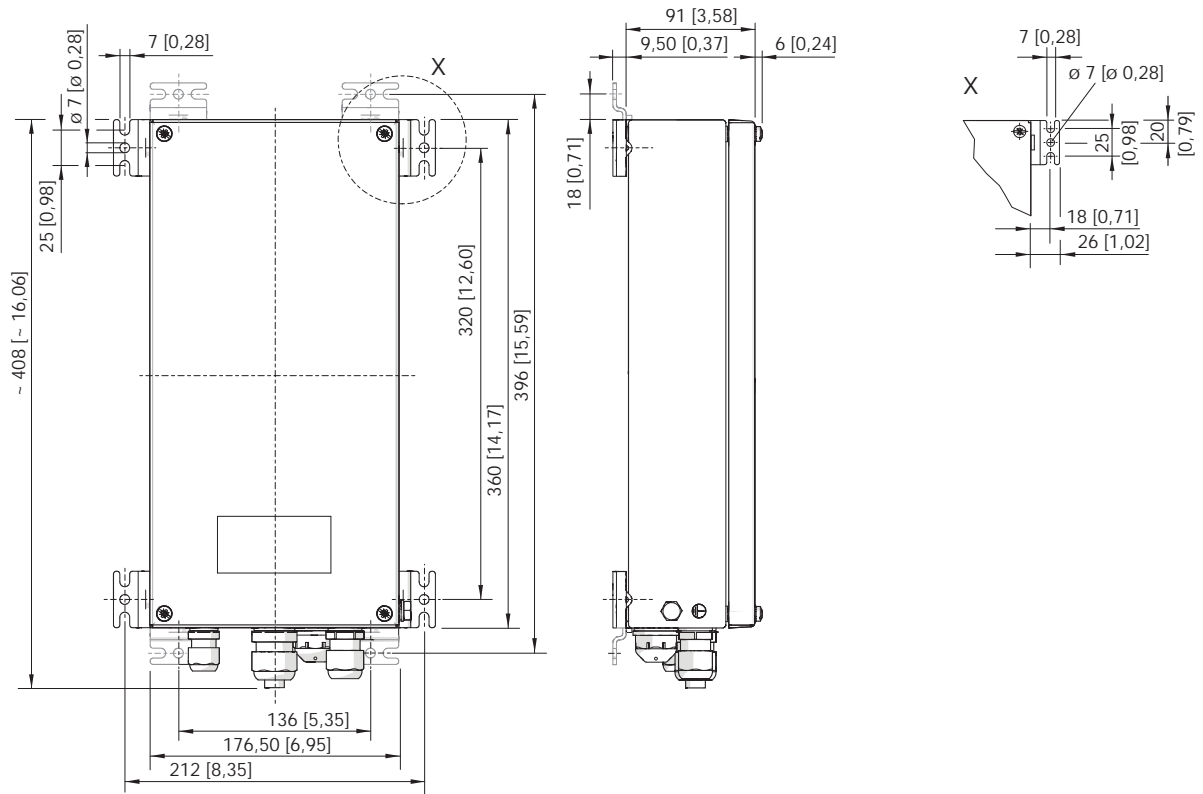
Technical Data

Explosion protection Europe (ATEX) Gas and dust	PTB 09 ATEX 1129 ⊕ II 3 G Ex nA IIC T4 Gc ⊕ II 3 D Ex tc IIIC T130°C Dc
Certifications and certificates Certificates	ATEX
Electrical data Auxiliary power Nominal voltage Voltage range Nominal current at 24 V DC Power consumption Operation indication	24 V DC 18 ... 31.2 V DC 180 mA 4.64 W "PWR" LED green
Radio interface Protocol Frequency band Max. number of WirelessHART subscribers Antenna connection Transmitting power (EIRP) Range National radio frequency allocation Directive 99/5/EC	WirelessHART 2.4 ... 2.4835 GHz (ISM-Band) 100 RP-SMA (female external thread, inner pin) 14.25 mW (11.54 dBm) Maximum: 200 m outside, 50 m inside, depending on ambient conditions and antenna location. The radio interface uses the licence-free, 2.4 GHz frequency band. Please note that local regulations may limit the use of the device. ETSI EN 300328: V1.8.1 (2012-06), ETSI EN 301489-17: V2.2.1 (2012-09)

Technical Data	
Data interface	
Protocol	Modbus TCP, HART over Ethernet (UDP)
100Base-TX connection	RJ45
Transmission range	max. 100 m
Parameterisation	Via integrated web server
Electromagnetic compatibility	Tested in accordance with the following standards and regulations: EN 61326-1 (application in industrial environments)
Ambient conditions	
Ambient temperature	-20 ... +60 °C
Storage	-20 ... +70 °C
Relative humidity (no condensation)	5 ... 95 %
Use at the height of	≤ 2000 m
Mechanical data	
Auxiliary power connection terminal	
Design	Screw terminal, 2-pin
Connection	
Rigid	0.2 ... 2.5 mm ²
Flexible	0.2 ... 2.5 mm ²
Flexible with core end sleeve	0.25 ... 2.5 mm ²
100Base-TX Ethernet	RJ45
Antenna	RP-SMA (female external thread, inner pin)
Mounting type	Wall mounting
Weight	4.7 kg
Enclosure	IP65
Enclosure	Stainless steel 1.4301, powder-coated

Accessories and Spare Parts					
Designation	Description		Art. no.	PS	Weight kg
Antennae	omnidirectional, 2.4 GHz ISM band	4 dBi antenna gain	207404	75	0.340
Coaxial cable	antenna - device RP-SMA / N-plug	1.5 m	207411	75	0.110
		3 m	207410	75	0.110
		6 m	207409	75	0.110
RJ-45 plug connector	Robust RJ-45 plug connector for fitting in the field		219563	26	0.011
The following devices can be supplied on the basis of a customised solution with a WirelessHART Gateway combined in an enclosure on request (dimensions different from the standard).					
Antenna barrier	Converts standard antenna signals to intrinsically safe Ex ia signals. Enables antennas to be installed in zones 2 and 22 or zones 1 and 21. Is mounted in the enclosure instead of the cable gland. N-type connector on the outside of the enclosure, N-type connector on the inside of the enclosure.		248629	75	0.173
Media Converter	Media Converter of 10/100 Base-Tx (1 x RJ45 port) to 100 Base-Fx "Ex op is" (1 x FO port SC); Multi mode (up to 4 km range); Webcode: 9721A		220381 ◀	22	0.240
	Media Converter from 10/100Base-TX (1 x RJ-45 port) to 100Base-FX "Ex op is" (1 x FO port SC); single mode (up to 30 km range); WebCode: 9721A		220382	22	0.240

Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



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