

V6

**Input Module
WDI100**





Input module WDI100 Technical Description

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FCC Compliance

This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada.

Operation is subject to the following two conditions:

- 1) this device may not cause harmful interference, and
- 2) this device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications made to this equipment not expressly approved by **ABB STOTZ-KONTAKT GmbH** may void the FCC authorization to operate this equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.



WDI100: **120 digital inputs for wireless position sensors**
 120 valid messages for wireless position sensors



Fig. 1: WDI100

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Input module

WDI100

Technical Description

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Purpose and short description

One single input module is able to transmit the information of up to 120 wireless position sensors to the machine control. The input module receives the sensor signals via two antennas and then transmits them to the machine control via a field bus.

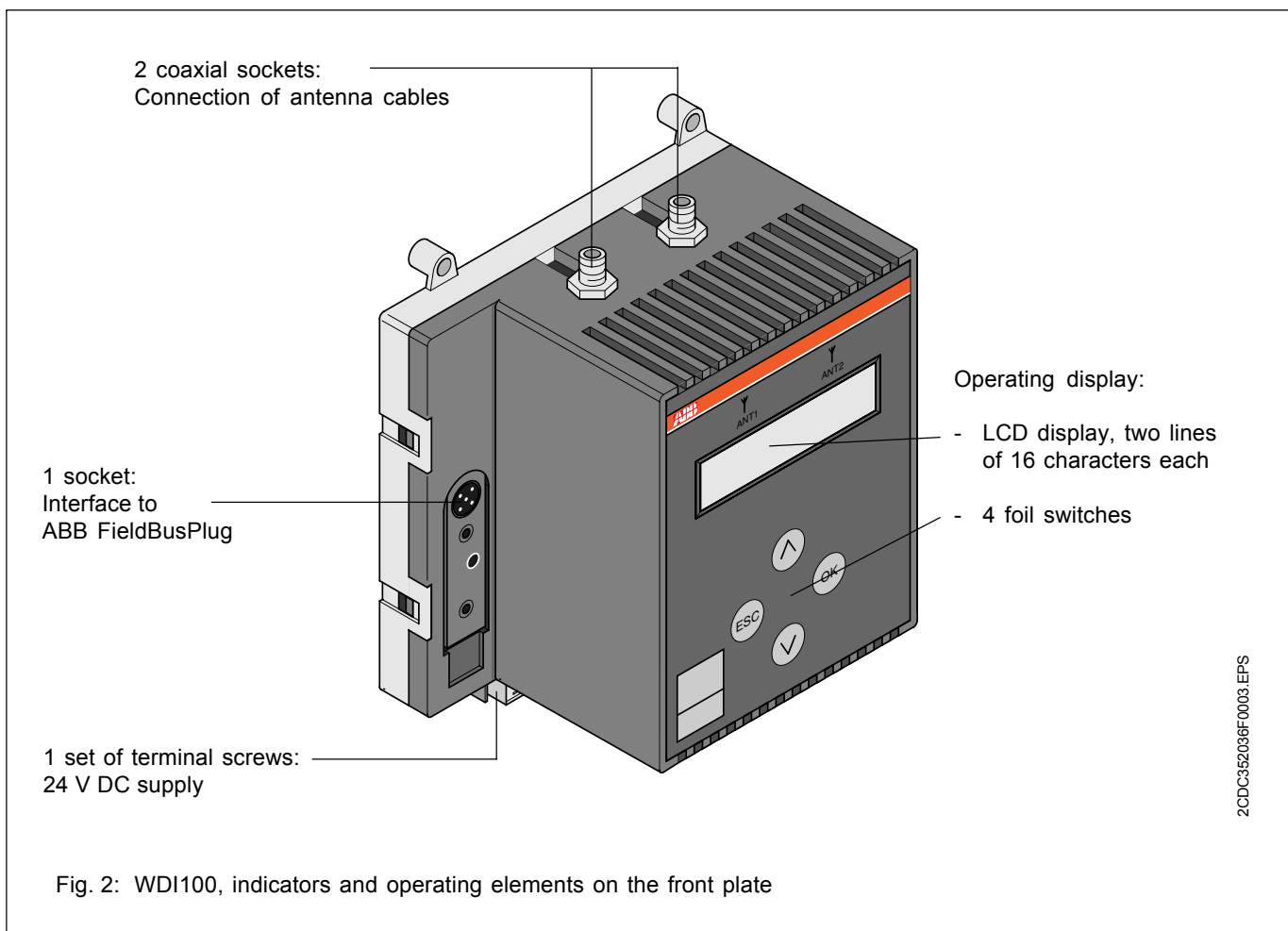
Communication is performed within the 2.4 GHz band according to the ETS 300 328 standard. The reliability of data transmission is guaranteed by the use of frequency hopping with different frequency sequences.

The input module expects to receive a functional state message of each assigned sensor every 500 ms. This way the input module monitors the correct operation of the sensors and is able to detect malfunctions immediately, if no functional state message is received any longer.

Furthermore, the input module provides configuration and diagnosis functions for wireless position sensors.

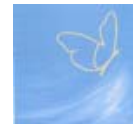
Indicators and operating elements on the front plate

Fig. 2 shows the indicators and operating elements on the front plate.



Input module WDI100

Technical Description



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Technical data

Number of inputs	120 digital inputs for wireless position sensors 120 status messages for wireless position sensors
Frequency band (communication)	2.4 GHz ISM band acc. to ETSI standard ETS 300 328
Frequency / antenna alternation	Frequency hopping with different frequency sequences Alternation between transmitting and receiving antenna
Error rate (per input)	10 ⁻⁹
Latency (99.9 %) (per input)	20 ms (max. 34 ms) until the signal is available on the fieldbus
Range of transmission (of the antenna)	5 m
Max. number of input modules per manufacturing cell	3
Operating display	- LCD display, two lines of 16 characters each - 4 foil switches
Electrical connections	- 2 coaxial sockets: Connection of the WAT100 antennas - 1 socket: Interface to ABB FieldBusPlug - 1 set of terminal screws: 24 V DC supply
Degree of protection acc. to IEC 60529	IP 20
Supply voltage	24 V DC (+20 %, -15 %)
Power consumption	15 W max.
Operating temperature	0 ... +50 °C
Storage temperature	-25 ... +70 °C
Permissible humidity during operation	+50 ... +95 %, non-condensing
Permissible shock and vibration stress according to EN 61131-2	Shock b < 15 g, T < 11 ms Frequency range 10 < f < 150 Hz, < 1g
Mounting	- DIN rail according to DIN EN 50022 - width: 35 mm - height: 15 mm - Mounting holes for screws of up to 4 mm diameter
Weight	410 g

Ordering data

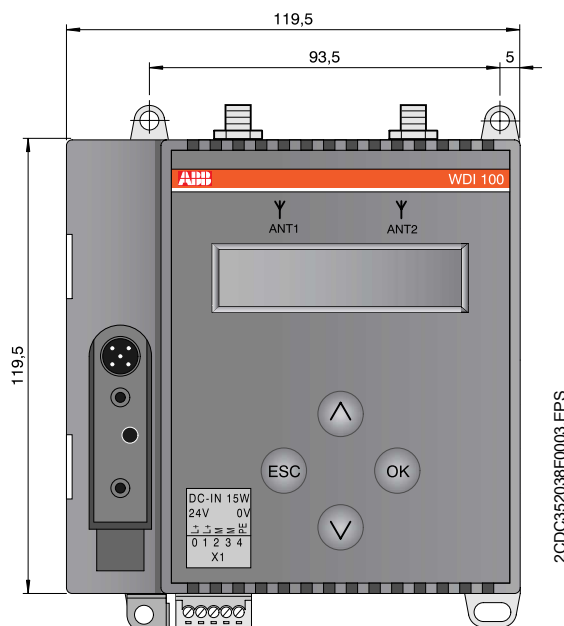
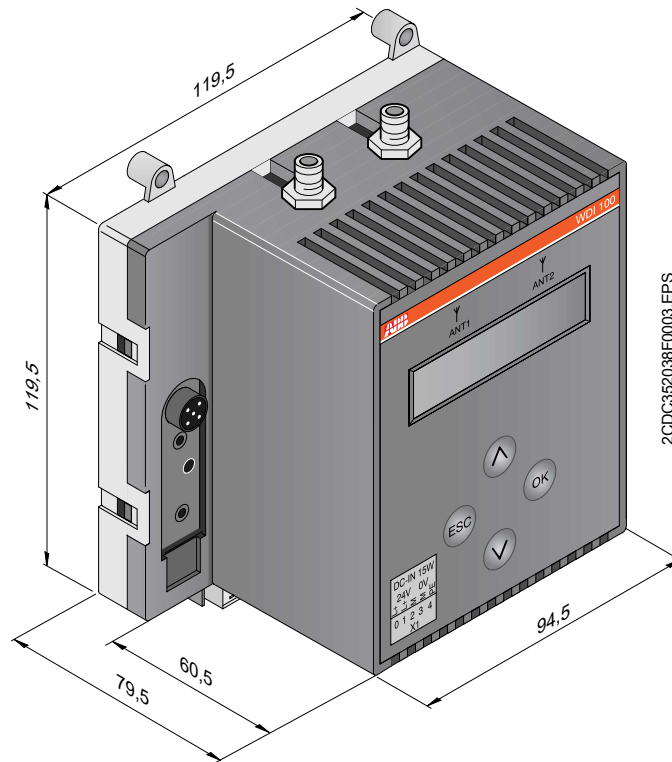
Type	Designation	Ordering number
WDI100-120FBP	Input module for wireless position sensors with FBP connection	1SAF900300R0001
EAN number	4013614365928	



Input module WDI100 Technical Description

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Mechanical dimensions



All dimensions in mm.

Fig. 3: WDI100, mechanical dimensions



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