Technical Description

Wireless Automation

Wireless Sensor Pad
WSP100

Power and productivity
for a better world™

Please note the following

Target group

This description is intended for the use of trained specialists in electrical installation and control and automation engineering, who are familiar with the applicable national standards.

Safety requirements

The responsible staff must ensure that the application or use of the products described satisfy all the requirements for safety, including all the relevant laws, regulations, guidelines and standards.

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 Automation Products 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 20 cm between the radiator and your body.

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

Liability

The documentation has been prepared with care. The products described are, however, constantly under development. For that reason the documentation is not in every case checked for consistency with performance data, standards or other characteristics, and does not represent an assurance of characteristics in the sense of § 459, Para. 2 of the German Civil Code. In the event that it contains technical or editorial errors, we retain the right to make alterations at any time and without warning.

No claims for the modification of products that have already been supplied may be made on the basis of the data, diagrams and descriptions in this documentation.

Wireless Sensor Pad
WSP100
Technical description

Purpose and short description

The sensor pad is a sensor distribution box enabling several sensor heads to be attached to one wireless communication device. The sensor pad receives its energy for the sensor functions and radio communication from an electromagnetic field.

The WSP100 communicates via ABB´s wireless communication technology to an WDIO Input/Output Module (“Basestation”), which connects via a FieldBusPlug to a fieldbus of choice (Profibus, Devicenet, Modbus…).

The sensor pad has to use the low power WSIN/WSIF-sensor-heads or passive switches (e.g. reed contacts).

Fig. 1: WSP100

Content

Connector, Indicator and Operating Element Overview

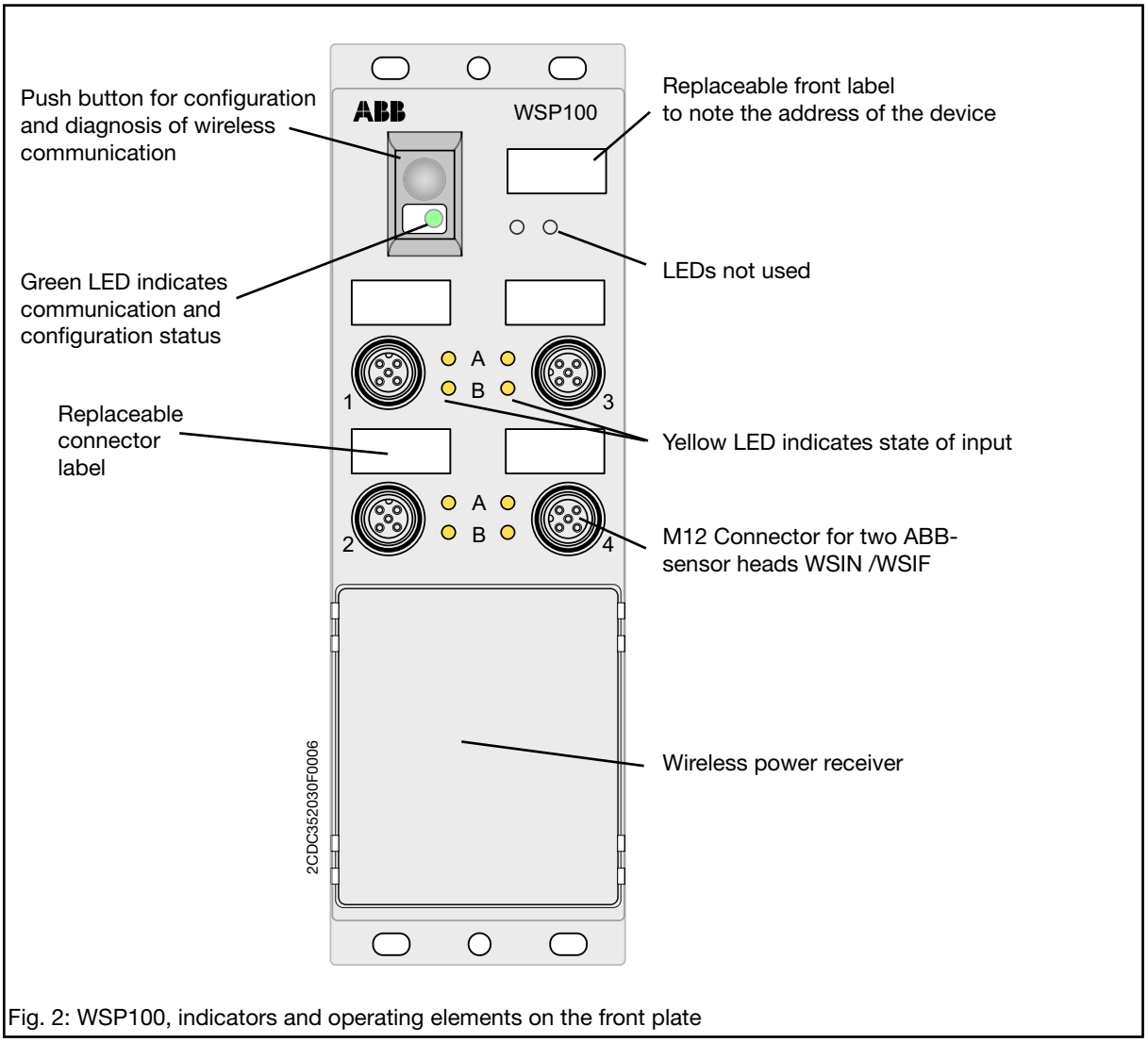


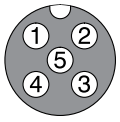
Fig. 2: WSP100, indicators and operating elements on the front plate

WDIO bus mapping of WSP data

4B	4A	3B	3A	2B	2A	1B	1A
MSB			Byte 1a				LSB

Pin assignment

Input M12 female



1 = IN B
2 = + 3 V
3 = GND (0 V)
4 = IN A
5 = earth

Pinning deviates from standard sensor connectors to avoid destruction by wrong wiring.

Pinning corresponds to WSIN/WSIF-sensor-heads.

Technical data

WSP100-8I	
Number of digital inputs	8 (low power ABB- Sensor heads or passive switches only)
Type of Connectors	M12
Operating temperature	0…55 ° C
Degree of protection	IP67
Weight	540 g
Housing	PBT
Inputs Power Supply	US
Voltage	Min. 2.9 V
Sensor Current	Max. 300 µA
Short circuit proof	yes
Inputs	
Rated input voltage	3 V
Channel type N.O.	n-switching
Channel status indicator	LED yellow per channel
Input filtering	1 ms (5 ms dead Time while first event is processed)

Approvals and authorizations

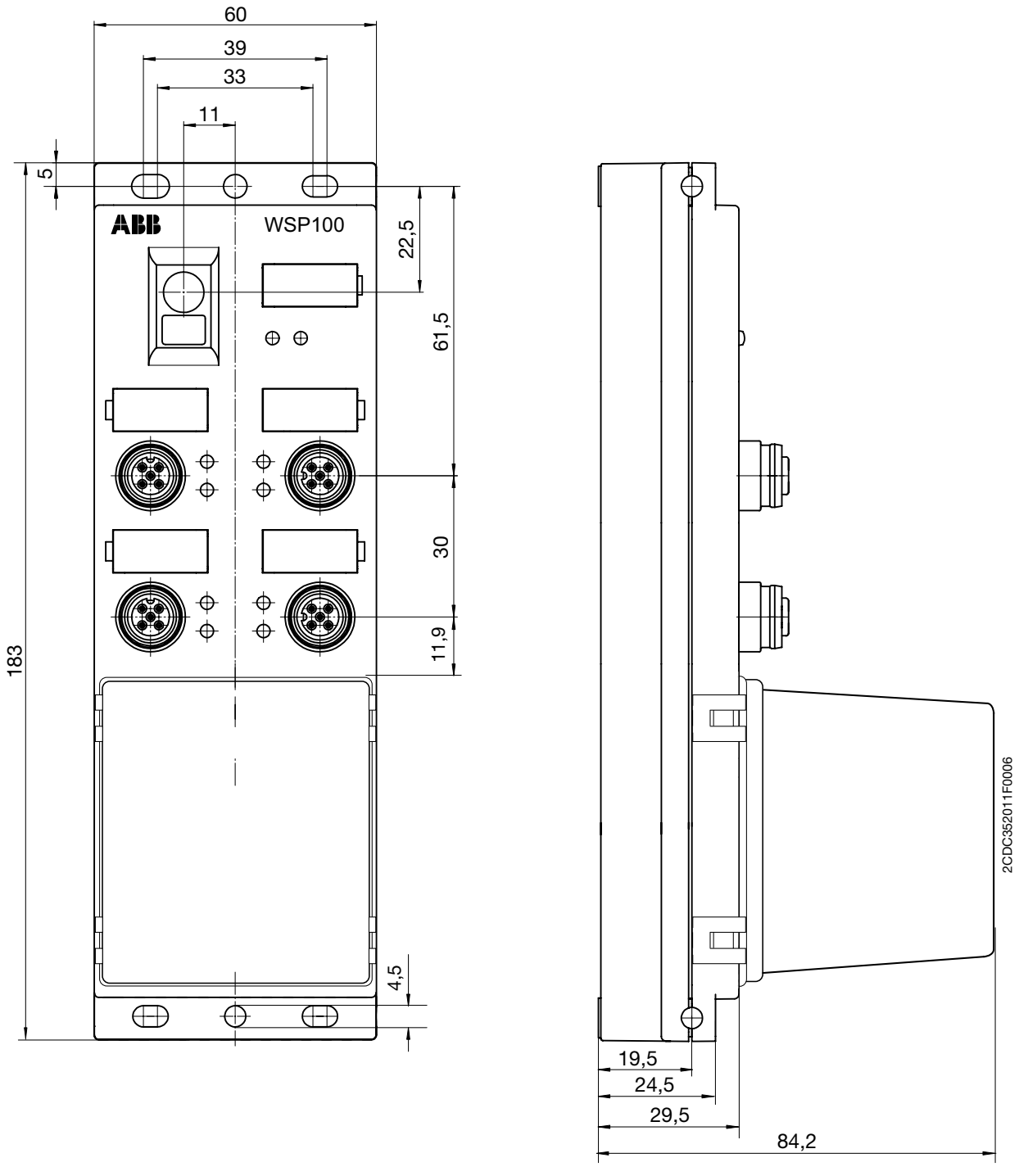
UL USA	CSA Canada	FCC	Japan	ETSI Europa	CMIIT China
■	■	■	■	■	■

■ = Approval available; rating plates carry the test symbol, if sign obligation exists.
□ = Approval submitted

Ordering data

Type	Designation	Ordering Number	EAN number
WSP100 - 8I	Wireless Sensor Pad	1SAF968100R1000	4013614388576
Accessories			
WDIO100-CON-FBP	In-/Output modul for wireless devices with FBP-connector	1SAF960300R1000	4013614386329
WSC1-YU0	Y-distribution connector M12 - 2xM12 for 2 WSIN/WSIF sensor heads	1SAF912990R1000	4013614388569

Mechanical dimensions



All dimensiones in mm

Fig. 3: WSP100, Mechanical dimensiones

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