Technical Description

Wireless Automation
Accessories
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.

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.

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<td>7/8&quot;-connector, plug, 5 pole for I/O pad WIOP100</td>
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<tr>
<td>SZC1-YU0</td>
<td>Y-connector M12 plug (5 pole) onto 2 x M12 socket (5-polig) for 2 sensors or</td>
</tr>
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<td>SZC8-YU0</td>
<td>Y-connector M12 plug (5-pole) onto 2 x M8 socket (3 pole) for 2 sensors or</td>
</tr>
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<td></td>
<td>actuators</td>
</tr>
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<td>WSC1-YU0</td>
<td>Y-connector M12 plug (5-pole) onto 2 x M8 socket (3 pole) for 2 sensor pads</td>
</tr>
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</tr>
<tr>
<td>WPI100</td>
<td>Wireless Power Indicator</td>
</tr>
</tbody>
</table>
WSC100-N000

Fixing bracket with M12 feedthrough male/female for WSIX communication module connection via a user cable to the WSIN/WSIF sensor heads.

**Description**

Feedthrough Receptacle

- M12 male connector for WSIX connection (without pin1), extended thread for fastening to the fixing bracket, 3 pins (2,4,3), pin assignment same as WSIX100
- M12 jack 5 pin for user cable (4 pole)

⚠️ EMC tests were done with a length of 3 m (unshielded cable)

**Electrical Data**

- Nominal voltage: < 300 V AC
- Test voltage: 2.0 kV
- Temperature range: -25°C ... + 80°C

**Mechanical data**

- Degree of protection: IP 67 (only in fully locked position)
- fixing bracket: high-grade steel (2 mm), 2 slotted holes for M6 screws

**Ordering data**

<table>
<thead>
<tr>
<th>Type</th>
<th>Cable length</th>
<th>Order number</th>
<th>EAN number</th>
</tr>
</thead>
<tbody>
<tr>
<td>WSC100-N000</td>
<td>0.0 m</td>
<td>1SAF 900 100 R1000</td>
<td>4013614386336</td>
</tr>
</tbody>
</table>

All dimensions in mm
WSC100-N003, WSC100-N006, WSC100-N007, WSC100-N010

Connection cable and holder for communication module WSIX100, assembled (0.3 m / 0.6 m / 0.7 m /1.0 m)

Description
- Connection cable: free of halogen, resistant to ultraviolet rays (only indoor)
- Conductor: bare litz wire (Cu) 43 x 0.1 mm diameter, extra finely stranded, 0.34 mm²
- Insulation: PP (Polypropylen), core diameter 1.3 mm
- Sheath: TPU Polyetheruethan, colour: black, external diameter 4.3 mm
- M12 right-angle plug: extended threat and square for fastening to the fixing bracket; 3 pins (2,4,3); pin assignment same as WSIX100 (pin 1 missing)
- M12 right-angle jack: 3 contacts (2,4,3); pin assignment same as WSIX100 (contact 1 sealed)
- Fixing bracket: high-grade steel; thickness: 2 mm, 2 slotted holes for M6 screws, square location hole for the right-angle plug

Electrical Data
- Nominal voltage: < 300 V AC
- Test voltage: 2.0 kV
- Temperature range:
  - moved: -25°C ... + 80°C
  - as trailing cable: + 60°C

Mechanical data
- Degree of protection: IP 67 (only in fully locked position)
- Good resistance to oil and chemicals
- Bending radius:
  - static: 25 mm
  - dynamic: 50 mm

Scope of delivery: Cable, assembled with M12 plug and M12 jack (both are right-angle), a M12 nut, a washer and a fixing bracket (high-grade steel)

Fig. 2: Mounting configuration WSC100-N0xx
WSC100-N003, WSC100-N006, WSC100-N007, WSC100-N010

Connection cable and holder for communication module WSIX100, assembled (0.3 m / 0.6 m / 0.7 m / 1.0 m)

Fig. 3: Mechanical dimensions

<table>
<thead>
<tr>
<th>Type</th>
<th>Cable length</th>
<th>Order number</th>
<th>EAN number</th>
</tr>
</thead>
<tbody>
<tr>
<td>WSC100-N003</td>
<td>0.3 m</td>
<td>1SAF 900 100 R1003</td>
<td>4013614379444</td>
</tr>
<tr>
<td>WSC100-N006</td>
<td>0.6 m</td>
<td>1SAF 900 100 R1006</td>
<td>4013614379468</td>
</tr>
<tr>
<td>WSC100-N007</td>
<td>0.7m</td>
<td>1SAF 900 100 R1007</td>
<td>4013614382864</td>
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<tr>
<td>WSC100-N010</td>
<td>1.0 m</td>
<td>1SAF 900 100 R1010</td>
<td>4013614379505</td>
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</table>
Wireless Automation
Accessories
Technical description

SZC7-5pol-S

7/8"-connector (socket 5 pole) for I/O pad WIOP100, assembling with screw terminals

Technical data
Temperature range -40°C ... + 90°C

Electrical data
Contact resistance ≤ 5 mΩ
Nominal current at 40°C 9 A
Nominal voltage 240 V
Rated voltage 250 V
Test voltage 2.0 kV eff. / 60s
Insulation resistance > 10⁹ Ω
Pollution degree 3

Mechanical data
Degree of protection IP 67
(Only in locked position with its proper counterparts.)

Mode of connection screw terminals
Connectable conductor max. 1.0 mm²
Screw joint for cable ø 8.0 - 10.0 mm²

Materials
Housing / Molded body PA
Insert TPU, self-extinguishing
Contact CuZn, pre-nickelized and 0.8 μm gold-plated
Receptacle shell / knurled screw / nut / hexagon screw / hexagon nut / sleeve Al anodized
O-Ring NBR

Ordering data

<table>
<thead>
<tr>
<th>Type</th>
<th>Order number</th>
<th>EAN number</th>
</tr>
</thead>
<tbody>
<tr>
<td>SZC7-5pol-S</td>
<td>1SAF 938 781 R1000</td>
<td>4013614389436</td>
</tr>
</tbody>
</table>

All dimensions in mm

*pin or screwdriver as assembly tool
*O-ring

Fig. 4: SZC7-5pol-S
**Wireless Automation**

**Accessories**

**Technical description**

**SZC7-5pol-P**

7/8”-connector (plug 5 pole) for I/O pad WIOP100, assembling with screw terminals

**Technical data**

* Temperature range: -40°C ... + 90°C

**Electrical data**

* Contact resistance: ≤ 5 mΩ
* Nominal current at 40°C: 9 A
* Nominal voltage: 240 V
* Rated voltage: 250 V
* Test voltage: 2.0 kV eff. / 60s
* Insulation resistance: > 10³ Ω
* Pollution degree: 3

**Mechanical data**

* Degree of protection: IP 67
  (Only in locked position with its proper counterparts.)
  The application of these products in harsh environments should always be checked before use.
* Mode of connection: screw terminals
* Connectable conductor: max. 1.0 mm²
* Screw joint for cable: Ø 8.0 - 10.0 mm²

**Materials**

* Housing / Molded body: PA
* Insert: TPU, self-extinguishing
* Contact: CuZn, pre-nickeled and 0.8 μm gold-plated
* Receptacle shell / knurled screw / nut / hexagon screw / hexagon nut / sleeve: Al anodized
* O-Ring: NBR

**Ordering data**

<table>
<thead>
<tr>
<th>Type</th>
<th>Order number</th>
<th>EAN number</th>
</tr>
</thead>
<tbody>
<tr>
<td>SZC7-5pol-P</td>
<td>1SAF 938 780 R1000</td>
<td>4013614389429</td>
</tr>
</tbody>
</table>

**Fig. 5:** SZC7-5pol-P
Wireless Automation
Accessories
Technical description

SZC1-YU0

Y-connector M12 plug (5 pole) onto 2 x M12 socket (5 pole) for 2 sensors or actuators

Technical data

Temperature range  
-25°C ... + 90°C

Electrical data

Contact resistance  ≤ 5 mΩ
Nominal current at 40°C  4 A per outlet / 4 A max. total
Nominal voltage  60 V
Rated voltage  63 V
Test voltage  1.5 kV eff. / 60s
Insulation resistance  > 10³ Ω
Pollution degree  3

Mechanical data

Degree of protection  IP 67
(Only in locked position with its proper counterparts.)

Materials

Housing / Molded body  TPU, self-extinguishing
Insert  PA GF, self-extinguishing
Contact  CuZn, pre-nickel and 0.8 μm gold-plated
Receptacle shell / knurled screw / nut / hexagon screw / hexagon nut / sleeve  CuZn, nickel-plated
O-ring  FKM

Ordering data

<table>
<thead>
<tr>
<th>Type</th>
<th>Order number</th>
<th>EAN number</th>
</tr>
</thead>
<tbody>
<tr>
<td>SZC1-YU0</td>
<td>1SAF 912 910 R1000</td>
<td>4013614386343</td>
</tr>
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</table>

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Fig. 6: SZC1-YU0
SZC8-YU0

Y-connector M12 plug (5 pole) onto 2 x M8 socket (3 pole) for 2 sensors or actuators

**Technical data**

**Temperature range**
-25°C ... + 90°C

**Electrical data**
- Contact resistance: \( \leq 5 \, \text{m\ O} \)
- Nominal current at 40°C: 4 A per outlet / 4 A max. total
- Nominal voltage: 60 V
- Rated voltage: 63 V
- Test voltage: 1.5 kV eff. / 60s
- Insulation resistance: \( > 10^9 \, \Omega \)
- Pollution degree: 3

**Mechanical data**
- Degree of protection: IP 67
  (Only in locked position with its proper counterparts.)
- The application of these products in harsh environments should always be checked before use.

**Materials**
- Housing / Molded body: TPU, self-extinguishing
- Insert: TPU, self-extinguishing
- Male connector: CuZn, pre-nickel-plated and 0.8 \( \mu \text{m} \) gold-plated
- Receptacle shell / knurled screw / nut / hexagon screw / hexagon nut / sleeve:
  CuZn, nickel-plated
- O-ring: FKM

**Wiring diagram**

<table>
<thead>
<tr>
<th>female connector “A”</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>female connector “B”</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>female connector “A”</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>female connector “B”</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

**Ordering data**

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<thead>
<tr>
<th>Type</th>
<th>Order number</th>
<th>EAN number</th>
</tr>
</thead>
<tbody>
<tr>
<td>SZC8-YU0</td>
<td>1SAF 912 911 R1000</td>
<td>4013614391217</td>
</tr>
</tbody>
</table>

Fig. 7: SZC8-YU0

Mechanical dimensions
WSC1-YU0

Y-connector M12 plug (5 pole) onto 2 x M12 socket (5 pole) for 2 sensor pads WSP

Technical data

Temperature range  
-25°C ... + 90°C

Electrical data

Contact resistance  
≤ 5 mΩ

Nominal current at 40°C  
4 A per outlet / 4 A max. total

Nominal voltage  
60 V

Rated voltage  
63 V

Test voltage  
1.5 kV eff. / 60s

Insulation resistance  
> 10⁶ Ω

Pollution degree  
3

Mechanical data

Degree of protection  
IP 67

(Only in locked position with its proper counterparts.)

The application of these products in harsh environments should always be checked before use.

Materials

Housing / Molded body  
TPU, self-extinguishing

Insert  
socket:  
PA GF, self-extinguishing  
plug:  
TPU, self-extinguishing

Contact  
CuZn, pre-nickel and  
0,8 μm gold-plated

Receptacle shell / knurled screw / nut / hexagon screw / hexagon nut / sleeve  
CuZn, nickel-plated

O-ring  
FKM

Wiring diagram

[Diagram showing pin assignment and wiring layout]

Ordering data

<table>
<thead>
<tr>
<th>Type</th>
<th>Order number</th>
<th>EAN number</th>
</tr>
</thead>
<tbody>
<tr>
<td>WSC1-YU0</td>
<td>1SAF 912 990 R1000</td>
<td>4013614388569</td>
</tr>
</tbody>
</table>
Wireless Automation
Accessories
Technical description

**WPI100 - Wireless Power Indicator**

![Warning! Service device only - No Measurement device! Do not use in continuous operation]

**Purpose and short description**
The WPI100 (Wireless Power Indicator) is used for indicating the field strength needed for the function of a wireless power product, especially the wireless proximity switch WSIX or sensor pad WSP.

It may not be used as measurement device for analysis of a regulatory situation. Such analysis have to be done via calculations as described in the planning and installation manual, simulations or via official calibrated measurement devices (as stated by the regulations and the BG in Germany).

**Functions of the WPI100**
The WPI100 has the following functions:
1. Indication of Wireless power availability and quality via LEDs
2. Remote reading of field strength with a standard voltmeter (proportional voltage generated)
The field strength produced by a power supply WPU is indicated by means of two LEDs. Additionally a voltage proportional to the field strength is output. The remote reading of the voltage can be done via a standard volt meter connected by an extension cable. The extension cable for the volt meter is attached at the jack socket (3.5 mm) at the back of the WPI.

<table>
<thead>
<tr>
<th>LEDs</th>
<th>WSIX100</th>
<th>WSP100</th>
<th>A/m Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- (No power)</td>
<td>- (No power)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>OK (low margin)</td>
<td>Good</td>
<td>&gt; 4.2</td>
</tr>
<tr>
<td></td>
<td>Good</td>
<td>Surplus</td>
<td>&gt; 5.6</td>
</tr>
<tr>
<td></td>
<td>Surplus</td>
<td>Surplus</td>
<td>&gt; 8</td>
</tr>
</tbody>
</table>

* Blinking of orange indicates intermediate state

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Output voltage +</td>
</tr>
<tr>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>GND</td>
</tr>
<tr>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Output voltage -</td>
</tr>
</tbody>
</table>
**Technical data**

- Diagnosis indication: LEDs, orange / green
- Operating temperature: -25 ... +55 °C
- Storage temperature: -40 ... +70 °C
- Connection voltmeter: 3.5 mm jack socket (alternative M12 socket)
- Frequency of fields strength: 120 kHz
- Weight: 125 g

**Ordering data**

<table>
<thead>
<tr>
<th>Type</th>
<th>Ordering number</th>
<th>EAN number</th>
</tr>
</thead>
<tbody>
<tr>
<td>WPI100</td>
<td>1SAF 902 800 R1000</td>
<td>4013614395611</td>
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<tr>
<td>Label</td>
<td>1SVR 366 017 R0100</td>
<td>4016779570459</td>
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</tbody>
</table>
### Mechanical dimensions

#### WPI100, mechanical dimensions

- **Dimensions in mm**
  - Width: 53 mm
  - Height: 58 mm
  - Depth: 31 mm
  - Thickness: 15.5 mm

#### Label for WPI100

- Label text: 3A11
- Label dimensions: 20 mm x 5 mm
- Text: "All dimensions in mm"

#### WPI100 - Extension cable for the volt meter, mechanical dimensions

- **Dimensions in mm**
  - Length: 1200 mm
  - Diameter: 2 x 0.5 mm²