

Data sheet | Item number: 890-224

Socket; 4-pole; Cod. A; 1,50 mm<sup>2</sup>; white

[www.wago.com/890-224](http://www.wago.com/890-224)



Color:



Subject to changes. Please also observe the further product documentation!

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## Item description

### Female connector/socket WINSTA® MINI with protection against mismatching

Use effective pluggable connections instead of laborious screw connections: With the WINSTA® MINI female connector/socket A coding. On PCBs, in control cabinets or for connecting lights – pluggable installation connectors from WAGO allow you to make connections according to a huge variety of requirements in no time flat. The coding options reduce installation errors, allowing fast, secure wiring of all components. The WINSTA® MINI pluggable installation connector with A coding in black or white is normally used for general mains applications in power distribution. WINSTA® MINI is our response to the trend toward miniaturisation. Our smallest pluggable connection system is primarily suited for lights, for instance, since due to LED technology, these offer much less space for the connection technology.

### Lower costs through fast commissioning and elimination of service expenses – solutions from WINSTA® MINI

The WINSTA® Pluggable Connection System allows pluggable electrical installation. This significantly reduces the need for servicing and lowers costs. Choose quality and durability – the WINSTA® MINI pluggable installation connector with protection against mismatching from WAGO makes the installation of electrical components noticeably easier.

- effective protection against mismatching
- easy tool-free operation, a wide range of coding options
- suitable for any application
- exact dimensions
- rapid, structured electrical installation

## Data

### Electrical data

#### Ratings per IEC/EN

Ratings per	IEC/EN 60664-1
Nominal voltage (III/3)	400 V
Rated impulse voltage (III/3)	6 kV
Rated current	16 A
Legend (ratings)	(III / 3) ≙ Overvoltage category III / Pollution degree 3

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## Ratings per UL 1977

Note for the US market

Some versions may also be used for current interruption in accordance with the UL certificate in select applications with currents below 5 A and voltages up to 600 V. For further information, please contact your local sales office.

Rated voltage (UL 1977)	600 V
Rated current UL 1977	12 A

## General information

Note on contact resistance

approx. 1 mΩ of contact resistance  
approx. 0.25 mΩ contact transition plug/socket

## Connection data

Connection points	4
Total number of potentials	4

## Connection 1

Connection technology	Push-in CAGE CLAMP®
Actuation type	Operating tool Push-in
Nominal cross-section	1.5 mm <sup>2</sup> / 16 AWG
Solid conductor	0.25 ... 1.5 mm <sup>2</sup> / 22 ... 16 AWG
Solid conductor; push-in termination	0.75 ... 1.5 mm <sup>2</sup> / 20 ... 16 AWG
Stranded conductor	0.25 ... 1 mm <sup>2</sup> / 22 ... 18 AWG
Fine-stranded conductor	0.25 ... 1.5 mm <sup>2</sup> / 22 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 0.75 mm <sup>2</sup> / 22 ... 20 AWG
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 0.75 mm <sup>2</sup> / 22 ... 20 AWG
Fine-stranded conductor; with ferrule; push-in termination	0.75 mm <sup>2</sup> / 20 AWG
Strip length	9 mm / 0.35 inches
Pole number	4
Conductor entry direction to mating direction	0°

## Physical data

Pin spacing	4.4 mm / 0.173 inches
Width	19.2 mm / 0.756 inches
Height	11.7 mm / 0.461 inches

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Depth	34.1 mm / 1.343 inches
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## Mechanical Data

Application	General mains applications
Coding	A
Variable coding	No
Marking	N $\frac{2}{L}$ 1/L'
Potential marking	N $\frac{2}{L}$ 1/L'
Mating force of a plug-in connection	approx. 20 ... 70 N (depending on pole number)
Retention force of a plug-in connection	Locked: > 80 N
Unmating force of a plug-in connection	Unlocked: approx. 20 ... 70 N (depending on pole number)
Number of mating cycles	200, without resistive load
Protection type	IP20; IP40 with strain relief housing

## Plug-in connection

Contact type (pluggable connector)	Female connector/socket
Connector (connection type)	for conductor
Mismating protection	Yes
Note on mismating protection	All <i>WINSTA</i> <sup>®</sup> components are 100% protected against mismating when: a.) plugging different numbers of poles b.) plugging while rotated 180 c.) plugging while laterally staggered d.) plugging one pole
Locking lever	Can be retrofitted
Locking of plug-in connection	locking lever
Note on locking system	All connectors for mounted installations (snap-in versions for lighting fixtures or devices, all types of PCB and distribution connectors) are factory-equipped with locking levers to ensure plugs and sockets are securely locked. Additional locking levers are only required for flying leads (plug/socket).

## Material Data

Note (material data)

Information on material specifications can be found here

Color	white
Cover color	gray
Material group	I

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Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Clamping spring material	Chrome-nickel spring steel (CrNi)
Contact material	Copper or copper alloy; surface-treated
Contact plating	Tin
Fire load	0.109 MJ
Weight	4.9 g

### Environmental requirements

Processing temperature	-5 ... +40 °C
Continuous operating temperature	-35 ... +85 °C
Note on continuous operating temperature	Insulating parts for temperatures $\leq 105$ °C

### Commercial data

Product Group	20 (Winsta)
eCl@ss 10.0	27-44-06-05
eCl@ss 9.0	27-44-06-05
ETIM 8.0	EC002560
ETIM 7.0	EC002560
PU (SPU)	50 pcs
Packaging type	box
Country of origin	DE
GTIN	4045454233198
Customs tariff number	85366990990

### Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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### Approvals / Certificates

#### General approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>CCA</b> DEKRA Certification B.V.	IEC 61535	NL-85020
	<b>CCA</b> DEKRA Certification B.V.	EN 61535	71- 123231
	<b>cURus</b> Underwriters Laboratories Inc.	UL 1977	E45171

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## Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	<b>EU-Declaration of Conformity</b> WAGO GmbH & Co. KG	-	-
	<b>UK-Declaration of Conformity</b> WAGO GmbH & Co. KG	-	-

## Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	<b>ABS</b> American Bureau of Shipping	Steel Vessel Rules	19- HG1869855- PDA
	<b>DNV GL</b> Det Norske Veritas, Germanischer Lloyd	-	TAE00001Z6
	<b>LR</b> Lloyds Register	EN 61535	08/20047 (E2)

## Counterpart

<b>Item no.890-234</b> Plug; 4-pole; Cod. A; 1,50 mm <sup>2</sup> ; white	<a href="http://www.wago.com/890-234">www.wago.com/890-234</a>
<b>Item no.890-134</b> Plug; with strain relief housing; 4-pole; 1,50 mm <sup>2</sup> ; white	<a href="http://www.wago.com/890-134">www.wago.com/890-134</a>
<b>Item no.890-676</b> T-distribution connector; 4-pole; Cod. A; 1 input; 2 outputs; 2 locking levers; white	<a href="http://www.wago.com/890-676">www.wago.com/890-676</a>
<b>Item no.890-677</b> T-distribution connector; 4-pole; Cod. A; 1 input; 2 outputs; 3 locking levers; for flying leads; white	<a href="http://www.wago.com/890-677">www.wago.com/890-677</a>
<b>Item no.890-734</b> Snap-in plug; 4-pole; Cod. A; 1,50 mm <sup>2</sup> ; white	<a href="http://www.wago.com/890-734">www.wago.com/890-734</a>
<b>Item no.890-834</b> Plug for PCBs; straight; 4-pole; Cod. A; white	<a href="http://www.wago.com/890-834">www.wago.com/890-834</a>
<b>Item no.890-834/011-000</b> Plug for PCBs; angled; 4-pole; Cod. A; white	<a href="http://www.wago.com/890-834/011-000">www.wago.com/890-834/011-000</a>
<b>Item no.890-994</b> h-distribution connector; 4-pole; Cod. A; 1 input; 2 outputs; outputs on one side; 2 locking levers; white	<a href="http://www.wago.com/890-994">www.wago.com/890-994</a>
<b>Item no.890-995</b> h-distribution connector; 4-pole; Cod. A; 1 input; 2 outputs; outputs on one side; 3 locking levers; for flying leads; white	<a href="http://www.wago.com/890-995">www.wago.com/890-995</a>
<b>Item no.891-8994/006-102</b> pre-assembled interconnecting cable; Eca; Socket/plug; 4-pole; Cod. A; H05VV-F 4G 1.5 mm <sup>2</sup> ; 1 m; 1,50 mm <sup>2</sup> ; white	<a href="http://www.wago.com/891-8994/006-102">www.wago.com/891-8994/006-102</a>

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**Item no.891-8994/206-102**

pre-assembled connecting cable; Eca; Plug/open-ended; 4-pole; Cod. A; H05VV-F 4G 1.5 mm<sup>2</sup>; 1 m;  
1,50 mm<sup>2</sup>; white

[www.wago.com/891-8994/206-102](http://www.wago.com/891-8994/206-102)

## Required accessories

### Strain relief

#### Strain relief housing

**Item no.: 890-504**

Strain relief housing; 4-pole; with locking clip; for 1 cable; 6.5 ... 10.5 mm; 45 mm; black

[www.wago.com/890-504](http://www.wago.com/890-504)

**Item no.: 890-514**

Strain relief housing; 4-pole; with locking clip; for 1 cable; 6.5 ... 10.5 mm; 45 mm; white

[www.wago.com/890-514](http://www.wago.com/890-514)

### Locking levers

#### Locking system

**Item no.: 890-111**

Locking lever; for flying leads; for tool operation; black

[www.wago.com/890-111](http://www.wago.com/890-111)

**Item no.: 890-101**

Locking lever; for manual operation; black

[www.wago.com/890-101](http://www.wago.com/890-101)

**Item no.: 890-121**

Locking lever; for manual operation; white

[www.wago.com/890-121](http://www.wago.com/890-121)

**Item no.: 890-131**

Locking lever; for flying leads; for tool operation; white

[www.wago.com/890-131](http://www.wago.com/890-131)

## Optional accessories

### Shield termination

#### Shield termination

**Item no.: 890-524**

Shield connecting plate; 4-pole; for sockets

[www.wago.com/890-524](http://www.wago.com/890-524)

### Cover

#### Cover

**Item no.: 897-2003**

Protective cap; Type2; for sockets and plugs; PVC; red

[www.wago.com/897-2003](http://www.wago.com/897-2003)

### Mounting

#### Mounting accessories

**Item no.: 890-310**

Mounting carrier; 2- to 5-pole; for flying leads; black

[www.wago.com/890-310](http://www.wago.com/890-310)

**Item no.: 890-311**

Mounting carrier; 2- to 5-pole; for flying leads; white

[www.wago.com/890-311](http://www.wago.com/890-311)

### Tool

Subject to changes. Please also observe the further product documentation!

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## Operating tool

**Item no.: 210-719**

Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft

[www.wago.com/210-719](http://www.wago.com/210-719)**Item no.: 890-384**

Operating tool; 4-way; green

[www.wago.com/890-384](http://www.wago.com/890-384)**Downloads****Documentation****Bid Text**

890-224 X81 - Datei	2019 年2月19日	xml 3.0 kB	Download
890-224 doc - Datei	2015 年6月8日	doc 23.0 kB	Download

**CAD/CAE-Data****CAD data**

2D/3D Models 890-224		URL	Download
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**CAE data**

WSCAD Universe 890-224		URL	Download
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ZUKEN Portal 890-224		URL	Download
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**Environmental Product Compliance****Compliance Search**

Environmental Product Compliance 890-224 Socket; 4-pole; Cod. A; 1,50 mm <sup>2</sup> ; white		URL	Download
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**Installation Notes****Conductor termination**

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1. Strip length, outer insulation = 30 mm (2-pole), 37 mm (3-pole), 45 mm (4- and 5-pole)

2. Strip length = 9 mm

3. Extended ground conductor = 8 mm



To terminate fine-stranded conductors, open the clamping unit via screwdriver – 2.5 mm blade width – and insert a stripped conductor until it hits the backstop.

Terminate solid conductors by simply pushing them in.



To terminate fine-stranded conductors, open clamping units via operating tool (890-382) and insert stripped conductors until they hit backstop.

Terminate solid conductors by simply pushing them in.



To terminate fine-stranded conductors, open clamping units via operating tool (890-383) and insert stripped conductors until they hit backstop.

Terminate solid conductors by simply pushing them in.

## Installation

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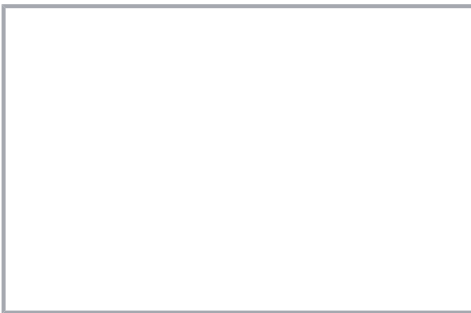
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Latch the wired connector into the base of the strain relief housing.



Push down strain relief clamp by hand.



Push down strain relief clamp with 2.5 mm screwdriver alternately on both sides.



Latch the top of the strain relief housing.

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Subject to changes. Please also observe the further product documentation!



The printed marking of the connector is clearly visible in the openings of the strain relief housing.

### Shield termination



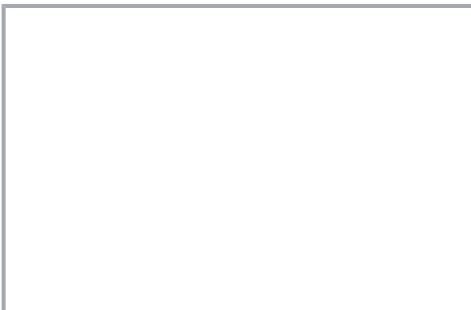
Connector with shield termination



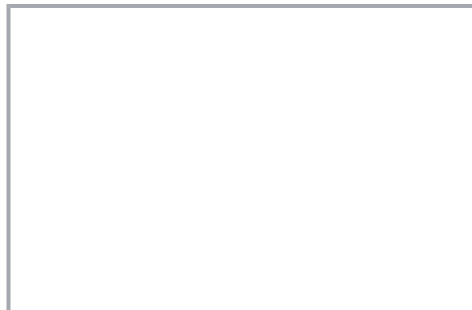
Apply the shield to the sheathed cable.

Strip length, outer insulation = 30 mm

Shield length = 8 mm



Push the shield connecting plate into the connector until fully inserted.



First insert the wired connector into strain relief housing, then snap clamp and cover.

### Product family

Subject to changes. Please also observe the further product documentation!

Data sheet | Item number: 890-224

[www.wago.com/890-224](http://www.wago.com/890-224)



**WINSTA® MINI**

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