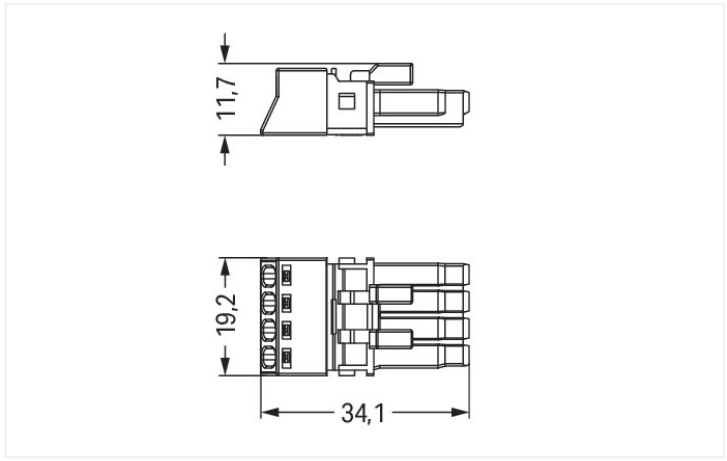
# Data Sheet | Item Number: 890-224

Socket; 4-pole; Cod. A; 1,50 mm²; white

https://www.wago.com/890-224

Color: white




Dimensions in mm

Female connector/socket *WINSTA*® MINI A coding

Use effective pluggable connections instead of laborious screw connections: With the *WINSTA*® MINI female connector/socket with protection type IP20. WAGO pluggable installation connectors can be used when specifications repeat or are distributed on a specific grid, for example for installing grid lighting or flush-mount lighting. The coding options reduce installation errors, allowing fast, secure wiring of all components. General mains applications for almost any domain of use can be implemented with *WINSTA*® MINI pluggable installation connectors with A coding. *WINSTA*® MINI is our response to the trend toward miniaturisation. Our smallest pluggable connection system is especially suitable for lights, for instance, since due to LED technology, these offer much less space for the connection technology.

*WINSTA*® MINI solutions for your electrical installation – protected against mismating and maintenance-free

The WINSTA® Pluggable Connection System is perfectly tailored to the very strict requirements of building installation. It makes electrical installation pluggable, and therefore more efficient, more reliable, and error-free. Use of this pre-assembled system reduces assembly times and installation errors at the construction site. Enjoy the benefits of the pluggable version of our maintenance-free spring pressure connection technology too! Plan your installation with with protection type IP20 from WAGO.

- effective protection against mismating
- easy tool-free operation, a wide range of coding options
- with A coding for use in a large number of general mains applications
- custom-engineered solutions
- convenient installation and commissioning

## Notes

| | |
|---|---|
| General safety information | **NOTICE: Observe installation and safety instructions!**<br><br>• Nur von Elektrofachkraft oder einer für die Tätigkeit elektrisch unterwiesenen Person (EUP nach DIN VDE 0105-100) anzuwenden!<br>• Nicht unter Spannung/Last installieren!<br>• Nur für bestimmungsgemäßen Gebrauch einsetzen!<br>• Nationale Vorschriften/Normen/Richtlinien beachten!<br>• Technische Daten der Produkte beachten!<br>• Auf die richtige Polbelegung achten!<br>• Keine beschädigten/verschmutzten Komponenten verwenden!<br>• Leiterarten, -querschnitte, Abisolierlängen und Leitungsdurchmesser beachten!<br>• Leiter bis zum Anschlag einführen!<br>• Nur mit Verriegelungsklinke und Zugentlastung verwenden!<br>• Originalzubehör verwenden!<br><br>**To be sold only with installation instructions!** |

## Electrical data

| Ratings per | IEC/EN 60664-1 | | |
|---|---|---|---|
| Overvoltage category | III | III | II |
| Pollution degree | 3 | 2 | 2 |
| Nominal voltage | 400 V | - | - |
| Rated impulse withstand voltage | 6 kV | - | - |
| Rated current | 16 A | - | - |

| Approvals per | UL 1977 |
|---|---|
| Rated voltage | 600 V |
| Rated current | 12 A |

### General information

| | |
|---|---|
| Note on contact resistance | approx. 1 mΩ of contact resistance<br>approx. 0.25 mΩ contact transition plug/socket |

## Connection Data

| | |
|---|---|
| Clamping units | 4 |
| Total number of potentials | 4 |

### Connection 1

| | |
|---|---|
| Connection technology | Push-in CAGE CLAMP® |
| Actuation type | Operating tool<br>Push-in |
| Nominal cross-section | 1.5 mm² / 16 AWG |
| Solid conductor | 0.25 … 1.5 mm² / 22 … 16 AWG |
| Solid conductor; push-in termination | 0.75 … 1.5 mm² / 20 … 16 AWG |
| Stranded conductor | 0.25 … 1 mm² / 22 … 18 AWG |
| Fine-stranded conductor | 0.25 … 1.5 mm² / 22 … 16 AWG |
| Fine-stranded conductor; with insulated ferrule | 0.25 … 0.75 mm² / 22 … 20 AWG |
| Fine-stranded conductor; with uninsulated ferrule | 0.25 … 0.75 mm² / 22 … 20 AWG |
| Fine-stranded conductor; with ferrule; push-in termination | 0.75 mm² / 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 |
| Depth | 34.1 mm / 1.343 inches |

## Mechanical data

| | |
|---|---|
| Use | General mains applications |
| Coding | A |
| Variable coding | No |
| Marking | N ⏚ 2/L 1/L' |
| Potential marking | N ⏚ 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 *WINSTA*® components are 100% protected against mismating when:<br>a.) plugging different numbers of poles<br>b.) plugging while rotated 180<br>c.) plugging while laterally staggered<br>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 |
| Insulation material (main housing) | 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 | 0.095 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 ≤ 105 °C |

## Commercial data

| | |
|---|---|
| Product Group | 20 (Winsta) |
| PU (SPU) | 50 pcs |
| Packaging type | Box |
| Country of origin | DE |
| GTIN | 4045454233198 |
| Customs tariff number | 85366990990 |

## Product Classification

| | |
|---|---|
| UNSPSC | 39121402 |
| eCl@ss 10.0 | 27-44-06-05 |
| eCl@ss 9.0 | 27-44-06-05 |
| ETIM 9.0 | EC002560 |
| ETIM 10.0 | EC002560 |
| ECCN | NO US CLASSIFICATION |

## Environmental Product Compliance

| | |
|---|---|
| RoHS Compliance Status | Compliant,No Exemption |

## Approvals / Certificates

### General approvals

| Approval | Standard | Certificate Name |
|---|---|---|
| CCA<br>DEKRA Certification B.V. | EN 61535 | 71-123231 |
| CCA<br>DEKRA Certification B.V. | IEC 61535 | NL-85020 |
| cURus<br>Underwriters Laboratories Inc. | UL 1977 | E45171 |

### Declarations of conformity and manufacturer's declarations

| Approval | Standard | Certificate Name |
|---|---|---|
| EU-Declaration of Conformity<br>WAGO GmbH & Co. KG | - | - |
| UK-Declaration of Conformity<br>WAGO GmbH & Co. KG | - | - |

### Approvals for marine applications

| Approval | Standard | Certificate Name |
|---|---|---|
| ABS<br>American Bureau of Shipping | Steel Vessel Rules | 24-0095973-PDA |
| DNV GL<br>Det Norske Veritas, Germanischer Lloyd | - | TAE00001Z6 |
| LR<br>Lloyds Register | EN 61535 | 08/20047 (E2) |
| PRS<br>Polski Rejestr Statków | - | TE/1096/880590/23 |

## Downloads

### Environmental Product Compliance

| Compliance Search | |
|---|---|
| Environmental Product Compliance 890-224 | |

### Documentation

| Bid Text | | | |
|---|---|---|---|
| 890-224 | 19.02.2019 | xml 2.93 KB | |
| 890-224 | 08.06.2015 | doc 22.50 KB | |

### CAD/CAE-Data

| CAD data | CAE data |
|---|---|
| 2D/3D Models 890-224 | WSCAD Universe 890-224 |
| | ZUKEN Portal 890-224 |

## 1 Compatible Products

### 1.1 System counterpart

#### 1.1.1 Cable assembly



Item No.: 891-8994/206-102
pre-assembled connecting cable; Eca; Plug/open-ended; 4-pole; Cod. A; H05VV-F 4G 1.5 mm²; 1 m; 1,50 mm²; white



Item No.: 891-8994/006-102
pre-assembled interconnecting cable; Eca; Socket/plug; 4-pole; Cod. A; H05VV-F 4G 1.5 mm²; 1 m; 1,50 mm²; white

#### 1.1.2 Distribution connector

Item No.: 890-994
h-distribution connector; 4-pole; Cod. A; 1 input; 2 outputs; outputs on one side; 2 locking levers; white

Item No.: 890-995
h-distribution connector; 4-pole; Cod. A; 1 input; 2 outputs; outputs on one side; 3 locking levers; for flying leads; white

Item No.: 890-676
T-distribution connector; 4-pole; Cod. A; 1 input; 2 outputs; 2 locking levers; white

Item No.: 890-677
T-distribution connector; 4-pole; Cod. A; 1 input; 2 outputs; 3 locking levers; for flying leads; white

#### 1.1.3 Male connector/plug

Item No.: 890-834/011-000
Plug for PCBs; angled; 4-pole; Cod. A; white

Item No.: 890-834
Plug for PCBs; straight; 4-pole; Cod. A; white



Item No.: 890-234
Plug; 4-pole; Cod. A; 1,50 mm²; white

Item No.: 890-134
Plug; with strain relief housing; 4-pole; 1,50 mm²; white

Item No.: 890-734
Snap-in plug; 4-pole; Cod. A; 1,50 mm²; white

## 1.2 Required Accessories

### 1.2.1 Locking system

#### 1.2.1.1 Locking system

Item No.: 890-111
Locking lever; for flying leads; for tool operation; black

Item No.: 890-131
Locking lever; for flying leads; for tool operation; white

Item No.: 890-101
Locking lever; for manual operation; black

Item No.: 890-121
Locking lever; for manual operation; white

### 1.2.2 Strain relief

#### 1.2.2.1 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

Item No.: 890-514
Strain relief housing; 4-pole; with locking clip; for 1 cable; 6.5 … 10.5 mm; 45 mm; white

## 1.3 Optional Accessories

### 1.3.1 Cover

#### 1.3.1.1 Cover

Item No.: 897-2003
Protective cap; Type2; for sockets and plugs; PVC; red

### 1.3.2 Installation

#### 1.3.2.1 Mounting accessories

Item No.: 890-310
Mounting carrier; 2- to 5-pole; for flying leads; black

Item No.: 890-311
Mounting carrier; 2- to 5-pole; for flying leads; white

### 1.3.3 Shield termination

#### 1.3.3.1 Shield termination

Item No.: 890-524
Shield connecting plate; 4-pole; for sockets

## 1.3.4 Tool

### 1.3.4.1 Operating tool

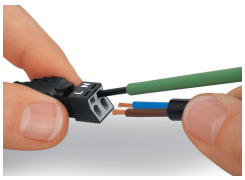
Item No.: 890-384
Operating tool; 4-way; green

Item No.: 210-719
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft

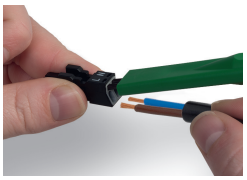
## Installation Notes

### Conductor termination

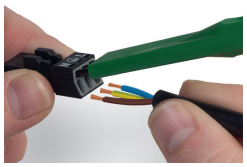

1. Strip length, outer insulation = 30 mm (2-pole), 37 mm (3-pole), 45 mm (4- and 5-pole)
2. Strip length = 9 mm
3. Extended ground conductor = 8 mm



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.

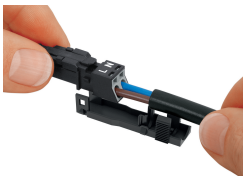


To terminate fine-stranded conductors, open clamping units via operating tool (890-382) and insert stripped conductors until they hit backstop.
Terminate solid conductors by simply pushing them in.



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.

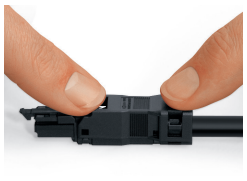
### Installation



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.

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.