

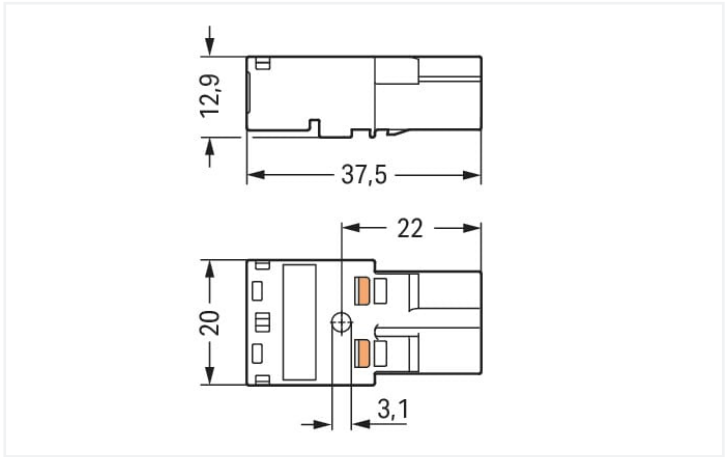
Data Sheet | Item Number: 770-1112

Plug; 2-pole; Cod. I; 4,00 mm²; blue

<https://www.wago.com/770-1112>



Color: ■ blue



Dimensions in mm

Male connector/plug WINSTA® MIDI rated current 25 A

The WINSTA® MIDI male connector/plug 2-pole is the pluggable solution for your application in control cabinets, for lighting connections or on PCBs. 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 next to no time. The mechanical coding and color coding of the pluggable installation connector ensure error-free installation of the individual components – including protection against mismating. The pluggable installation connector is protected in accordance with protection type IP20 (When mated and secured with a strain relief housing: IP2xC (These compact connectors are not designed for use in open, easily accessible areas!)). That results in the fact that users' fingers will never come into contact with electrified contact elements. I coding in blue is used to identify WINSTA® MIDI pluggable installation connectors, which are used primarily in automation of buildings for controlling lighting. Important parameters in the selection of a pluggable installation connector are the rated current and voltage: They tell us about the product's domains of use. This product has a current rating of 25 A – so it is also suitable for powerful loads. Our WINSTA® MIDI product line offers flexibility for the installation of applications. With its Push-in CAGE CLAMP® spring pressure connection technology, it guarantees error-free, time-saving installation and offers customization and flexibility for meeting an enormous variety of installation requirements.

Push-in CAGE CLAMP® spring pressure connection technology – pluggable installation instead of laborious screw connections!

The WINSTA® Pluggable Connection System is ideally tailored to the strict requirements of building installation. It makes electrical installation pluggable, and consequently more efficient, more reliable, and error-free. Use of this pre-assembled system decreases time spent on assembly and errors during installation at the construction site. Choose durability and quality – with protection type IP20 from WAGO makes the installation of electrical components visibly easier.

- protection against mismating eliminates errors
- for automation controllers
- for intelligent, easy lighting installation
- flexible installation to save space
- quick replacement of defective units during ongoing operation

| Electrical data      |       |                |    |  |
|----------------------|-------|----------------|----|--|
| Ratings per          |       | IEC/EN 60664-1 |    |  |
| Overvoltage category | III   | III            | II |  |
| Pollution degree     | 3     | 2              | 2  |  |
| Nominal voltage      | 250 V | -              | -  |  |
| Rated surge voltage  | 4 kV  | -              | -  |  |
| Rated current        | 25 A  | -              | -  |  |
| Approvals per        |       | UL 1977        |    |  |
| Rated voltage        |       | 600 V          |    |  |
| Rated current        |       | 23 A           |    |  |

### General information

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

### Connection data

|                            |   |                                                            |                                  |
|----------------------------|---|------------------------------------------------------------|----------------------------------|
| Connection points          | 4 | <b>Connection 1</b>                                        |                                  |
| Total number of potentials | 2 | Connection technology                                      | Push-in CAGE CLAMP®              |
|                            |   | Actuation type                                             | Operating tool<br>Push-in        |
|                            |   | Nominal cross-section                                      | 4 mm² / 12 AWG                   |
|                            |   | Solid conductor                                            | 0.5 ... 4 mm² / 20 ... 12 AWG    |
|                            |   | Solid conductor; push-in termination                       | 1.5 ... 4 mm² / 16 ... 12 AWG    |
|                            |   | Stranded conductor                                         | 0.5 ... 2.5 mm² / 20 ... 14 AWG  |
|                            |   | Fine-stranded conductor                                    | 0.5 ... 4 mm² / 20 ... 12 AWG    |
|                            |   | Fine-stranded conductor; with insulated ferrule            | 0.25 ... 1.5 mm² / 20 ... 16 AWG |
|                            |   | Fine-stranded conductor; with uninsulated ferrule          | 0.25 ... 2.5 mm² / 20 ... 14 AWG |
|                            |   | Fine-stranded conductor; with ferrule; push-in termination | 1.5 mm² / 16 AWG                 |
|                            |   | Strip length                                               | 9 mm / 0.35 inches               |
|                            |   | Pole number                                                | 2                                |
|                            |   | Conductor entry direction to mating direction              | 0°                               |

### Physical data

|             |                        |
|-------------|------------------------|
| Pin spacing | 10 mm / 0.394 inches   |
| Width       | 20 mm / 0.787 inches   |
| Height      | 12.9 mm / 0.508 inches |
| Depth       | 37.5 mm / 1.476 inches |

### Mechanical data

|                                         |                                                                                                                                                        |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Application                             | DALI, Lighting Management                                                                                                                              |
| Coding                                  | I                                                                                                                                                      |
| Variable coding                         | No                                                                                                                                                     |
| Marking                                 | DA- DA+                                                                                                                                                |
| Potential marking                       | DA- DA+                                                                                                                                                |
| 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; When mated and secured with a strain relief housing: IP2xC (These compact connectors are not designed for use in open, easily accessible areas!) |

### Plug-in connection

|                                    |                                                                                                                                                                                                                                                                                                                  |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contact type (pluggable connector) | Male connector/plug                                                                                                                                                                                                                                                                                              |
| 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)        | <a href="https://www.wago.com/us/material-specifications">Information on material specifications can be found here</a> |
| Color                       | blue                                                                                                                   |
| Cover color                 | gray                                                                                                                   |
| Material group              | I                                                                                                                      |
| 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                   | 0.139 MJ                                                                                                               |
| Weight                      | 6.5 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)   |
| 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)              | 100 pcs       |
| Packaging type        | Box           |
| Country of origin     | DE            |
| GTIN                  | 4050821028321 |
| Customs tariff number | 85366990990   |



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

Approvals / Certificates

| General approvals                                                                                                                                                                                                                                                                                                                      |           |                  | Declarations of conformity and manufacturer's declarations |          |                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------|------------------------------------------------------------|----------|------------------|
|     |           |                  |                                                            |          |                  |
| Approval                                                                                                                                                                                                                                                                                                                               | Standard  | Certificate Name | Approval                                                   | Standard | Certificate Name |
| CCA<br>DEKRA Certification B.V.                                                                                                                                                                                                                                                                                                        | EN 61535  | 71-123228        | EU-Declaration of Confor-<br>mity<br>WAGO GmbH & Co. KG    | -        | -                |
| CCA<br>DEKRA Certification B.V.                                                                                                                                                                                                                                                                                                        | IEC 61535 | NL -84761        |                                                            |          |                  |
| cURus<br>Underwriters Laboratories<br>Inc.                                                                                                                                                                                                                                                                                             | UL 1977   | E45171           |                                                            |          |                  |
| cURus<br>Underwriters Laboratories<br>Inc.                                                                                                                                                                                                                                                                                             | UL 1059   | E 45172          |                                                            |          |                  |
| VDE<br>VDE Prüf- und Zertifizie-<br>rungsinstitut                                                                                                                                                                                                                                                                                      | EN 61535  | 40029808         |                                                            |          |                  |

Approvals for marine applications

|    |           |                  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------|--|--|--|
| Approval                                                                                                                                                                                                                                                   | Standard  | Certificate Name |  |  |  |
| ABS<br>American Bureau of Ship-<br>ping                                                                                                                                                                                                                    | -         | 19-HG1868589-PDA |  |  |  |
| DNV GL<br>Det Norske Veritas, Ger-<br>manischer Lloyd                                                                                                                                                                                                      | -         | TAE00001Z6       |  |  |  |
| LR<br>Lloyds Register                                                                                                                                                                                                                                      | IEC 61984 | LR22429487TA     |  |  |  |

Downloads

| Environmental Product Compliance             |                                                                                     |
|----------------------------------------------|-------------------------------------------------------------------------------------|
| Compliance Search                            |                                                                                     |
| Environmental Product<br>Compliance 770-1112 |  |



Documentation

| Bid Text |            |                 |                   |
|----------|------------|-----------------|-------------------|
| 770-1112 | 19.02.2019 | xml<br>2.93 KB  | <a href="#">↓</a> |
| 770-1112 | 08.06.2015 | doc<br>23.50 KB | <a href="#">↓</a> |

CAD/CAE-Data

| CAD data                 |
|--------------------------|
| 2D/3D Models<br>770-1112 |



| CAE data                      |
|-------------------------------|
| EPLAN Data Portal<br>770-1112 |
| WSCAD Universe<br>770-1112    |
| ZUKEN Portal<br>770-1112      |



1 Compatible Products

1.1 System counterpart

1.1.1 Cable assembly



[Item No.: 771-8982/106-101](#)  
pre-assembled connecting cable; Eca;  
Socket/open-ended; 2-pole; Cod. I;  
H05VV-F 2 x 1.5 mm²; 1 m; 1,50 mm²; blue

[Item No.: 771-8982/006-101](#)  
pre-assembled interconnecting cable;  
Eca; Socket/plug; 2-pole; Cod. I; H05VV-F  
2 x 1.5 mm²; 1 m; 1,50 mm²; blue

1.1.2 Distribution connector



[Item No.: 770-7102](#)  
Linect® T-connector; 2-pole; Cod. I; 1 in-  
put; 2 outputs; white

1.1.3 Female connector/socket



[Item No.: 770-1102](#)  
Socket; 2-pole; Cod. I; 4,00 mm²; blue



1.2 Required Accessories

1.2.1 Locking system

1.2.1.1 Locking system



[Item No.: 770-101](#)  
Locking lever; for flying leads; for manual operation; black



[Item No.: 770-121](#)  
Locking lever; for flying leads; for manual operation; white



[Item No.: 770-111](#)  
Locking lever; for flying leads; for tool operation; black



[Item No.: 770-131](#)  
Locking lever; for flying leads; for tool operation; white

1.2.2 Strain relief

1.2.2.1 Strain relief housing



[Item No.: 770-502/042-000](#)  
Strain relief housing; 2-pole; with locking clip; for 1 cable; 5.0 ... 9.0 mm; 35 mm; black



[Item No.: 770-512/042-000](#)  
Strain relief housing; 2-pole; with locking clip; for 1 cable; 5.0 ... 9.0 mm; 35 mm; white



[Item No.: 770-502/041-000](#)  
Strain relief housing; 2-pole; with locking clip; for 1 cable; 7.0 ... 10.5 mm; 35 mm; black



[Item No.: 770-512/041-000](#)  
Strain relief housing; 2-pole; with locking clip; for 1 cable; 7.0 ... 10.5 mm; 35 mm; white

1.3 Optional Accessories

1.3.1 Cover

1.3.1.1 Cover



[Item No.: 770-360](#)  
Lockout cap; for plugs; 5-pole; separable; yellow



[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.: 897-2100](#)  
Mounting plate; for Snap-in; Plastic; for detectors and sensors ; Ø 200 mm; red



[Item No.: 770-317](#)  
Snap-in frame; 2-pole; 1.0 ... 3.0 mm; black



[Item No.: 770-337](#)  
Snap-in frame; 2-pole; 1.0 ... 3.0 mm; white

1.3.3 Tool

1.3.3.1 Operating tool



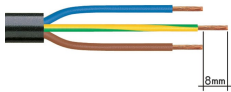
[Item No.: 770-382](#)  
Operating tool; 2-way; green



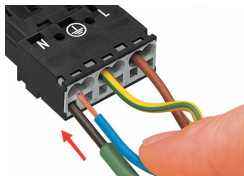
[Item No.: 210-719](#)  
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft

Installation Notes

Conductor termination



- 1. Strip length, outer insulation = 35 mm (2-pole), 55 mm (3- to 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.

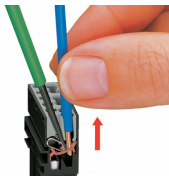


Insert the stripped solid conductor until it hits the backstop.



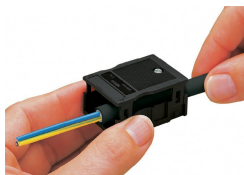
To terminate fine-stranded conductors, open the clamping unit via screwdriver (2.5 mm blade width) and insert a stripped conductor until it hits the backstop.

Conductor removal

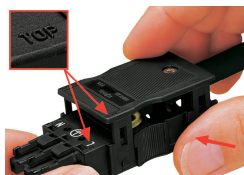


To remove the conductor, actuate the clamp via screwdriver (2.5 mm blade width) and pull out the conductor.

Installation



We recommend pulling the pre-latched strain relief housing over the cable prior to termination. However, the strain relief can be mounted at a later time as well.



Latch the strain relief housing onto the plug/socket. Note the "TOP" inscription.



Prepare strain relief housing by snapping together upper and bottom part.



Tighten strain relief screw with screwdriver (2.5 mm blade width).