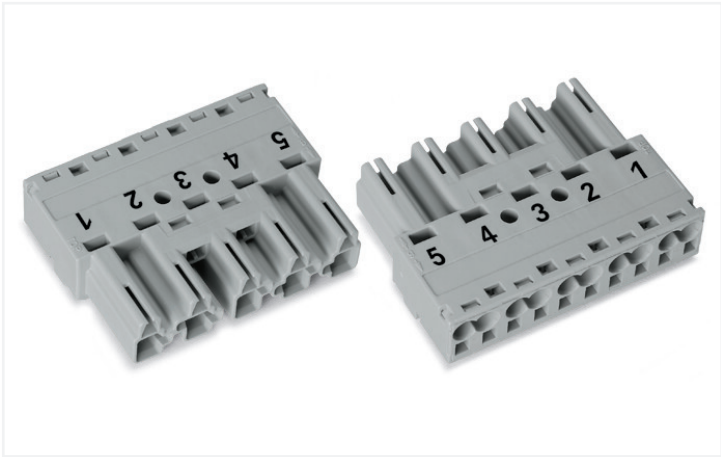
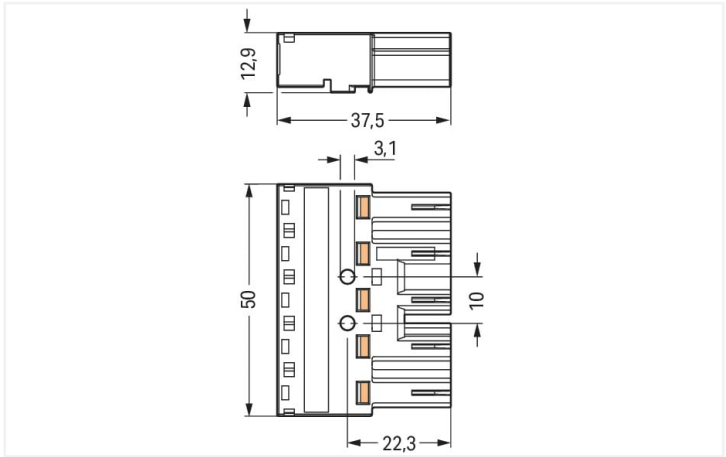




Color: ■ gray



Dimensions in mm

Male connector/plug WINSTA® MIDI with protection against mismating

For signal and power transmission: The WINSTA® MIDI male connector/plug B coding. Whether on PCBs, in control cabinets or for connecting lights – pluggable installation connectors from WAGO allow you to establish connections according to a huge variety of requirements in no time flat. For greater security in electrical installations, the pluggable installation connector is provided with mechanical protection against mismating. The pluggable installation connector offers touch-proof protection with live components 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!)). Solutions like the WINSTA® MIDI pluggable installation connectors with B coding are suitable for applications related to process control, such as for lighting or in data networks. This pluggable installation connector is used for electrical currents up to 25 A. Thus the product is also suitable for high power loads. The WINSTA® MIDI Pluggable Connection System with Push-in CAGE CLAMP® spring pressure connection technology facilitates precise electrification. Thanks to the included test slot, connections can be checked even when they are plugged in. This saves time, labor, and money.

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

The WINSTA® Pluggable Connection System is perfectly tailored to the strict requirements of building installation. It makes electrical installation pluggable, and thus faster, even more reliable, and error-free. Use of this pre-assembled system decreases assembly times and errors during installation at the construction site. Now you can also lower installation expenses without compromising safety and quality: with marking eliminates the need for servicing and prevents unnecessary downtime.

- protection against mismating eliminates errors
- simple circuits
- for automation controllers
- ready for immediate use
- convenient installation and commissioning

| Notes     |                                                                                                                                                                                     |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Variants: | Other pole markings<br>Other versions (or variants) can be requested from WAGO Sales or configured at <a href="https://configurator.wago.com/">https://configurator.wago.com/</a> . |

| Electrical data      |       |                |     |    |
|----------------------|-------|----------------|-----|----|
| Ratings per          |       | IEC/EN 60664-1 |     |    |
| Overvoltage category |       | III            | III | II |
| Pollution degree     |       | 3              | 2   | 2  |
| Nominal voltage      | 400 V | -              | -   | -  |
| Rated surge voltage  | 6 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          | 10 | <b>Connection 1</b>                                        |                                  |
| Total number of potentials | 5  | 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                                                | 5                                |
|                            |    | Conductor entry direction to mating direction              | 0°                               |

## Physical data

|             |                        |
|-------------|------------------------|
| Pin spacing | 10 mm / 0.394 inches   |
| Width       | 50 mm / 1.969 inches   |
| Height      | 12.9 mm / 0.508 inches |
| Depth       | 37.5 mm / 1.476 inches |

## Mechanical data

|                                         |                                                                                                                                                        |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Application                             | Control technology                                                                                                                                     |
| Coding                                  | B                                                                                                                                                      |
| Variable coding                         | Yes                                                                                                                                                    |
| Marking                                 | 5 4 3 2 1                                                                                                                                              |
| Potential marking                       | 5 4 3 2 1                                                                                                                                              |
| 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 <i>WINSTA</i> ® 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                       | gray                                                                                                                   |
| 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                   | 0.419 MJ                                                                                                               |
| Weight                      | 15.9 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)   |
| 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                  | 4044918253987 |
| 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.                                                                                                                                                                                                                      | IEC 61984 | NL-32104         | EU-Declaration of Confor-<br>mity<br>WAGO GmbH & Co. KG    | -        | -                |
| CCA<br>DEKRA Certification B.V.                                                                                                                                                                                                                      | EN 61984  | 2173495.01       | UK-Declaration of Confor-<br>mity<br>WAGO GmbH & Co. KG    | -        | -                |
| cURus<br>Underwriters Laboratories<br>Inc.                                                                                                                                                                                                           | UL 1977   | E45171           |                                                            |          |                  |
| cURus<br>Underwriters Laboratories<br>Inc.                                                                                                                                                                                                           | UL 1059   | E 45172          |                                                            |          |                  |

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 770-255 |  |

Documentation

| Bid Text |            |                 |                                                                                     |
|----------|------------|-----------------|-------------------------------------------------------------------------------------|
| 770-255  | 19.02.2019 | xml<br>2.96 KB  |  |
| 770-255  | 08.06.2015 | doc<br>24.00 KB |  |



| CAD/CAE-Data                                                     |                                                                       |
|------------------------------------------------------------------|-----------------------------------------------------------------------|
| <div>CAD data</div> <div>2D/3D Models 770-255</div> <div>↓</div> | <div>CAE data</div> <div>EPLAN Data Portal 770-255</div> <div>↓</div> |
|                                                                  | <div>WSCAD Universe 770-255</div> <div>↓</div>                        |
|                                                                  | <div>ZUKEN Portal 770-255</div> <div>↓</div>                          |

1 Compatible Products

1.1 System counterpart

1.1.1 Cable assembly



**Item No.: 771-9995/105-103**  
pre-assembled connecting cable; Eca; Socket/open-ended; 5-pole; Cod. B; 1 m; 1,00 mm²; gray

**Item No.: 771-9995/005-103**  
pre-assembled interconnecting cable; Eca; Socket/plug; 5-pole; Cod. B; 1 m; 1,00 mm²; gray

1.1.2 Distribution connector

**Item No.: 770-1744**  
3-way distribution connector; 5-pole; Cod. B; 1 input; 3 outputs; gray

**Item No.: 770-1641**  
T-distribution connector; 5-pole; Cod. B; 1 input; 2 outputs; 2 locking levers; gray

**Item No.: 770-1741**  
T-distribution connector; 5-pole; Cod. B; 1 input; 2 outputs; 3 locking levers; for flying leads; gray

1.1.3 Female connector/socket

**Item No.: 770-745**  
Snap-in socket; 5-pole; Cod. B; 4,00 mm²; gray

**Item No.: 770-845/011-000**  
Socket for PCBs; angled; 5-pole; Cod. B; gray

**Item No.: 770-845**  
Socket for PCBs; straight; 5-pole; Cod. B; gray

**Item No.: 770-245**  
Socket; 5-pole; Cod. B; 4,00 mm²; gray

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.: 770-505/021-000](#)  
Strain relief housing; 5-pole; for 1 cable;  
11.5 ... 16.5 mm; 71 mm; black



[Item No.: 770-515/021-000](#)  
Strain relief housing; 5-pole; for 1 cable;  
11.5 ... 16.5 mm; 71 mm; white



[Item No.: 770-505/023-000](#)  
Strain relief housing; 5-pole; for 2 cables;  
5.0 ... 9.0 mm; 55 mm; black



[Item No.: 770-515/023-000](#)  
Strain relief housing; 5-pole; for 2 cables;  
5.0 ... 9.0 mm; 55 mm; white



[Item No.: 770-505](#)  
Strain relief housing; 5-pole; for 2 cables;  
9.0 ... 13.0 mm; 55 mm; black



[Item No.: 770-515](#)  
Strain relief housing; 5-pole; for 2 cables;  
9.0 ... 13.0 mm; 55 mm; white

1.3 Optional Accessories

1.3.1 Coding

1.3.1.1 Coding



[Item No.: 770-401](#)  
Coding pin; for plugs; Plastic; gray

1.3.2 Cover

1.3.2.1 Cover



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



[Item No.: 897-2005](#)  
Protective cap; Type4; for sockets and  
plugs; PVC; red

1.3.3 Installation

1.3.3.1 Mounting accessories



[Item No.: 770-321](#)  
Snap-in frame; 5-pole; 0.5 ... 2.0 mm;  
black



[Item No.: 770-341](#)  
Snap-in frame; 5-pole; 0.5 ... 2.0 mm; whi-  
te



[Item No.: 770-320](#)  
Snap-in frame; 5-pole; 1.0 ... 3.0 mm;  
black



[Item No.: 770-340](#)  
Snap-in frame; 5-pole; 1.0 ... 3.0 mm; whi-  
te

1.3.4 Marking

1.3.4.1 Marker



[Item No.: 770-450/000-006](#)  
Marker card; Plastic; blue



[Item No.: 770-450/000-001](#)  
Marker card; Plastic; green



[Item No.: 770-450/000-012](#)  
Marker card; Plastic; orange



[Item No.: 770-450/000-005](#)  
Marker card; Plastic; red



[Item No.: 770-450](#)  
Marker card; Plastic; white



[Item No.: 770-450/000-002](#)  
Marker card; Plastic; yellow

1.3.5 Tool

1.3.5.1 Operating tool



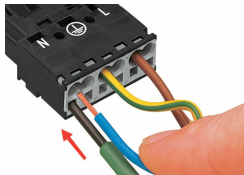
**Item No.: 210-719**  
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft

Installation Notes

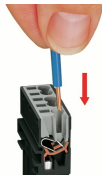
Conductor termination



- 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.

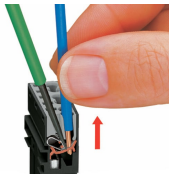


Insert the stripped solid conductor until it hits the backstop.



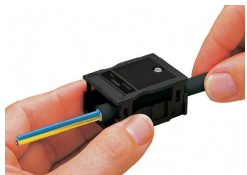
To terminate fine-stranded conductors, open the clamping unit via screwdriver (2.5 mm blade width) and insert a stripped conductor until it hits the backstop.

Conductor removal

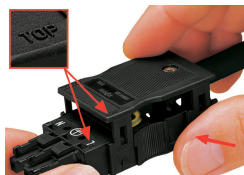


To remove the conductor, actuate the clamp via screwdriver (2.5 mm blade width) and pull out the conductor.

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).

Coding

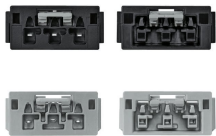
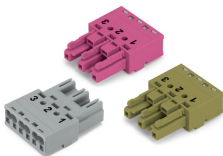


Simply cut off the coding pin from the socket.



Insert coding pin into plug (break first) until it engages.

Mismating protection



B-coded connectors with different colors can be plugged together.

Important note:  
Different colors and/or pole markings are used for circuit identification.  
Only connectors of the same color and same pole marking must be plugged together.

B-coded connectors (shown in gray) not only differ in color, but also in their design, making them incompatible with other coded connectors.

Easy circuit identification via different marking and colors