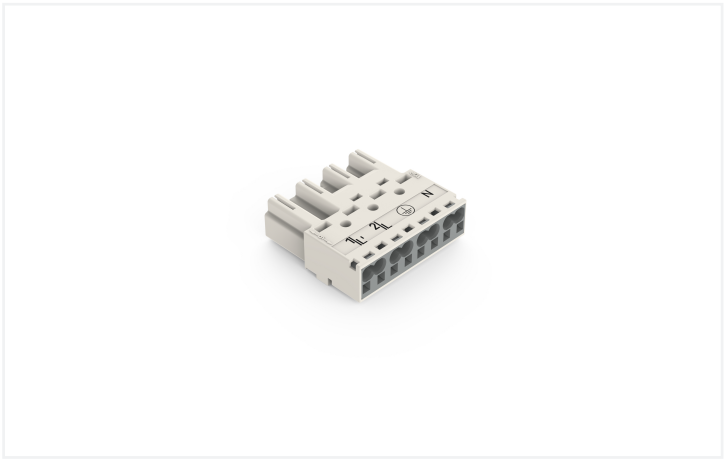
# Data Sheet | Item Number: 770-234

Plug; 4-pole; Cod. A; white

https://www.wago.com/770-234



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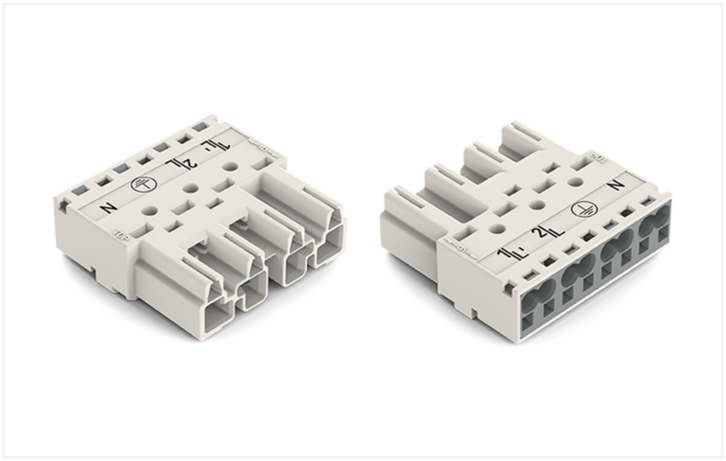

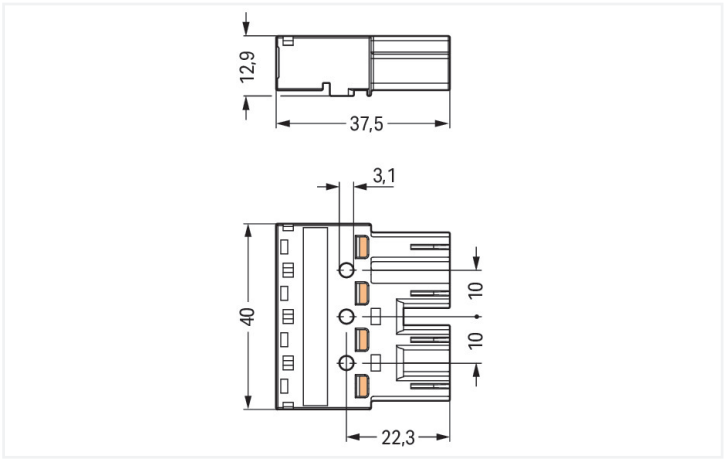


Dimensions in mm

Male connector/plug *WINSTA*® MIDI with protection against mismating

The *WINSTA*® MIDI male connector/plug A coding provides the foundation for assembly of fine-stranded and solid conductors. 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 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 against ingress by solid objects 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!)). General mains applications for almost any domain of use can be implemented with *WINSTA*® MIDI pluggable installation connectors with A coding. The rated current and voltage are important criteria for selecting a pluggable installation connector: They provide information about possible domains of use and applications. This product has a current rating of 25 A – so it is suitable for high power loads. Our *WINSTA*® MIDI product line achieves maximum flexibility for the electrical installation. With its Push-in CAGE CLAMP® spring pressure connection technology, it guarantees time-saving, error-free installation and offers flexibility for meeting all installation requirements.

Lower costs through fast commissioning and elimination of service expenses – solutions from *WINSTA*® MIDI

The WINSTA® Pluggable Connection System is ideally tailored to the strict requirements of building installation. It makes electrical installation pluggable, and thus faster, more reliable, and error-free. Using this pre-assembled system reduces time spent on assembly and installation errors at the construction site. Now you can also reduce installation costs without compromising safety and quality: with protection against mismating eliminates the need for servicing and prevents unnecessary downtime.

- effective protection against mismating
- for automation controllers

- with A coding for a large number of applications
- exact dimensions
- 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 | 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/socket |

## Connection Data

| | |
|---|---|
| Clamping units | 8 |
| Total number of potentials | 4 |
| PE function | Preceding PE contact |

### Connection 1

| | |
|---|---|
| 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 | 4 |
| Conductor entry direction to mating direction | 0 ° |

## Physical data

| | |
|---|---|
| Pin spacing | 10 mm / 0.394 inches |
| Width | 40 mm / 1.575 inches |
| Height | 12.9 mm / 0.508 inches |
| Depth | 37.5 mm / 1.476 inches |

## Mechanical data

| | |
|---|---|
| Use | General mains applications |
| Coding | A |
| Variable coding | Yes |
| Marking | 1/L' 2/L ⏚ N |
| Potential marking | 1/L' 2/L ⏚ N |
| 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) | 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 | 0.265 MJ |
| Weight | 13.5 g |


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## 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 | PL |
| GTIN | 4044918254595 |
| 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 | 71-123228 |
| CCA<br>DEKRA Certification B.V. | IEC 61535 | NL -84761 |
| cURus<br>Underwriters Laboratories Inc. | UL 1977 | E45171 |
| cURus<br>Underwriters Laboratories Inc. | UL 1059 | E 45172 |
| VDE<br>VDE Prüf- und Zertifizierungsinstitut | EN 61984 | 40002889 |

### Declarations of conformity and manufacturer's declarations

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


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## Approvals for marine applications

| Approval | Standard | Certificate Name |
|---|---|---|
| ABS<br>American Bureau of Shipping | - | 24-0095977-PDA |
| DNV GL<br>Det Norske Veritas, Germanischer Lloyd | - | TAE00001Z6 |
| LR<br>Lloyds Register | IEC 61984 | LR22429487TA |

## Downloads

### Environmental Product Compliance

**Compliance Search**

Environmental Product Compliance 770-234

### Documentation

**Bid Text**

| | | |
|---|---|---|
| 770-234 | 19.02.2019 | xml<br>2.93 KB |
| 770-234 | 08.06.2015 | doc<br>23.50 KB |

### CAD/CAE-Data

**CAD data**

2D/3D Models 770-234

**CAE data**

EPLAN Data Portal 770-234

WSCAD Universe 770-234

ZUKEN Portal 770-234

## 1 Compatible Products

### 1.1 System counterpart

#### 1.1.1 Cable assembly

Item No.: 771-9994/106-102
pre-assembled connecting cable; Eca; Socket/open-ended; 4-pole; Cod. A; H05VV-F 4G 1.5 mm²; 1 m; 1,50 mm²; white

Item No.: 771-9994/006-102
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.: 770-994
h-distribution connector; 4-pole; Cod. A; 1 input; 2 outputs; outputs on one side; 2 locking levers; white

Item No.: 770-995
h-distribution connector; 4-pole; Cod. A; 1 input; 2 outputs; outputs on one side; 3 locking levers; for flying leads; white

Item No.: 770-6224
Linect® T-connector; 4-pole; Cod. A; 1 input; 2 outputs; white

Item No.: 770-676
T-distribution connector; 4-pole; Cod. A; 1 input; 2 outputs; 2 locking levers; white

Item No.: 770-677
T-distribution connector; 4-pole; Cod. A; 1 input; 2 outputs; 3 locking levers; for flying leads; white

### 1.1.3 Female connector/socket

Item No.: 770-724
Snap-in socket; 4-pole; Cod. A; white

Item No.: 770-724/009-000
Snap-in socket; with protruding mating face; 4-pole; Cod. A; white

Item No.: 770-824/011-000
Socket for PCBs; angled; 4-pole; Cod. A; white

Item No.: 770-824
Socket for PCBs; straight; 4-pole; Cod. A; white

Item No.: 770-224
Socket; 4-pole; Cod. A; white

Item No.: 770-124
Socket; with strain relief housing; 4-pole; Cod. A; 4,00 mm²; white

## 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.: 770-504/023-000
Strain relief housing; 4-pole; for 2 cables; 5.0 … 9.0 mm; 55 mm; black

Item No.: 770-514/023-000
Strain relief housing; 4-pole; for 2 cables; 5.0 … 9.0 mm; 55 mm; white

Item No.: 770-504
Strain relief housing; 4-pole; for 2 cables; 9.0 … 13.0 mm; 55 mm; black

Item No.: 770-514
Strain relief housing; 4-pole; for 2 cables; 9.0 … 13.0 mm; 55 mm; white

 Continued on next page

## 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.: 897-2005
Protective cap; Type4; for sockets and plugs; PVC; red

### 1.3.2 Installation

#### 1.3.2.1 Mounting accessories

Item No.: 770-319
Snap-in frame; 4-pole; 1.0 … 3.0 mm; black

Item No.: 770-339
Snap-in frame; 4-pole; 1.0 … 3.0 mm; white

### 1.3.3 Marking

#### 1.3.3.1 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

### 1.3.4 Strain relief

#### 1.3.4.1 Strain relief housing

Item No.: 770-504/020-000
Strain relief housing; 4-pole; for 1 cable; 11.5 … 16.5 mm; 71 mm; black

### 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


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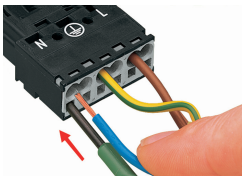
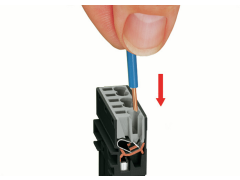
## Installation Notes

### Conductor termination

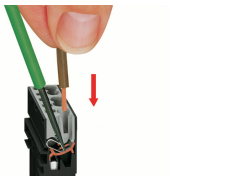

1. Strip length, outer insulation = 35 mm (2-pole), 55 mm (3- to 5-pole)
2. Strip length = 9 mm
3. Extended ground conductor = 8 mm




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.

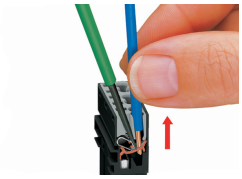


Insert the stripped solid conductor until it hits the backstop.



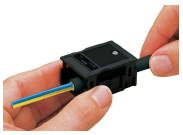
To terminate fine-stranded conductors, open the clamping unit via screwdriver (2.5 mm blade width) and insert a stripped conductor until it hits the backstop.

### Conductor removal



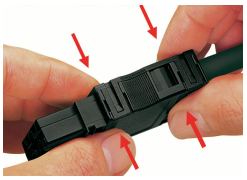
To remove the conductor, actuate the clamp via screwdriver (2.5 mm blade width) and pull out the conductor.

### 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).