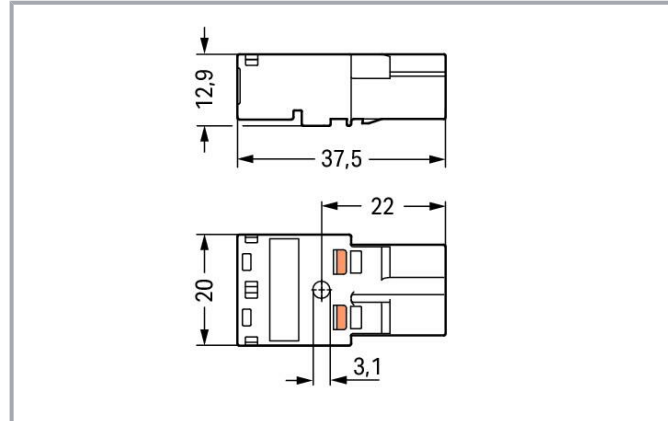
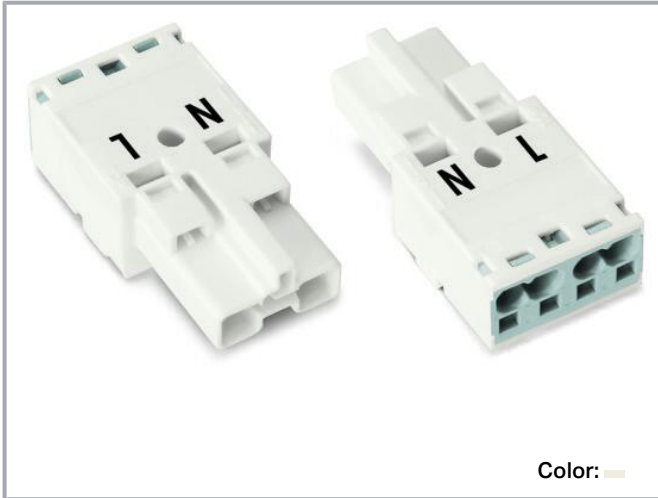


Data sheet | Item number: 770-232
Plug; 2-pole; Cod. A; 4,00 mm²; white

www.wago.com/770-232



Item description

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

For signal and power transmission: The *WINSTA*® MIDI male connector/plug with protection against mismatching. The pluggable installation connectors with spring pressure connection technology work completely without screw connections. They allow fast, efficient, error-free installation in numerous possible uses. For greater security in electrical installations, the pluggable installation connector is equipped with mechanical protection against mismatching. 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!)). This means that users' fingers will never come into contact with electrified elements. General mains applications for almost any domain of use can be realised with *WINSTA*® MIDI pluggable installation connectors with A coding. This pluggable installation connector can be employed for a current load of up to 25 A. Thus, it can also be used for high power loads. Our *WINSTA*® MIDI product line allows maximum flexibility for the electrical installation. With its Push-in CAGE CLAMP® spring pressure connection technology, it ensures error-free, time-saving installation and offers flexibility for meeting various installation requirements.

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

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

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

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-
- protection against mismatching eliminates errors
- for automation controllers
- with A coding for use in many general mains applications
- custom-engineered solutions
- quick replacement of defective units during ongoing operation

Data

Electrical data

Ratings per IEC/EN

| | |
|-------------------------------|---|
| Ratings per | IEC/EN 60664-1 |
| Nominal voltage (III/3) | 250 V |
| Rated impulse voltage (III/3) | 4 kV |
| Rated current | 25 A |
| Legend (ratings) | (III / 3) ≙ Overvoltage category III / Pollution degree 3 |

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 16 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 | 23 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 | 2 |

Connection 1

| | |
|-----------------------|---------------------|
| Connection technology | Push-in CAGE CLAMP® |
| Actuation type | Operating tool |

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



| | Push-in |
|--|--|
| Nominal cross-section | 4 mm ² / 12 AWG |
| Solid conductor | 0.5 ... 4 mm ² / 20 ... 12 AWG |
| Solid conductor; push-in termination | 1.5 ... 4 mm ² / 16 ... 12 AWG |
| Stranded conductor | 0.5 ... 2.5 mm ² / 20 ... 14 AWG |
| Fine-stranded conductor | 0.5 ... 4 mm ² / 20 ... 12 AWG |
| Fine-stranded conductor; with insulated ferrule | 0.25 ... 1.5 mm ² / 20 ... 16 AWG |
| Fine-stranded conductor; with uninsulated ferrule | 0.25 ... 2.5 mm ² / 20 ... 14 AWG |
| Fine-stranded conductor; with ferrule; push-in termination | 1.5 mm ² / 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 | General mains applications |
| Coding | A |
| Variable coding | Yes |
| Marking | N L |
| Potential marking | N 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; 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 |

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



Note on mismatching protection

All WINSTA® components are 100% protected against mismatching 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 |
| 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 |

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

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| | |
|-----------------------|---------------|
| ETIM 7.0 | EC002560 |
| ECCN | NO DATA |
| PU (SPU) | 100 pcs |
| Packaging type | box |
| Country of origin | DE |
| GTIN | 4050821028314 |
| Customs tariff number | 85366990990 |

Environmental Product Compliance


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

Approvals / Certificates

General approvals

| Logo | Approval | Additional Approval Text | Certificate name |
|--|---|--------------------------|------------------|
| | CCA DEKRA Certification B.V. | IEC 61535 | NL -84761 |
|  | CCA DEKRA Certification B.V. | EN 61535 | 71- 123228 |
|  | cURus Underwriters Laboratories Inc. | UL 1977 | E45171 |
|  | cURus Underwriters Laboratories Inc. | UL 1059 | E 45172 |

Declarations of conformity and manufacturer's declarations

| Logo | Approval | Additional Approval Text | Certificate name |
|--|--|--------------------------|------------------|
|  | EU-Declaration of Conformity WAGO GmbH & Co. KG | - | - |




Approvals for marine applications

| Logo | Approval | Additional Approval Text | Certificate name |
|------|----------|--------------------------|------------------|
| | | | |









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| | | | |
|---|---|-----------|--------------------------|
|  | ABS American Bureau of Shipping | - | 19- HG1868589- PDA |
|  | DNV GL Det Norske Veritas, Germanischer Lloyd | - | TAE00001Z6 |
|  | LR Lloyds Register | IEC 61984 | LR22429487TA |

Counterpart

| | | |
|--|--|--|
|  | Item no.770-122/041-000 Socket; with strain relief housing; 2-pole; Cod. A; 4,00 mm ² ; white | www.wago.com/770-122/041-000 |
|  | Item no.770-1656 T-distribution connector; 2-pole; Cod. A; 1 input; 2 outputs; 2 locking levers; white | www.wago.com/770-1656 |
|  | Item no.770-1665 T-distribution connector; 2-pole; Cod. A; 1 input; 2 outputs; 3 locking levers; white | www.wago.com/770-1665 |
|  | Item no.770-1684 h-distribution connector; 2-pole; Cod. A; 1 input; 2 outputs; outputs on one side; 2 locking levers; white | www.wago.com/770-1684 |
|  | Item no.770-1686 h-distribution connector; 2-pole; Cod. A; 1 input; 2 outputs; outputs on one side; 3 locking levers; for flying leads; white | www.wago.com/770-1686 |
|  | Item no.770-222 Socket; 2-pole; Cod. A; 4,00 mm ² ; white | www.wago.com/770-222 |
|  | Item no.771-8992/106-102 pre-assembled connecting cable; Eca; Socket/open-ended; 2-pole; Cod. A; H05VV-F 2 x 1.5 mm ² ; 1 m; 1,50 mm ² ; white | www.wago.com/771-8992/106-102 |
|  | Item no.771-8992/006-102 pre-assembled interconnecting cable; Eca; Socket/plug; 2-pole; Cod. A; H05VV-F 2 x 1.5 mm ² ; 1 m; 1,50 mm ² ; white | www.wago.com/771-8992/006-102 |

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

Required accessories

Locking levers

Locking system



Item no.: 770-121
Locking lever; for flying leads; for manual operation; white

www.wago.com/770-121



Item no.: 770-131
Locking lever; for flying leads; for tool operation; white

www.wago.com/770-131



Item no.: 770-101
Locking lever; for flying leads; for manual operation; black

www.wago.com/770-101



Item no.: 770-111
Locking lever; for flying leads; for tool operation; black

www.wago.com/770-111

Strain relief

Strain relief housing



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

www.wago.com/770-502/041-000



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

www.wago.com/770-502/042-000



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

www.wago.com/770-512/041-000



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

www.wago.com/770-512/042-000

Optional accessories

Mounting

Mounting accessories



Item no.: 770-317
Snap-in frame; 2-pole; 1.0 ... 3.0 mm; black

www.wago.com/770-317



Item no.: 770-337
Snap-in frame; 2-pole; 1.0 ... 3.0 mm; white

www.wago.com/770-337

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



Item no.: 897-2100

Mounting plate; for Snap-in; Plastic; for detectors and sensors ; Ø 200 mm; red

www.wago.com/897-2100

Tool

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



Item no.: 770-382

Operating tool; 2-way; green

www.wago.com/770-382

Cover

Cover



Item no.: 770-360

Lockout cap; for plugs; 5-pole; separable; yellow

www.wago.com/770-360



Item no.: 897-2003

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

www.wago.com/897-2003

Downloads

Documentation

Bid Text

| | | | |
|------------------------|-------------|----------------|----------|
| 770-232 X81 - Datei | 2019 Feb 19 | xml 3.0 kB | Download |
| 770-232 doc - Datei | 2015 Jun 8 | doc 24.1 kB | Download |

CAD/CAE-Data

CAD data

| | | |
|----------------------|-----|----------|
| 2D/3D Models 770-232 | URL | Download |
|----------------------|-----|----------|

CAE data

| | | |
|------------------------|-----|----------|
| WSCAD Universe 770-232 | URL | Download |
|------------------------|-----|----------|

71 IKFN Portal 770-232

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EPLAN Data Portal 770-232

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Asset Administration Shell

Asset Administration Shell 770-232

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Environmental Product Compliance

Compliance Search

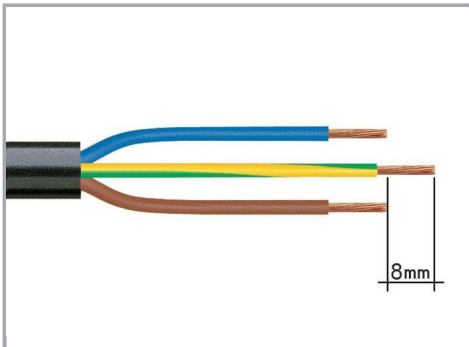
Environmental Product Compliance 770-232

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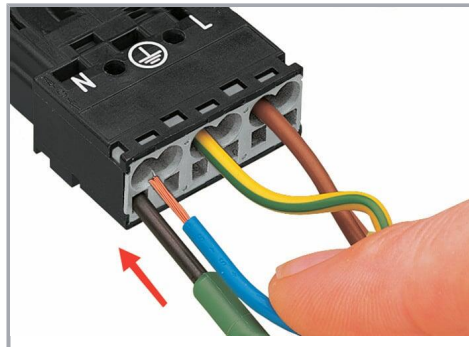
Plug; 2-pole; Cod. A; 4,00 mm²; white

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.

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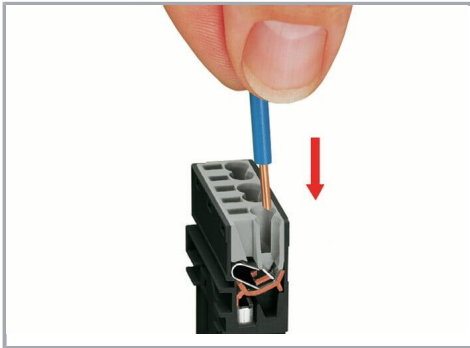
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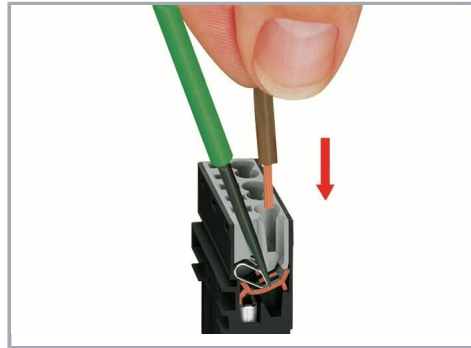
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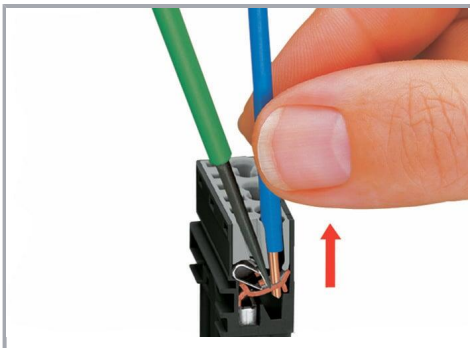


Insert the stripped solid conductor until it hits the backstop.



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.

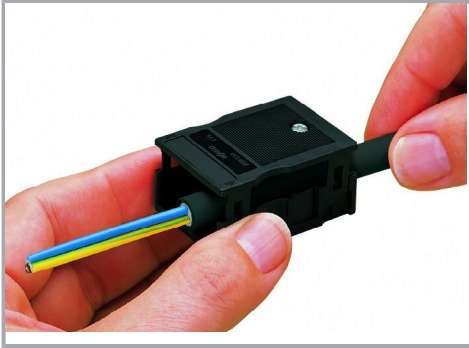
Conductor removal



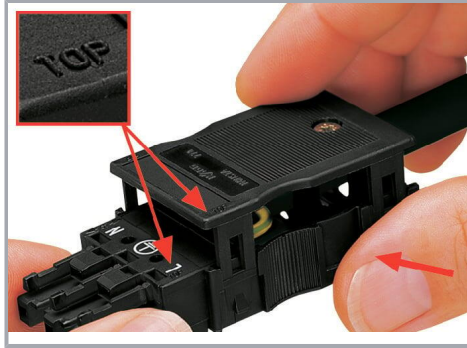
To remove the conductor, actuate the clamp via screwdriver (2.5 mm blade width) and pull out the conductor.

Installation

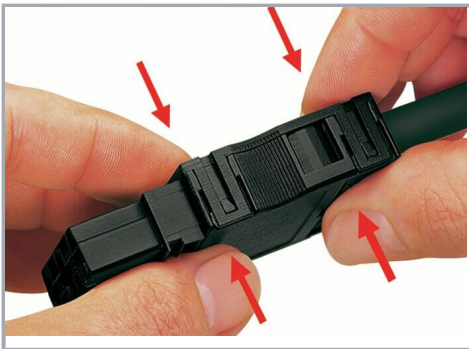
Subject to changes. Please also observe the further product documentation!



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).

Product family

WINSTA® MIDI

[Show all products from the family](#)

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