

**Data sheet | Item number: 770-104**

Socket; with strain relief housing; 4-pole; Cod. A; 4,00 mm<sup>2</sup>; black

[www.wago.com/770-104](http://www.wago.com/770-104)



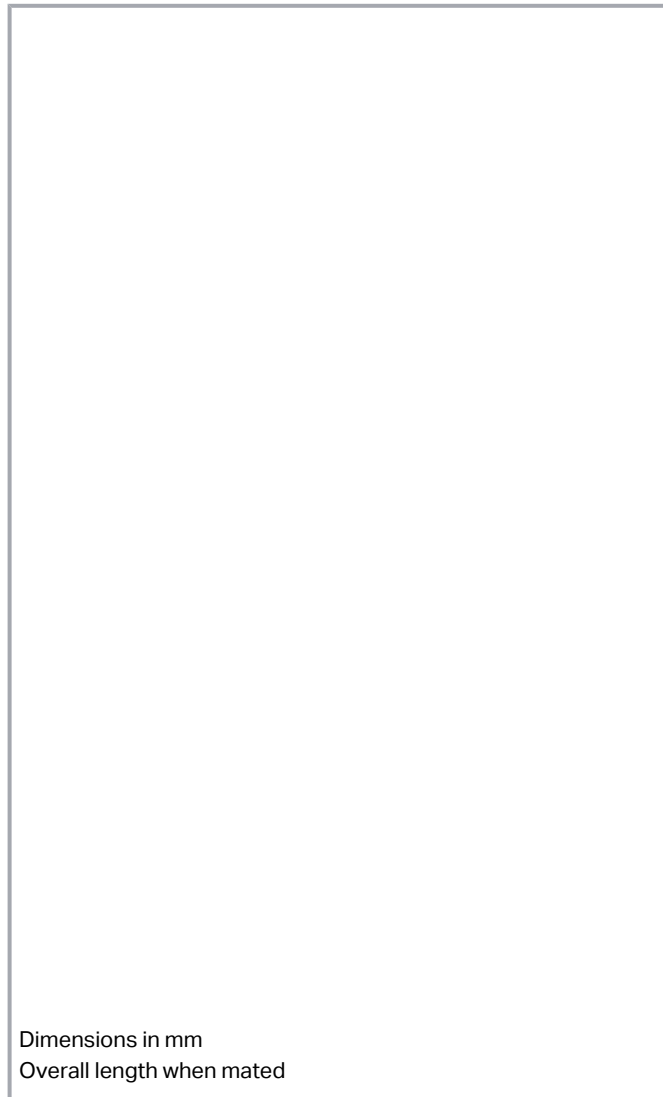
**Color:**

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## Item description

### Female connector/socket *WINSTA*® MIDI A coding

Use effective pluggable connections instead of laborious screw connections: With the *WINSTA*® MIDI female connector/socket with protection against mismatching. Our pluggable installation connectors with spring pressure connection technology function 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!)). That results in the fact that users' fingers will never come into contact with live elements. Standard mains applications for almost any domain of use can be realised with *WINSTA*® MIDI pluggable installation connectors with A coding. This pluggable installation connector

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is designed for a load of up to 25 A. As a result, it can also be used for high power loads. Our *WINSTA*® MIDI product line guarantees total flexibility for the installation of applications. With its Push-in CAGE CLAMP® spring pressure connection technology, it ensures error-free, time-saving installation and offers customization and flexibility for meeting various installation requirements. The strip length is 55 mm.

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

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

- protection against mismatching eliminates errors
- for automation controllers
- with A coding for a large number of uses
- custom-engineered solutions
- fast, secure installation

**Data**

**Electrical data**

**Ratings per IEC/EN**

Ratings per	IEC/EN 60664-1
Nominal voltage (III/3)	400 V
Rated impulse voltage (III/3)	6 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

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## General information

Note on contact resistance	approx. 1 mΩ of contact resistance approx. 0.25 mΩ contact transition plug/socket
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## Connection data

Connection points	8
Total number of potentials	4

## Connection 1

Connection technology	Push-in CAGE CLAMP®
Actuation type	Operating tool Push-in
Nominal cross-section	4 mm <sup>2</sup> / 12 AWG
Solid conductor	0.5 ... 4 mm <sup>2</sup> / 20 ... 12 AWG
Solid conductor; push-in termination	1.5 ... 4 mm <sup>2</sup> / 16 ... 12 AWG
Stranded conductor	0.5 ... 2.5 mm <sup>2</sup> / 20 ... 14 AWG
Fine-stranded conductor	0.5 ... 4 mm <sup>2</sup> / 20 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 1.5 mm <sup>2</sup> / 20 ... 16 AWG
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 2.5 mm <sup>2</sup> / 20 ... 14 AWG
Fine-stranded conductor; with ferrule; push-in termination	1.5 mm <sup>2</sup> / 16 AWG
Strip length	9 mm / 0.35 inches
Pole number	4
Conductor entry direction to mating direction	0°
Strip length (outer insulation)	55 mm

## Physical data

Pin spacing	10 mm / 0.394 inches
Width	44.6 mm / 1.756 inches
Height	17 mm / 0.669 inches
Depth	76 mm / 2.992 inches

## Mechanical Data

Application	General mains applications
Coding	A
Variable coding	Yes

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Marking	N $\downarrow$ 2/L 1/L'
Potential marking	N $\downarrow$ 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; 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)	Female connector/socket
Connector (connection type)	for conductor
Mismating protection	Yes
Note on mismating protection	All WINSTA <sup>®</sup> components are 100% protected against mismating 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).
Strain relief	strain relief housing

### Material Data

Note (material data)	Information on material specifications can be found here
Color	black
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

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Contact plating	Tin
Fire load	0.576 MJ
Weight	24.4 g

### Environmental requirements

Processing temperature	-5 ... +40 °C
Continuous operating temperature	-35 ... +85 °C
Note on continuous operating temperature	Insulating parts for temperatures $\leq 105$ °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)	25 pcs
Packaging type	box
Country of origin	DE
GTIN	4044918252126
Customs tariff number	85366990990

### Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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### Approvals / Certificates

#### General approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>CCA</b> DEKRA Certification B.V.	EN 61535	71-123228
	<b>CCA</b> DEKRA Certification B.V.	IEC 61535	NL -84761
	<b>cURus</b> Underwriters Laboratories Inc.	UL 1977	E45171
	<b>cURus</b> Underwriters Laboratories Inc.	UL 1059	E 45172
	<b>VDE</b> VDE Prüf- und Zertifizierungsinstitut	EN 61535	40029808

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VDE  
VDE Prüf- und Zertifizierungsinstitut

EN 61984

40002889

**Declarations of conformity and manufacturer's declarations**

Logo	Approval	Additional Approval Text	Certificate name
	<b>EU-Declaration of Conformity</b> WAGO GmbH & Co. KG	-	-

**Approvals for marine applications**

Logo	Approval	Additional Approval Text	Certificate name
	<b>ABS</b> American Bureau of Shipping	-	19- HG1868589- PDA
	<b>DNV GL</b> Det Norske Veritas, Germanischer Lloyd	-	TAE00001Z6
	<b>LR</b> Lloyds Register	IEC 61984	LR22429487TA

**Counterpart**

<b>Item no.770-114</b> Plug; with strain relief housing; 4-pole; Cod. A; 4,00 mm <sup>2</sup> ; black	<a href="http://www.wago.com/770-114">www.wago.com/770-114</a>
<b>Item no.770-214</b> Plug; 4-pole; Cod. A; 4,00 mm <sup>2</sup> ; black	<a href="http://www.wago.com/770-214">www.wago.com/770-214</a>
<b>Item no.770-626</b> T-distribution connector; 4-pole; Cod. A; 1 input; 2 outputs; 2 locking levers; black	<a href="http://www.wago.com/770-626">www.wago.com/770-626</a>
<b>Item no.770-627</b> T-distribution connector; 4-pole; Cod. A; 1 input; 2 outputs; 3 locking levers; for flying leads; black	<a href="http://www.wago.com/770-627">www.wago.com/770-627</a>
<b>Item no.770-714</b> Snap-in plug; 4-pole; Cod. A; 4,00 mm <sup>2</sup> ; black	<a href="http://www.wago.com/770-714">www.wago.com/770-714</a>
<b>Item no.770-714/007-000</b> Snap-in plug; with direct ground contact; 4-pole; Cod. A; 4,00 mm <sup>2</sup> ; black	<a href="http://www.wago.com/770-714/007-000">www.wago.com/770-714/007-000</a>
<b>Item no.770-814</b> Plug for PCBs; straight; 4-pole; Cod. A; black	<a href="http://www.wago.com/770-814">www.wago.com/770-814</a>
<b>Item no.770-814/011-000</b> Plug for PCBs; angled; 4-pole; Cod. A; black	<a href="http://www.wago.com/770-814/011-000">www.wago.com/770-814/011-000</a>
<b>Item no.770-944</b> h-distribution connector; 4-pole; Cod. A; 1 input; 2 outputs; outputs on one side; 2 locking levers; black	<a href="http://www.wago.com/770-944">www.wago.com/770-944</a>
<b>Item no.770-945</b> h-distribution connector; 4-pole; Cod. A; 1 input; 2 outputs; outputs on one side; 3 locking levers; for flying leads; black	<a href="http://www.wago.com/770-945">www.wago.com/770-945</a>
<b>Item no.771-9994/006-101</b>	

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pre-assembled interconnecting cable; Eca; Socket/plug; 4-pole; Cod. A; H05VV-F 4G 1.5 mm <sup>2</sup> ; 1 m; 1,50 mm <sup>2</sup> ; black	<a href="http://www.wago.com/771-9994/006-101">www.wago.com/771-9994/006-101</a>
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**Item no. 771-9994/206-101**

pre-assembled connecting cable; Eca; Plug/open-ended; 4-pole; Cod. A; H05VV-F 4G 1.5 mm <sup>2</sup> ; 1 m; 1,50 mm <sup>2</sup> ; black	<a href="http://www.wago.com/771-9994/206-101">www.wago.com/771-9994/206-101</a>
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**Required accessories****Cover**

Cover

**Item no.: 770-201**

Lockout cap; 12-pole, separable; for sockets; Plastic; black	<a href="http://www.wago.com/770-201">www.wago.com/770-201</a>
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**Item no.: 770-221**

Lockout cap; 12-pole, separable; for sockets; Plastic; white	<a href="http://www.wago.com/770-221">www.wago.com/770-221</a>
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**Locking levers**

Locking system

**Item no.: 770-121**

Locking lever; for flying leads; for manual operation; white	<a href="http://www.wago.com/770-121">www.wago.com/770-121</a>
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**Item no.: 770-131**

Locking lever; for flying leads; for tool operation; white	<a href="http://www.wago.com/770-131">www.wago.com/770-131</a>
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**Item no.: 770-101**

Locking lever; for flying leads; for manual operation; black	<a href="http://www.wago.com/770-101">www.wago.com/770-101</a>
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**Item no.: 770-111**

Locking lever; for flying leads; for tool operation; black	<a href="http://www.wago.com/770-111">www.wago.com/770-111</a>
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**Optional accessories****Marking accessories**

Marker

**Item no.: 770-450/000-002**

Marker card; Plastic; yellow	<a href="http://www.wago.com/770-450/000-002">www.wago.com/770-450/000-002</a>
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**Item no.: 770-450/000-001**

Marker card; Plastic; green	<a href="http://www.wago.com/770-450/000-001">www.wago.com/770-450/000-001</a>
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**Item no.: 770-450/000-005**

Marker card; Plastic; red	<a href="http://www.wago.com/770-450/000-005">www.wago.com/770-450/000-005</a>
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**Item no.: 770-450**

Marker card; Plastic; white	<a href="http://www.wago.com/770-450">www.wago.com/770-450</a>
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Item no.: 770-450/000-006  
Marker card; Plastic; blue

[www.wago.com/770-450/000-006](http://www.wago.com/770-450/000-006)

Item no.: 770-450/000-012  
Marker card; Plastic; orange

[www.wago.com/770-450/000-012](http://www.wago.com/770-450/000-012)

#### 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](http://www.wago.com/210-719)

#### Cover

Cover

Item no.: 897-2005  
Protective cap; Type4; for sockets and plugs; PVC; red

[www.wago.com/897-2005](http://www.wago.com/897-2005)

## Downloads

### Documentation

#### Bid Text

770-104 X81 - Datei	2019 年2月19日	xml 3.1 kB	Download
770-104 doc - Datei	2015 年6月8日	doc 24.1 kB	Download
ausschreiben.de 770-104		URL	Download

### CAD/CAE-Data

#### CAE data

EPLAN Data Portal 770-104		URL	Download
WSCAD Universe 770-104		URL	Download
ZUKEN Portal 770-104		URL	Download

#### CAD data

2D/3D Models 770-104		URL	Download
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## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 770-104

URL

Download

Socket; with strain relief housing; 4-pole; Cod. A; 4,00 mm<sup>2</sup>; black

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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

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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).

### Product family

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



**WINSTA® MIDI**

[Show all products from the family](#)

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