

## Item description

### Female connector/socket WINSTA® MIDI L coding

The WINSTA® MIDI female connector/socket with protection type IP20 allows installation of solid and fine-stranded conductors. The pluggable installation connectors with spring pressure connection technology work entirely without screw connections. They allow resource-efficient, error-free installation in a large number of applications. 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 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!)). WINSTA® MIDI pluggable installation connectors with L coding (2-pole or 5-pole) are perfect for use in supplying power to power supply units or small servo motors. The rated current and voltage are important criteria for selecting a pluggable installation connector: They tell us about the product's domains of use. This product has a current rating of 25 A – therefore it is suitable for high power loads. The WINSTA® MIDI Pluggable Connection System with Push-in CAGE CLAMP® spring pressure connection technology facilitates exemplary electrification. Thanks to the integrated test slot, it is possible to check connections even when they are plugged in. That saves time and reduces installation labor and costs.

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



## 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 significantly reduces the need for servicing and lowers costs. Take advantage of the pluggable version of our maintenance-free spring pressure connection technology too! Plan your installation with protection against mismating from WAGO.

- effective protection against mismating
- for automation controllers
- with L coding for supplying power in automation
- custom-engineered solutions
- convenient installation and commissioning

### 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

#### General information

Note on contact resistance	approx. 1 mΩ of contact resistance approx. 0.25 mΩ contact transition plug/socket
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Subject to changes. Please also observe the further product documentation!



## Connection data

Connection points	10
Total number of potentials	5

## Connection 1

Connection technology	Push-in CAGE CLAMP®
Actuation type	Operating tool 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	Emergency power supply
Coding	L
Variable coding	No
Marking	N ⊥ L N' L'
Potential marking	N ⊥ L 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

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



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 <i>WINSTA</i> ® 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).

## Material data

Note (material data)	Information on material specifications can be found here
Color	dark 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	0.303 MJ
Weight	15.7 g

## Environmental requirements

Processing temperature	-5 ... +40 °C
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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	4050821064381
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
	CCA DEKRA Certification B.V.	EN 61535	71-123228
	CCA DEKRA Certification B.V.	IEC 61535	NL -84761
	cULus Underwriters Laboratories Inc.	UL 1977	E45171
	cULus Underwriters Laboratories Inc.	UL 1059	E 45172
	VDE VDE Prüf- und Zertifizierungsinstitut	EN 61535	40029808

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## 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
	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.770-7505**  
Linect® T-connector; 5-pole; Cod. L; 1 input; 2 outputs; white

[www.wago.com/770-7505](http://www.wago.com/770-7505)



**Item no.770-1175**  
Plug; 5-pole; Cod. L; 4,00 mm²; dark gray

[www.wago.com/770-1175](http://www.wago.com/770-1175)



**Item no.771-8985/006-103**  
pre-assembled interconnecting cable; Eca; Socket/plug; 5-pole; Cod. L; H05VV-F 5G 1.5 mm²; 1 m; 1,50 mm²; dark gray

[www.wago.com/771-8985/006-103](http://www.wago.com/771-8985/006-103)



**Item no.771-8985/206-103**  
pre-assembled connecting cable; Eca; Plug/open-ended; 5-pole; Cod. L; H05VV-F 5G 1.5 mm²; 1 m; 1,50 mm²; dark gray

[www.wago.com/771-8985/206-103](http://www.wago.com/771-8985/206-103)

## Required accessories

## Locking levers

Locking system

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**Item no.: 770-121**

Locking lever; for flying leads; for manual operation; white

[www.wago.com/770-121](http://www.wago.com/770-121)**Item no.: 770-131**

Locking lever; for flying leads; for tool operation; white

[www.wago.com/770-131](http://www.wago.com/770-131)**Item no.: 770-101**

Locking lever; for flying leads; for manual operation; black

[www.wago.com/770-101](http://www.wago.com/770-101)**Item no.: 770-111**

Locking lever; for flying leads; for tool operation; black

[www.wago.com/770-111](http://www.wago.com/770-111)**Strain relief****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

[www.wago.com/770-505/021-000](http://www.wago.com/770-505/021-000)**Item no.: 770-505/023-000**

Strain relief housing; 5-pole; for 2 cables; 5.0 ... 9.0 mm; 55 mm; black

[www.wago.com/770-505/023-000](http://www.wago.com/770-505/023-000)**Item no.: 770-505**

Strain relief housing; 5-pole; for 2 cables; 9.0 ... 13.0 mm; 55 mm; black

[www.wago.com/770-505](http://www.wago.com/770-505)**Item no.: 770-515**

Strain relief housing; 5-pole; for 2 cables; 9.0 ... 13.0 mm; 55 mm; white

[www.wago.com/770-515](http://www.wago.com/770-515)**Item no.: 770-515/023-000**

Strain relief housing; 5-pole; for 2 cables; 5.0 ... 9.0 mm; 55 mm; white

[www.wago.com/770-515/023-000](http://www.wago.com/770-515/023-000)**Item no.: 770-515/021-000**

Strain relief housing; 5-pole; for 1 cable; 11.5 ... 16.5 mm; 71 mm; white

[www.wago.com/770-515/021-000](http://www.wago.com/770-515/021-000)**Optional accessories****Marking accessories****Marker****Item no.: 770-450/000-002**

Marker card; Plastic; yellow

[www.wago.com/770-450/000-002](http://www.wago.com/770-450/000-002)**Item no.: 770-450/000-001**

Marker card; Plastic; green

[www.wago.com/770-450/000-001](http://www.wago.com/770-450/000-001)

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**Item no.: 770-450/000-005**  
Marker card; Plastic; red

[www.wago.com/770-450/000-005](http://www.wago.com/770-450/000-005)



**Item no.: 770-450**  
Marker card; Plastic; white

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



**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

### Wiring aid



**Item no.: 770-100**  
Wiring aid; 2- to 5-pole; Plastic; orange

[www.wago.com/770-100](http://www.wago.com/770-100)

### 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.: 770-201**  
Lockout cap; 12-pole, separable; for sockets; Plastic; black

[www.wago.com/770-201](http://www.wago.com/770-201)



**Item no.: 770-221**  
Lockout cap; 12-pole, separable; for sockets; Plastic; white

[www.wago.com/770-221](http://www.wago.com/770-221)



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

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

## Mounting

### Mounting accessories



**Item no.: 770-320**  
Snap-in frame; 5-pole; 1.0 ... 3.0 mm; black

[www.wago.com/770-320](http://www.wago.com/770-320)



**Item no.: 770-321**  
Snap-in frame; 5-pole; 0.5 ... 2.0 mm; black

[www.wago.com/770-321](http://www.wago.com/770-321)

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Item no.: 770-340  
Snap-in frame; 5-pole; 1.0 ... 3.0 mm; white

[www.wago.com/770-340](http://www.wago.com/770-340)



Item no.: 770-341  
Snap-in frame; 5-pole; 0.5 ... 2.0 mm; white

[www.wago.com/770-341](http://www.wago.com/770-341)

Downloads  
Documentation

Bid Text			
770-1165 X81 - Datei	2019 Feb 19	xml 3.0 kB	Download
770-1165 doc - Datei	2015 Jun 8	doc 24.1 kB	Download

CAD/CAE-Data

CAE data			
WSCAD Universe 770-1165		URL	Download

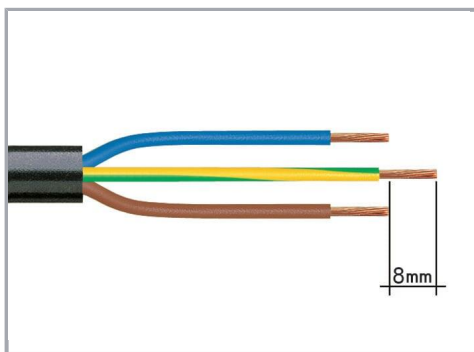
Environmental Product Compliance

Compliance Search			
Environmental Product Compliance 770-1165 Socket; 5-pole; Cod. L; 4,00 mm²; dark gray		URL	Download

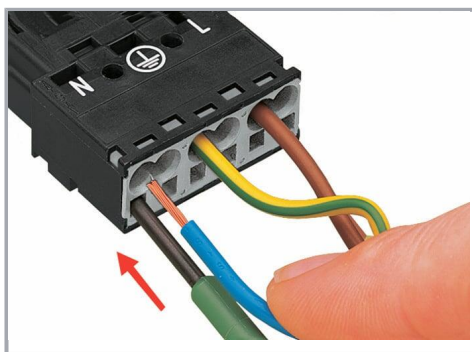
Installation Notes

Conductor termination

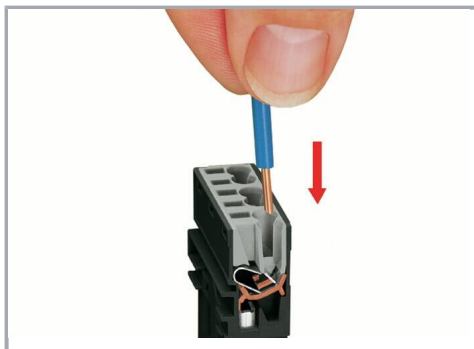
Subject to changes. Please also observe the further product documentation!



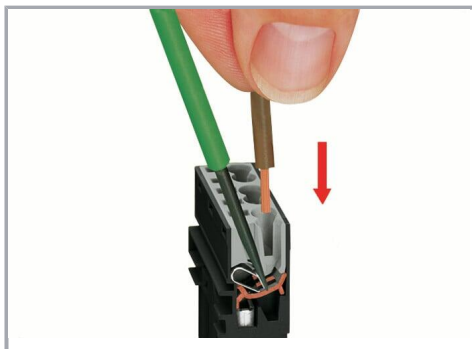
1. Strip length, outer insulation = 35 mm (2-pole), 55 mm (3- to 5-pole)
2. Strip length = 9 mm
3. Extended ground conductor = 8 mm



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.

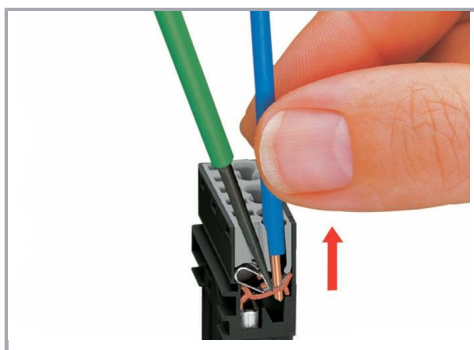


Insert the stripped solid conductor until it hits the backstop.



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.

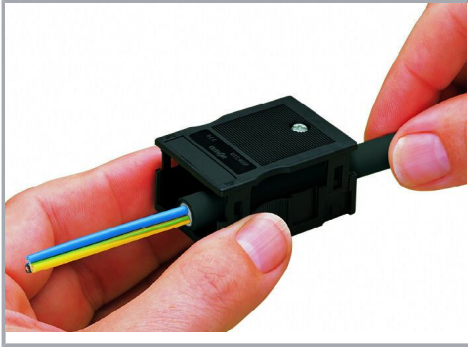
#### Conductor removal



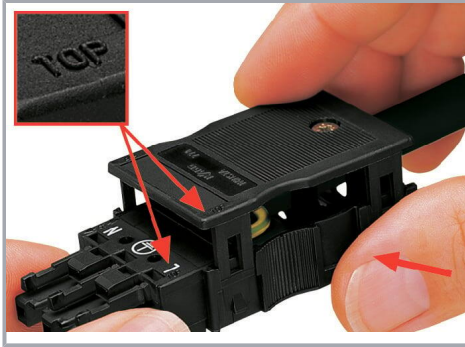
To remove the conductor, actuate the clamp via screwdriver (2.5 mm blade width) and pull out the conductor.

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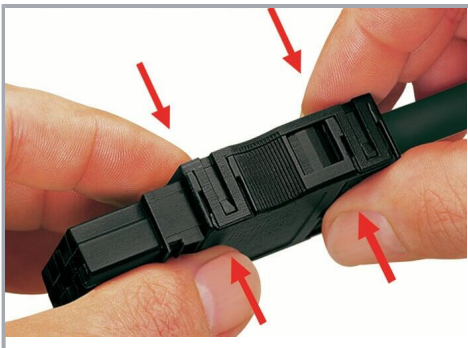
## Installation



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

WINSTA® MIDI

[Show all products from the family](#)

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