

**Data sheet | Item number: 770-1165**

Socket; 5-pole; Cod. L; 4,00 mm<sup>2</sup>; dark gray

[www.wago.com/770-1165](http://www.wago.com/770-1165)



**Color:**

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

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## Item description

### Female connector/socket WINSTA® MIDI 5-pole

The WINSTA® MIDI female connector/socket 5-pole is the pluggable solution for your use in control cabinets, on PCBs or for lighting connections. Our pluggable installation connectors with spring pressure connection technology function completely without screw connections. They allow resource-efficient, error-free installation in a large number of possible uses. For greater security in electrical installations, the pluggable installation connector is equipped with mechanical protection against mismatching. 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!)). L coding identifies WINSTA® MIDI pluggable installation connectors for use in applications related to power supply in automation. This pluggable installation connector can be used for electrical currents up to 25 A. Thus the product is especially suitable for high power loads. The WINSTA® MIDI Pluggable Connection System with Push-in CAGE CLAMP® spring pressure connection technology facilitates precise electrification. Due to the built-in test slot, connections can be checked even when they are plugged in. That saves time and reduces installation labor and expense.

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

WINSTA® is the pluggable connection system that is perfectly tailored to the strict requirements of electrical installation. It ensures error-free installation of cables and components, quickly and reliably. Now you can also cut installation costs without compromising quality and safety: The WINSTA® MIDI pluggable installation connector with protection type IP20 reduces the need for servicing and prevents unnecessary downtime.

- protection against mismatching eliminates errors
- pre-assembled versions
- with L coding for use in supplying power to power supply units or small servo motors
- custom-engineered solutions
- rapid, structured electrical 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

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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

10

Total number of potentials

5

## 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

5

Conductor entry direction to mating direction

0°

## Physical data

Pin spacing

10 mm / 0.394 inches

Width

50 mm / 1.969 inches

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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 $\perp$ L N' L'
Potential marking	N $\perp$ 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
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> <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).

## Material Data

Note (material data)	Information on material specifications can be found here
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Subject to changes. Please also observe the further product documentation!



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
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

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<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

#### 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.770-7505</b> Linect® T-connector; 5-pole; Cod. L; 1 input; 2 outputs; white	<a href="http://www.wago.com/770-7505">www.wago.com/770-7505</a>
<b>Item no.770-1175</b> Plug; 5-pole; Cod. L; 4,00 mm <sup>2</sup> ; dark gray	<a href="http://www.wago.com/770-1175">www.wago.com/770-1175</a>
<b>Item no.771-8985/006-103</b> pre-assembled interconnecting cable; Eca; Socket/plug; 5-pole; Cod. L; H05VV-F 5G 1.5 mm <sup>2</sup> ; 1 m; 1,50 mm <sup>2</sup> ; dark gray	<a href="http://www.wago.com/771-8985/006-103">www.wago.com/771-8985/006-103</a>
<b>Item no.771-8985/206-103</b> pre-assembled connecting cable; Eca; Plug/open-ended; 5-pole; Cod. L; H05VV-F 5G 1.5 mm <sup>2</sup> ; 1 m; 1,50 mm <sup>2</sup> ; dark gray	<a href="http://www.wago.com/771-8985/206-103">www.wago.com/771-8985/206-103</a>

#### Required accessories

##### Strain relief

Strain relief housing
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**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)

## Locking levers

### Locking system

**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)

## Optional accessories

### 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)

### Marking accessories

#### Marker

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**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)

**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)

## 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)

**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)

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

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## Downloads

### Documentation

#### Bid Text

770-1165 X81 - Datei	2019 年2月19日	xml 3.0 kB	Download
770-1165 doc - Datei	2015 年6月8日	doc 24.1 kB	Download

## CAD/CAE-Data

### CAE data

WSCAD Universe 770-1165	URL	Download
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## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 770-1165 Socket; 5-pole; Cod. L; 4,00 mm <sup>2</sup> ; dark gray	URL	Download
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## Installation Notes

### Conductor termination

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



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

WINSTA® MIDI

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



[Show all products from the family](#)

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

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