Plug; with strain relief housing; 3-pole; Cod. A; 4,00 mm<sup>2</sup>; black





0-1	

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# Data sheet | Item number: 770-113 www.wago.com/770-113



Dimensions in mm Overall length when mated	
	Disconsis as is asset
	Dimensions in mm
Overall length when mated	
5	Overall length when mated
	3

# Item description

#### Male connector/plug WINSTA® MIDI rated current 25 A

The WINSTA® MIDI male connector/plug 3-pole is the pluggable solution for your use in control cabinets, on PCBs or for lighting connections. WAGO pluggable installation connectors are used when specifications repeat or are planned on a specific pattern, for example for installing grid lighting or flush-mount lighting. The color coding and mechanical coding of the pluggable installation connector ensure error-free installation of the individual components – including protection against mismating. 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 is used for

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electrical currents up to 25 A. Thus the product is also 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 included test slot, it is possible to check connections even when they are plugged in. That saves time and reduces installation labor and costs. 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 significantly reduces the need for servicing and lowers costs. Choose quality and durability – the WINSTA® MIDI pluggable installation connector with strain relief hosting from WAGO makes the installation of electrical components visibly easier.

- protection against mismating eliminates errors
- pre-assembled versions
- suitable for any application
- ready to install and use immediately
- convenient installation and commissioning

# 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

Rated voltage (UL 1977) 600 V Rated current UL 1977 23 A	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 current UL 1977 23 A	Rated voltage (UL 1977)	600 V
	Rated current UL 1977	23 A

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#### **General information**

Note on contact resistance	approx. 1 m $\Omega$ of contact resistance
	approx. $0.25 \text{ m}\Omega$ contact transition plug/socket

#### Connection data

Connection points	6
Total number of potentials	3
PE function	Preceding PE contact

#### 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 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 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	3
Conductor entry direction to mating direction	0°
Strip length (outer insulation)	55 mm

# Physical data

Pin spacing	10 mm / 0.394 inches
Width	34.6 mm / 1.362 inches
Height	15 mm / 0.591 inches
Depth	76 mm / 2.992 inches

#### **Mechanical Data**

Application	General mains applications
Coding	A

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Variable coding	Yes
Marking	N <del>↓</del> 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
Note on mismating protection	All WINSTA® 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	VO	
Clamping spring material	Chrome-nickel spring steel (CrNi)	

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Contact material	Copper or copper alloy; surface-treated
Contact plating	Tin
Fire load	0.484 MJ
Strain relief color	black
Weight	19.8 g

# **Environmental requirements**

Processing temperature	-5 +40 °C
Continuous operating temperature	-35 +85 ℃
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)	25 pcs
Packaging type	box
Country of origin	DE
GTIN	4044918254083
Customs tariff number	85366990990

# **Environmental Product Compliance**

RoHS Compliance Status Compliant, No Exemption

# Approvals / Certificates

#### General approvals

name
71-
123228
NL -84761
E45171
E 45172
_

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	VDE	EN 61535	40029808
	VDE Prüf- und Zertifizierungsinstitut		
	VDE	EN 61984	40002889
	VDE Prüf- und Zertifizierungsinstitut		
Declaration	ns of conformity and manufacturer's declarations		
			Certificate
Logo	Approval	Additional Approval Text	name
	EU-Declaration of Conformity	-	-
	WAGO GmbH & Co. KG		
Approvals	for marine applications		
			Certificate
Logo	Approval	Additional Approval Text	name
	ABS	-	19-
	American Bureau of Shipping		HG1868589-
			PDA
	DNV GL	-	TAE00001Z6
	Det Norske Veritas, Germanischer Lloyd		
	LR	IEC 61984	LR22429487TA
	Lloyds Register		

# Counterpart

Item no.770-103	www.wago.com/770-
Socket; with strain relief housing; 3-pole; Cod. A; 4,00 mm²; black	103
Item no.770-203	www.wago.com/770-
Socket; 3-pole; Cod. A; 4,00 mm²; black	203
Item no.770-203/035-000	www.wago.com/770-
Socket; with strain relief housing; 3-pole; Cod. A; 4,00 mm²; black	203/035-000
 Item no.770-606	www.wago.com/770-
T-distribution connector; 3-pole; Cod. A; 1 input; 2 outputs; 2 locking levers; black	606
Item no.770-608	www.wago.com/770-
5-way distribution connector; 3-pole; Cod. A; 1 input; 5 outputs; outputs on both sides; black	608
Item no.770-607	www.wago.com/770-
3-way distribution connector; 3-pole; Cod. A; 1 input; 3 outputs; black	607
Item no.770-611 Three-phase to single-phase distribution connector; with phase selection; 5-pole/3-pole; Cod. A; 1 input; 2 outputs; with cable connection on the input side; black	www.wago.com/770- 611
 Item no.770-615	
T-distribution connector; 3-pole; Cod. A; 1 input; 2 outputs; 3 locking levers; for flying leads; black	www.wago.com/770- 615
 Item no.770-634	
	www.wago.com/770-
 h-distribution connector; 3-pole; Cod. A; 1 input; 2 outputs; outputs on one side; 2 locking levers; black	634
Item no.770-633	www.wago.com/770-

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h-distribution connector; 3-pole; Cod. A; 1 input; 2 outputs; 2 locking levers; black	633
Item no.770-635 h-distribution connector; 3-pole; Cod. A; 1 input; 2 outputs; outputs on both sides; 3 locking levers; for flying leads; black	www.wago.com/770- 635
Item no.770-636 h-distribution connector; 3-pole; Cod. A; 1 input; 2 outputs; outputs on one side; 3 locking levers; for flying leads; black	www.wago.com/770- 636
Item no.770-637 Distribution connector for switches; Single-pole switch and series circuit; 3-pole; Cod. A/S; 1 input; 5 outputs; black	www.wago.com/770- 637
Item no.770-638  Distribution connector for switches; Single-pole and throttle two-way circuit; 3-pole; Cod. A/S; 1 input; 5 outputs; black	www.wago.com/770- 638
Item no.770-640 Three-phase to single-phase distribution connector; with phase selection; 5-pole/3-pole; Cod. A; 1 input; 5 outputs; black	www.wago.com/770- 640
ltem no.770-703 Snap-in socket; 3-pole; Cod. A; 4,00 mm²; black	www.wago.com/770- 703
ltem no.770-703/009-000 Snap-in socket; with protruding mating face; 3-pole; Cod. A; 4,00 mm²; black	www.wago.com/770- 703/009-000
ltem no.770-803 Socket for PCBs; straight; 3-pole; Cod. A; black	www.wago.com/770- 803
ltem no.770-803/011-000 Socket for PCBs; angled; 3-pole; Cod. A; black	www.wago.com/770- 803/011-000
ltem no.771-9993/006-101 pre-assembled interconnecting cable; Eca; Socket/plug; 3-pole; Cod. A; H05VV-F 3G 1.5 mm²; 1 m; 1,50 mm²; black	www.wago.com/771- 9993/006-101

# 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	www.wago.com/770-131
	Locking lever; for flying leads; for tool operation; white	www.wago.com///o 101
	Item no.: 770-101	www.wago.com/770-101
	Locking lever; for flying leads; for manual operation; black	www.wago.com#770 101
	Item no.: 770-111	www.wago.com/770-111
	Locking lever; for flying leads; for tool operation; black	www.wago.com/770-111

# Optional accessories

Tool

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Operatin	g tool	
	Item no.: 210-719	www.waga.com/210.710
	Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft	www.wago.com/210-719
	Item no.: 770-383	WWW.Wogo.com/770.202
	Operating tool; 3-way; green	www.wago.com/770-383
larking ac	ccessories	
Marker		
	Item no.: 770-450/000-002	www.wago.com/770-450
	Marker card; Plastic; yellow	/000-002
	Item no.: 770-450/000-001	www.wago.com/770-450
	Marker card; Plastic; green	/000-001
	Item no.: 770-450/000-005	www.wago.com/770-450
	Marker card; Plastic; red	/000-005
	Item no.: 770-450	www.wago.com/770-450
	Marker card; Plastic; white	
	Item no.: 770-450/000-006	www.wago.com/770-450
	Marker card; Plastic; blue	/000-006
	Item no.: 770-450/000-012	www.wago.com/770-450
	Marker card; Plastic; orange	/000-012
oding		
Coding		
	Item no.: 770-401	www.wago.com/770-401
	Coding pin; for plugs; Plastic; gray	www.wago.com///0-401
over		
Cover		
	Item no.: 770-360	www.wago.com/770-360
	Lockout cap; for plugs; 5-pole; separable; yellow	www.wago.com/770-360

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EPLAN Data Portal 770-113		URL	Download
Environmental Product Compliance			
Compliance Search			
Environmental Product Compliance 770-113 Plug; with strain relief housing; 3-pole; Cod. A; 4,00 mm²; black		URL	Download

#### **Installation Notes**

Conductor termination

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<ol> <li>Strip length, outer insulation = 35 mm (2-pole), 55 mm (3- to 5-pole)</li> <li>Strip length = 9 mm</li> </ol>	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.
3. Extended ground conductor = 8 mm	
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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# Data sheet | Item number: 770-113 www.wago.com/770-113 To remove the conductor, actuate the clamp via screwdriver (2.5 mm blade width) and pull out the conductor. Coding Simply cut off the coding pin from the socket. Insert coding pin into plug (break first) until it engages. Shield termination Connector with shield termination Apply the shield to the sheathed cable.

Strip length, outer insulation = 55 mm

Shield length = 10 mm

 $\label{thm:continuity} \textbf{Subject to changes. Please also observe the further product documentation!}$ 

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Push the shield connecting plate into the connector until fully inserted.

First insert the wired connector into a strain relief housing, then snap cover and tighten screw.

# **Product family**

WINSTA® MIDI

Show all products from the family

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