

## Data Sheet | Item Number: 770-103

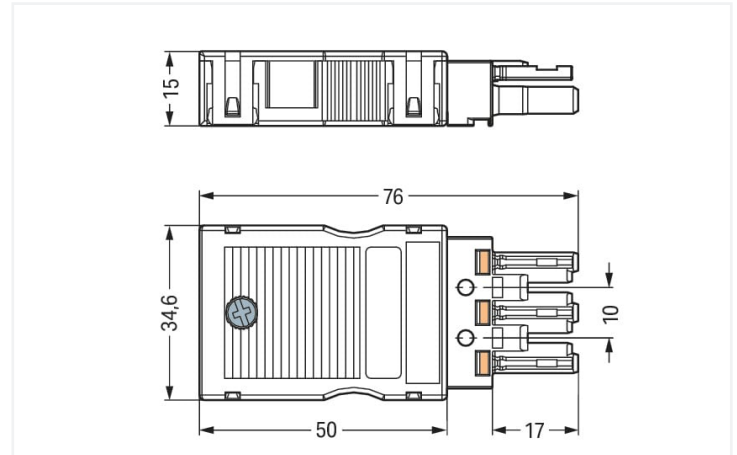
Socket; with strain relief housing; 3-pole; Cod. A; 4,00 mm<sup>2</sup>; black



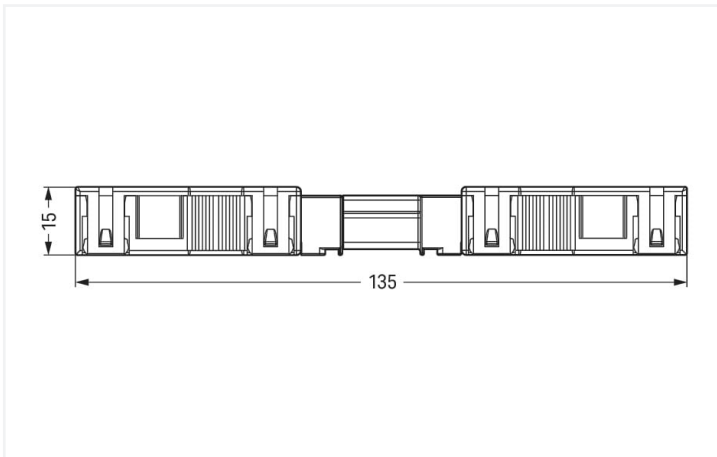
<https://www.wago.com/770-103>



Color: ■ black



Dimensions in mm



Dimensions in mm  
Overall length when mated

### Female connector/socket WINSTA® MIDI with strain relief

The WINSTA® MIDI female connector/socket rated current 25 A provides the foundation for assembly of fine-stranded and solid conductors. WAGO pluggable installation connectors are useful when criteria repeat or are planned on a defined pattern, for example for installing grid lighting or flush-mount lighting. The mechanical coding and color coding of the pluggable installation connector ensure error-free installation of the individual components – including protection against mismatching. Thanks to the color coding and mechanical A coding of WINSTA® MIDI pluggable installation connectors, you can clearly distinguish different circuits. This pluggable installation connector is used for electrical currents up to 25 A. Thus the product is especially suitable for high power loads. WINSTA® MIDI with Push-in CAGE CLAMP® spring pressure connection technology is found in a broad range of individual products you can use for quick, easy, flexible, and secure installation. A range up to 55 mm can be used for the strip length.

Lower costs through fast commissioning and elimination of service expenses – solutions from WINSTA® MIDI

WINSTA® is the pluggable connection system that is ideally tailored to the strict requirements of electrical installation. It allows error-free installation of cables and components, quickly and reliably. Choose durability and quality – the WINSTA® MIDI pluggable installation connector with marking from WAGO makes the installation of electrical components significantly easier.

- protection against mismatching eliminates errors
- for automation controllers
- for any mains application
- flexible installation to save space
- convenient installation and commissioning



This item includes:



Item No.: 770-503	1	Item No.: 770-203	1
Strain relief housing; 3-pole; for 2 cables; 8.0 ... 11.5 mm; 55 mm; black		Socket; 3-pole; Cod. A; 4,00 mm <sup>2</sup> ; black	

Electrical data

Ratings per		IEC/EN 60664-1			Approvals per		UL 1977
Overvoltage category		III	III	II	Rated voltage		600 V
Pollution degree		3	2	2	Rated current		23 A
Nominal voltage		250 V	-	-			
Rated surge voltage		4 kV	-	-			
Rated current		25 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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Connection data

Connection points	6	Connection 1	
Total number of potentials	3	Connection technology	Push-in CAGE CLAMP®
Number of test slots	3	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	3
		Connectable sheathed cable diameter	8 ... 11.5 mm
		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
Variable coding	Yes
Marking	L ⊕ N
Potential marking	L ⊕ N
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	IP2XC; 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).
Strain relief	Strain relief housing

## Material data

Note (material data)	<a href="https://www.wago.com/us/material-specifications" href="_blank">Information on material specifications can be found here</a>
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
Contact plating	Tin
Fire load	0.447 MJ
Strain relief color	black
Weight	20 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)	25 pcs	
Packaging type	Box	
Country of origin	DE	
GTIN	4044918252096	
Customs tariff number	85366990990	

Environmental Product Compliance		
RoHS Compliance Status	Compliant, No Exemption	

Approvals / Certificates

General approvals			Declarations of conformity and manufacturer's declarations		
   					
Approval	Standard	Certificate Name	Approval	Standard	Certificate Name
CCA DEKRA Certification B.V.	EN 61535	71-123228	EU-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-
CCA DEKRA Certification B.V.	IEC 61535	NL -84761			
cURus Underwriters Laboratories Inc.	UL 1977	E45171			
VDE VDE Prüf- und Zertifizie- rungsinstitut	EN 61984	40002889			
VDE VDE Prüf- und Zertifizie- rungsinstitut	EN 61535	40029808			

Approvals for marine applications

  		
Approval	Standard	Certificate Name
ABS American Bureau of Ship- ping	-	19-HG1868589-PDA
DNV GL Det Norske Veritas, Ger- manischer Lloyd	-	TAE00001Z6
LR Lloyds Register	IEC 61984	LR22429487TA

Downloads
Environmental Product Compliance



Compliance Search			
Environmental Product Compliance 770-103			

Documentation			
Bid Text			
770-103	19.02.2019	xml 3.01 KB	
770-103	08.06.2015	doc 23.50 KB	
ausschreiben.de 770-103			

CAD/CAE-Data	
CAD data	CAE data
2D/3D Models 770-103	EPLAN Data Portal 770-103
	WSCAD Universe 770-103
	ZUKEN Portal 770-103

1 Compatible Products
1.1 System counterpart
1.1.1 Cable assembly



[Item No.: 771-9993/206-101](#)  
pre-assembled connecting cable; Eca; Plug/open-ended; 3-pole; Cod. A; H05VV-F 3G 1.5 mm<sup>2</sup>; 1 m; 1,50 mm<sup>2</sup>; black

[Item No.: 771-9993/006-101](#)  
pre-assembled interconnecting cable; Eca; Socket/plug; 3-pole; Cod. A; H05VV-F 3G 1.5 mm<sup>2</sup>; 1 m; 1,50 mm<sup>2</sup>; black

1.1.2 Distribution box			
<a href="#">Item No.: 899-631/181-000</a> Distribution box; 230 V + DALI; 2 inputs; 6 outputs; Cod. A, I; MINI, MIDI; black	<a href="#">Item No.: 899-631/405-000</a> Distribution box; 230 V + SMI; 2 inputs; 6 outputs; Cod. A, B; MINI, MIDI; black	<a href="#">Item No.: 899-631/315-000</a> Distribution box; Cable and device protection; 1 input; 4 outputs; Cod. A; MIDI; black	<a href="#">Item No.: 899-631/305-000</a> Distribution box; Crossover switching; 1 input; 5 outputs; Cod. A, B, S; MIDI; black
<a href="#">Item No.: 899-631/309-000</a> Distribution box; Motion/presence detector; 1 input; 3 outputs; Cod. A, S; MIDI; black	<a href="#">Item No.: 899-631/180-000</a> Distribution box; Motion/presence detector; 1 input; 5 outputs; Cod. A; MIDI; black	<a href="#">Item No.: 899-632/102-000</a> Distribution box; Relay switching; 2 inputs; 1 output; Cod. A, B; MINI, MIDI	<a href="#">Item No.: 899-631/386-000</a> Distribution box; Series switching; 1 input; 7 outputs; Cod. A, S; MIDI; black
<a href="#">Item No.: 899-631/477-000</a> Distribution box; Single-phase current (230 V); 1 input; 11 outputs; Cod. A; MIDI	<a href="#">Item No.: 899-631/334-000</a> Distribution box; Single-phase current (230 V); 1 input; 13 outputs; Cod. A; MIDI; black	<a href="#">Item No.: 899-631/476-000</a> Distribution box; Single-phase current (230 V); 1 input; 4 outputs; Cod. A; MIDI	<a href="#">Item No.: 899-631/104-000</a> Distribution box; Single-phase current (230 V); 1 input; 7 outputs; Cod. A; MIDI; black

### 1.1.2 Distribution box



**Item No.: 899-631/311-000**

Distribution box; Single-phase current (230 V); 2 inputs; 6 outputs; Cod. A, P; MIDI; black



**Item No.: 899-631/327-000**

Distribution box; Single-phase current (230 V); 2 inputs; 6 outputs; Cod. A; MIDI; black



**Item No.: 899-631/363-000**

Distribution box; Single-pole switch circuit; 1 input; 5 outputs; Cod. A, S; MIDI; black



**Item No.: 899-631/478-000**

Distribution box; Single-pole switch circuit; 1 input; 7 outputs; Cod. A, S; MIDI



**Item No.: 899-632/101-000**

Distribution box; Surge switch circuit; 1 input; 4 outputs; Cod. A, S; MIDI; black



**Item No.: 899-632/138-000**

Distribution box; Surge switch circuit; 1 input; 4 outputs; Cod. A, S; MIDI; black



**Item No.: 899-632/103-000**

Distribution box; Surge switch circuit; 2 inputs; 2 outputs; Cod. A; MIDI



**Item No.: 899-631/308-000**

Distribution box; Two-way circuit; 1 input; 5 outputs; Cod. A, S; MIDI; black



**Item No.: 899-631/189-000**

Distribution box; Two-way circuit; 1 input; 7 outputs; Cod. A, S; MIDI; black

### 1.1.3 Distribution connector



**Item No.: 770-607**

3-way distribution connector; 3-pole; Cod. A; 1 input; 3 outputs; black



**Item No.: 770-608**

5-way distribution connector; 3-pole; Cod. A; 1 input; 5 outputs; outputs on both sides; black



**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



**Item No.: 770-637**

Distribution connector for switches; Single-pole switch and series circuit; 3-pole; Cod. A/S; 1 input; 5 outputs; black



**Item No.: 770-633**

h-distribution connector; 3-pole; Cod. A; 1 input; 2 outputs; 2 locking levers; black



**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



**Item No.: 770-634**

h-distribution connector; 3-pole; Cod. A; 1 input; 2 outputs; outputs on one side; 2 locking levers; black



**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



**Item No.: 770-606**

T-distribution connector; 3-pole; Cod. A; 1 input; 2 outputs; 2 locking levers; black



**Item No.: 770-615**

T-distribution connector; 3-pole; Cod. A; 1 input; 2 outputs; 3 locking levers; for flying leads; black

### 1.1.4 Male connector/plug



**Item No.: 770-813/011-000**

Plug for PCBs; angled; 3-pole; Cod. A; black



**Item No.: 770-813**

Plug for PCBs; straight; 3-pole; Cod. A; black



**Item No.: 770-213**

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



**Item No.: 770-213/002-000**

Plug; with direct ground contact; 3-pole; Cod. A; 4,00 mm<sup>2</sup>; black



**Item No.: 770-113**

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



**Item No.: 770-213/035-000**

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



**Item No.: 770-713**

Snap-in plug; 3-pole; Cod. A; 4,00 mm<sup>2</sup>; black



**Item No.: 770-713/007-000**

Snap-in plug; with direct ground contact; 3-pole; Cod. A; 4,00 mm<sup>2</sup>; black

## 1.2 Required Accessories

### 1.2.1 Locking system



1.2.1.1 Locking system



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



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



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



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

1.3 Optional Accessories

1.3.1 Cover

1.3.1.1 Cover



**Item No.: 770-201**  
Lockout cap; 12-pole, separable; for sockets; Plastic; black



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

1.3.2 Marking

1.3.2.1 Marker



**Item No.: 770-450/000-006**  
Marker card; Plastic; blue



**Item No.: 770-450/000-001**  
Marker card; Plastic; green



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



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



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



**Item No.: 770-450/000-002**  
Marker card; Plastic; yellow

1.3.3 Tool

1.3.3.1 Operating tool



**Item No.: 770-383**  
Operating tool; 3-way; green



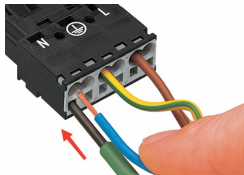
**Item No.: 210-719**  
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft

Installation Notes

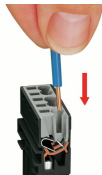
Conductor termination



- 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.

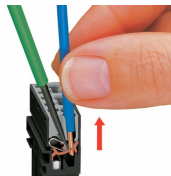


Insert the stripped solid conductor until it hits the backstop.



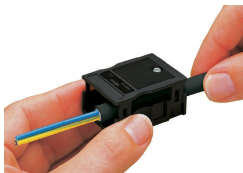
To terminate fine-stranded conductors, open the clamping unit via screwdriver (2.5 mm blade width) and insert a stripped conductor until it hits the backstop.

Conductor removal



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.

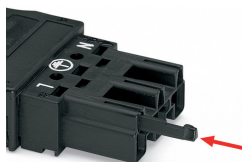


Tighten strain relief screw with screwdriver (2.5 mm blade width).

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



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.