

Dimensions in mm

Male connector/plug WINSTA® MIDI with protection against mismating

The WINSTA® MIDI male connector/plug with protection against mismating supports fast, reliable installation. WAGO pluggable installation connectors are used when requirements repeat or are planned on a specified grid, 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 live contact elements. Pluggable installation connectors with B coding from the WINSTA® MIDI line are available in pink, light green, or gray, allowing you to distinguish different circuits, for example for light, pumps or, sun blinds. Usage-specific pole marking is possible in addition. This pluggable installation connector can be used for a voltage load of up to 25 A. As a result, it can also be used for high power loads. The WINSTA® MIDI product line guarantees maximum flexibility for the electrical installation. With its Push-in CAGE CLAMP® spring pressure connection technology, it achieves time-saving, error-free installation and offers customization and flexibility for meeting all installation requirements.

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

WINSTA® is the pluggable connection system that is perfectly tailored to the strict requirements of electrical installation. It offers fast, secure and, above all, error-free installation of components and cables. Now you can also reduce installation costs without compromising quality and safety: with protection type IP20 reduces the need for servicing and prevents unnecessary downtime.

- pluggable installation connectors with protection against mismating
- · for automation controllers
- with B coding for use in automation of processes, such as lighting technology, for example
- ready to install and use immediately
- convenient installation and commissioning

https://www.wago.com/770-293



Notes

Variants:

Other pole markings

Other versions (or variants) can be requested from WAGO Sales or configured at https://configurator.wago.com/.

Electrical data			
Ratings per	IEC	C/EN 60664	-1
Overvoltage category	III	III	II
Pollution degree	3	2	2
Nominal voltage	250 V	-	-
Rated surge voltage	4 kV	-	-
Rated current	25 A	-	-
General information			
Note on contact resistance	approx. 1 mΩ o	of contact res	istance

approx. $0.25~\text{m}\Omega$ contact transition plug/socket

onnection data				
Connection points	6		Connection 1	
Total number of potentials 3	3	3	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	3
			Conductor entry direction to mating direction	0°

Physical data	
Pin spacing	10 mm / 0.394 inches
Width	30 mm / 1.181 inches
Height	12.9 mm / 0.508 inches
Depth	37.5 mm / 1.476 inches

Data Sheet | Item Number: 770-293 https://www.wago.com/770-293



Mechanical data	
Application	Control technology
Coding	В
Variable coding	Yes
Marking	321
Potential marking	321
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).

Material data	
Note (material data)	
	<u>Information on material specifications can be found here</u>
Color	pink
Cover color	gray
Material group	1
Insulation material	Polyamide (PA66)
Flammability class per UL94	VO
Clamping spring material	Chrome-nickel spring steel (CrNi)
Contact material	Copper or copper alloy; surface-treated
Contact plating	Tin
Fire load	0.197 MJ
Weight	10 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

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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)	100 pcs
Packaging type	Box
Country of origin	DE
GTIN	4050821446729
Customs tariff number	85366990990

Environmental Product Compliance

RoHS Compliance Status Compliant,No Exemption

Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
CCA DEKRA Certification B.V.	IEC 61984	NL-32104
CCA DEKRA Certification B.V.	EN 61984	2173495.01
cURus Underwriters Laboratories Inc.	UL 1977	E45171
cURus Underwriters Laboratories Inc.	UL 1059	E 45172

Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate Name
EU-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-
UK-Declaration of Conformity WAGO GmbH & Co. KG	-	-

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

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Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 770-293



Documentation

Bid Text			
770-293	19.02.2019	xml 2.94 KB	<u>↓</u>
770-293	08.06.2015	doc 24.00 KB	$\underline{\downarrow}$

CAD/CAE-Data

CAD data

2D/3D Models 770-293



CAE data

WSCAD Universe 770-293

ZUKEN Portal 770-293



1 Compatible Products

1.1 System counterpart

1.1.1 Cable assembly







Item No.: 771-9993/105-107

pre-assembled connecting cable; Eca; Socket/open-ended; 3-pole; Cod. B; 1 m; 1,00 mm²; pink

Item No.: 771-9993/005-107

pre-assembled interconnecting cable; Eca; Socket/plug; 3-pole; Cod. B; 1 m; 1,00 mm²; pink

1.1.2 Distribution connector



3-way distribution connector; 3-pole; Cod.





Item No.: 770-1766

h-distribution connector; 3-pole; Cod. B; 1 input; 2 outputs; outputs on both sides; 2 locking levers; pink



Item No.: 770-1769

h-distribution connector; 3-pole; Cod. B; 1 input; 2 outputs; outputs on both sides; 3 locking levers; for flying leads; pink



Item No.: 770-1663

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



Item No.: 770-1763

Item No.: 770-1716

B; 1 input; 3 outputs; pink

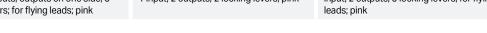
h-distribution connector; 3-pole; Cod. B; 1 input; 2 outputs; outputs on one side; 3 locking levers; for flying leads; pink

Item No.: 770-1613

T-distribution connector; 3-pole; Cod. B; 1 input; 2 outputs; 2 locking levers; pink

Item No.: 770-1713

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



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1.1.3 Female connector/socket









Item No.: 770-783

Snap-in socket; 3-pole; Cod. B; 4,00 mm²; pink

Item No.: 770-883/011-000

Socket for PCBs; angled; 3-pole; Cod. B; nink

Item No.: 770-883

Socket for PCBs; straight; 3-pole; Cod. B; nink

Item No.: 770-283

Socket; 3-pole; Cod. B; 4,00 mm²; pink

1.2 Required Accessories

1.2.1 Locking system

Item No.: 770-101

operation; black

1.2.1.1 Locking system



Locking lever; for flying leads; for manual



Locking lever; for flying leads; for manual

Item No.: 770-121

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 Coding

1.3.1.1 Coding



Item No.: 770-401

Coding pin; for plugs; Plastic; gray

1.3.2 Cover

1.3.2.1 Cover



Item No.: 770-360

Lockout cap; for plugs; 5-pole; separable; yellow

1.3.3 Installation

1.3.3.1 Mounting accessories





Item No.: 770-318
Snap-in frame; 3-pole; 1.0 ... 3.0 mm; black

Item No.: 770-338 Snap-in frame; 3-pole; 1.0 ... 3.0 mm; white https://www.wago.com/770-293



1.3.4 Marking

1.3.4.1 Marker









Item No.: 770-450/000-006

Marker card; Plastic; blue



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

Marker card; Plastic; green

1.3.5 Strain relief

1.3.5.1 Strain relief housing









Item No.: 770-503/021-000

Strain relief housing; 3-pole; for 1 cable; 9.0 ... 13.0 mm; 71 mm; black

Item No.: 770-513/021-000

Strain relief housing; 3-pole; for 1 cable; 9.0 ... 13.0 mm; 71 mm; white

Item No.: 770-503/023-000

Strain relief housing; 3-pole; for 2 cables; 4.5 ... 8.0 mm; 55 mm; black

Item No.: 770-513/023-000

Strain relief housing; 3-pole; for 2 cables; 4.5 ... 8.0 mm; 55 mm; white





Item No.: 770-503

Strain relief housing; 3-pole; for 2 cables; 8.0 ... 11.5 mm; 55 mm; black

Item No.: 770-513

Strain relief housing; 3-pole; for 2 cables; 8.0 ... 11.5 mm; 55 mm; white

Item No.: 770-513/032-000

Strain relief housing; 3-pole; for 2 cables; 8.0 ... 11.5 mm; 55 mm; white

Item No.: 770-503/035-000

Strain relief housing; 3-pole; with locking clip; for 1 cable; 7.0 ... 11.5 mm; 48 mm; black



Item No.: 770-503/038-000

Strain relief housing; 3-pole; with locking clip; for 1 cable; 7.0 ... 11.5 mm; 48 mm; black

100

Item No.: 770-513/035-000

Strain relief housing; 3-pole; with locking clip; for 1 cable; 7.0 ... 11.5 mm; 48 mm; white

Item No.: 770-513/038-000 Strain relief housing; 3-pole; with locking clip; for 1 cable; 7.0 ... 11.5 mm; 48 mm; white

Item No.: 770-503/032-000 Strain relief housing; 3-pole; with locking clip; for 2 cables; 8.0 ... 11.5 mm; 55 mm; black

1.3.6 Tool

1.3.6.1 Operating tool





Item No.: 770-383

Operating tool; 3-way; green

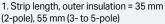
Item No.: 210-719

Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft

Installation Notes

Conductor termination





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.

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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.

Mismating protection



B-coded connectors with different colors can be plugged together.

Important note:
Different colors and/or pole markings are used for circuit identification.
Only connectors of the same color and same pole marking must be plugged together.









B-coded connectors (shown in gray) not only differ in color, but also in their design, making them incompatible with other coded connectors.



Easy circuit identification via different marking and colors

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

Current addresses can be found at:: $\underline{www.wago.com}$

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