

Dimensions in mm

Male connector/plug WINSTA® MINI with protection type IP20

The WINSTA® MINI male connector/plug B coding is the pluggable solution for your application in control cabinets, for lighting connections or on PCBs. Our pluggable installation connectors with spring pressure connection technology function completely without screw connections. They allow flexible, error-free installation in a large number of possible uses. The coding options reduce installation errors, allowing fast, secure wiring of all components. B coding enables the WINSTA® MINI pluggable installation connectors to be used for application control in the domains of automation, mechanical engineering and robotics. Thanks to its particularly compact dimensions, our WINSTA® MINI Pluggable Connection System with Push-in CAGE CLAMP® spring pressure connection technology is very suitable in very restricted spaces, i.e., for installations when very little room is available.

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 – with protection against mismating from WAGO makes the electrical installation of electrical components significantly easier.

- · protection against mismating eliminates errors
- consistent IP40 protection
- for automation controllers
- custom-engineered solutions
- · fast, secure installation

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	/EN 60664	<b>-1</b>	Ratings per IEC/EN – Notes	s
Overvoltage category	III	III	II	Rated current (note)	13 A for 3-pole load
Pollution degree	3	2	2		10 A for 4- and 5-pole load
Nominal voltage	400 V	-	-		
Rated surge voltage	6 kV	-	-		
Rated current	16 A	-	-		

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Approvals per	UL 1977
Rated voltage	600 V
Rated current	12 A

General information	
Note on contact resistance	approx. 1 m $\Omega$ of contact resistance approx. 0.25 m $\Omega$ contact transition plug/ socket

Connection data			
Clamping units	5	Connection 1	
Total number of potentials 5	5	Connection technology	Push-in CAGE CLAMP®
		Actuation type	Operating tool Push-in
		Nominal cross-section	1.5 mm² / 16 AWG
		Solid conductor	0.25 1.5 mm² / 22 16 AWG
		Solid conductor; push-in termination	0.75 1.5 mm² / 20 16 AWG
		Stranded conductor	0.25 1 mm² / 22 18 AWG
		Fine-stranded conductor	0.25 1.5 mm² / 22 16 AWG
		Fine-stranded conductor; with insulated ferrule	0.25 0.75 mm² / 22 20 AWG
		Fine-stranded conductor; with uninsulated ferrule	0.25 0.75 mm² / 22 20 AWG
	Fine-stranded conductor; with ferrule; push-in termination	0.75 mm <sup>2</sup> / 20 AWG	
		Strip length	9 mm / 0.35 inches
	Pole number	5	
	Conductor entry direction to mating direction	0°	

Physical data	
Pin spacing	4.4 mm / 0.173 inches
Width	23.6 mm / 0.929 inches
Height	11.7 mm / 0.461 inches
Depth	34.1 mm / 1.343 inches

Mechanical data	
Use	Control technology
Coding	В
Variable coding	No
Marking	54321
Potential marking	54321
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; IP40 when mated with strain relief housing

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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 (main housing)	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	0.141 MJ
Weight	5.6 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 9.0	EC002560
ETIM 8.0	EC002560
PU (SPU)	50 pcs
Packaging type	Box
Country of origin	PL
GTIN	4055143499781
Customs tariff number	85366990990



## **Environmental Product Compliance**

RoHS Compliance Status

## Approvals / Certificates

## General approvals



Approval	Standard	Certificate Name
CB DEKRA Certification B.V.	EN 61984	NL-64351
CB DEKRA Certification B.V.	EN 61984	71-112993
cURus Underwriters Laboratories Inc.	UL 1977	E45171
KEMA/KEUR DEKRA Certification B.V.	EN 60320	2148952.04

## Declarations of conformity and manufacturer's declarations

Compliant, No Exemption

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
DNV GL Det Norske Veritas, Ger- manischer Lloyd	-	TAE00001Z6
LR Lloyds Register	EN 61535	08/20047 (E2)

## Downloads

## **Environmental Product Compliance**

## Compliance Search

Environmental Product Compliance 890-295



## Documentation

Bid Text			
890-295	19.02.2019	xml 2.95 KB	$\underline{\downarrow}$
890-295	08.06.2015	doc 23.50 KB	$\underline{\downarrow}$

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https://www.wago.com/890-295



### CAD/CAE-Data

CAD data

2D/3D Models 890-295



CAE data

ZUKEN Portal 890-295



## 1 Compatible Products

### 1.1 System counterpart

### 1.1.1 Cable assembly





#### Item No.: 891-8995/105-107

pre-assembled connecting cable; Eca; Socket/open-ended; 5-pole; Cod. B; (H) 05VV-F 5x1,0 mm²; 1 m; 1,00 mm²; pink

#### Item No.: 891-8995/005-107

pre-assembled interconnecting cable; Eca; Socket/plug; 5-pole; Cod. B; (H)05VV-F 5x1,0 mm²; 1 m; 1,00 mm²; pink

## 1.1.2 Female connector/socket









Item No.: 890-785

Snap-in socket; 5-pole; Cod. B; 1,50 mm²; pink

### Item No.: 890-885/011-000

Socket for PCBs; angled; 5-pole; Cod. B; pink

#### Item No.: 890-885

Socket for PCBs; straight; 5-pole; Cod. B; pink

Item No.: 890-285

Socket; 5-pole; Cod. B; 1,50 mm<sup>2</sup>; pink

## 1.2 Required Accessories

#### 1.2.1 Locking system

## 1.2.1.1 Locking system







Item No.: 890-101



Item No.: 890-111

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

## Item No.: 890-131

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

Locking lever; for manual operation; black

Locking lever; for manual operation; white

## 1.2.2 Strain relief

## 1.2.2.1 Strain relief housing



## Item No.: 890-505

Strain relief housing; 5-pole; with locking clip; for 1 cable; 6.5 ... 10.5 mm; 45 mm; black

## Item No.: 890-515

Strain relief housing; 5-pole; with locking clip; for 1 cable; 6.5 ... 10.5 mm; 45 mm; white

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### 1.3 Optional Accessories

## 1.3.1 Cover

#### 1.3.1.1 Cover



Item No.: 897-2003

Protective cap; Type2; for sockets and plugs; PVC; red

#### 1.3.2 Installation

## 1.3.2.1 Mounting accessories



Item No.: 890-310

Mounting carrier; 2- to 5-pole; for flying leads; black



Item No.: 890-311

Mounting carrier; 2- to 5-pole; for flying leads; white

## 1.3.3 Tool

## 1.3.3.1 Operating tool



Item No.: 890-385

Operating tool; 5-way; green



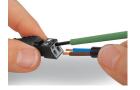
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft

## **Installation Notes**

#### Conductor termination



- 1. Strip length, outer insulation = 30 mm (2-pole), 37 mm (3-pole), 45 mm (4- and 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. Terminate solid conductors by simply pushing them in.



To terminate fine-stranded conductors, open clamping units via operating tool (890-382) and insert stripped conductors until they hit backstop.

Terminate solid conductors by simply pushing them in.



To terminate fine-stranded conductors, open clamping units via operating tool (890-383) and insert stripped conductors until they hit backstop.

Terminate solid conductors by simply pushing them in.

## Installation



Latch the wired connector into the base of the strain relief housing.



Push down strain relief clamp by hand.



Push down strain relief clamp with 2.5 mm screwdriver alternately on both sides.



Latch the top of the strain relief housing.

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# W/AGO

## Installation



The printed marking of the connector is clearly visible in the openings of the strain relief housing.

## 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.



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