

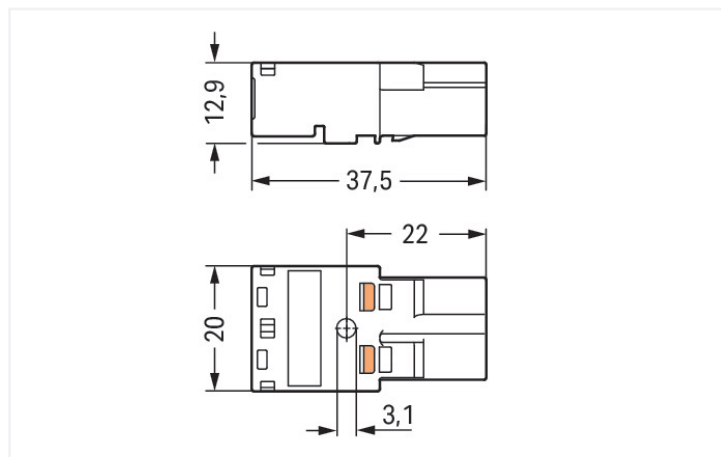
Data Sheet | Item Number: 770-232

Plug; 2-pole; Cod. A; white

<https://www.wago.com/770-232>



Color: ■ white



Dimensions in mm

Male connector/plug WINSTA® MIDI with protection against mismating

The WINSTA® MIDI male connector/plug with protection type IP20 is the pluggable solution for your application in control cabinets, for lighting connections or on PCBs. The pluggable installation connectors with spring pressure connection technology work entirely without screw connections. They allow flexible, error-free installation in numerous applications. The coding options reduce installation errors, allowing fast, secure wiring of all components. The pluggable installation connector is protected against ingress by solid objects 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!)). 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 also suitable for high power loads. The WINSTA® MIDI product line achieves total flexibility for the electrical installation. Through its Push-in CAGE CLAMP® spring pressure connection technology, it ensures time-saving, error-free installation and offers flexibility and customization for meeting various installation requirements.

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

WINSTA® is the pluggable connection system that is ideally tailored to the strict requirements of electrical installation. It offers error-free installation of cables and components, quickly and reliably. Enjoy the benefits of the pluggable version of our maintenance-free spring pressure connection technology too! Plan your installation with with protection against mismating from WAGO.

- pluggable installation connectors with protection against mismating
- pre-assembled versions
- for any mains application
- custom-engineered solutions

- fast, secure installation

Notes

General safety information

NOTICE: Observe installation and safety instructions!

- Nur von Elektrofachkraft oder einer für die Tätigkeit elektrisch unterwiesenen Person (EUP nach DIN VDE 0105-100) anzuwenden!
- Nicht unter Spannung/Last installieren!
- Nur für bestimmungsgemäßen Gebrauch einsetzen!
- Nationale Vorschriften/Normen/Richtlinien beachten!
- Technische Daten der Produkte beachten!
- Auf die richtige Polbelegung achten!
- Keine beschädigten/verschmutzten Komponenten verwenden!
- Leiterarten, -querschnitte, Abisolierlängen und Leitungsdurchmesser beachten!
- Leiter bis zum Anschlag einführen!
- Nur mit Verriegelungsklinke und Zugentlastung verwenden!
- Originalzubehör verwenden!

To be sold only with installation instructions!

Electrical data				
Ratings per		IEC/EN 60664-1		
Overvoltage category		III	III	II
Pollution degree		3	2	2
Nominal voltage		250 V	-	-
Rated impulse withstand voltage		4 kV	-	-
Rated current		25 A	-	-

Approvals per		UL 1977
Rated voltage		600 V
Rated current		23 A

General information

Note on contact resistance

approx. 1 mΩ of contact resistance
approx. 0.25 mΩ contact transition plug/
socket

Connection Data		
Clamping units	4	
Total number of potentials	2	

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 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	2
Conductor entry direction to mating direction	0 °

Physical data

Pin spacing	10 mm / 0.394 inches
Width	20 mm / 0.787 inches
Height	12.9 mm / 0.508 inches
Depth	37.5 mm / 1.476 inches

Mechanical data

Use	General mains applications
Coding	A
Variable coding	Yes
Marking	N 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 <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).

Material data

Note (material data)	Information on material specifications can be found here
Color	white
Cover color	gray
Material group	I
Insulation material (main housing)	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	0.126 MJ
Weight	6.5 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)
PU (SPU)	100 pcs
Packaging type	Box
Country of origin	PL
GTIN	4050821028314
Customs tariff number	85366990990

Product Classification	
UNSPSC	39121402
eCl@ss 10.0	27-44-06-05
eCl@ss 9.0	27-44-06-05
ETIM 9.0	EC002560
ETIM 10.0	EC002560
ECCN	NO US CLASSIFICATION

Environmental Product Compliance	
RoHS Compliance Status	Compliant, No Exemption

Approvals / Certificates	
General approvals	Declarations of conformity and manufacturer's declarations



Approval	Standard	Certificate Name
CCA DEKRA Certification B.V.	EN 61535	71-123228
CCA DEKRA Certification B.V.	IEC 61535	NL -84761
cURus Underwriters Laboratories Inc.	UL 1977	E45171
cURus Underwriters Laboratories Inc.	UL 1059	E 45172

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

Approvals for marine applications		
		
Approval	Standard	Certificate Name
ABS American Bureau of Ship- ping	-	24-0095977-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 770-232

Download icon

Documentation				
Bid Text				
770-232	19.02.2019	xml	2.93 KB	Download icon
770-232	08.06.2015	doc	23.50 KB	Download icon

CAD/CAE-Data

CAD data

2D/3D Models 770-232

Download icon

CAE data

EPLAN Data Portal 770-232

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WSCAD Universe 770-232

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ZUKEN Portal 770-232

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1 Compatible Products

1.1 System counterpart

1.1.1 Cable assembly



[Item No.: 771-8992/106-102](#)
pre-assembled connecting cable; Eca; Socket/open-ended; 2-pole; Cod. A; H05VV-F 2 x 1.5 mm²; 1 m; 1,50 mm²; white

[Item No.: 771-8992/006-102](#)
pre-assembled interconnecting cable; Eca; Socket/plug; 2-pole; Cod. A; H05VV-F 2 x 1.5 mm²; 1 m; 1,50 mm²; white

1.1.2 Distribution connector

[Item No.: 770-1684](#)
h-distribution connector; 2-pole; Cod. A; 1 input; 2 outputs; outputs on one side; 2 locking levers; white

[Item No.: 770-1686](#)
h-distribution connector; 2-pole; Cod. A; 1 input; 2 outputs; outputs on one side; 3 locking levers; for flying leads; white

[Item No.: 770-1656](#)
T-distribution connector; 2-pole; Cod. A; 1 input; 2 outputs; 2 locking levers; white

[Item No.: 770-1665](#)
T-distribution connector; 2-pole; Cod. A; 1 input; 2 outputs; 3 locking levers; white

1.1.3 Female connector/socket



Item No.: 770-222
Socket; 2-pole; Cod. A; white

Item No.: 770-122/041-000
Socket; with strain relief housing; 2-pole; Cod. A; white

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

1.2.2 Strain relief

1.2.2.1 Strain relief housing



Item No.: 770-502/042-000
Strain relief housing; 2-pole; with locking clip; for 1 cable; 5.0 ... 9.0 mm; 35 mm; black

Item No.: 770-512/042-000
Strain relief housing; 2-pole; with locking clip; for 1 cable; 5.0 ... 9.0 mm; 35 mm; white

Item No.: 770-502/041-000
Strain relief housing; 2-pole; with locking clip; for 1 cable; 7.0 ... 10.5 mm; 35 mm; black

Item No.: 770-512/041-000
Strain relief housing; 2-pole; with locking clip; for 1 cable; 7.0 ... 10.5 mm; 35 mm; white

1.3 Optional Accessories

1.3.1 Cover

1.3.1.1 Cover



Item No.: 770-360
Lockout cap; for plugs; 5-pole; separable; yellow

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.: 897-2100
Mounting plate; for Snap-in; Plastic; for detectors and sensors ; Ø 200 mm; red

Item No.: 770-317
Snap-in frame; 2-pole; 1.0 ... 3.0 mm; black

Item No.: 770-337
Snap-in frame; 2-pole; 1.0 ... 3.0 mm; white

1.3.3 Tool

1.3.3.1 Operating tool



Item No.: 770-382
Operating tool; 2-way; green



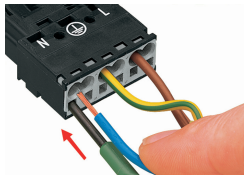
Item No.: 210-719
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft

Installation Notes

Conductor termination



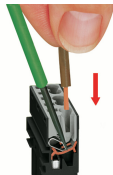
- 1. Strip length, outer insulation = 35 mm (2-pole), 55 mm (3- to 5-pole)
- 2. Strip length = 9 mm
- 3. Extended ground conductor = 8 mm



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.

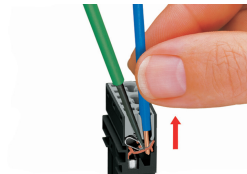


Insert the stripped solid conductor until it hits the backstop.



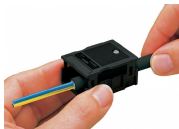
To terminate fine-stranded conductors, open the clamping unit via screwdriver (2.5 mm blade width) and insert a stripped conductor until it hits the backstop.

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).