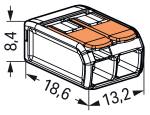
# Data Sheet | Item Number: 221-412

Splicing connector with levers; for all conductor types; max. 4 mm²; 2-conductor; transparent housing; Surrounding air temperature: max 85°C (T85); 4,00 mm²; transparent

https://www.wago.com/221-412




Color: transparent

Dimensions in mm

Splicing connector with levers, 221 Series, lever

Our splicing connector with levers (item number 221-412) is designed for seamless electrical installations. From intercom system wiring to electric ovens—connecting various conductor types is quick and easy with WAGO's practical 221 Series splicing connector. Strip lengths must be 11 mm when connecting conductors to splicing connector with levers. This splicing connector has a rated voltage of 450 V and can handle currents up to 32 A, making it suitable for high-load applications. This product incorporates conductor terminals and utilizes CAGE CLAMP®. Our CAGE CLAMP® connection offers a proven and maintenance-free way to connect all types of conductors. You do not need to prepare the conductor in any way, such as crimping ferrules. The dimensions are (13.1 x 8.3 x 18.6) mm (width x height x depth). Depending on the conductor type, splicing connector with levers is suitable for conductor cross sections ranging from 0.2 mm² to 4 mm².

WAGO's 221 Series Splicing Connector with levers impresses with its innovative design for different conductor cross-sections. That's why WAGO's lever-equipped splicing connector holds a unique trademark within electrical interconnection technology. The flat levers, which fit seamlessly into the 221's base, act like a cast when closed and can be positioned neatly in any housing without disturbing edges. Due to the wide design of each leaver, they can all be operated perfectly without tools for convenient conductor terminations. The transparent housing displays robust technology and enables immediate visual inspection for the correct contact of solid, stranded and fine-stranded conductors. Resembling piano keys, the levers' design perfectly combines the functional and aesthetic connection technology "Made by WAGO." This product is designed for specific Ex applications (please refer to the product datasheet).

## Notes

| | |
|---|---|
| General safety information | **NOTICE: Observe installation and safety instructions!**<br><br>▪ **Only to be used by electricians!**<br>▪ Do not work under voltage/load!<br>▪ Use only for proper use!<br>▪ Observe national regulations/standards/guidelines!<br>▪ Observe technical specifications for the products!<br>▪ Observe the number of permissible potentials!<br>▪ Do not use damaged/dirty components!<br>▪ Observe conductor types, cross-sections and strip lengths!<br>▪ Insert conductor until it hits the product's backstop!<br>▪ Use original accessories!<br><br>**To be sold only with installation instructions!** |
| Safety Information | in grounded power lines |

## Electrical data

| Ratings per | EN 60664 | | |
|---|---|---|---|
| Overvoltage category | III | III | II |
| Pollution degree | 3 | 2 | 2 |
| Nominal voltage | - | - | 450 V |
| Rated impulse withstand voltage | - | - | 4 kV |
| Rated current | - | - | 32 A |

| Approvals per | UL 486C | | |
|---|---|---|---|
| Use group | B | C | D |
| Rated voltage | - | 600 V | - |
| Rated current | - | 20 A | - |

### General information

| | |
|---|---|
| Wiring direction | Side-entry wiring |

## Connection Data

| | |
|---|---|
| Clamping units | 2 |
| Total number of potentials | 1 |

### Connection 1

| | |
|---|---|
| Connection technology | CAGE CLAMP® |
| Actuation type | Lever |
| Connectable conductor materials | Copper |
| Nominal cross-section | 4 mm² / 12 AWG |
| Solid conductor | 0.2 … 4 mm² / 24 … 12 AWG |
| Stranded conductor | 0.2 … 4 mm² / 24 … 12 AWG |
| Fine-stranded conductor | 0.14 … 4 mm² / 24 … 12 AWG |
| Strip length | 11 mm / 0.43 inches |
| Wiring direction | Side-entry wiring |

## Physical data

| | |
|---|---|
| Width | 13.1 mm / 0.516 inches |
| Height | 8.3 mm / 0.327 inches |
| Depth | 18.6 mm / 0.732 inches |

## Material data

| | |
|---|---|
| Note (material data) | Information on material specifications can be found here |
| Color | transparent |
| Material group | IIIa |
| Insulation material (main housing) | Polycarbonate (PC) |
| Flammability class per UL94 | V2 |
| Fire load | 0.033 MJ |
| Actuator color | orange |
| Weight | 1.7 g |

## Environmental requirements

| | |
|---|---|
| Ambient temperature (operation) | +85 °C |
| Continuous operating temperature | 105 °C |
| Temperature marking per EN 60998 | T85 |


Continued on next page

## Commercial data

| | |
|---|---|
| Product Group | 7 (Push Wire Conn.) |
| PU (SPU) | 1000 (100) pcs |
| Packaging type | Box |
| Country of origin | DE |
| GTIN | 4050821808435 |
| Customs tariff number | 85369010000 |

## Product Classification

| | |
|---|---|
| UNSPSC | 39121409 |
| eCl@ss 10.0 | 27-14-11-04 |
| eCl@ss 9.0 | 27-14-11-04 |
| ETIM 9.0 | EC000446 |
| ETIM 10.0 | EC000446 |
| ECCN | NO US CLASSIFICATION |

## Environmental Product Compliance

| | |
|---|---|
| RoHS Compliance Status | Compliant,No Exemption |

## Approvals / Certificates

### General approvals

| Approval | Standard | Certificate Name |
|---|---|---|
| CCA<br>DEKRA Certification B.V. | EN 60998 | NTR NL-7990 |
| cULus_Listed_667F<br>Underwriters Laboratories Inc. | UL 486C | E69654 |
| ENEC 05<br>DEKRA Certification B.V. | EN 60998 | 71-152284 |
| UL<br>Underwriters Laboratories Inc. | UL 467 | E201573 |

### Declarations of conformity and manufacturer's declarations

| Approval | Standard | Certificate Name |
|---|---|---|
| EU-Declaration of Conformity<br>WAGO GmbH & Co. KG | - | - |
| UK-Declaration of Conformity<br>WAGO GmbH & Co. KG | - | - |

### Approvals for marine applications

| Approval | Standard | Certificate Name |
|---|---|---|
| ABS<br>American Bureau of Shipping | EN 60998 | 23-2417173-PDA |
| LR<br>Lloyds Register | EN 60998 | LR2446364TA |
| PRS<br>Polski Rejestr Statków | EN 60998 | TE/1093/880590/23 |


Continued on next page

## Downloads

### Environmental Product Compliance

**Compliance Search**

Environmental Product Compliance 221-412

### Documentation

**Bid Text**

| | | |
|---|---|---|
| 221-412 | 19.02.2019 | xml 3.43 KB |
| 221-412 | 23.01.2019 | docx 15.26 KB |
| ausschreiben.de 221-412 | | |

### CAD/CAE-Data

**CAD data**

2D/3D Models 221-412

**CAE data**

EPLAN Data Portal 221-412

ZUKEN Portal 221-412

## 1 Compatible Products

### 1.1 Optional Accessories

#### 1.1.1 General accessories

##### 1.1.1.1 Empty housings



Item No.: 207-4301
Junction box; Branch; for multicore cables; 221 Series; max. 4 mm² connectors; without splicing connectors; white

##### 1.1.1.2 Moisture protection



Item No.: 207-1331
Gelbox; Branch; for cables; with gel; 221, 2x73 Series; max. 4 mm² connectors; without splicing connectors; Size 1; gray



Item No.: 207-1332
Gelbox; Branch; for cables; with gel; 221, 2x73 Series; max. 4 mm² connectors; without splicing connectors; Size 2; gray



Item No.: 207-1333
Gelbox; Branch; for cables; with gel; 221, 2x73 Series; max. 4 mm² connectors; without splicing connectors; Size 3; gray

 Continued on next page

## 1.1.2 Jumper

### 1.1.2.1 Jumper



Item No.: 221-941/000-006
Jumper; for conductor entry; 2-way; insulated; blue



Item No.: 221-942/000-006
Jumper; for conductor entry; 2-way; insulated; blue



Item No.: 221-941
Jumper; for conductor entry; 2-way; insulated; dark gray



Item No.: 221-942
Jumper; for conductor entry; 2-way; insulated; dark gray

## 1.1.3 Mounting adapter

### 1.1.3.1 Mounting accessories



Item No.: 221-500/000-006
Mounting carrier; 221 Series - 4 mm²; for DIN-35 rail mounting/screw mounting; blue



Item No.: 221-500/000-053
Mounting carrier; 221 Series - 4 mm²; for DIN-35 rail mounting/screw mounting; dark gray-yellow



Item No.: 221-500
Mounting carrier; 221 Series - 4 mm²; for DIN-35 rail mounting/screw mounting; orange



Item No.: 221-502/000-004
Mounting carrier; for 2-conductor terminal blocks; 221 Series - 4 mm²; for screw mounting; black



Item No.: 221-502
Mounting carrier; for 2-conductor terminal blocks; 221 Series - 4 mm²; for screw mounting; white



Item No.: 221-512/000-004
Mounting carrier; for 2-conductor terminal blocks; 221 Series - 4 mm²; with snap-in mounting foot for horizontal mounting; black



Item No.: 221-512
Mounting carrier; for 2-conductor terminal blocks; 221 Series - 4 mm²; with snap-in mounting foot for horizontal mounting; white



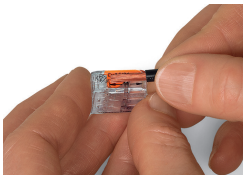
Item No.: 221-522/000-004
Mounting carrier; for 2-conductor terminal blocks; 221 Series - 4 mm²; with snap-in mounting foot for vertical mounting; black



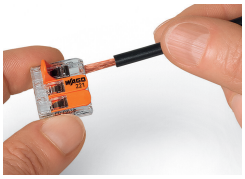
Item No.: 221-522
Mounting carrier; for 2-conductor terminal blocks; 221 Series - 4 mm²; with snap-in mounting foot for vertical mounting; white

## Installation Notes

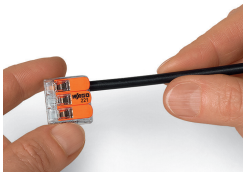
### Conductor termination



Strip conductor to 11 mm (0.43 inch).



Pull up an orange lever to open the clamping unit.



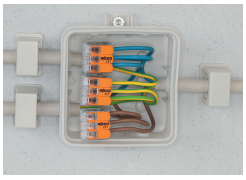
Then insert the conductor and push the lever back down, flush with the connector housing.



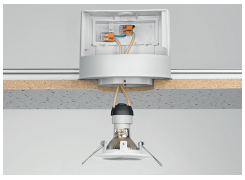
**Compact, lever-operated splicing connectors:**
Tool-free connection of fine-stranded conductors from 0.14 … 4 mm², as well as solid or stranded conductors from 0.2 … 4 mm² (24 … 12 AWG).
**Safety:**
The lever's specially designed rest position reliably prevents accidental unclamping of a connected conductor.
Application safety, for any type of conductor (solid, stranded, fine-stranded), is confirmed by approvals like ENEC or UL.


Continued on next page

## Application



Wiring fine-stranded conductors in junction boxes.



Custom low-voltage lighting system



Lighting distribution in a ceiling canopy



Pendant light connection in a suspended ceiling