

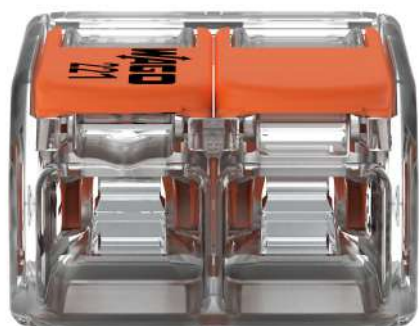
## Data Sheet | Item Number: 221-412

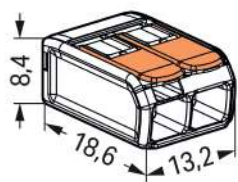
Splicing connector with levers; for all conductor types; max. 4 mm<sup>2</sup>; 2-conductor;  
transparent housing; Surrounding air temperature: max 85°C (T85); 4,00 mm<sup>2</sup>; trans-  
parent

<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) ensures effortless electrical installations. From wiring intercom systems to installing electrical ovens, connecting different conductor types is quick and hassle-free with WAGO's compact 221 Series splicing connector, which allows you to quickly and safely connect different types of conductors. 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. Ensure that the strip lengths are 11 mm when connecting conductors to splicing connector with levers. 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 type of conductor, 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 lever, 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 instructions | <b>NOTICE: Observe installation and safety instructions!</b> <ul style="list-style-type: none"><li>• <b>Only to be used by electricians!</b></li><li>• Do not work under voltage/load!</li><li>• Use only for proper use!</li><li>• Observe national regulations/standards/guidelines!</li><li>• Observe technical specifications for the products!</li><li>• Observe the number of permissible potentials!</li><li>• Do not use damaged/dirty components!</li><li>• Observe conductor types, cross-sections and strip lengths!</li><li>• Insert conductor until it hits the product's backstop!</li><li>• Use original accessories!</li></ul> <b>To be sold only with installation instructions!</b> |
| 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 surge voltage  | -   | -        | 4 kV  |  |
| Rated current        | -   | -        | 32 A  |  |

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

| 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)               | <a href="#">Information on material specifications can be found here</a> |
| Color                              | transparent                                                              |
| Material group                     | Illa                                                                     |
| Insulation material (main housing) | Polycarbonate (PC)                                                       |
| Flammability class per UL94        | V2                                                                       |
| Fire load                          | 0.049 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    |

| Commercial data       |                     |
|-----------------------|---------------------|
| Product Group         | 7 (Push Wire Conn.) |
| eCl@ss 10.0           | 27-14-11-04         |
| eCl@ss 9.0            | 27-14-11-04         |
| ETIM 9.0              | EC000446            |
| ETIM 8.0              | EC000446            |
| PU (SPU)              | 1000 (100) pcs      |
| Packaging type        | Box                 |
| Country of origin     | DE                  |
| GTIN                  | 4050821808435       |
| Customs tariff number | 85369010000         |

| Product classification |          |
|------------------------|----------|
| UNSPSC                 | 39121409 |

| 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<br>DEKRA Certification B.V.                        | EN 60998           | NTR NL-7990      | EU-Declaration of Confor-<br>mity<br>WAGO GmbH & Co. KG    | -        | -                |
| cULus_Listed_667F<br>Underwriters Laboratories<br>Inc. | UL 486C            | E69654           | UK-Declaration of Confor-<br>mity<br>WAGO GmbH & Co. KG    | -        | -                |
| ENEC 05<br>DEKRA Certification B.V.                    | EN 60669, EN 60998 | 71-127529        |                                                            |          |                  |
| UL_Listed_64KA<br>UL International Germany<br>GmbH     | UL 467             | E201573          |                                                            |          |                  |

Approvals for marine applications

| Approval                                              | Standard | Certificate Name |
|-------------------------------------------------------|----------|------------------|
| ABS<br>American Bureau of Ship-<br>ping               | -        | 18-HG1755093-PDA |
| DNV GL<br>Det Norske Veritas, Ger-<br>manischer Lloyd | EN 60998 | TAE000015T       |
| LR<br>Lloyds Register                                 | EN 60998 | LR22207029TA     |



Downloads

Environmental Product Compliance

|                                          |  |  |  |
|------------------------------------------|--|--|--|
| Compliance Search                        |  |  |  |
| Environmental Product Compliance 221-412 |  |  |  |

Documentation

|                            |            |                  |  |
|----------------------------|------------|------------------|--|
| Bid Text                   |            |                  |  |
| 221-412                    | 19.02.2019 | xml<br>3.43 KB   |  |
| 221-412                    | 23.01.2019 | docx<br>15.26 KB |  |
| ausschreiben.de<br>221-412 |            |                  |  |

CAD/CAE-Data

|                      |  |
|----------------------|--|
| CAD data             |  |
| 2D/3D Models 221-412 |  |

|                              |  |
|------------------------------|--|
| CAE data                     |  |
| EPLAN Data Portal<br>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; wi-  
thout 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; wi-  
thout splicing connectors; Size 1; gray



[Item No.: 207-1332](#)  
Gelbox; Branch; for cables; with gel; 221,  
2x73 Series; max. 4 mm² connectors; wi-  
thout splicing connectors; Size 2; gray



[Item No.: 207-1333](#)  
Gelbox; Branch; for cables; with gel; 221,  
2x73 Series; max. 4 mm² connectors; wi-  
thout splicing connectors; Size 3; gray



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 mm<sup>2</sup>; for DIN-35 rail mounting/screw mounting; blue



**Item No.: 221-500/000-053**  
Mounting carrier; 221 Series - 4 mm<sup>2</sup>; for DIN-35 rail mounting/screw mounting; dark gray-yellow



**Item No.: 221-500**  
Mounting carrier; 221 Series - 4 mm<sup>2</sup>; for DIN-35 rail mounting/screw mounting; orange



**Item No.: 221-502/000-004**  
Mounting carrier; for 2-conductor terminal blocks; 221 Series - 4 mm<sup>2</sup>; for screw mounting; black



**Item No.: 221-502**  
Mounting carrier; for 2-conductor terminal blocks; 221 Series - 4 mm<sup>2</sup>; for screw mounting; white



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



**Item No.: 221-512**  
Mounting carrier; for 2-conductor terminal blocks; 221 Series - 4 mm<sup>2</sup>; 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 mm<sup>2</sup>; with snap-in mounting foot for vertical mounting; black



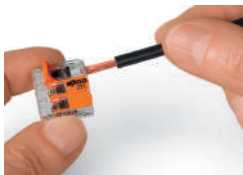
**Item No.: 221-522**  
Mounting carrier; for 2-conductor terminal blocks; 221 Series - 4 mm<sup>2</sup>; with snap-in mounting foot for vertical mounting; white

Installation Notes

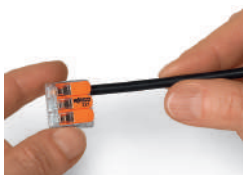
Conductor termination



Strip conductor to 11 mm (0.43 inch).



Pull up an orange lever to open the clamping unit.

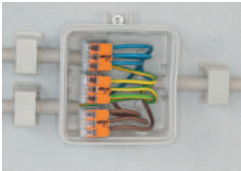


Then insert the conductor and push the lever back down, flush with the connector housing.



**Compact, lever-operated splicing connectors:**  
Tool-free connection of fine-stranded conductors from 0.14 ... 4 mm<sup>2</sup>, as well as solid or stranded conductors from 0.2 ... 4 mm<sup>2</sup> (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.

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