# Data Sheet | Item Number: 2001-410

Jumper; 10-way; insulated; light gray

https://www.wago.com/2001-410

Color: light gray

| Technical data | |
|---|---|
| Number of spacings | 10 -times |

| Electrical data | |
|---|---|
| Rated current | 18 A |

| Physical data | |
|---|---|
| Width | 40.8 mm / 1.606 inches |
| Height | 4.1 mm / 0.161 inches |
| Depth | 19 mm / 0.748 inches |



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## Material data

| | |
|---|---|
| Color | light gray |
| Insulation material (main housing) | Polyamide (PA66) |
| Flammability class per UL94 | V0 |
| Fire load | 0.026 MJ |
| Weight | 3.7 g |

## Commercial data

| | |
|---|---|
| Product Group | 22 (TOPJOB S) |
| PU (SPU) | 25 pcs |
| Packaging type | Bag |
| Country of origin | DE |
| GTIN | 4055143699440 |
| Customs tariff number | 85366990990 |

## Product Classification

| | |
|---|---|
| UNSPSC | 39121421 |
| eCl@ss 10.0 | 27-14-11-40 |
| eCl@ss 9.0 | 27-14-11-40 |
| ETIM 9.0 | EC000489 |
| ETIM 10.0 | EC000489 |
| ECCN | NO US CLASSIFICATION |

## Environmental Product Compliance

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

## Environmental requirements

### Environmental Testing

| | |
|---|---|
| Test specification:<br>Railway applications –<br>Rolling stock –<br>Electronic equipment | DIN EN 50155 (VDE 0115-200):2022-06 |
| Test procedure:<br>Railway applications –<br>Rolling stock equipment –<br>Vibration and shock tests | DIN EN 61373 (VDE 0115-0106):2011-04 |
| Spectrum/Mounting location | Service life test, Category 1, Class A/B |
| Functional test with noise-like oscillations | Test passed according to Section 8 of the standard |
| Frequency | $f_1 = 5$ Hz to $f_2 = 150$ Hz |
| Acceleration | 0.101g (highest test level used for all axes) |
| Test duration per axis | 10 min. |
| Test directions | X, Y and Z axes |
| Monitoring of contact faults and interruptions | Passed |
| Voltage drop measurement before and after each axis | Passed |
| Simulated service life test through increased levels of noise-like oscillations | Test passed according to Section 9 of the standard |
| Frequency | $f_1 = 5$ Hz to $f_2 = 150$ Hz |
| Acceleration | 0.572g (highest test level used for all axes) |
| Test duration per axis | 5 h |
| Test directions | X, Y and Z axes |
| Extended testing: Monitoring of contact faults and interruptions | Passed |

### Environmental Testing

| | |
|---|---|
| Extended testing: Voltage drop measurement before and after each axis | Passed |
| Shock test | Test passed according to Section 10 of the standard |
| Shock pulse form | Half sine |
| Acceleration | 5g (highest test level used for all axes) |
| Shock duration | 30 ms |
| Number of shocks (per axis) | 3 pos. und 3 neg. |
| Test directions | X, Y and Z axes |
| Extended testing: Monitoring of contact faults and interruptions | Passed |
| Extended testing: Voltage drop measurement before and after each axis | Passed |
| Vibration and shock stress for rolling stock equipment | Passed |


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## Approvals / Certificates

### Declarations of conformity and manufacturer's declarations

| Approval | Standard | Certificate Name |
|---|---|---|
| Railway<br>WAGO GmbH & Co. KG | - | Railway Ready |

## Downloads

### Environmental Product Compliance

**Compliance Search**

Environmental Product Compliance 2001-410

## Documentation

**Bid Text**

| | | | |
|---|---|---|---|
| 2001-410 | 19.02.2019 | xml<br>2.52 KB | |
| 2001-410 | 27.04.2017 | doc<br>23.50 KB | |

## CAD/CAE-Data

**CAD data**

2D/3D Models 2001-410

**CAE data**

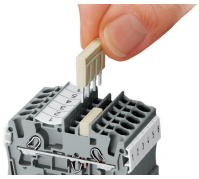
EPLAN Data Portal 2001-410

WSCAD Universe 2001-410

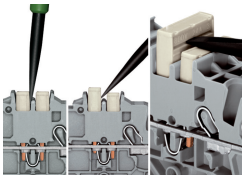
ZUKEN Portal 2001-410

## Installation Notes

### Commoning



Insert push-in type jumper bar and push down until it hits backstop.



**Removing a push-in type jumper bar:**
Insert the operating tool between the jumper and partition wall of the dual jumper slots, then lift up the jumper.
Place the operating tool in the center of jumpers for up to five contacts (see above), or alternately on both sides for jumpers with more than five contacts.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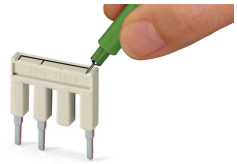
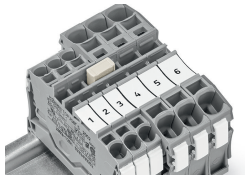
## Commoning

Custom jumpers are created by breaking and removing jumper contacts (2000, 2001, 2002, 2004 Series).

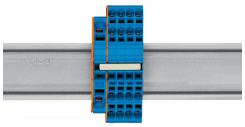


Marking with a felt-tip pen.

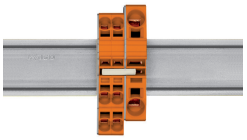
## Commoning



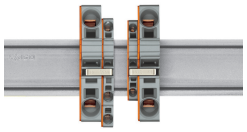
Stepping down via push-in type jumper bar.



**Stepping down via push-in type jumper bar:**
Commoning via closed terminal side with end plate allows jumpering over two cross-section sizes, e.g., from 16 mm² (6 AWG) to 6 mm² (10 AWG) or from 6 mm² (10 AWG) to 2.5 mm² (14 AWG) (see illustration above).



**Stepping down via push-in type jumper bar:**
Commoning via open terminal side with end plate allows jumpering over two cross-section sizes for 16 mm² (6 AWG) and 10 mm² (8 AWG) and one cross-section size for 6/4/2.5 mm² (10/12/14 AWG). An example: from 16 mm² (6 AWG) to 6 mm² (10 AWG) (see illustration above) or from 10 mm² (8 AWG) to 4 mm² (12 AWG).



**Note:**
The total current of the outgoing circuits must not exceed the nominal current of the step-down jumper/push-in type jumper bar.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