

# Data Sheet | Item Number: 2002-405

Jumper; 5-way; insulated; light gray

<https://www.wago.com/2002-405>



Color: ■ light gray

## Electrical data

### Ratings per IEC/EN

Nominal voltage (III/3)	800 V
Rated current	25 A

### Ex information

Rated current (Ex e II)	20 A
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## Physical data

Width	24.3 mm / 0.957 inches
Height	4.1 mm / 0.161 inches
Depth	19 mm / 0.748 inches
Jumper assignment	1-2-3-4-5

## Material data

Note (material data)

[Information on material specifications can be found here](#)

Color	light gray
Fire load	0.017 MJ
Weight	2.4 g

## Environmental requirements

### Environmental Testing (Environmental Conditions)

Test specification Railway applications – Rolling stock – Electronic equipment	DIN EN 50155 (VDE 0115-200):2022-06
Test procedure Railway applications – Rolling stock equipment – Shock and vibration tests	DIN EN 61373 (VDE 0115-0106):2011-04
Spectrum/Installation location	Service life test, Category 1, Class A/B
Function test with noise-like vibration	Test passed according to Section 8 of the standard
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$ $f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$

### Environmental Testing (Environmental Conditions)

Acceleration	0.101g (highest test level used for all axes) 0.572g (highest test level used for all axes) 5g (highest test level used for all axes)
Test duration per axis	10 min. 5 h
Test directions	X, Y and Z axes X, Y and Z axes X, Y and Z axes
Monitoring for contact faults/interruptions	Passed
Voltage drop measurement before and after each axis	Passed
Simulated service life test through increased levels of noise-like vibration	Test passed according to Section 9 of the standard

**Environmental Testing (Environmental Conditions)**

Extended test scope: Monitoring for contact faults/interruptions	Passed Passed
Extended test scope: Voltage drop measurement before and after each axis	Passed Passed
Shock test	Test passed according to Section 10 of the standard
Shock form	Half sine
Shock duration	30 ms
Number of shocks per axis	3 pos. und 3 neg.
Vibration and shock stress for rolling stock equipment	Passed

**Commercial data**

Product Group	22 (TOPJOB S)
eCl@ss 10.0	27-14-11-40
eCl@ss 9.0	27-14-11-40
ETIM 9.0	EC000489
ETIM 8.0	EC000489
PU (SPU)	25 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4055143687393
Customs tariff number	85366990990

**Environmental Product Compliance**

RoHS Compliance Status	Compliant, No Exemption
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**Approvals / Certificates**

**Declarations of conformity and manufacturer's declarations**



Approval	Standard	Certificate Name
Railway WAGO GmbH & Co. KG	-	Railway Ready

**Downloads**

**Environmental Product Compliance**

**Compliance Search**

Environmental Product Compliance 2002-405	↓
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## Documentation

### Additional Information

Technical Section	pdf 2246.92 KB	<a href="#">↓</a>
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### Bid Text

2002-405	19.02.2019	xml 2.51 KB	<a href="#">↓</a>
2002-405	27.04.2017	doc 23.50 KB	<a href="#">↓</a>

## CAD/CAE-Data

### CAD data

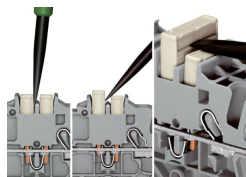
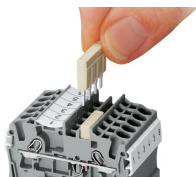
2D/3D Models 2002-405	<a href="#">↓</a>
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### CAE data

EPLAN Data Portal 2002-405	<a href="#">↓</a>
WSCAD Universe 2002-405	<a href="#">↓</a>
ZUKEN Portal 2002-405	<a href="#">↓</a>

## Installation Notes

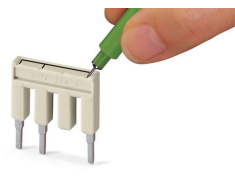
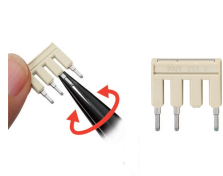
### Commoning



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.

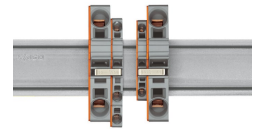
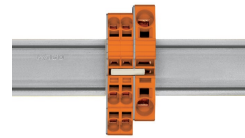
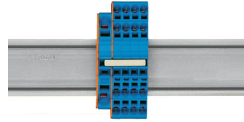
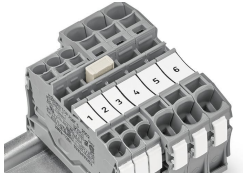
### Commoning



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 mm<sup>2</sup> (6 AWG) to 6 mm<sup>2</sup> (10 AWG) or from 6 mm<sup>2</sup> (10 AWG) to 2.5 mm<sup>2</sup> (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 mm<sup>2</sup> (6 AWG) and 10 mm<sup>2</sup> (8 AWG) and one cross-section size for 6/4/2.5 mm<sup>2</sup> (10/12/14 AWG). An example: from 16 mm<sup>2</sup> (6 AWG) to 6 mm<sup>2</sup> (10 AWG) (see illustration above) or from 10 mm<sup>2</sup> (8 AWG) to 4 mm<sup>2</sup> (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.