

Data Sheet | Item Number: 2002-410

Jumper; 10-way; insulated; light gray

<https://www.wago.com/2002-410>



Color: ■ light gray

Technical data		
Number of spacings		10 -times

Electrical data		
Rated current		25 A

Physical data		
Width		50.4 mm / 1.984 inches
Height		4.1 mm / 0.161 inches
Depth		19 mm / 0.748 inches

Material data		
Color		light gray
Fire load		0.032 MJ
Weight		5 g

Commercial data		
Product Group		22 (TOPJOB S)
PU (SPU)		25 pcs
Packaging type		Bag
Country of origin		DE
GTIN		4055143690386
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 Testing	
Test specification: Railway applications – Rolling stock – Electronic equipment	DIN EN 50155 (VDE 0115-200):2022-06
Test procedure: Railway applications – Rolling stock equipment – 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
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

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 2002-410



Documentation

Bid Text			
2002-410	19.02.2019	xml 2.52 KB	
2002-410	27.04.2017	doc 23.50 KB	

CAD/CAE-Data

CAD data
2D/3D Models 2002-410

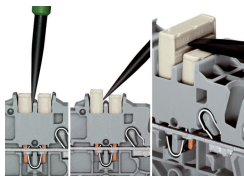
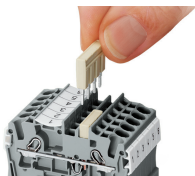


CAE data
EPLAN Data Portal 2002-410
WSCAD Universe 2002-410
ZUKEN Portal 2002-410



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.

Commoning



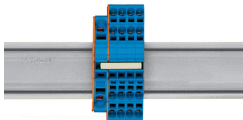
Custom jumpers are created by breaking and removing jumper contacts (2000, 2001, 2002, 2004 Series).

Marking with a felt-tip pen.

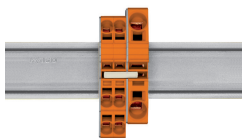
Commoning



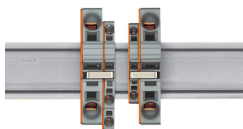
Stepping down via push-in type jumper bar.



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.