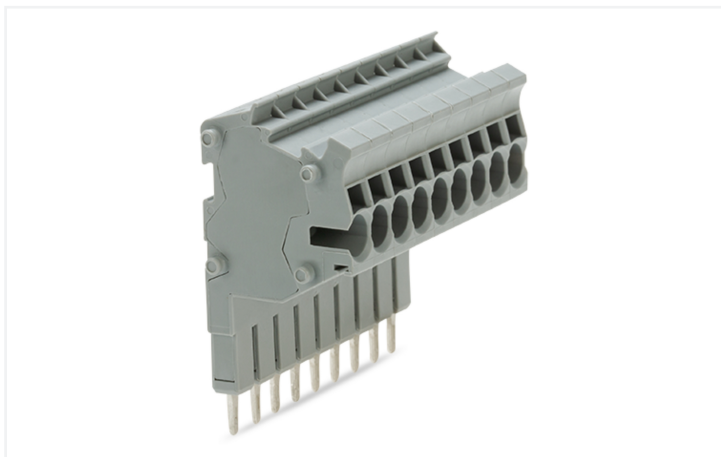


Data Sheet | Item Number: 2002-559

Modular TOPJOB®S connector; modular; for jumper contact slot; 9-pole; gray

<https://www.wago.com/2002-559>



Color: ■ gray

Notes

Safety Information According to EN 61984, pluggable connectors without current interrupting capacity must not be mated or unmated when live or under load.

Electrical data

Ratings per IEC/EN	
Nominal voltage (III/3)	500 V
Rated impulse withstand voltage (III / 3)	6 kV
Rated current	24 A
Legend (ratings)	(III / 3) ≙ Overvoltage category III / Pollution degree 3

General information	
Wiring direction	Side-entry wiring

Connection Data

Clamping units	9
Total number of potentials	9

Connection 1	
Connection technology	Push-in CAGE CLAMP®
Actuation type	Operating tool
Nominal cross-section	2.5 mm ²
Solid conductor	0.25 ... 4 mm ² / 22 ... 12 AWG
Solid conductor; push-in termination	0.75 ... 4 mm ² / 18 ... 12 AWG
Fine-stranded conductor	0.25 ... 4 mm ² / 22 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 2.5 mm ² / 22 ... 14 AWG
Fine-stranded conductor; with ferrule; push-in termination	1 ... 2.5 mm ² / 18 ... 14 AWG
Note (conductor cross-section)	Depending on the conductor characteristic, a conductor with a smaller cross-section can also be inserted via push-in termination.
Strip length	10 ... 12 mm / 0.39 ... 0.47 inches
Pole number	9
Wiring direction	Side-entry wiring

Physical data

Width	46.8 mm / 1.843 inches
Module width	5.2 mm / 0.205 inches

Mechanical data

Marking level	Center/side marking
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Material data

Note (material data)	Information on material specifications can be found here
Color	gray
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.459 MJ
Weight	24.7 g

Environmental requirements

Environmental Testing

Test specification: Railway applications – Rolling stock – Electronic equipment	DIN EN 50155 (VDE 0115-200):2022-06
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Test procedure: Railway applications – Rolling stock equipment – Vibration and shock tests	DIN EN 61373 (VDE 0115-0106):2011-04
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Spectrum/Mounting location	Service life test, Category 1, Class A/B
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Functional test with noise-like oscillations	Test passed according to Section 8 of the standard
--	--

Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
-----------	--

Acceleration	0.101g (highest test level used for all axes)
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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	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
-----------	--

Acceleration	0.572g (highest test level used for all axes)
--------------	---

Test duration per axis	5 h
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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
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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
--	--------

Environmental Testing

Extended testing: Voltage drop measurement before and after each axis	Passed
---	--------

Vibration and shock stress for rolling stock equipment	Passed
--	--------

Commercial data

Product Group	22 (TOPJOB S)
PU (SPU)	10 pcs
Packaging type	Box
Country of origin	DE
GTIN	4045454178406
Customs tariff number	85366990990

Product Classification

UNSPSC	39121409
eCl@ss 10.0	27-14-11-51
eCl@ss 9.0	27-14-11-51
ETIM 9.0	EC002021
ETIM 10.0	EC002021
ECCN	NO US CLASSIFICATION

Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
CCA DEKRA Certification B.V.	EN 61984	NTR NL-7450
CCA DEKRA Certification B.V.	EN 61984	2185079.01

Declarations of conformity and manufacturer's declarations



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

Approvals for marine applications



Approval	Standard	Certificate Name
DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2
PRS Polski Rejestr Statków	-	TE/1094/880590/23

Downloads

Environmental Product Compliance

Compliance Search	
Environmental Product Compliance 2002-559	↓

Documentation

Bid Text			
2002-559	29.04.2019	xml 3.64 KB	↓
2002-559	29.04.2019	docx 15.18 KB	↓

CAD/CAE-Data

CAD data	
2D/3D Models 2002-559	↓

CAE data	
WSCAD Universe 2002-559	↓
ZUKEN Portal 2002-559	↓

1 Compatible Products

1.1 Optional Accessories

1.1.1 Ferrule

1.1.1.1 Ferrule

<p>Item No.: 216-241 Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white</p>	<p>Item No.: 216-242 Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray</p>	<p>Item No.: 216-262 Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray</p>	<p>Item No.: 216-243 Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red</p>
<p>Item No.: 216-263 Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red</p>	<p>Item No.: 216-244 Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black</p>	<p>Item No.: 216-264 Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black</p>	<p>Item No.: 216-246 Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue</p>
<p>Item No.: 216-266 Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue</p>			

1.1.2 Insulation stop

1.1.2.1 Insulation stop



Item No.: 2002-171

Insulation stop; 0.25 - 0.5 mm²; 5 pieces/strip; light gray

Item No.: 2002-172

Insulation stop; 0.75 - 1 mm²; 5 pieces/strip; dark gray

1.1.3 Marking

1.1.3.1 Marker

Item No.: 2009-145/000-006

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue

Item No.: 2009-145/000-007

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray

Item No.: 2009-145/000-023

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green

Item No.: 2009-145/000-012

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange

Item No.: 2009-145/000-005

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red

Item No.: 2009-145/000-024

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet

Item No.: 2009-145

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

Item No.: 2009-145/000-002

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow



Item No.: 248-501/000-006

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue

Item No.: 248-501/000-007

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray

Item No.: 248-501/000-023

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green

Item No.: 248-501/000-017

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green



Item No.: 248-501/000-012

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange

Item No.: 248-501/000-005

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red

Item No.: 248-501/000-024

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet

Item No.: 248-501

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white



Item No.: 248-501/000-002

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow

Item No.: 793-5501/000-006

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; blue

Item No.: 793-5501/000-014

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; brown

Item No.: 793-5501/000-007

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; gray



Item No.: 793-5501/000-023

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; green

Item No.: 793-5501/000-017

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; light green

Item No.: 793-5501/000-012

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; orange

Item No.: 793-5501/000-005

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; red



Item No.: 793-5501/000-024

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; violet

Item No.: 793-5501

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white

Item No.: 793-5501/000-002

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; yellow

Item No.: 2009-115/000-006

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue



Item No.: 2009-115/000-007

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray

Item No.: 2009-115/000-023

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green

Item No.: 2009-115/000-017

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; light green

Item No.: 2009-115/000-012

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange



Item No.: 2009-115/000-024

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet

Item No.: 2009-115

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

Item No.: 2009-115/000-002

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow

1.1.3.2 Marking strip



Item No.: 2009-110

Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white

1.1.4 Strain relief

1.1.4.1 Strain relief plate



Item No.: 734-326

Strain relief plate; for female and male connectors; 35 mm wide; 1 part; gray

1.1.5 Test and measurement

1.1.5.1 Testing accessories



Item No.: 210-136

Test plug; 2 mm Ø; with 500 mm cable; red

1.1.6 Tool

1.1.6.1 Operating tool



Item No.: 210-720

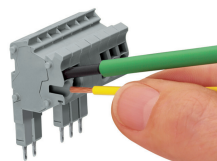
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

Conductor termination

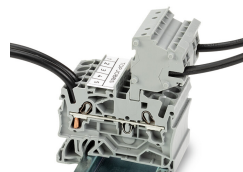


All conductor types at a glance



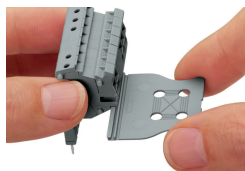
Conductor termination via:

- Operating tool for fine-stranded conductors without ferrules
- Push-in connection of solid conductors



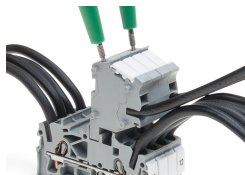
The modular TOPJOB® S connectors also connect conductors of the same size as the terminal blocks being used.

Strain relief



Snapping on a strain relief plate.

Testing



TOPJOB® S Connectors with a 2 mm Ø test socket for testing voltage via 2-pole voltage tester