

Notes

Safety Information

The MCS – MULTI CONNECTION SYSTEM includes connectors without breaking capacity in accordance with DIN EN 61984. When used as intended, these connectors must not be connected/disconnected when live or under load. When used as intended, these connectors must not be connected/disconnected when live or under load. The circuit design should ensure header pins, which can be touched, are not live when unmated.

Variants:

Other pole numbers

Other versions (or variants) can be requested from WAGO Sales or configured at <https://configurator.wago.com/>.

Electrical data

Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Nominal voltage	800 V	1000 V	1000 V
Rated impulse withstand voltage	8 kV	8 kV	8 kV
Rated current	41 A	41 A	41 A

Approvals per	UL 1059		
Use group	B	C	D
Rated voltage	-	600 V	-
Rated current	-	42 A	-

Approvals per	CSA		
Use group	B	C	D
Rated voltage	-	600 V	-
Rated current	-	41 A	-

Connection Data

Clamping units	2
Total number of potentials	2
Number of connection types	1
Number of levels	1

Connection 1

Connection technology	Push-in CAGE CLAMP®
Actuation type	Operating tool
Actuation direction 1	Operation parallel to conductor entry
Solid conductor	0.5 ... 10 mm ² / 20 ... 8 AWG
Fine-stranded conductor	0.5 ... 10 mm ² / 20 ... 8 AWG
Fine-stranded conductor; with insulated ferrule	0.5 ... 6 mm ²
Fine-stranded conductor; with uninsulated ferrule	0.5 ... 6 mm ²
Strip length	13 ... 15 mm / 0.51 ... 0.59 inches
Pole number	2
Conductor entry direction to mating direction	0°

Physical data

Pin spacing	7.62 mm / 0.3 inches
Width	17.12 mm / 0.674 inches
Height	27.5 mm / 1.083 inches
Depth	46 mm / 1.811 inches

Mechanical data

Variable coding	Yes
Anti-rotation protection	Yes

Plug-in connection

Contact type (pluggable connector)	Male connector/plug
Connector (connection type)	for conductor
Mismating protection	Yes
Strain relief	Strain relief plate

Material data

Note (material data)	Information on material specifications can be found here
Color	light gray
Material group	I
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Clamping spring material	Chrome-nickel spring steel (CrNi)
Contact material	Electrolytic copper (E _{Cu})
Contact Plating	Tin
Fire load	0.31 MJ
Weight	15.6 g

Environmental requirements

Limit temperature range	-60 ... +105 °C
Processing temperature	-35 ... +60 °C

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

Environmental Testing

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

Commercial data

PU (SPU)	48 pcs
Packaging type	Box
Country of origin	PL
GTIN	4055143511339
Customs tariff number	85366930000

Product Classification

UNSPSC	39121409
eCl@ss 10.0	27-14-11-06
eCl@ss 9.0	27-14-11-06
ETIM 9.0	EC001284
ETIM 10.0	EC001284
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
CB DEKRA Certification B.V.	IEC 61984	NL-61360/M1
KEMA/KEUR DEKRA Certification B.V.	EN 61984	71-116057
UL Underwriters Laboratories Inc.	UL 1059	UL-US-2426356-0

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
831-3202/133-000



Documentation

Additional Information

Technical Section

03.04.2019

pdf

2027.26 KB



1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket



[Item No.: 831-3102](#)

1-conductor female connector; Push-in CAGE CLAMP®; 10 mm²; Pin spacing 7.62 mm; 2-pole; 100% protected against mismatching; 10,00 mm²; light gray

[Item No.: 831-3522](#)

THT female header; angled; Pin spacing 7.62 mm; 2-pole; 100% protected against mismatching; 1.0 x 1.2 mm solder pin; light gray

[Item No.: 831-3502](#)

THT female header; straight; Pin spacing 7.62 mm; 2-pole; 100% protected against mismatching; 1.0 x 1.2 mm solder pin; light gray

1.2 Optional Accessories

1.2.1 Coding

1.2.1.1 Coding



[Item No.: 831-500](#)

Coding pin carrier with six coding pins; orange

1.2.2 Ferrule

1.2.2.1 Ferrule



[Item No.: 216-284](#)

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

[Item No.: 216-286](#)

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

[Item No.: 216-287](#)

Ferrule; Sleeve for 4 mm² / AWG 12; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray

[Item No.: 216-288](#)

Ferrule; Sleeve for 6 mm² / AWG 10; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; yellow

1.2.3 Marking

1.2.3.1 Marker

<p>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</p>	<p>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</p>	<p>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</p>	<p>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</p>
<p>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</p>	<p>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</p>	<p>Item No.: 2009-145 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white</p>	<p>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</p>
<p>Item No.: 248-501/000-006 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue</p>	<p>Item No.: 248-501/000-007 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray</p>	<p>Item No.: 248-501/000-023 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green</p>	<p>Item No.: 248-501/000-017 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green</p>
<p>Item No.: 248-501/000-012 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange</p>	<p>Item No.: 248-501/000-005 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red</p>	<p>Item No.: 248-501 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white</p>	<p>Item No.: 248-501/000-002 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow</p>
<p>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</p>	<p>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</p>	<p>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</p>	<p>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</p>
<p>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</p>	<p>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</p>	<p>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</p>	<p>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</p>
<p>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</p>	<p>Item No.: 793-501/000-006 WMB marking card; as card; not stretchable; plain; snap-on type; blue</p>	<p>Item No.: 793-501/000-007 WMB marking card; as card; not stretchable; plain; snap-on type; gray</p>	<p>Item No.: 793-501/000-023 WMB marking card; as card; not stretchable; plain; snap-on type; green</p>
<p>Item No.: 793-501/000-017 WMB marking card; as card; not stretchable; plain; snap-on type; light green</p>	<p>Item No.: 793-501/000-012 WMB marking card; as card; not stretchable; plain; snap-on type; orange</p>	<p>Item No.: 793-501/000-005 WMB marking card; as card; not stretchable; plain; snap-on type; red</p>	<p>Item No.: 793-501/000-024 WMB marking card; as card; not stretchable; plain; snap-on type; violet</p>
<p>Item No.: 793-501 WMB marking card; as card; not stretchable; plain; snap-on type; white</p>	<p>Item No.: 793-501/000-002 WMB marking card; as card; not stretchable; plain; snap-on type; yellow</p>	<p>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</p>	<p>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</p>
<p>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</p>	<p>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</p>	<p>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</p>	<p>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</p>
<p>Item No.: 2009-115 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white</p>	<p>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</p>		

1.2.3.2 Marking strip



Item No.: 2009-110/762-852
 Marking strips; for Smart Printer; cut to a defined length; MARKED; not stretchable; snap-on type; white



Item No.: 2009-110/762-853
 Marking strips; for Smart Printer; cut to a defined length; MARKED; not stretchable; snap-on type; white



Item No.: 2009-110/762-854
 Marking strips; for Smart Printer; cut to a defined length; MARKED; not stretchable; snap-on type; white



Item No.: 2009-110/762-855
 Marking strips; for Smart Printer; cut to a defined length; MARKED; not stretchable; snap-on type; white



Item No.: 2009-110/762-856
 Marking strips; for Smart Printer; cut to a defined length; MARKED; not stretchable; snap-on type; white



Item No.: 2009-110/762-857
 Marking strips; for Smart Printer; cut to a defined length; MARKED; not stretchable; snap-on type; white



Item No.: 2009-110/762-858
 Marking strips; for Smart Printer; cut to a defined length; MARKED; not stretchable; snap-on type; white



Item No.: 2009-110/762-859
 Marking strips; for Smart Printer; cut to a defined length; MARKED; not stretchable; snap-on type; white



Item No.: 2009-110
 Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white

1.2.4 Mounting adapter

1.2.4.1 Mounting accessories



Item No.: 831-137
 Mounting adapter; for DIN-35 rail/panel mounting; 3 parts; Pin spacing 7.62 mm; light gray

1.2.5 Test and measurement

1.2.5.1 Testing accessories



Item No.: 210-136
 Test plug; 2 mm Ø; with 500 mm cable; red

1.2.6 Tool

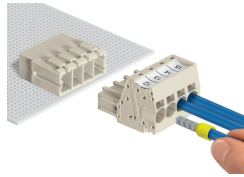
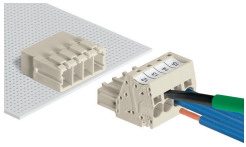
1.2.6.1 Operating tool



Item No.: 210-721
 Operating tool; Blade: 5.5 x 0.8 mm; with a partially insulated shaft; multicoloured

Installation Notes

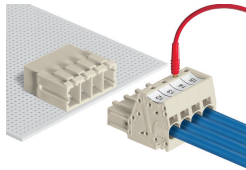
Conductor termination



Inserting fine-stranded conductors via (5.5 x 0.8) mm screwdriver.

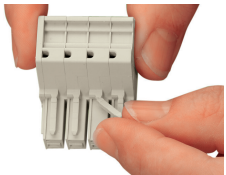
Solid and ferruled conductors are terminated by simply pushing them into unit.

Testing

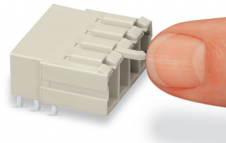


Testing with 2 mm Ø test plug.

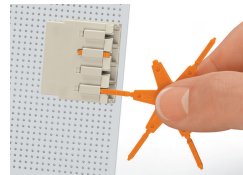
Coding



Break or cut off coding pin from female connector.



Insert coding pin into male header (break first) until it engages.



Coding a THT male header by inserting a coding pin.

Marking



Direct marking of female and male connectors



MCS MAXI male and female connectors can also be marked via Mini-WSB or WMB markers.