

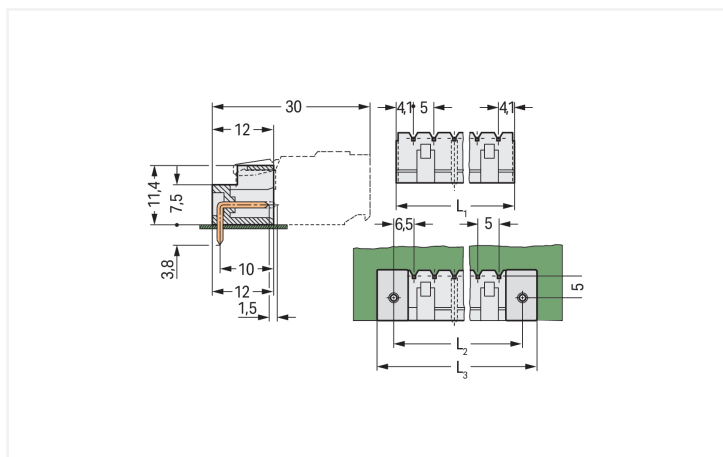
Data Sheet | Item Number: 721-438/001-000

THT male header; 1.0 x 1.0 mm solder pin; angled; 100% protected against mismatching; Pin spacing 5 mm; 8-pole; light gray

<https://www.wago.com/721-438/001-000>



Color: ■ light gray



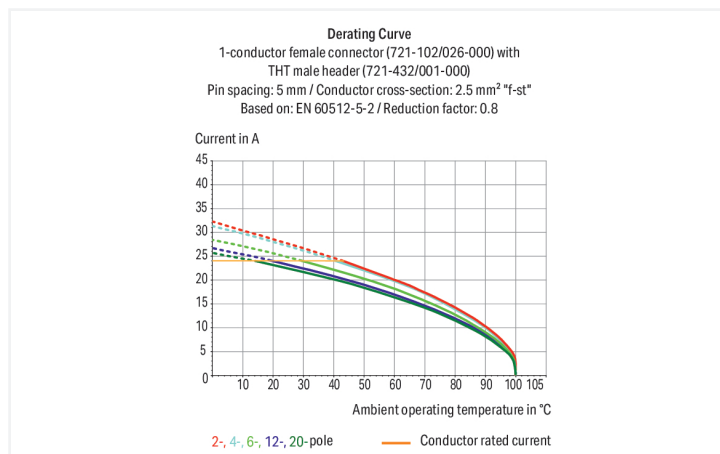
Dimensions in mm

$L1 = (\text{pole no.} - 1) \times \text{pin spacing} + 8.2 \text{ mm}$
 $L2 = L1 + 5 \text{ mm}$
 $L3 = L2 + 7.4 \text{ mm}$

Male connector, 721 Series, solder pin dimensions 1 x 1 mm

This male connector (item number 721-438/001-000) is designed for hassle-free electrical installations. The dimensions are (43.2 x 15.2 x 12) mm (width x height x depth).

Tin is used for coating the contact surfaces. The pcb connector is designed for THT soldering.





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 3.8 mm pin projection for male headers with straight solder pins Gold-plated or partially gold-plated contact surfaces 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	320 V	320 V	630 V
Rated impulse withstand voltage	4 kV	4 kV	4 kV
Rated current	12 A	12 A	12 A
Approvals per		UL 1059	
Use group	B	C	D
Rated voltage	300 V	-	300 V
Rated current	10 A	-	10 A
Approvals per		UL 1977	
Rated voltage	600 V		
Rated current	10 A		
Approvals per		CSA	
Use group	B	C	D
Rated voltage	300 V	-	300 V
Rated current	10 A	-	10 A

Connection Data	
Total number of potentials	8
Number of connection types	1
Number of levels	1
Connection 1	
Pole number	8

Physical data	
Pin spacing	5 mm / 0.197 inches
Width	43.2 mm / 1.701 inches
Height	15.2 mm / 0.598 inches
Height from the surface	11.4 mm / 0.449 inches
Depth	12 mm / 0.472 inches
Solder pin length	3.8 mm
Solder pin dimensions	1 x 1 mm
!	1.4 (+0.1) mm

Mechanical data	
Variable coding	Yes
Anti-rotation protection	Yes



Plug-in connection	
Contact type (pluggable connector)	Male connector/plug
Connector (connection type)	for PCB
Mismating protection	Yes
Mating direction to the PCB	0°

PCB contact	
PCB contact	THT
Solder pin arrangement	over the entire male connector (in-line)
Number of solder pins per potential	1

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
Contact material	Electrolytic copper (E _{Cu})
Contact Plating	Tin
Fire load	0.05 MJ
Weight	2.7 g

Environmental requirements																																										
Limit temperature range	-60 ... +100 °C	<table><tr><th colspan="2">Environmental Testing</th></tr><tr><td>Test specification: Railway applications – Rolling stock – Electronic equipment</td><td>DIN EN 50155 (VDE 0115-200):2022-06</td></tr><tr><td>Test procedure: Railway applications – Rolling stock equipment – Vibration and shock tests</td><td>DIN EN 61373 (VDE 0115-0106):2011-04</td></tr><tr><td>Spectrum/Mounting location</td><td>Service life test, Category 1, Class A/B</td></tr><tr><td>Functional test with noise-like oscillations</td><td>Test passed according to Section 8 of the standard</td></tr><tr><td>Frequency</td><td>f₁ = 5 Hz to f₂ = 150 Hz</td></tr><tr><td>Acceleration</td><td>0.101g (highest test level used for all axes)</td></tr><tr><td>Test duration per axis</td><td>10 min.</td></tr><tr><td>Test directions</td><td>X, Y and Z axes</td></tr><tr><td>Monitoring of contact faults and interruptions</td><td>Passed</td></tr><tr><td>Voltage drop measurement before and after each axis</td><td>Passed</td></tr><tr><td>Simulated service life test through increased levels of noise-like oscillations</td><td>Test passed according to Section 9 of the standard</td></tr><tr><td>Frequency</td><td>f₁ = 5 Hz to f₂ = 150 Hz</td></tr><tr><td>Acceleration</td><td>0.572g (highest test level used for all axes)</td></tr><tr><td>Test duration per axis</td><td>5 h</td></tr><tr><td>Test directions</td><td>X, Y and Z axes</td></tr><tr><td>Extended testing: Monitoring of contact faults and interruptions</td><td>Passed</td></tr><tr><td>Extended testing: Voltage drop measurement before and after each axis</td><td>Passed</td></tr><tr><td>Shock test</td><td>Test passed according to Section 10 of the standard</td></tr><tr><td>Shock pulse form</td><td>Half sine</td></tr></table>	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
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Shock pulse form	Half sine																																									
Processing temperature	-35 ... +60 °C																																									



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	
Product Group	3 (Multi Conn. System)
PU (SPU)	100 pcs
Packaging type	Box
Country of origin	PL
GTIN	4044918869690
Customs tariff number	85366930000

Product Classification	
UNSPSC	39121409
eCl@ss 10.0	27-44-04-02
eCl@ss 9.0	27-44-04-02
ETIM 9.0	EC002637
ETIM 10.0	EC002637
ECCN	NO US CLASSIFICATION

Environmental Product Compliance	
RoHS Compliance Status	Compliant, No Exemption

Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
CB DEKRA Certification B.V.	IEC 61984	NL-113351
CSA DEKRA Certification B.V.	C22.2	1466354
KEMA/KEUR DEKRA Certification B.V.	EN 61984	71-130478 REV.1
UL Underwriters Laboratories Inc.	UL 1977	E45171
UL Underwriters Laboratories Inc.	UL 1059	E45172

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
ABS American Bureau of Ship- ping	-	24-0095975-PDA
DNV DNV GL SE	-	TAE000016Z
PRS Polski Rejestr Statków	-	TE/1095/880590/23

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 721-438/001-000



Documentation

Additional Information
Technical Section
03.04.2019
pdf 2027.26 KB



CAD/CAE-Data

CAD data
2D/3D Models 721-438/001-000



CAE data
EPLAN Data Portal 721-438/001-000
ZUKEN Portal 721-438/001-000



PCB Design

Symbol and Footprint via SamacSys 721-438/001-000
Symbol and Footprint via Ultra Librarian 721-438/001-000





1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket



Item No.: 722-108/026-000
1-conductor female connector, angled; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; 100% protected against mismatching; 2,50 mm²; light gray



Item No.: 722-208/026-000
1-conductor female connector, angled; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; 100% protected against mismatching; 2,50 mm²; light gray



Item No.: 721-108/026-000
1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; 100% protected against mismatching; 2,50 mm²; light gray



Item No.: 721-108/027-000
1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; 100% protected against mismatching; clamping collar; 2,50 mm²; light gray



Item No.: 721-108/031-000
1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; 100% protected against mismatching; clamping collar; 2,50 mm²; light gray



Item No.: 721-108/037-000
1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; 100% protected against mismatching; Lateral locking levers; 2,50 mm²; light gray



Item No.: 2721-1108/326-000
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; 100% protected against mismatching, coding finger; 2,50 mm²; light gray



Item No.: 2721-1108/326-047
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; 100% protected against mismatching, coding finger; direct marking; light gray



Item No.: 2721-1108/326-9037
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; 100% protected against mismatching, coding finger; direct marking; light gray



Item No.: 2721-1108/037-000
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; 100% protected against mismatching, coding finger; Lateral locking levers; 2,50 mm²; light gray



Item No.: 2721-1108/037-000/335-000
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; 100% protected against mismatching, coding finger; Lateral locking levers; Strain relief plate; light gray



Item No.: 2721-1108/326-000/335-000
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; 100% protected against mismatching, coding finger; Strain relief plate; light gray



Item No.: 2721-108/026-000
1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; 100% protected against mismatching; 2,50 mm²; light gray



Item No.: 2721-108/031-000
1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; 100% protected against mismatching; clamping collar; 2,50 mm²; light gray



Item No.: 2721-108/037-000
1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; 100% protected against mismatching; Lateral locking levers; 2,50 mm²; light gray



Item No.: 721-2108/037-000
2-conductor female connector; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; 100% protected against mismatching; Lateral locking levers; 2,50 mm²; light gray



Item No.: 721-2108/026-000
2-conductor female connector; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; 100% protected against mismatching; with integrated end plate; 2,50 mm²; light gray

1.2 Optional Accessories

1.2.1 Coding

1.2.1.1 Coding



Item No.: 231-129
Coding key; snap-on type; light gray

1.2.2 Marking

1.2.2.1 Marking strip



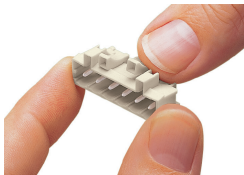
Item No.: 210-833
Marking strips; 25 m on roll; 6 mm wide;
plain; Self-adhesive; white



Item No.: 210-834
Marking strips; on reel; 5 mm wide; plain;
Self-adhesive; white

Installation Notes

Coding



Coding a male header – fitting coding key
(s).