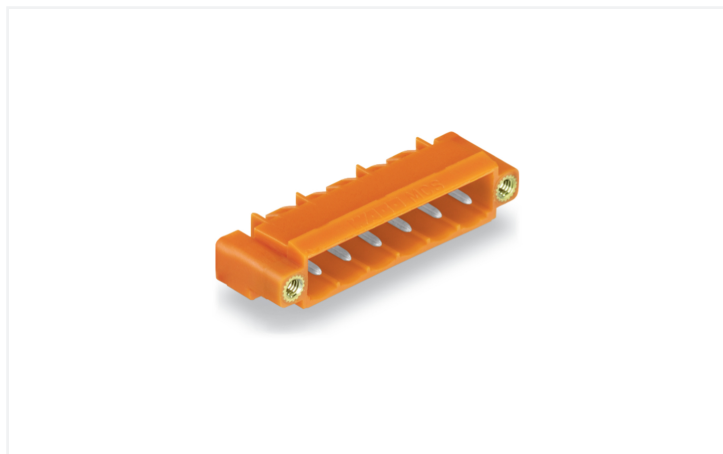


Data Sheet | Item Number: 231-542/108-000

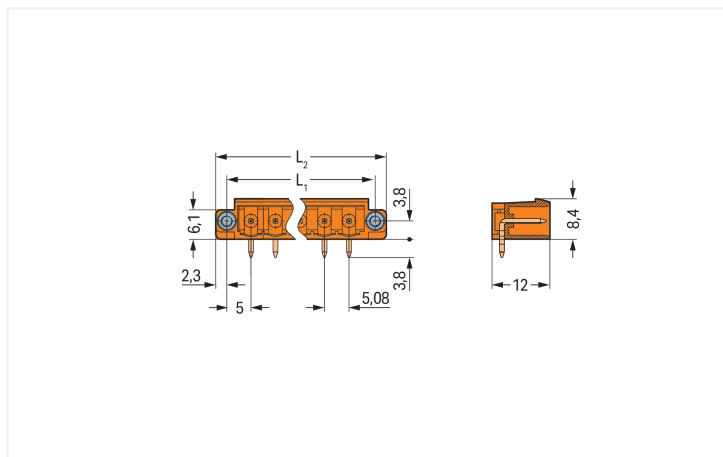
THT male header; 1.0 x 1.0 mm solder pin; angled; Threaded flange; Pin spacing 5.08 mm; 12-pole; orange

<https://www.wago.com/231-542/108-000>



Color: ■ orange

Similar to illustration



Dimensions in mm

$L1 = (\text{pole no.} \times \text{pin spacing}) + 5.4 \text{ mm}$
 $L2 = (\text{pole no.} \times \text{pin spacing}) + 10 \text{ mm}$

Male connector, 231 Series, solder pin dimensions 1 x 1 mm

This male connector (item number 231-542/108-000) is designed for fault-free electrical installations. Dimensions: (70.96 x 12.2 x 12) mm (width x height x depth).

Tin is used for coating the contact surfaces. THT is used to solder the pcb connector.



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	12
Number of connection types	1
Number of levels	1
Connection 1	
Pole number	12

Physical data	
Pin spacing	5.08 mm / 0.2 inches
Width	70.96 mm / 2.794 inches
Height	12.2 mm / 0.48 inches
Height from the surface	8.4 mm / 0.331 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	No
Mating direction to the PCB	0°
Locking of plug-in connection	Threaded flange

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	orange
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	0.079 MJ
Weight	4.5 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></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
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Shock test	Test passed according to Section 10 of the standard																																							
Processing temperature	-35 ... +60 °C																																							



Environmental Testing	
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

Commercial data	
Product Group	3 (Multi Conn. System)
PU (SPU)	100 pcs
Packaging type	Box
Country of origin	PL
GTIN	4044918867290
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,With Exemption
RoHS Exemption	6(c)
SCIP notification number (Austria)	eea20c78-8c30-4938-ad08-243c22268526
SCIP notification number (Belgium)	22a51ed4-a34f-4100-8c62-3601d20b0167
SCIP notification number (Bulgaria)	fe9b0011-53c8-4d0d-86af-5ce1acb147ab
SCIP notification number (Czech Republic)	d8decbb7-345a-493d-be53-8c8f4105c797
SCIP notification number (Denmark)	19af877e-780a-475e-931d-27210a15f7f1
SCIP notification number (Finland)	f7611494-5687-4e2e-9b59-79f0e9e52c84
SCIP notification number (France)	1242313a-8088-49a0-aeff-302ada3fa928
SCIP notification number (Germany)	7bfa2020-6ce2-4622-8637-35e551e48390
SCIP notification number (Hungary)	85af4bbb-36e3-4708-8e7d-c45a7799c2bf
SCIP notification number (Italy)	0258f3a4-fa64-4495-abe7-ee872ad98b8e
SCIP notification number (Netherlands)	a3f1380c-8560-479a-be03-b69cff37d648
SCIP notification number (Poland)	145f3ea4-60e0-4420-acfe-8ef9474a1dd1
SCIP notification number (Romania)	4143a357-c969-49f6-973c-56d1f31cc12b
SCIP notification number (Sweden)	cd66605c-1f74-4f13-967f-46b2713a726e



Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
CSA DEKRA Certification B.V.	C22.2	1466354
KEMA/KEUR DEKRA Certification B.V.	EN 61984	71-130478 REV.1
UL UL International Germany GmbH	UL 1977	E45171
UR 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
BV Bureau Veritas S.A.	IEC 60998	11915/E0 BV

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product
Compliance
231-542/108-000



Documentation

Additional Information

Technical Section

03.04.2019

pdf
2027.26 KB



CAD/CAE-Data

CAD data

2D/3D Models
231-542/108-000



CAE data

EPLAN Data Portal
231-542/108-000



ZUKEN Portal
231-542/108-000



PCB Design	
Symbol and Footprint via SamacSys 231-542/108-000	
Symbol and Footprint via Ultra Librarian 231-542/108-000	

1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket



Item No.: 231-312/107-000
1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 12-pole; Screw flange; orange



Item No.: 2231-312/107-000
1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 12-pole; Screw flange; 2,50 mm²; orange



Item No.: 231-2312/107-000
2-conductor female connector; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 12-pole; Screw flange; orange

1.2 Optional Accessories

1.2.1 Coding

1.2.1.1 Coding



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

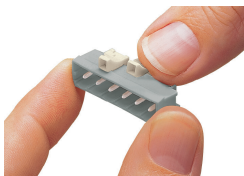
1.2.1.2 Intermediate plate



Item No.: 231-500
Spacer; for formation of groups; light gray

Installation Notes

Coding



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