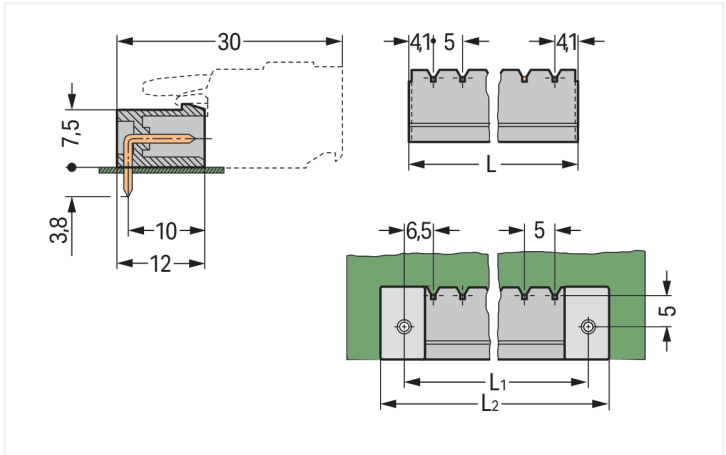
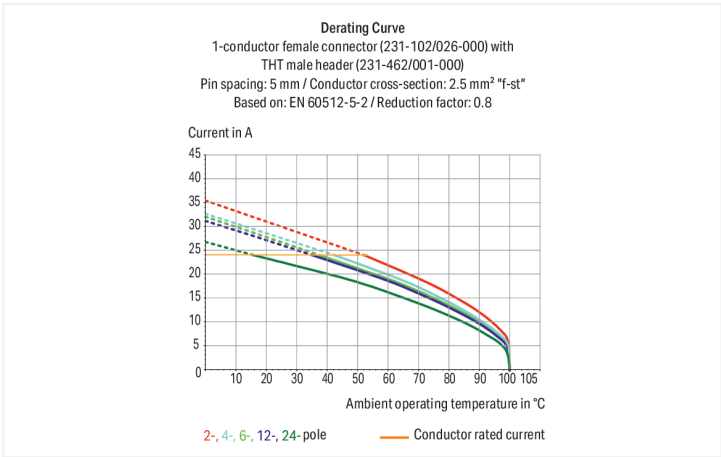




Color: ■ gray



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



Stiftleiste Serie 231, grau

Die Stiftleiste (Artikelnummer 231-464/001-000) ermöglicht eine ordentliche Elektroinstallation. Setzen Sie beim Design-In Ihres Gerätes auf erprobte Sicherheit: Mit Leiterplatten-Steckverbindern erhalten Sie vielseitige Verwendungsmöglichkeiten. Die Maße betragen in Breite x Höhe x Tiefe (23,2 x 12,2 x 12) mm. Für die Kontaktoberfläche wurde Zinn eingesetzt. Das MCS – "Multi Connection System" von WAGO ist ein vielfältiges Steckverbinder-system für Ihre durchgängige Systemverdrahtung. Es ermöglicht Ihnen eine vereinfachte Verdrahtung in der Kabelvorkonfektionierung und auf Geräten durch zwei Betätigungsrichtungen für die CAGE CLAMP®-Varianten. Der Leiterplatten-Steckverbinder wird mittels THT verlötet.

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	250 V	320 V	630 V	
Rated surge voltage	4 kV	4 kV	4 kV	
Rated current	16 A	16 A	16 A	
Approvals per		UL 1059		
Use group		B	C	D
Rated voltage		300 V	-	300 V
Rated current		15 A	-	10 A
Approvals per		UL 1977		
Rated voltage		600 V		
Rated current		15 A		
Approvals per		CSA		
Use group		B	C	D
Rated voltage		300 V	-	300 V
Rated current		15 A	-	10 A
Connection data				
Total number of potentials	4	Connection 1		
Number of connection types	1	Pole number		
Number of levels	1	4		
Physical data				
Pin spacing		5 mm / 0.197 inches		
Width		23.2 mm / 0.913 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		1.2 x 1.2 mm		
Drilled hole diameter with tolerance		1.7 ^(+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°		
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	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	0.054 MJ
Weight	1.7 g

Environmental requirements	
Limit temperature range	-60 ... +100 °C
Processing temperature	-35 ... +60 °C
Environmental Testing (Environmental Conditions)	
Test specification Railway applications – Rolling stock – Electronic equipment	DIN EN 50155 (VDE 0115-200):2022-06
Test procedure Railway applications – Rolling stock equipment – Shock and vibration tests	DIN EN 61373 (VDE 0115-0106):2011-04
Spectrum/Installation location	Service life test, Category 1, Class A/B
Function test with noise-like vibration	Test passed according to Section 8 of the standard
Frequency	f ₁ = 5 Hz to f ₂ = 150 Hz f ₁ = 5 Hz to f ₂ = 150 Hz
Acceleration	0.101g (highest test level used for all axes) 0.572g (highest test level used for all axes) 5g (highest test level used for all axes)
Test duration per axis	10 min. 5 h
Test directions	X, Y and Z axes X, Y and Z axes X, Y and Z axes
Monitoring for contact faults/interruptions	Passed
Voltage drop measurement before and after each axis	Passed
Simulated service life test through increased levels of noise-like vibration	Test passed according to Section 9 of the standard
Extended test scope: Monitoring for contact faults/interruptions	Passed Passed
Extended test scope: Voltage drop measurement before and after each axis	Passed Passed
Shock test	Test passed according to Section 10 of the standard
Shock form	Half sine
Shock duration	30 ms
Number of shocks per axis	3 pos. und 3 neg.
Vibration and shock stress for rolling stock equipment	Passed



Commercial data	
Product Group	3 (Multi Conn. System)
PU (SPU)	200 pcs
Packaging type	Box
Country of origin	PL
GTIN	4044918930376
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 8.0	EC002637
ECCN	NO US CLASSIFICATION

Environmental Product Compliance	
RoHS Compliance Status	Compliant,No Exemption

Approvals / Certificates

General approvals			Declarations of conformity and manufacturer's declarations		
					
Approval	Standard	Certificate Name	Approval	Standard	Certificate Name
CB DEKRA Certification B.V.	IEC 61984	NL-113351	Railway WAGO GmbH & Co. KG	-	Railway Ready
CSA DEKRA Certification B.V.	C22.2	LR 18677-25			
KEMA/KEUR DEKRA Certification B.V.	EN 61984	71-130478 REV.1			
UL Underwriters Laboratories Inc.	UL 1059	UL-US- L45172-6187117-81111991-1			
UR Underwriters Laboratories Inc.	UL 1977	E45171			

Approvals for marine applications

		
Approval	Standard	Certificate Name
ABS American Bureau of Ship- ping	-	19-HG1869876-PDA
BV Bureau Veritas S.A.	IEC 60998	11915/D0 BV
DNV DNV GL SE	-	TAE000016Z



Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance
231-464/001-000

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Documentation

Additional Information

Technical Section03.04.2019pdf2027.26 KB

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CAD/CAE-Data

CAD data

2D/3D Models
231-464/001-000

↓

CAE data

EPLAN Data Portal
231-464/001-000

↓

ZUKEN Portal
231-464/001-000

↓

PCB Design

Symbol and Footprint
via SamacSys
231-464/001-000

↓

Symbol and Footprint
via Ultra Librarian
231-464/001-000

↓

1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket



Item No.: [231-104/026-000](#)
1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 4-pole; 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

1.2.1.2 Intermediate plate



Item No.: 231-500

Spacer; for formation of groups; light gray

1.2.2 Installation

1.2.2.1 Mounting accessories

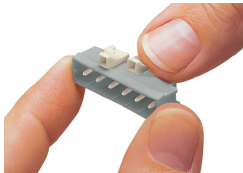


Item No.: 231-193

Locking device; for male connectors; 1 part; gray

Installation Notes

Coding



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