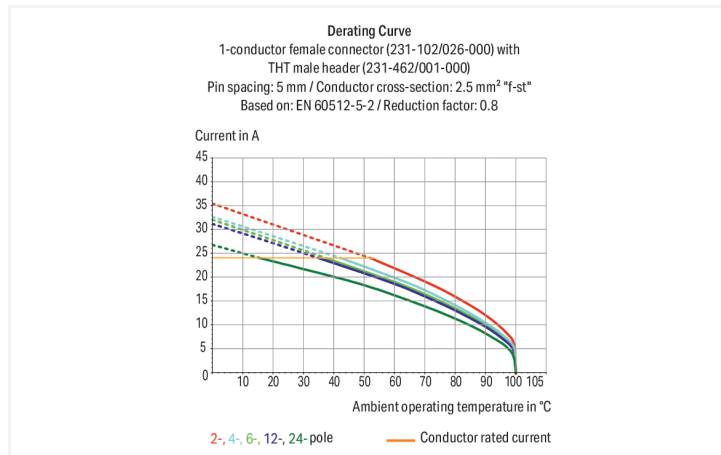
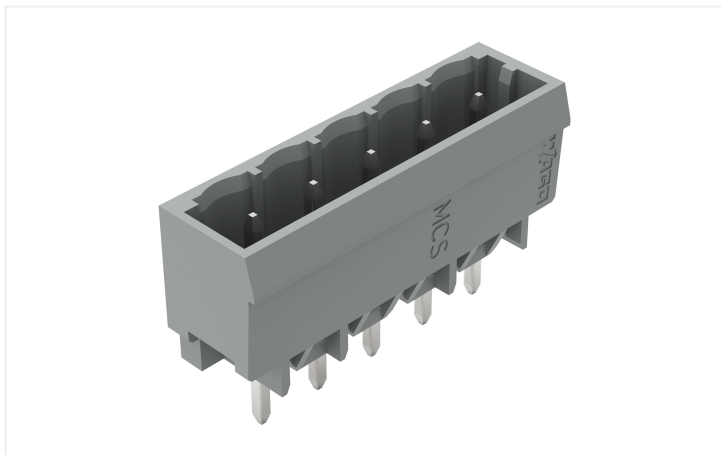


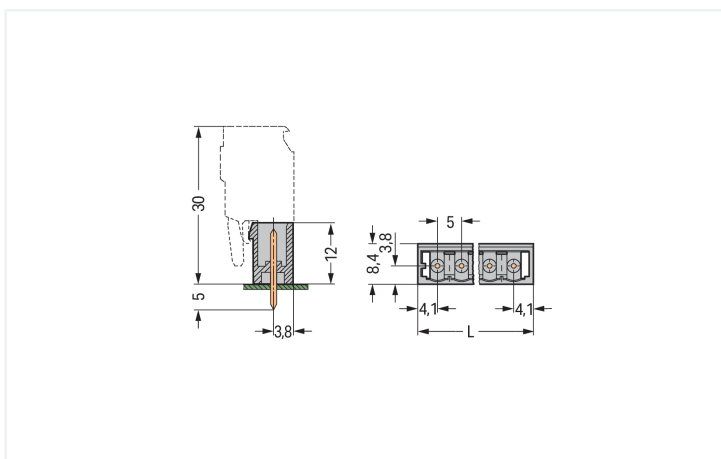
Data Sheet | Item Number: 231-135/001-000

THT male header; 1.0 x 1.0 mm solder pin; straight; Pin spacing 5 mm; 5-pole; gray

<https://www.wago.com/231-135/001-000>



Color: ■ gray



Dimensions in mm

$L = (\text{pole no.} - 1) \times \text{pin spacing} + 8.2 \text{ mm}$

Male connector, 231 Series, with 5 mm pin spacing

This male connector (item number 231-135/001-000) is designed for seamless electrical installations. The dimensions are (28.2 x 17 x 8.4) mm (width x height x depth).

The contact surface is coated with tin. 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

Ratings per UL 1977

Rated current UL 1977	10 A
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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	5
Number of connection types	1
Number of levels	1

Connection 1

Pole number	5
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Physical data

Pin spacing	5 mm / 0.197 inches
Width	28.2 mm / 1.11 inches
Height	17 mm / 0.669 inches
Height from the surface	12 mm / 0.472 inches
Depth	8.4 mm / 0.331 inches
Solder pin length	5 mm
Solder pin dimensions	1 x 1 mm
Drilled hole diameter	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	90 °

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	0.027 MJ
Weight	1.7 g

Environmental requirements

Limit temperature range	-60 ... +100 °C	Environmental Testing
Processing temperature	-35 ... +60 °C	
Test specification:		DIN EN 50155 (VDE 0115-200):2022-06
Railway applications – Rolling stock – Electronic equipment		
Test procedure:		DIN EN 61373 (VDE 0115-0106):2011-04
Railway applications – Rolling stock equipment – Vibration and shock tests		
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
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)	200 pcs
Packaging type	Box
Country of origin	PL
GTIN	4044918863155
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
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Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
CB DEKRA Certification B.V.	IEC 61984	NL-113351
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	E45172
UR Underwriters Laboratories Inc.	UL 1977	E45171

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 Shipping	-	24-0095975-PDA
BV Bureau Veritas S.A.	IEC 60998	11915/E0 BV
DNV DNV GL SE	-	TAE000016Z
PRS Polski Rejestr Statków	-	TE/1095/880590/23

Downloads

Environmental Product Compliance

Compliance Search	
Environmental Product Compliance 231-135/001-000	↓

Documentation

Additional Information			
Technical Section	03.04.2019	pdf 2027.26 KB	↓

CAD/CAE-Data

CAD data	
2D/3D Models 231-135/001-000	↓

CAE data	
EPLAN Data Portal 231-135/001-000	↓

ZUKEN Portal 231-135/001-000	↓
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PCB Design

Symbol and Footprint via SamacSys 231-135/001-000	↓
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Symbol and Footprint via Ultra Librarian 231-135/001-000	↓
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1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket



Item No.: 232-105/026-000
1-conductor female connector; angled; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; 2,50 mm²; gray



Item No.: 232-205/026-000
1-conductor female connector; angled; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; 2,50 mm²; gray



Item No.: 231-105/031-000
1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; clamping collar; gray



Item No.: 231-105/026-000
1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; gray



Item No.: 231-105/037-000
1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; Lateral locking levers; gray



Item No.: 231-105/124-000
1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; Snap-in flange; gray



Item No.: 231-105/102-000
1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; with integrated end plate; gray



Item No.: 2231-1105/327-000
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; 2,50 mm²; gray



Item No.: 2231-1105/328-000
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; Centered locking levers; 2,50 mm²; gray



Item No.: 2231-1105/328-000/334-000
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; Centered locking levers; Strain relief plate; gray



Item No.: 2231-1105/327-047
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; direct marking; gray



Item No.: 2231-1105/327-9037
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; direct marking; gray

1.1.1 Female connector/socket



Item No.: 2231-1105/038-000

1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; Lateral locking levers; 2,50 mm²; gray

Item No.: 2231-1105/038-000/334-000

1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; Lateral locking levers; Strain relief plate; gray

Item No.: 2231-1105/327-000/334-000

1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; Strain relief plate; gray

Item No.: 2231-105/026-000

1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; 2,50 mm²; gray



Item No.: 2231-105/031-000

1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; clamping collar; 2,50 mm²; gray

Item No.: 2231-105/037-000

1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; Lateral locking levers; 2,50 mm²; gray

Item No.: 2231-105/037-000/134-000

1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; Lateral locking levers; Strain relief plate; 2,50 mm²; gray

Item No.: 2231-105/026-000/134-000

1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; Strain relief plate; 2,50 mm²; gray



Item No.: 2231-105/102-000

1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; with integrated end plate; 2,50 mm²; gray

Item No.: 231-2105/037-000

2-conductor female connector; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; Lateral locking levers; gray

Item No.: 231-2105/026-000

2-conductor female connector; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 5-pole; with integrated end plate; 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

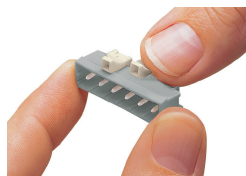


Item No.: 231-500

Spacer; for formation of groups; light gray

Installation Notes

Coding



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