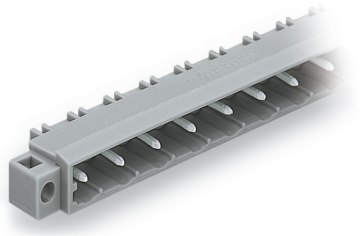
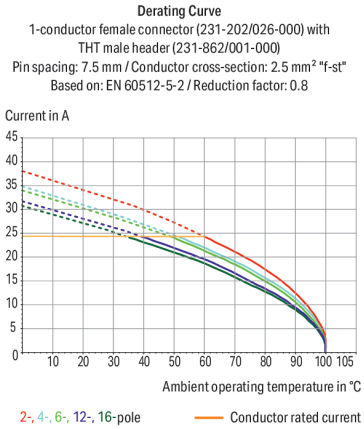
Data Sheet | Item Number: 231-840/040-000

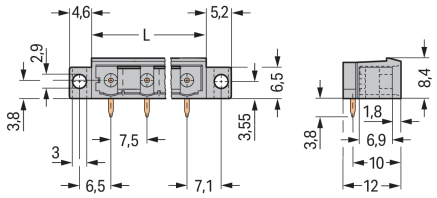
THT male header; 1.0 x 1.0 mm solder pin; angled; clamping collar; Pin spacing 7.5 mm; 10-pole; gray

https://www.wago.com/231-840/040-000





Color: gray



Dimensions in mm
L = (pole no. – 1) x pin spacing + 8.2 mm

Male connector, 231 Series, gray

This male connector (item number 231-840/040-000) is designed for seamless electrical installations. Dimensions: (75.7 x 12.2 x 12) 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	500 V	630 V	1000 V
Rated impulse withstand voltage	6 kV	6 kV	6 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	10
Number of connection types	1
Number of levels	1

Connection 1

Pole number	10

Physical data

Pin spacing	7.5 mm / 0.295 inches
Width	75.7 mm / 2.98 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
Mounting type	Mounting flange
Mounting type	Feed-through mounting Panel mounting
Anti-rotation protection	Yes
Suitable for through-panel applications	Yes

 Continued on next page

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	0.088 MJ
Weight	4.2 g

Environmental requirements

Limit temperature range	-60 … +100 °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 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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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)	50 pcs
Packaging type	Box
Country of origin	PL
GTIN	4044918868266
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
UR Underwriters Laboratories Inc.	UL 1977	E 45171
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

 Continued on next page

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

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance
231-840/040-000

Documentation

Additional Information

Technical Section	03.04.2019	pdf 2027.26 KB

CAD/CAE-Data

CAD data

2D/3D Models
231-840/040-000

CAE data

EPLAN Data Portal
231-840/040-000

ZUKEN Portal
231-840/040-000

PCB Design

Symbol and Footprint via SamacSys
231-840/040-000

Symbol and Footprint via Ultra Librarian
231-840/040-000

1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket

Item No.: 231-210/026-000
1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 7.5 mm; 10-pole; gray

1.2 Optional Accessories

1.2.1 Coding

1.2.1.1 Coding

Item No.: 231-130
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.: 231-295
Screw with nut

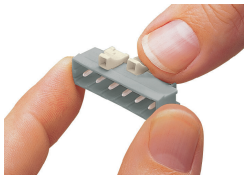
Item No.: 231-195
Screw with nut; M2x12; for fixing element

Item No.: 209-147
Self-tapping screw

Item No.: 231-194
Self-tapping screw; B 2.2x13, fixing hole 1.8 mm Ø

Installation Notes

Coding



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