

Data Sheet | Item Number: 231-439/001-000/105-604/997-409

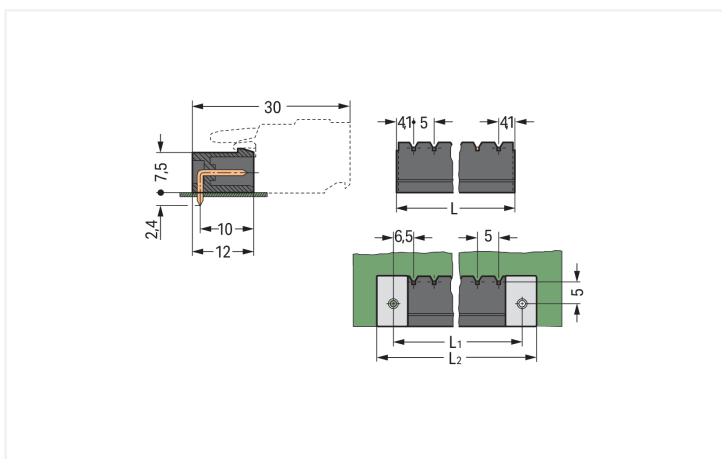
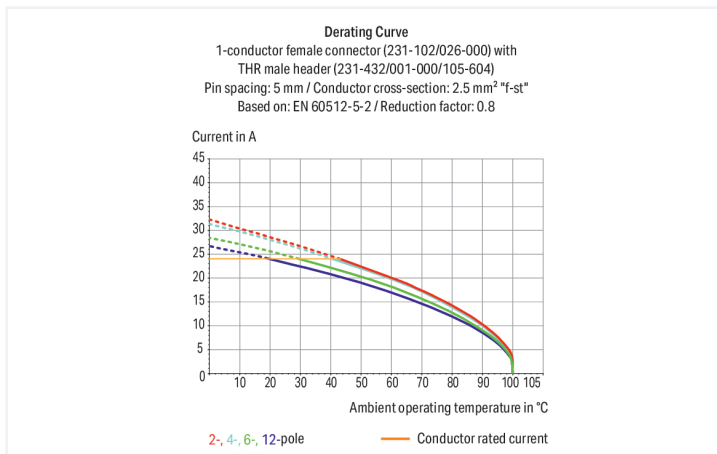
THR male header; 1.0 x 1.0 mm solder pin; angled; in tape-and-reel packaging; Pin spacing 5 mm; 9-pole; black

<https://www.wago.com/231-439/001-000/105-604/997-409>



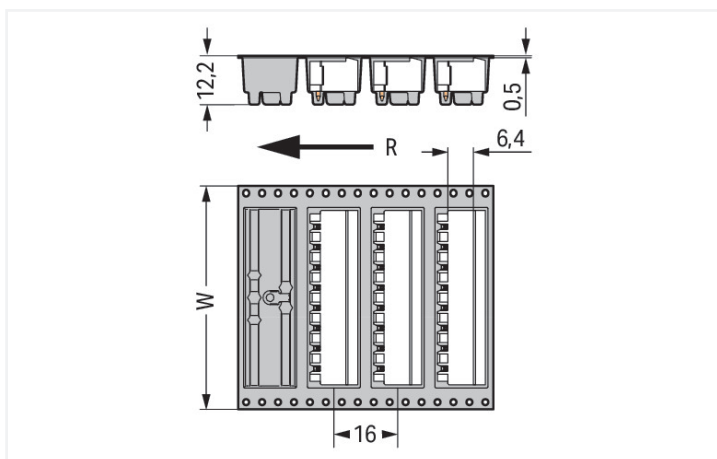
Color: ■ black

Similar to illustration



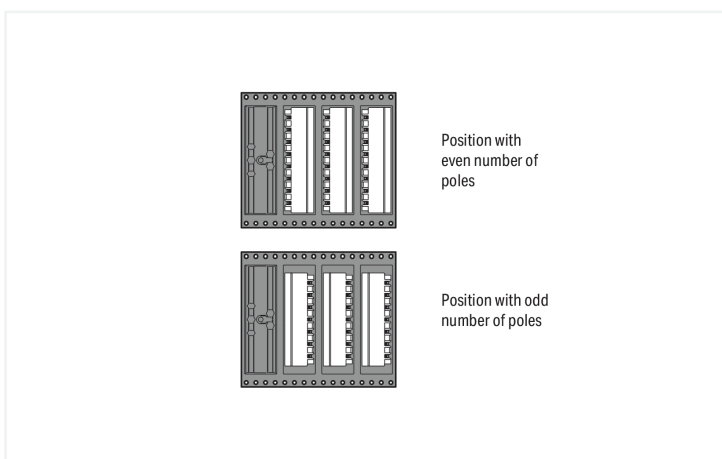
Dimensions in mm

$L = (\text{pole no.} - 1) \times \text{pin spacing} + 8.2 \text{ mm}$
 $L_1 = L + 4.8 \text{ mm}$
 $L_2 = L_1 + 7.2 \text{ mm}$



Dimensions in mm

W = tape width
 R = feed direction



Dimensions in mm

Pin position in tape-and-reel packaging



Male connector, 231 Series, with 5 mm pin spacing

This male connector (item number 231-439/001-000/105-604/997-409) simplifies electrical installations. The dimensions are (48.2 x 10.8 x 12) mm (width x height x depth).

The contact surface is coated with tin. The pcb connector is designed for THR 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 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			Approvals per		UL 1059	
Overvoltage category	III	III	II	Use group	B	C	D	
Pollution degree	3	2	2	Rated voltage	300 V	-	300 V	
Nominal voltage	320 V	320 V	630 V	Rated current	10 A	-	10 A	
Rated impulse withstand voltage	4 kV	4 kV	4 kV					
Rated current	12 A	12 A	12 A					
Approvals per		UL 1977		Approvals per		CSA		
Rated voltage		600 V		Use group	B	C	D	
Rated current		10 A		Rated voltage	300 V	-	300 V	
				Rated current	10 A	-	10 A	

Connection Data		
Total number of potentials	9	Connection 1 Pole number 9
Number of connection types	1	
Number of levels	1	

Physical data	
Pin spacing	5 mm / 0.197 inches
Width	48.2 mm / 1.898 inches
Height	10.8 mm / 0.425 inches
Height from the surface	8.4 mm / 0.331 inches
Depth	12 mm / 0.472 inches
Solder pin length	2.4 mm
Solder pin dimensions	1 x 1 mm
Plated through-hole diameter (THR)	1.4 (+0.1) mm
Reel diameter of tape-and-reel packaging	330 mm
Tape width	88 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	THR
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	black
Material group	I
Insulation material (main housing)	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Contact material	Electrolytic copper (E _{Cu})
Contact Plating	Tin
Fire load	10.54 MJ
Weight of insulation material	2.07 g
Weight	6.6 g
MSL per J-STD 020D	1

Environmental requirements

Limit temperature range	-60 ... +100 °C
Processing temperature	-35 ... +60 °C

Commercial data

PU (SPU)	170 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4055143706544
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
CSA DEKRA Certification B.V.	C22.2	1466354

Downloads

Environmental Product Compliance

Compliance Search



Documentation

Additional Information

Technical Section	03.04.2019	pdf 2027.26 KB	
		pdf 535.32 KB	

CAD/CAE-Data

CAD data



PCB Design



1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket



Item No.: 231-109/026-000
 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 9-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

Installation Notes

Coding



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