

**Data Sheet | Item Number: 231-440/001-000/105-604/997-409**

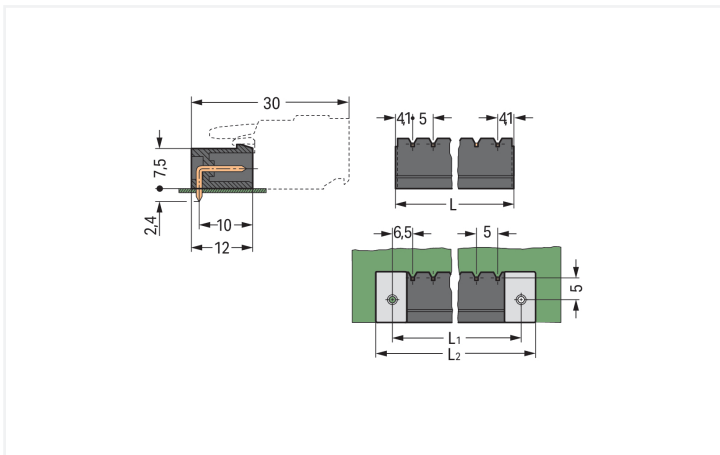
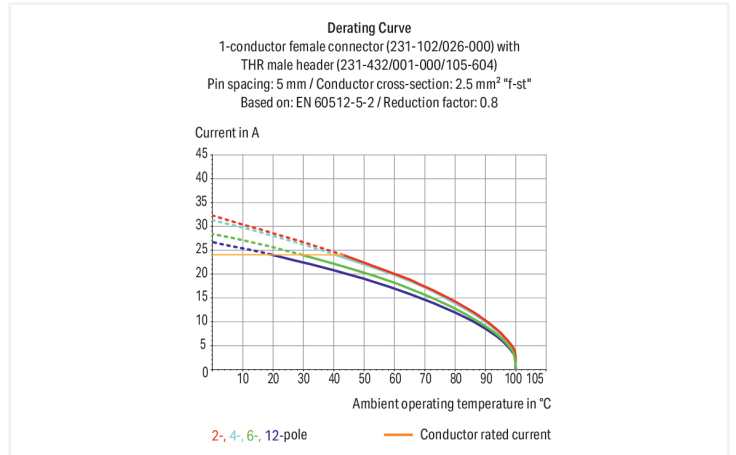
THR male header; 1.0 x 1.0 mm solder pin; angled; in tape-and-reel packaging; Pin spacing 5 mm; 10-pole; black

<https://www.wago.com/231-440/001-000/105-604/997-409>



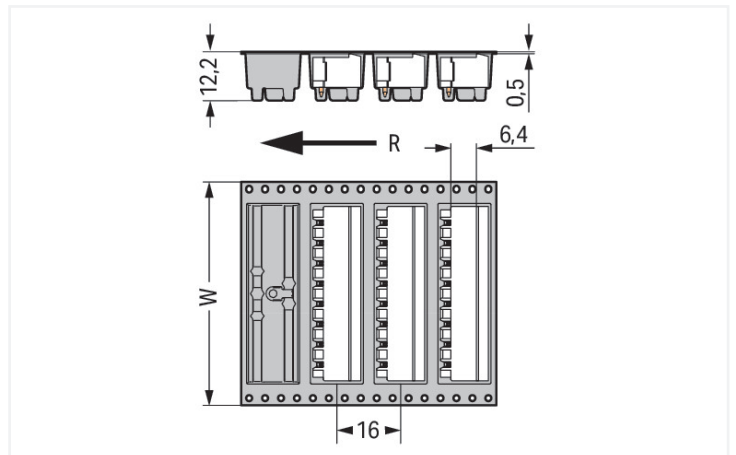
Color: ■ black

Similar to illustration



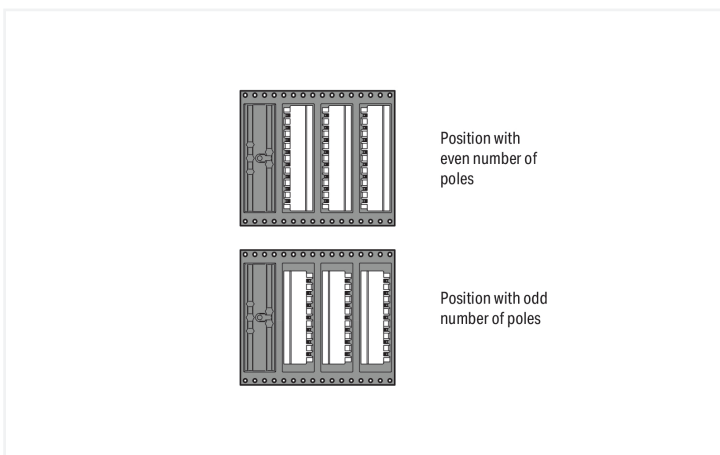
Dimensions in mm

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



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 231-440/001-000/105-604/997-409) simplifies electrical installations. Dimensions: (53.2 x 10.8 x 12) mm (width x height x depth).

Tin is used for coating the contact surfaces. THR is used to assemble 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  
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	10
Number of connection types	1
Number of levels	1

Connection 1	
Pole number	10

**Physical data**

Pin spacing	5 mm / 0.197 inches
Width	53.2 mm / 2.094 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)	<a href="#">Information on material specifications can be found here</a>
Color	black
Material group	I
Insulation material (main housing)	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Contact material	Electrolytic copper (E <sub>Cu</sub> )
Contact Plating	Tin
Fire load	0.071 MJ
Weight	3.7 g
MSL per J-STD 020D	1

### Environmental requirements

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

### Commercial data

Product Group	3 (Multi Conn. System)
PU (SPU)	170 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4044918936545
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
<a href="#">↓</a>

### Documentation

Additional Information			
Technical Section	03.04.2019	pdf 2027.26 KB	<a href="#">↓</a>
		pdf 535.32 KB	<a href="#">↓</a>

### CAD/CAE-Data

CAD data
<a href="#">↓</a>

CAE data
<a href="#">↓</a>

PCB Design
<a href="#">↓</a>
<a href="#">↓</a>

## 1 Compatible Products

### 1.1 System counterpart

#### 1.1.1 Female connector/socket



**Item No.:** [231-110/026-000](#)

1-conductor female connector; CAGE CLAMP®; 2.5 mm<sup>2</sup>; Pin spacing 5 mm; 10-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

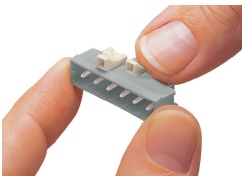


**Item No.:** [231-500](#)

Spacer; for formation of groups; light gray

## Installation Notes

### Coding



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