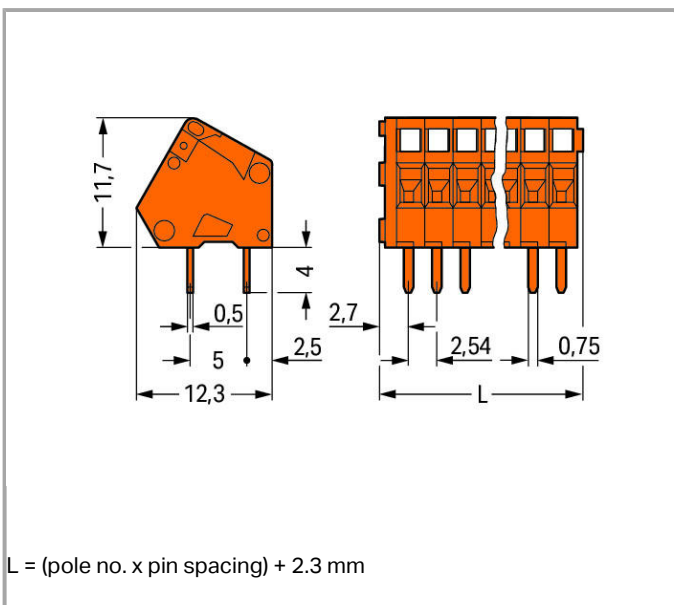
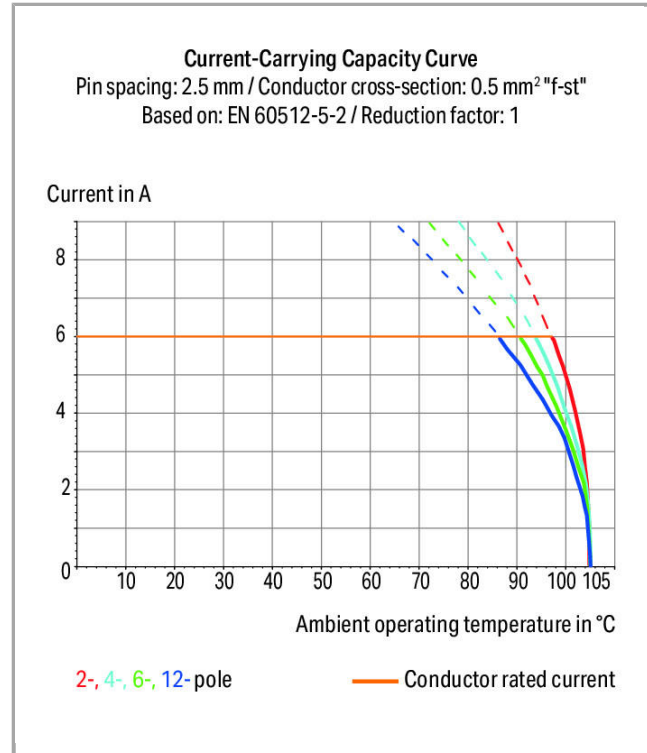
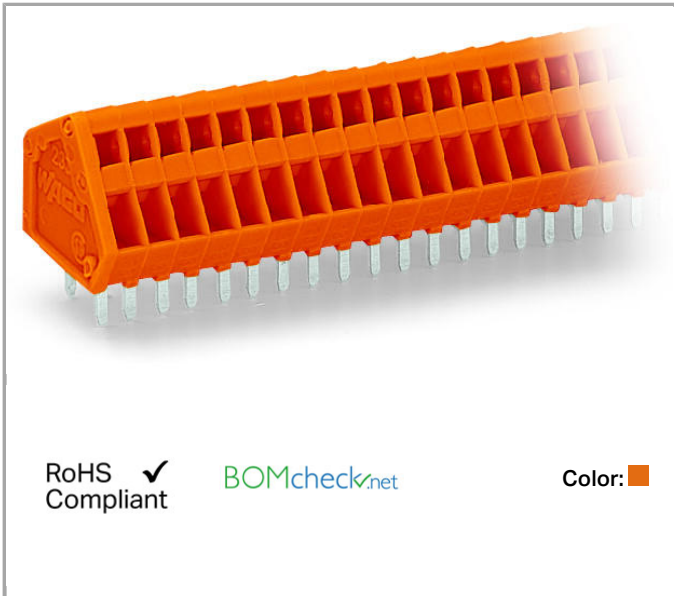


233-412



Item description

- Compact terminal strips with CAGE CLAMP® connection and screwdriver actuation parallel or perpendicular to conductor entry

- Double solder pins for high mechanical stability
- Custom color combinations

## Data

### Electrical data

#### Ratings per IEC/EN 60664-1

Rated voltage (III / 3)	63 V
Rated impulse voltage (III / 3)	2.5 kV
Rated voltage (III / 2)	160 V
Rated impulse voltage (III / 2)	2.5 kV
Rated voltage (II / 2)	320 V
Rated impulse voltage (II / 2)	2.5 kV
Rated current	6 A

#### Approvals per UL 1059

Rated voltage UL (Use Group B)	150 V
Rated current UL (Use Group B)	4 A

#### Approvals per CSA

Rated voltage CSA (Use Group B)	150 V
Rated current CSA (Use Group B)	4 A

### Connection data

Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Solid conductor	0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG
Fine-stranded conductor	0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG
Fine-stranded conductor with ferrule with plastic collar	0.25 mm <sup>2</sup>
Fine-stranded conductor with ferrule without plastic collar	0.25 mm <sup>2</sup>
Strip length	5 ... 6 mm / 0.2 ... 0.24 inch
Conductor entry angle to the PCB	30°
Note (conductor cross-section)	Terminating 0.75 mm <sup>2</sup> /18 AWG conductors is possible; however insulation diameter allows only every other clamping unit to be terminated with this conductor size.
No. of poles	12
Total number of connection points	12
Total number of potentials	12
Number of connection types	1
Number of levels	1

## Geometrical Data

Pin spacing	2.54 mm / 0.1 inch
Width	32.78 mm / 1.291 inch
Height	15.7 mm / 0.618 inch
Height from the surface	11.7 mm / 0.461 inch
Depth	12.1 mm / 0.476 inch
Solder pin length	4 mm
Solder pin dimensions	0.5 x 0.75 mm
Drilled hole diameter (tolerance)	1.1 <sup>(- ... +0.1)</sup> mm

## PCB contact

PCB contact	THT
Solder pin arrangement	over the entire terminal strip, in line
Number of solder pins per potential	2

## Material Data

Color	orange
Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact material	Electrolytic copper (E <sub>Cu</sub> )
Contact plating	tin-plated
Fire load	0.064 MJ
Weight	4.19 g

## Environmental Requirements

Limit temperature range	-60 ... +105 °C
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## Commercial data

Product Group	4 (Printed Circuit)
Country of origin	CH
GTIN	4045454050078
Customs Tariff No.	85369010000



## Approvals / Certificates

### Country specific Approvals


Certificate

Logo	Approval	Additional Approval Text	name
	CCA DEKRA Certification B.V.	EN 60998	NTR NL 6946
	CCA DEKRA Certification B.V.	EN 60998	2153951.01
	CCA DEKRA Certification B.V.	EN 60947-7-4	2169331.02
	CSA DEKRA Certification B.V.	C22.2	1465035
	CSA DEKRA Certification B.V.	C22.2	1465035

## Ship Approvals









Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	-	14- HG1241537- PDA
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE000016Z

## UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL UL International Germany GmbH	UL 1059	E45172

## Compatible products

ferrule

	<b>Item no.: 216-131</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated	216-131
	<b>Item no.: 216-151</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated	216-151
	<b>Item no.: 216-301</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated	216-301
	<b>Item no.: 216-321</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated	216-321
<b>tools</b>		
	<b>Item no.: 210-647</b> Operating tool with partially insulated shaft; Blade (2.5 x 0.4) mm; short	210-647
	<b>Item no.: 210-648</b> Operating tool with partially insulated shaft; Blade (2.5 x 0.4) mm; short; angled	210-648
	<b>Item no.: 210-719</b> Operating tool with partially insulated shaft; Type 1, blade (2.5 x 0.4) mm	210-719
	<b>Item no.: 233-331</b> Operating tool; for female and male connectors with CAGE CLAMP® connection; insulated	233-331
	<b>Item no.: 233-332</b> Operating tool; for 233 and 733 Series; of insulating material	233-332
	<b>Item no.: 233-335</b> Operating tool; for 233 and 733 Series	233-335
<b>Marking accessories</b>		
	<b>Item no.: 210-331/250-202</b> Marking strips; as a DIN A4 sheet; MARKED; 1-16 (400x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive	210-331 / 250-202
	<b>Item no.: 210-331/250-204</b> Marking strips; as a DIN A4 sheet; MARKED; 17-32 (400x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive	210-331 / 250-204
	<b>Item no.: 210-331/250-206</b> Marking strips; as a DIN A4 sheet; MARKED; 33-48 (400x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive	210-331 / 250-206
	<b>Item no.: 210-331/250-207</b> Marking strips; as a DIN A4 sheet; MARKED; 1-48 (100x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive	210-331 / 250-207
	<b>Item no.: 210-331/254-202</b> Marking strips; as a DIN A4 sheet; MARKED; 1-16 (400x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive	210-331 / 254-202
	<b>Item no.: 210-331/254-204</b> Marking strips; as a DIN A4 sheet; MARKED; 17-32 (400x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive	210-331 / 254-204
	<b>Item no.: 210-331/254-206</b> Marking strips; as a DIN A4 sheet; MARKED; 33-48 (400x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive	210-331 / 254-206



length 182 mm; Horizontal marking; Self-adhesive

**Item no.: 210-331/254-207**

Marking strips; as a DIN A4 sheet; MARKED; 1-48 (100x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive

/254-207

210-331

**Downloads**

**CAD/CAE - Smart Data**

**CAD data**

3D Download 233-412

URL

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**PCB libraries**

TARGET Library for WAGO PCB Terminal Blocks

1.1.0

zip

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Compatible with TARGET PCB Design Software Version 17.x

Oct 6, 2014

27.1 MB

EAGLE Library for WAGO PCB Terminal Blocks

2.1

zip

Download

Compatible with EAGLE PCB Design Software Version 6.x or higher

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23.9 MB

DesignSpark Library for WAGO PCB Terminal Blocks

2.1

zip

Download

Compatible with DesignSpark PCB Version 4.x or higher

Oct 6, 2014

22.5 MB

Subject to changes.