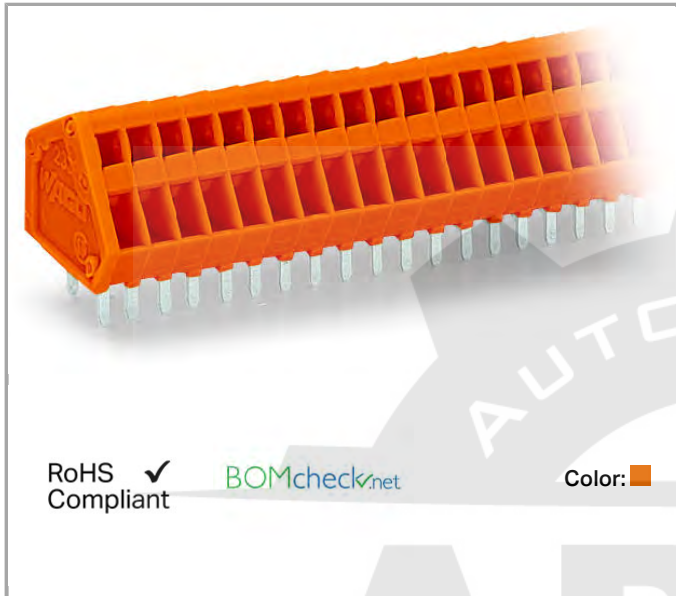


Data sheet | Item number: 233-412

PCB terminal block; 0.5 mm²; Pin spacing 2.54 mm; 12-pole; CAGE CLAMP®



233-412

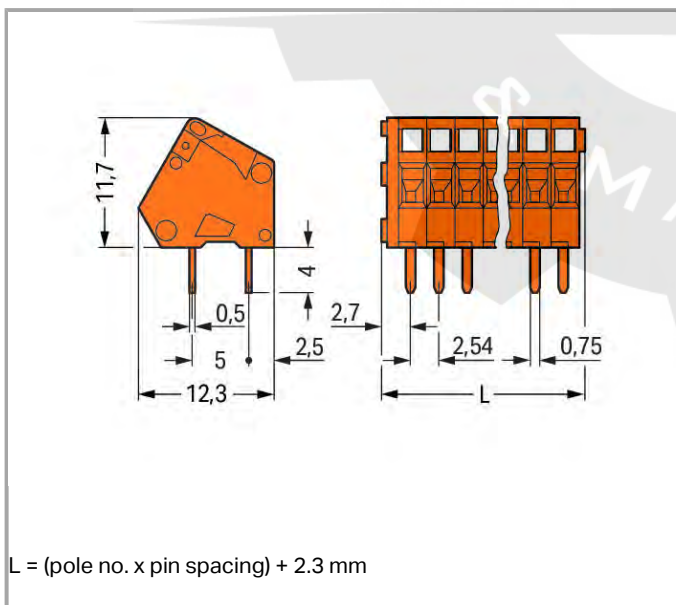
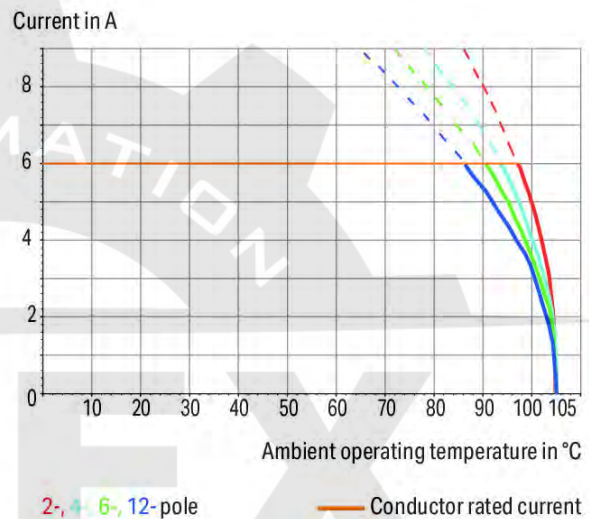


RoHS
Compliant

BOMcheck.net

Color: 

Current-Carrying Capacity Curve
Pin spacing: 2.5 mm / Conductor cross-section: 0.5 mm² "f-st"
Based on: EN 60512-5-2 / Reduction factor: 1



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 ² / 28 ... 20 AWG
Fine-stranded conductor	0.08 ... 0.5 mm ² / 28 ... 20 AWG
Fine-stranded conductor with ferrule with plastic collar	0.25 mm ²
Fine-stranded conductor with ferrule without plastic collar	0.25 mm ²
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 ² /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 ^(- ... +0.1) 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 _{Cu})
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

	Item no.: 216-131 Ferrule; Sleeve for 0.25 mm ² / AWG 24; uninsulated; electro-tin plated	216-131
	Item no.: 216-151 Ferrule; Sleeve for 0.25 mm ² / AWG 24; uninsulated; electro-tin plated	216-151
	Item no.: 216-301 Ferrule; Sleeve for 0.25 mm ² / AWG 24; insulated; electro-tin plated	216-301
	Item no.: 216-321 Ferrule; Sleeve for 0.25 mm ² / AWG 24; insulated; electro-tin plated	216-321
tools		
	Item no.: 210-647 Operating tool with partially insulated shaft; Blade (2.5 x 0.4) mm; short	210-647
	Item no.: 210-648 Operating tool with partially insulated shaft; Blade (2.5 x 0.4) mm; short; angled	210-648
	Item no.: 210-719 Operating tool with partially insulated shaft; Type 1, blade (2.5 x 0.4) mm	210-719
	Item no.: 233-331 Operating tool; for female and male connectors with CAGE CLAMP® connection; insulated	233-331
	Item no.: 233-332 Operating tool; for 233 and 733 Series; of insulating material	233-332
	Item no.: 233-335 Operating tool; for 233 and 733 Series	233-335
Marking accessories		
	Item no.: 210-331/250-202 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
	Item no.: 210-331/250-204 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
	Item no.: 210-331/250-206 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
	Item no.: 210-331/250-207 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	210-331 / 250-207
	Item no.: 210-331/254-202 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
	Item no.: 210-331/254-204 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
	Item no.: 210-331/254-206 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

210-331

/254-207

Downloads**CAD/CAE - Smart Data****CAD data**

3D Download 233-412		URL	Download
PCB libraries			
TARGET Library for WAGO PCB Terminal Blocks Compatible with TARGET PCB Design Software Version 17.x	1.1.0 Oct 6, 2014	zip 27.1 MB	Download
EAGLE Library for WAGO PCB Terminal Blocks Compatible with EAGLE PCB Design Software Version 6.x or higher	2.1 Oct 6, 2014	zip 23.9 MB	Download
DesignSpark Library for WAGO PCB Terminal Blocks Compatible with DesignSpark PCB Version 4.x or higher	2.1 Oct 6, 2014	zip 22.5 MB	Download

Subject to changes.