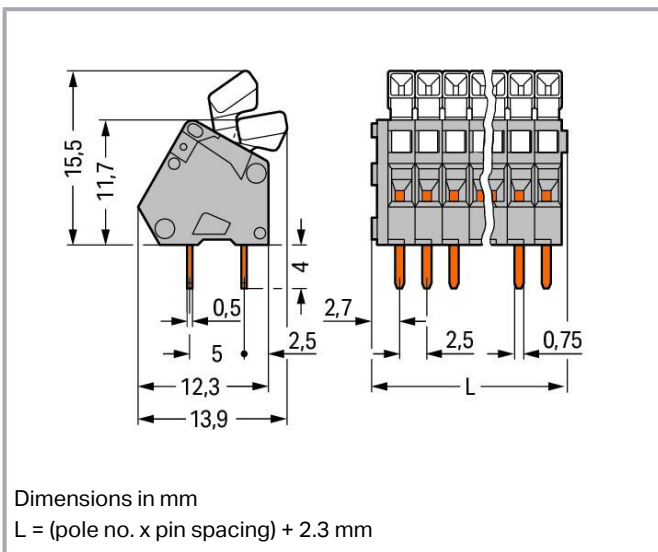
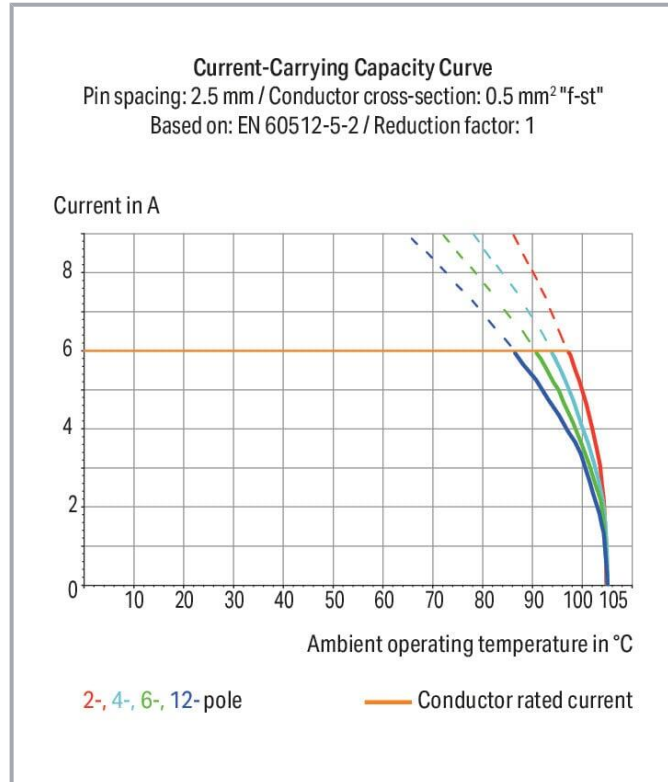
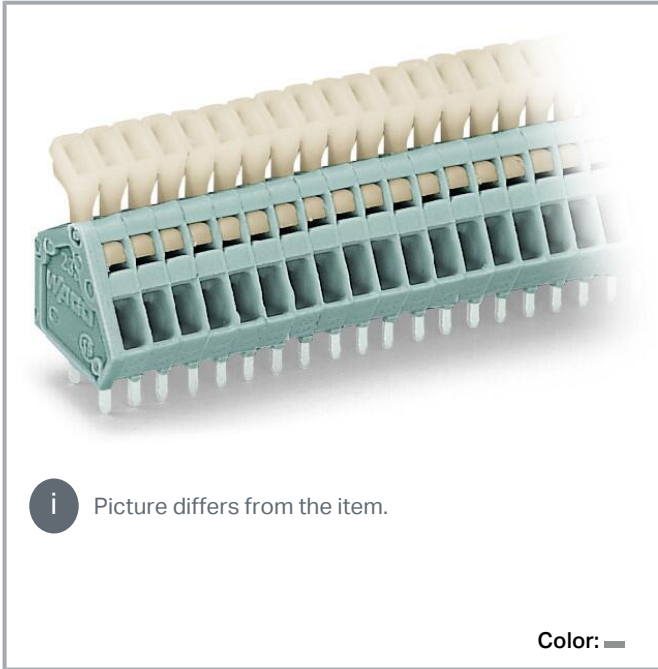


Data sheet | Item number: 233-224

PCB terminal block; push-button; 0.5 mm²; Pin spacing 2.5 mm; 24-pole;
CAGE CLAMP®; 0,50 mm²; gray



www.wago.com/233-224



Subject to changes. Please also observe the further product documentation!

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Item description

- PCB terminal strips with push-buttons and CAGE CLAMP® connection
- Double solder pins for high mechanical stability on PCB
- Ideal for in-the-field wiring thanks to simplified push-button actuation
- Convenient, tool-free operation

Data

Notes

Variants:

Other pole numbers

Other colors

Mixed-color PCB connector strips

Direct marking

Other versions (or variants) can be requested from WAGO Sales or configured at <https://configurator.wago.com/>.

Electrical data

Ratings per IEC/EN

Ratings per	IEC/EN 60664-1
Nominal 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
Nominal voltage (II/2)	320 V
Rated surge voltage (II/2)	2.5 kV
Rated current	6 A
Legend (ratings)	(III / 2) ≙ Overvoltage category III / Pollution degree 2

Ratings per UL

Approvals per	UL 1059
Rated voltage UL (Use Group B)	150 V
Rated current UL (Use Group B)	4 A

Ratings per CSA

Approvals per	CSA
Rated voltage CSA (Use Group B)	150 V

Subject to changes. Please also observe the further product documentation!

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Rated current CSA (Use Group B)	4 A
---------------------------------	-----

Connection data

Connection points	24
Total number of potentials	24
Number of connection types	1
Number of levels	1

Connection 1

Connection technology	CAGE CLAMP®
Actuation type	Push-button
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 insulated ferrule	0.25 mm ²
Fine-stranded conductor; with uninsulated ferrule	0.25 mm ²
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.
Strip length	5 ... 6 mm / 0.2 ... 0.24 inches
Conductor connection direction to PCB	30 °
Pole number	24

Physical data

Pin spacing	2.5 mm / 0.098 inches
Width	62.3 mm / 2.453 inches
Height	19.5 mm / 0.768 inches
Height from the surface	15.5 mm / 0.61 inches
Depth	13.9 mm / 0.547 inches
Solder pin length	4 mm
Solder pin dimensions	0.5 x 0.75 mm
Drilled hole diameter with 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

Subject to changes. Please also observe the further product documentation!



Material data

Note (material data)

Information on material specifications can be found here

Color	gray
Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Clamping spring material	Chrome-nickel spring steel (CrNi)
Contact material	Electrolytic copper (E _{Cu})
Contact plating	Tin
Fire load	0.22 MJ
Weight	9.5 g

Environmental requirements

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

Product Group	4 (Printed Circuit Connectors)
eCl@ss 10.0	27-44-04-01
eCl@ss 9.0	27-44-04-01
ETIM 8.0	EC002643
ETIM 7.0	EC002643
ECCN	NO DATA
PU (SPU)	80 (20) pcs
Packaging type	Box
Country of origin	CH
GTIN	4045454049690
Customs tariff number	85369010000

Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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Approvals / Certificates







General approvals

Certificate



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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	NTR NL 7786
	CSA DEKRA Certification B.V.	C22.2	1465035
	KEMA/KEUR DEKRA Certification B.V.	EN 60947-7-4	71-111040
	UL UL International Germany GmbH	UL 1059	E45172

Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
	UK-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	-	19- HG1869876- PDA

Subject to changes. Please also observe the further product documentation!



BV
Bureau Veritas S.A.

IEC 60998

11915/DO
BV

DNV
DNV GL SE





-

TAE000016Z

Optional accessories



Ferrule

Ferrule

	Item no.: 216-131 Ferrule; Sleeve for 0.25 mm ² / AWG 24; uninsulated; electro-tin plated; silver-colored	www.wago.com/216-131
	Item no.: 216-151 Ferrule; Sleeve for 0.25 mm ² / AWG 24; uninsulated; electro-tin plated	www.wago.com/216-151
	Item no.: 216-301 Ferrule; Sleeve for 0.25 mm ² / AWG 24; insulated; electro-tin plated; yellow	www.wago.com/216-301
	Item no.: 216-321 Ferrule; Sleeve for 0.25 mm ² / AWG 24; insulated; electro-tin plated; yellow	www.wago.com/216-321



Tool

Operating tool


	Item no.: 210-648 Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; angled; short	www.wago.com/210-648
	Item no.: 210-719 Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft	www.wago.com/210-719

Marking accessories

Marking strip

	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; white	www.wago.com/210-331/250-207
	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; white	www.wago.com/210-331/250-202

Subject to changes. Please also observe the further product documentation!

	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; white	www.wago.com/210-331/254-204
	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; white	www.wago.com/210-331/250-204
	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; white	www.wago.com/210-331/254-206
	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; white	www.wago.com/210-331/250-206
	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; white	www.wago.com/210-331/254-202
	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; white	www.wago.com/210-331/254-207

Downloads

Documentation

Additional Information

Technical Section	2019 Apr 3	pdf	Download
Technical explanations		2.1 MB	

CAD/CAE-Data

CAD data

2D/3D Models 233-224	URL	Download
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PCB Design

Symbol and Footprint via Ultra Librarian 233-224	URL	Download
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CAX data for your PCB design, consisting of "schematic symbols and PCB footprints", allow easy integration of the WAGO component into your development environment.

Supported formats:

- Accel EDA 14 & 15

Subject to changes. Please also observe the further product documentation!



- Altair
- Altium 6 to current version
- Autodesk Fusion 360
- Cadence Allegro
- DesignSpark
- Eagle Libraries
- KiCad
- Mentor Graphics
- BoardStation
- Mentor Graphics Design Architect
- Mentor Graphics Design
- Expedition 99 and 2000
- OrCAD 9.X PCB and Capture
- PADS PowerPCB 3, 3.5, 4.X, and 5.X
- PADS PowerPCB and PowerLogic 3.0
- PCAD 2000, 2001, 2002, 2004, and 2006
- Pulsonix 8.5 or newer
- STL
- 3D STEP
- TARGET 3001!
- View Logic ViewDraw
- Quadcept
- Zuken CadStar 3 and 4
- Zuken CR-5000 and CR-8000
- Zuken eCADSTAR 2020 and 2021Zuken CR-5000 and CR-8000

PCB Component Libraries (EDA), PCB CAD Library Ultra Librarian

Symbol and Footprint via SamacSys 233-224

URL

Download

CAX data for your PCB design, consisting of "schematic symbols and PCB footprints", allow easy integration of the WAGO component into your development environment.

Supported formats:

- 3D (stp)
- Altium
- CADSTAR
- Capture
- CircuitStudio

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- CR-5000
- CR-8000
- DEHDL
- DesignSpark PCB
- DesignSpark PCB PRO
- DipTrace
- EAGLE
- Easy-PC
- EasyEDA
- eCADSTAR
- KiCad
- OrCAD_Allegro16
- PADS
- Proteus
- Pulsonix
- Quadcept
- SOLIDWORKS PCB
- TARGET 3001!
- xDX Designer
- Xpedition

PCB Component Libraries (EDA), PCB CAD Library SamacSys Electronic Component Search Engine

CAE data

ZUKEN Portal 233-224	URL	Download
EPLAN Data Portal 233-224	URL	Download

Asset Administration Shell

Asset Administration Shell 233-224	URL	Download
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Environmental Product Compliance

Compliance Search

Environmental Product Compliance 233-224	URL	Download
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Subject to changes. Please also observe the further product documentation!

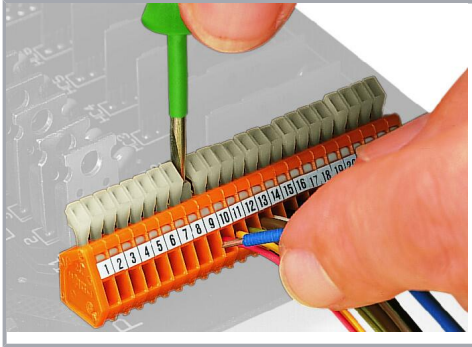
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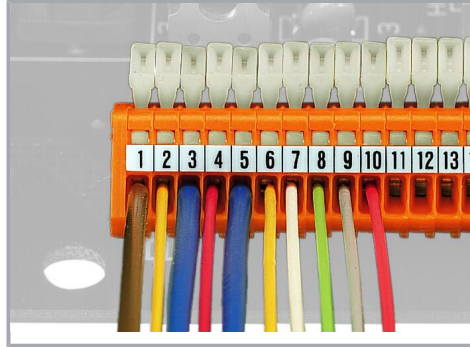
PCB terminal block; push-button; 0.5 mm²; Pin spacing 2.5 mm; 24-pole; CAGE
CLAMP®; 0,50 mm²; gray

Installation Notes

Conductor termination



Inserting/removing a conductor.



Nominal cross-section: 0.5 mm² (20 AWG),
0.75 mm² (18 AWG) only in every other position

Marking



Labeling via self-adhesive marking strips or
factory direct marking.

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