

## Data sheet | Item number: 2059-301/998-403

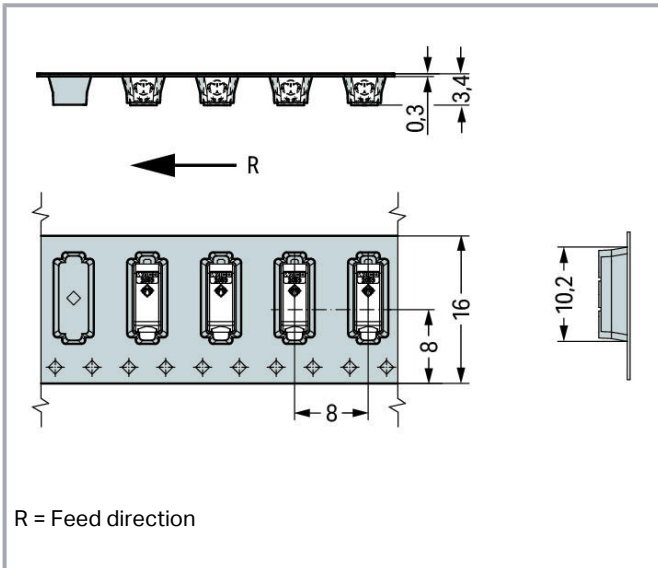
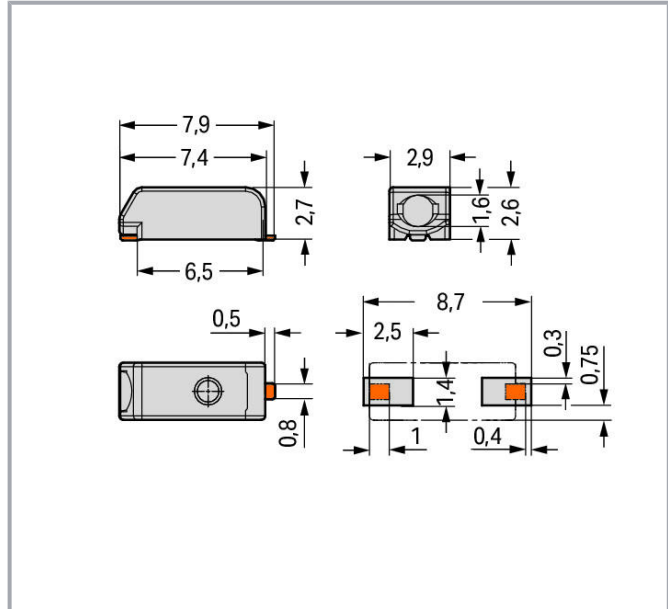
SMD PCB terminal block; 0.5 mm<sup>2</sup>; Pin spacing 3 mm; 1-pole; PUSH WIRE®; in tape-and-reel packaging; 0,50 mm<sup>2</sup>; white



[www.wago.com/2059-301/998-403](http://www.wago.com/2059-301/998-403)



Color:



### Item description

- SMD PCB terminal blocks with PUSH WIRE® connection technology

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

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- Push-in termination of solid conductors
- Easy conductor removal via operating tool
- Height of just 2.7 mm
- Assemble terminal blocks without pole loss
- Available in tape-and-reel packaging for automated assembly

**Note:**

Application notes:

Suitable for lead-free, reflow-soldering profiles per DIN EN 61760-1 and IEC 60068-2-58 up to max. 260°C peak temperature. Due to application-specific variables (component configuration and orientation, type of soldering machine, solder paste), trial runs are recommended to ensure product and process compatibility under actual manufacturing conditions.

**Note:**

Depending on reflow soldering temperatures and times, color deviations may occur. These deviations will have no impact on functionality.

**Recommendation:**

Recommendation for stencil:

Material thickness: 150 µm; Pattern layout identical to solder pad layout

**Data**

**Electrical data**

**Ratings per IEC/EN**

Ratings per	IEC/EN 60664-1
Nominal voltage (III/3)	63 V
Rated surge voltage (III/3)	2.5 kV
Rated voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Nominal voltage (II/2)	320 V
Rated surge voltage (II/2)	2.5 kV
Rated current	3 A
Legend (ratings)	(III / 2) ≙ Overvoltage category III / Pollution degree 2

**Ratings per UL**

Approvals per	UL 1059
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Subject to changes. Please also observe the further product documentation!



## Ratings per UL

Rated voltage UL 1977	600 V
Rated current UL 1977	3 A

## Ratings per CSA

Approvals per	CSA
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## Connection data

Connection technology	PUSH WIRE®
Actuation type	Operating tool
Solid conductor	0.14 ... 0.34 mm <sup>2</sup> / 26 ... 22 AWG
Note (conductor cross-section)	For conductors (26 AWG) that are not rigid enough, the clamping unit must be opened using an operating tool.
Strip length	4 ... 5.5 mm / 0.16 ... 0.22 inch
Conductor connection direction to PCB	0°
Pole No.	1
Solid conductor 2	0.5 mm <sup>2</sup> / 20 AWG
Note (conductor cross-section) 2	No reconnection of smaller conductor cross-sections (0.5 mm <sup>2</sup> /20 AWG)
Strip length 2	6 ... 7.5 mm / 0.24 ... 0.3 inch
Total number of connection points	1
Total number of potentials	1
Number of connection types	1
Number of levels	1

## Physical data

Pin spacing	3 mm / 0.118 inch
Width	2.9 mm / 0.114 inch
Height	2.7 mm / 0.106 inch
Depth	7.9 mm / 0.311 inch
Reel diameter of tape-and-reel packaging	330 mm
Tape width	16 mm

## PCB contact

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

## Material data

Color	white
Material group	I
Insulation material	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact material	Copper alloy
Contact plating	tin-plated
Weight	0.1 g

## Environmental requirements




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

Product Group	33 (Printed Circuit)
Packaging type	BOX
Country of origin	CH
GTIN	4055143082679
Customs tariff number	85369010000

## Approvals / Certificates


### Country specific Approvals

Logo	Approval	Additional Approval Text	Certificate name
	CCA DEKRA Certification B.V.	EN 60947	NTR NL- 7680
	CCA DEKRA Certification B.V.	EN 60838	NTR NL- 7720
	KEMA/KEUR DEKRA Certification B.V.	EN 60947	71- 103560
	KEMA/KEUR DEKRA Certification B.V.	EN 60838	71- 106226

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## UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL Underwriters Laboratories Inc.	UL 1977	E45171

## Compatible products

### General accessories

	Item no.: 2059-901 Board-to-Board Link; Pin spacing 3 mm; 1-pole; Length: 15.3 mm; white	<a href="http://www.wago.com/2059-901">www.wago.com/2059-901</a>
	Item no.: 2059-901/018-000 Board-to-Board Link; Pin spacing 3 mm; 1-pole; Length: 17.5 mm; white	<a href="http://www.wago.com/2059-901/018-000">www.wago.com/2059-901/018-000</a>
	Item no.: 2059-901/021-000 Board-to-Board Link; Pin spacing 3 mm; 1-pole; Length: 20.5 mm; white	<a href="http://www.wago.com/2059-901/021-000">www.wago.com/2059-901/021-000</a>
<b>tools</b>		
	Item no.: 2059-189 Operating tool; made of insulating material; for 2059 Series	<a href="http://www.wago.com/2059-189">www.wago.com/2059-189</a>
	Item no.: 206-859 Operating tool; for 2059 Series; multicoloured	<a href="http://www.wago.com/206-859">www.wago.com/206-859</a>

## Downloads

### Documentation

#### Additional Information

Technical explanations	Apr 3, 2019	pdf 2.0 MB	Download
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## CAD/CAE-Data

### CAD data

2D/3D Models 2059-301/998-403

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### PCB Design

Symbol and Footprint 2059-301/998-403

[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:

- Accel EDA 14 & 15
- Altium 6 to current version
- 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

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

### CAE data

ZUKEN Portal 2059-301/998-403

[URL](#) [Download](#)

## Environmental Product Compliance

### Compliance Search

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Environmental Product Compliance 2059-301/998-403

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## Installation Notes

### Conductor termination



Insert solid conductors via push-in termination.

### Conductor termination



Easy conductor removal, e.g., via operating tool (206-859)

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