

## **SMD Terminal Blocks**

A compact and flat printed circuit board connection is required to achieve the most uniform light distribution, while minimizing shadowing. WAGO's SMD terminal blocks, with their combination of flat design and wide range of potential uses, completely cover these functionality demands.

Furthermore, assembling 1-, 2- and 3-pole terminal blocks without losing any poles provides complete flexibility with a reduced number of variants. All SMD terminal blocks come in tape-and-reel packaging to ensure full integration into an automated assembly process.

### **Applications:**

The SMD family offers many advantages allowing for a wide range of applications. From compact, conventionally wired LED spotlights up to industrially wired, recessed ceiling luminaires, WAGO's three SMD terminal block series are the perfect connection between driver and module.

The terminal blocks accommodate a broad range of conductors making them highly versatile for worldwide applications.



#### **Benefits:**

- Low profile minimizes on-board shadowing
- Direct push-in of solid conductors
- Terminal strips of different lengths can be mounted without losing any poles allowing for a reduced number of variants and lower production costs
- Available in 1-3 pole configurations
- Delivery in tape-and-reel packaging for full integration into SMT soldering process
- Potential for significant savings via automated pick-and-place assembly

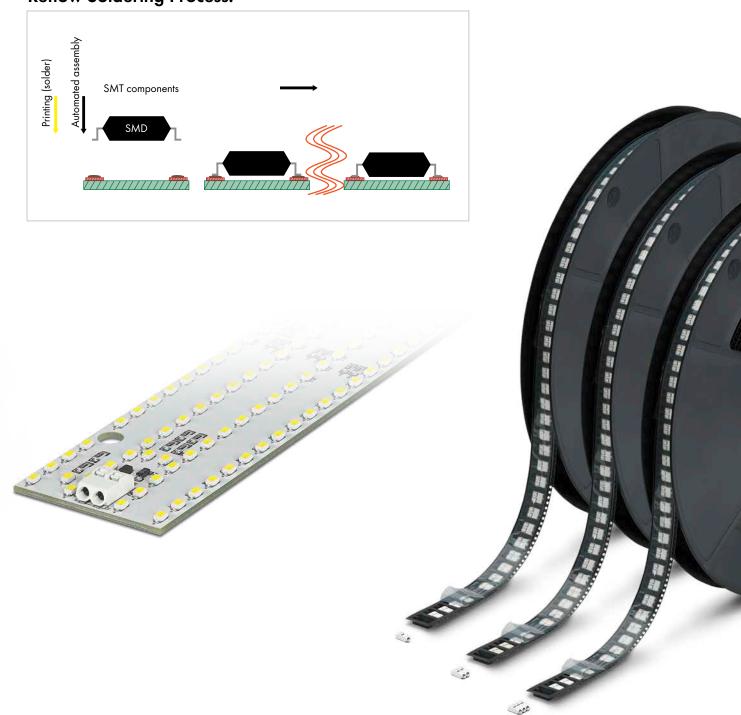


# **Surface Mount Technology**

Surface Mount Technology (SMT) means soldering electronic components directly onto PCB surface pads without drilling holes. The basic SMT process consists of applying solder paste to the PCB via solder dispensing equipment, screen or stencil printing.

SMT assembly is performed using fully automated placement machines. Surface mount components are soldered to the board in infrared, convection or vapor phase ovens.

## **Reflow Soldering Process:**



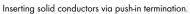
# 2059 Series

## For the Smallest Installation Spaces

- Low profile of just 2.7 mm
- Pin spacing: 3 mm
- Terminates solid conductors from 26 to 22 AWG (0.14 0.34 mm²)
- Direct push-in of solid conductors
- Easy conductor removal via operating tool
- Rated data: 160 V, 2.5 kV/2 (III), 3 A
- Available in 1-, 2- and 3-pole configurations
- Group arrangement is possible without losing any poles
- Available in tape-and-reel packaging







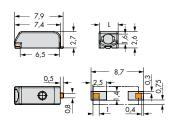


Easy conductor removal, e.g., via 206-859 operating tool.



2059 Series, 3 mm Pin Spacing							
Pin Spacing 3 mm / 0.118 in			8 in	Conductor Data			
Ratings per	IEC/	EN 606	64-1	Connection technology	PUSH WIRE®		
Overvoltage category	III	III	П	Conductor size: solid	$0.14 - 0.34 \text{ mm}^2$		
Pollution degree	3	2	2	AWG	26 - 22 "sol."		
Rated voltage	63 V	160 V	320 V	Strip length	4 - 5.5  mm / 0.16 - 0.22  in		
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV				
Rated current	3 A	3 A	3 A				

Pole No.	Item No.	Pack. Unit	
SMD terminal block	s in tape-and-reel packagin	g, white	Reel diameter: 330 mm
1	2059-301/998-403	31800 (12 x 2650)	
2	2059-302/998-403	21000 (12 x 1750)	
3	2059-303/998-403	21000 (12 x 1750)	

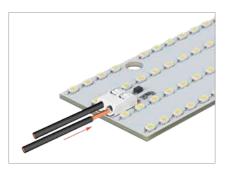


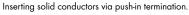
L = (pole no. x pin spacing) - 0.1 mm

## For Manual and Automated Wiring Systems

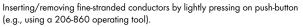
- 4.5 mm high
- Pin spacing: 4 mm
- Terminates conductors from 24 to 18 AWG (0.2 - 0.75 mm²)
- Direct push-in of solid conductors
- Push-buttons for easy connection and removal of all types of conductors
- Rated data: 160 V, 2.5 kV/2 (III), 9 A
- Available in 1-, 2- and 3-pole configurations
- Group arrangement is possible without losing any poles
- Available in tape-and-reel packaging







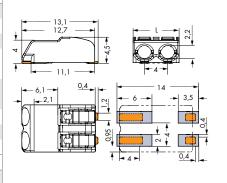






2060 Series, 4 mm	n Pin S	pacin	g		
Pin Spacing	in Spacing 4 mm / 0.157 in Conductor Data				
Ratings per	IEC/	EN 606	64-1	Connection technology	CAGE CLAMP® S
Overvoltage category	Ш	Ш	П	Conductor size: solid	0.2 - 0.75 mm <sup>2</sup>
Pollution degree	3	2	2	Conductor size: fine-stranded	0.2 - 0.75 mm <sup>2</sup>
Rated voltage	63 V	160 V	320 V	Conductor size: fine-stranded	0.25 - 0.34 mm <sup>2</sup> (with insulated ferrule)
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV		
Rated current	9 A	9 A	9 A	Conductor size: fine-stranded	0.25 - 0.34 mm <sup>2</sup>
Approvals per		UL 1977	7		(with uninsulated ferrule)
Rated voltage, 1-pole		600 V		AWG	24 - 18
Rated voltage, 2 or more poles	250 V			Strip length	7 - 9  mm / 0.28 - 0.35  in
Rated current (UL)		9 A			
Pole No.	Item No	٠.		Pack. Unit	
SMD terminal blocks with	push-but	tons in	tape-and	d-reel packaging, white	Reel diameter: 330 mm

Pole No.	Item No.	Pack. Unit	
SMD terminal blocks wit	h push-buttons in tape-ar	nd-reel packaging, white	Reel diameter: 330 mm
1	2060-451/998-404	13500 (9 x 1500)	
2	2060-452/998-404	9000 (9 x 1000)	
3	2060-453/998-404	6750 (9 x 750)	



## Pin Spacing: 8 mm

The 2-pole SMD terminal block with 8 mm pin spacing has been added to WAGO's portfolio, providing higher rated voltages up to 630 V/6 kV/2 in LED and industrial applications.

## **Board-To-Board Link**

Besides standard wiring, several LED modules can be easily assembled into a single string using board-to-board connection links. This minimizes labor (no manual wiring) and materials needed for connecting LED modules.

## THR and Wave Soldering

WAGO's 2060 Series THR PCB Terminal Blocks with soldering pins are ideally suited for THR and wave soldering. The 2060 Series THR terminal blocks are available in light gray and black. Additional information at www.wago.com/2060



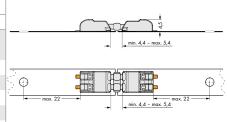




Assembly: Place PCBs on a flat surface and connect terminal blocks on adjoining PCBs via board-to-board link.
Disassembly: Pull PCBs apart (max. 10 connections/disconnections).
The PCBs must be secured.

2040	Coming	Board-to-B	a mud Cam		I imbe
70100	Series	BOOKG-TO-B	oara con	nection	IINK

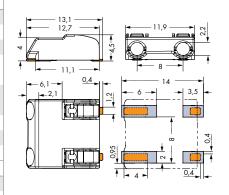
Pin Spacing	4 m	m / 0.15	7 in	Pole No.	Item No.	Pack. Unit
Ratings per	IEC/	EN 606	64-1	Board-to-bo	ard link for SMD ter	minal blocks
Overvoltage category	III	Ш	П	with push-bu	ittons	
Pollution degree	3	2	2			
Rated voltage	63 V	160 V	320 V	1	2060-901	1500
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV	2	2060-902	500
Rated current	9 A	9 A	9 A	3	2060-903	375



2060	Series,	8	mm	Pin	Spacing

Pin Spacing	8 m	ım / 0.3	l4 in	Conductor Data		
Ratings per	IEC,	C/EN 60664-1		Connection technology	CAGE CLAMP® S	
Overvoltage category	Ш	Ш	П	Conductor size: solid	$0.2 - 0.75 \text{ mm}^2$	
Pollution degree	3	2	2	Conductor size: fine-stranded	0.2 - 0.75 mm <sup>2</sup>	
Rated voltage	400 V	630 V	1000 V	Conductor size: fine-stranded	0.25 - 0.34 mm <sup>2</sup>	
Rated surge voltage	6 kV	6 kV	6 kV		(with insulated ferrule)	
Rated current	9 A	9 A	9 A	Conductor size: fine-stranded	0.25 - 0.34 mm <sup>2</sup> (with uninsulated ferrule)	
Approvals per		UL 1977	7			
Rated voltage		600 V		AWG	24 - 18	
Rated current (UL)		9 A		Strip length	7 - 9  mm / 0.28 - 0.35  in	

Pole No.	Item No.	Pack. Unit	
SMD terminal blocks	with push-buttons in tape-o	and-reel packaging, white	Reel diameter: 330 mm
2	2060-852/998-404	6750 (9 x 750)	



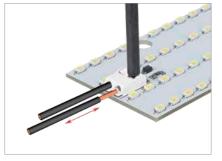
## For Direct Power System Feed-In

- 5.6 mm high
- Pin spacing: 6 mm
- Terminates conductors from 20 to 16 AWG (0.5 – 1.5 mm²)
- Direct push-in of solid conductors
- Push-buttons for easy connection and removal of all types of conductors
- Well-suited for automated wiring systems
- Rated data 320 V, 4 kV/2 (III), 17,5 A
- 300 V UL 1059
- Available in 1-, 2- and 3-pole configurations
- Group arrangement is possible without losing any poles
- Available in tape-and-reel packaging

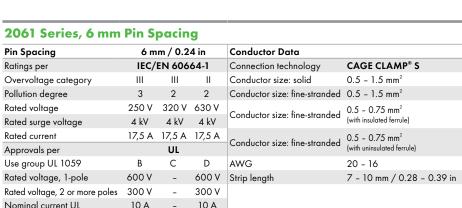




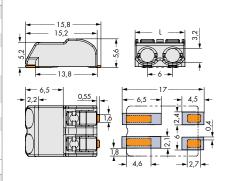
Application example: LED driver



Inserting/removing fine-stranded conductors by lightly pressing on push-button (e.g., using a 206-861 operating tool).



Nominal Correm OL	107 - 107		
Pole No.	Item No.	Pack. Unit	
SMD terminal blocks wit	h push-buttons in tape-ar	nd-reel packaging, white	Reel diameter: 330 mm
1	2061-601/998-404	8100 (9 x 900)	
2	2061-602/998-404	6300 (9 x 700)	
3	2061-603/998-404	4050 (9 x 450)	





www.wago.com/SMD

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