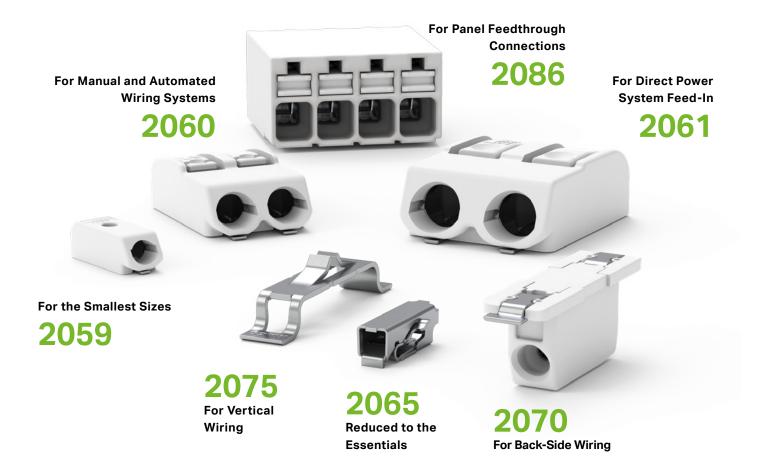


WAGO SMD PCB Terminal Blocks





SMD PCB Terminal Blocks

SMD PCB terminal blocks are used for conductor termination wherever components for through-hole technology (THT/THR) are not possible or desired.

The 2086 Series is ideal for compact device connections or space-restricted applications. It features both Push-in CAGE CLAMP® and push-button actuation parallel to conductor entry, making it suitable for through-panel mounting applications.

In LED lighting applications, WAGO's compact SMD PCB terminal blocks provide the perfect connection between driver and LED module. They are ideal for low-profile applications, as well as for small, conventionally wired LED spotlights and industrially wired LED modules in recessed ceiling luminaires.

A compact and low-profile connection is required for the most uniform light distribution that minimizes shadowing.

WAGO's SMD PCB terminal blocks, with their combination of a flat design and various sizes and shapes, cover a wide range of requirements. Furthermore, 1-, 2- and 3-pole terminal blocks (2059, 2060 and 2061 Series) can be assembled without pole loss, providing total flexibility with just a few models.

All surface-mount PCB terminal blocks come in tapeand-reel packaging for full integration into an automated assembly process.

WAGO'S SMD PCB terminal blocks accommodate a broad range of conductors and carry major international approvals making them highly versatile for worldwide applications.

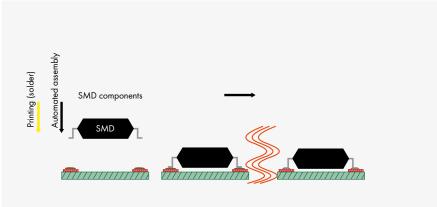
Your Benefits:

- Fully integrate connection technology into the SMT soldering process and reduce costs
- Low profiles minimize on-board LED shadowing in lighting applications
- 2086 Series ideal for panel feedthrough and space-restricted applications
- Push-in termination of solid and ferruled conductors

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 convection or vapor phase ovens.



Reflow soldering process



Reflow oven



For the Smallest Sizes

- Low profile: just 2.7 mm
- Pin spacing: 3 mm
- Conductor range: 0.14 ... 0.5 mm²
 (26 ... 20 AWG), solid
- Push-in termination of solid conductors
- Easy conductor removal via operating tool
- Available in 1–3 pole variants
- Side-by-side assembly without pole loss
- Available in tape-and-reel packaging





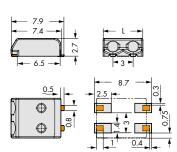
Push-in termination of solid conductors



Easy conductor removal, e.g., via operating tool (Item No. 206-859) or "twist & pull" (max. 10 x, no reconnection of smaller conductors possible)



2059 Series, Pin Spacing: 3 mm						
Pin spacing	3 mm /	0.118 inch		Conductor Data		
Ratings per	IEC/EN	60664-1		Connection technology	PUSH WIRE®	
Overvoltage category	П	П	1	Conductor cross-section: solid	0.14 0.34 mm²	
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 inch	
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV			
Rated current	3 A	3 A	3 A			
Approvals per	UL 197	7		Conductor cross-section: solid	0.5 mm²	
Rated voltage (1-pole)	600 V			AWG	20 "sol."	
Rated voltage (2 or more poles)	250 V			Strip length	6 7.5 mm / 0.24 0.3 inch	
Nominal current UL	3 A			Note (conductor cross-section)	No reconnection of smaller conductor cross-sections	
Approvals per	UL 105	9				
Use group	В	С	D			
Rated voltage (1-pole)	600 V	600 V	600 V			
Rated voltage (2 or more poles)	150 V	-	-			
Nominal current UL	5 A	5 A	5 A			
Pole No.	Item No).		PU		
SMD PCB terminal blocks in tape-ar	id-reel pac	kaging, wh	nite		Reel diameter: 330 mm	
1	2059-3	01/998-40)3	31800 (12 x 2650)		
2	2059-3	02/998-40	03	21000 (12 x 1750)		
3	2059-3	03/998-40	03	21000 (12 x 1750)		



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



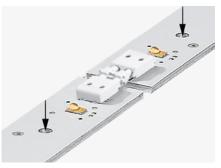


Insert a board-to-board link into the terminal block.



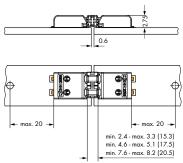
Assembly: Place PCBs on a flat surface and connect terminal blocks on adjoining PCBs via board-to-board link.

Disassembly: Pull PCBs apart (max. 10 mating cycles).



The PCBs must be secured.

2059 Series, Board-to-Board Link									
Pin spacing	3 mm /	3 mm / 0.118 inch			Item No.	Item No.			
					Pin length: 15.3 mm	Pin length: 17.5 mm	Pin length: 20.5 mm		
Ratings per	IEC/EN	IEC/EN 60664-1		1	2059-901	2059-901/018-000	2059-901/021-000	1500	
Overvoltage category	11	П	I	2	2059-902	2059-902/018-000	2059-902/021-000	500	
Pollution degree	3	2	2	3	2059-903	2059-902/018-000	2059-902/021-000	375	
Rated voltage	63 V	160 V	320 V	4	2059-904	2059-904/018-000	2059-904/021-000	250	
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV						
Rated current	3 A	3 A	3 A						



For Manual and Automated Wiring Systems

- Low profile: 4.5 mm
- Pin spacing: 4 mm
- Conductor range:
 0.2 ... 0.75 mm² (24 ... 18 AWG)
- Push-in termination of solid conductors
- Push-button for easy connection and disconnection of all conductor types
- Available in 1–3 pole variants
- Side-by-side assembly without pole loss
- Available in tape-and-reel packaging





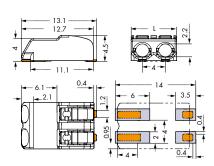
Insert solid conductors via push-in termination.





Insert/remove fine-stranded conductors by lightly pressing on a push-button, e.g., via operating tool (Item No. 206-860).

2060 Series, Pin Spacing: 4 mm							
Pin spacing	4 mm /	0.157 incl	า	Conductor Data			
Ratings per	IEC/EN	60664-1		Connection technology	Push-in CAGE CLAMP®		
Overvoltage category	П	П	1	Conductor cross-section: solid	0.2 0.75 mm²		
Pollution degree	3	2	2	Conductor cross-section: fine-stranded	0.2 0.75 mm²		
Rated voltage	63 V	160 V	320 V	Conductor cross-section: fine-stranded	0.25 0.34 mm ² (with insulated ferrule)		
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV	Conductor cross-section: fine-stranded	0.25 0.34 mm ² (with uninsulated ferrule)		
Rated current	9 A	9 A	9 A	AWG	24 18		
Approvals per	UL 197	7		Strip length	7 9 mm / 0.28 0.35 inch		
Rated voltage (1-pole)	600 V						
Rated voltage (2 or more poles)	320 V						
Nominal current UL	9 A						
Pole No.	Item No).		PU			
SMD PCB terminal blocks with push-	buttons ir	tape-and	d-reel pa	ckaging, white	Reel diameter: 330 mm		
1	2060-451/998-404			13500 (9 x 1500)			
2	2060-4	52/998-4	104	9000 (9 x 1000)			
3	2060-4	53/998-4	104	6750 (9 x 750)			



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

Pin Spacing: 8 mm

A 2-pole SMD PCB 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 links. This minimizes labor (no manual wiring) and materials needed for connecting LED modules.



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 mating cycles).

The PCBs must be secured.

THR and Wave Soldering

WAGO's 2060 Series THR PCB Terminal Blocks with soldering pins are ideal for both THR and wave soldering. The 2060 THR Series is available in both white and black housings.

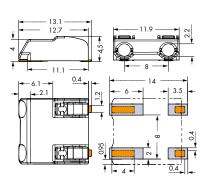
Additional information at:

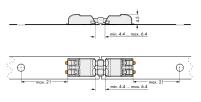
www.wago.com/2060



2060 Series, Pin Spacing: 8 mm							
Pin spacing	8 mm / 0	0.314 incl	า	Conductor Data			
Ratings per	IEC/EN	60664-1		Connection technology	Push-in CAGE CLAMP®		
Overvoltage category	П	П	1	Conductor cross-section: solid	0.2 0.75 mm²		
Pollution degree	3	2	2	Conductor cross-section: fine-stranded	0.2 0.75 mm²		
Rated voltage	400 V	630 V	1000 V	Conductor cross-section: fine-stranded	0.25 0.34 mm ² (with insulated ferrule)		
Rated surge voltage	6 kV	6 kV	6 kV	Conductor cross-section: fine-stranded	0.25 0.34 mm ² (with uninsulated ferrule)		
Rated current	9 A	9 A	9 A	AWG	24 18		
Approvals per	UL 1977	7		Strip length	7 9 mm / 0.28 0.35 inch		
Rated voltage	600 V						
Nominal current UL	9 A						
Pole No.	Item No.			PU			
SMD PCB terminal blocks with push-t	outtons in	kaging, white	Reel diameter: 330 mm				
2	2060-8	52/998-40	04	6750 (9 x 750)			

2060 Series, Board-to-Board Link						
Pin spacing	4 mm / 0	0.157 inch	1	Pole No.	Item No.	PU
Ratings per	IEC/EN 60664-1		1	2060-951/028-000	1500	
Overvoltage category	П	11	1	2	2060-952/028-000	500
Pollution degree	3	2	2	3	2060-953/028-000	375
Rated voltage	63 V	160 V	320 V			
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV			
Rated current	9 A	9 A	9 A			





For Direct Power System Feed-In

- Low profile: 5.6 mm
- Pin spacing: 6 mm
- Conductor range: 0.5 ... 1.5 mm² (20 ... 16 AWG)
- Push-in termination of solid conductors
- Push-button for easy connection and disconnection of all conductor types
- Ideal for automated wiring systems
- 300 V UL 1059
- Available in 1–3 pole variants
- Side-by-side assembly without pole loss
- Available in tape-and-reel packaging





Insert/remove fine-stranded conductors by lightly pressing on a push-button, e.g., via operating tool (Item No. 206-866).



Assembly: Place PCBs on a flat surface and connect terminal blocks on adjoining PCBs via board-to-board links (Item No. 2061-901).

Disassembly: Pull PCBs apart (max. 10 mating cycles). The PCBs must be secured.



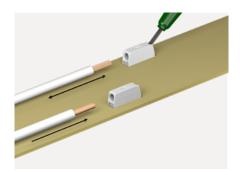
The 2061 Series is also available as a THR variant with solder pins in both white and black housings.

2061 Series, Pin Spacing: 6 mm								
Pin spacing	6 mm / 0.24 inch		Conductor Data		15.8 ————————————————————————————————————			
Ratings per	IEC/EN	60664-1		Connection technology	Push-in CAGE CLAMP®	15.2		
Overvoltage category	Ш	П	1	Conductor cross- section: solid	0.5 1.5 mm²	13.8		
Pollution degree	3	2	2	Conductor cross- section: fine-stranded	0.5 1.5 mm²	2.2 4 0.6 4.5		
Rated voltage	250 V	320 V	630 V	Conductor cross- section: fine-stranded	0.5 0.75 mm ² (with insulated ferrule)	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		
Rated surge voltage	4 kV	4 kV	4 kV	Conductor cross- section: fine-stranded	0.5 0.75 mm ² (with uninsulated ferrule)	4.6 - 2.7 0.4		
Rated current	17.5 A	17.5 A	17.5 A	AWG	20 16	L = (pole no. x pin spacing) – 0.3 mm		
Approvals per	UL 1059	9		Strip length	7 10 mm / 0.28 0.39 inch			
Use group	В	С	D					
Rated voltage (1-pole)	600 V	600 V	600 V			<u> </u>		
Nominal current UL (1-pole)	10 A	10 A	10 A					
Rated voltage (2 or more poles)	300 V	-	300 V					
Nominal current UL (2-pole)	10 A	-	10 A					
Pole No.	Item No).		PU				
SMD PCB terminal blocks with pu	sh-butto	ns in tape-aı	nd-reel packaging, wh	nite	Reel diameter: 330 mm			
1	2061-6	01/998-404		8100 (9 x 900)				
2	2061-6	02/998-404		6300 (9 x 700)		<20 <20		
3	2061-6	03/998-404		4050 (9 x 450)		2.9 6.0 (30) 8.1 9.5 (34)		
Board-to-Board Link	Pin leng	gth: 30 mm	Pin length: 34 mm					
1	2061-9	01	2061-901/034-000	700		The installation of the board-to-board links is identical w both 2059 and 2060 Series.		
2	2061-9	02	2061-902/034-000	300		5001 2000 drid 2000 36165.		
3	2061-9	03	2061-903/034-000	200				
4	2061-9	04	2061-904/034-000	100				

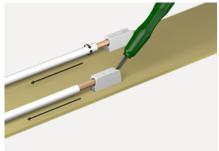
For Back-Side Wiring of LED Modules

- Shift wiring to the back of the LED modules
- Low profile of just 1.1 mm on top of the PCB minimizes shadowing
- Easy pick-and-place assembly and minimum shadowing via optional cover
- Optional marking of the clamping point helps prevent wiring errors
- Clearance and creepage distances for use up to 500 V per EN 60598-1
- For manual and automated wiring systems





Insert fine-stranded conductors and remove all conductor types via operating tool. Solid conductors can also be terminated by simply pushing them in.



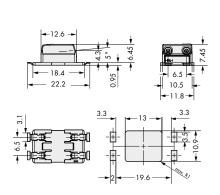
Use an operating tool (Item No. 2070-400) or simply "twist and pull" to remove solid conductors.



Shift wiring to the back of the LED modules via 2070 Series SMD PCB Terminal Blocks.

2070 Series								
Technical Data			Conductor Data					
Ratings per	IEC/EN	60664-1		Connection technology	Push-in CAGE CLAMP®			
Overvoltage category	П	П	1	Conductor cross-section: solid	0.2 0.75 mm²			
Pollution degree	3	2	2	Conductor cross-section: fine-stranded	0.2 0.75 mm²			
Rated voltage*	320 V	320 V	630 V					
Rated surge voltage	4 kV	4 kV	4 kV					
Rated current	9 A	9 A	9 A					
				AWG	24 18			
				Strip length	8.5 10 mm / 0.3 inch			
Pole No.	Item No).		PU				
Through-board SMD PCB terminal b	locks witl	n cover			Reel diameter: 330 mm			
1	2070-461/998-406			4770 (954)				
2	2070-4	62/998-40	06	2385 (477)				
3	2070-4	63/998-40	06	1590 (318)				

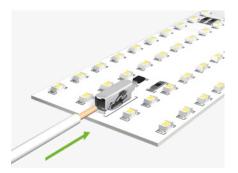
Note: Go to our online shop to find more variants without cover and with pole marking. Reel diameter: 381 mm (available upon request)



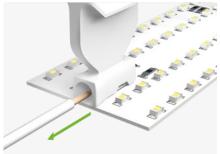
Reduced to the Essentials

- Maximum conductor range, minimum installation space: 0.2 ... 0.75 mm²
- Compact design minimizes on-board LED shadowing
- Low profile of just 2.7 mm provides uniform light distribution
- A reliable alternative to wire soldering
- As if from a single mold: Miniaturized connection technology meets elegant design
- Slim SMD metal contact enables space-saving and convenient conductor connection

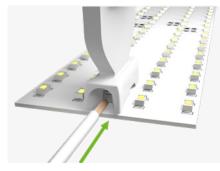




Insert solid conductors via push-in termination.

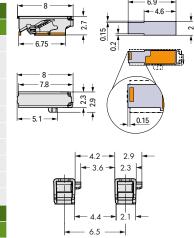


Insert fine-stranded conductors and remove all conductor types - via operating tool (Item No. 2065-189).



The operating tool's funneled conductor entry securely guides the conductor into the terminal block.

2065 Series							
Technical Data			Conductor Data				
Ratings per	IEC/EN	60664-1		Connection technology	Push-in CAGE CLAMP®		
Overvoltage category	11 11 1		1	Conductor cross-section: solid	0.2 0.75 mm²		
Pollution degree	3	2	2	Conductor cross-section: fine-stranded	0.2 0.75 mm²		
Rated voltage*	320 V	320 V	630 V				
Rated surge voltage	4 kV	4 kV	4 kV				
Rated current	9 A	9 A	9 A				
Approvals per	UL 1977	7		AWG	24 18		
Rated current	600 V			Strip length	7.5 mm / 0.3 inch (min.)		
Nominal current UL	9 A						
Pole No.	Item No.			PU			
SMD PCB terminal blocks with push-	buttons i	n tape-ar	ackaging	Reel diameter: 330 mm			
1	2065-10	00/998-40	03	31800 (12x 2650)			



* Rated voltage for 6.5 mm pin spacing Any layout deviation must meet the insulation coordination safety standards (EN/IEC 60664-1) or end device standard requirements.

NOTE: Terminal block without insulation housing!

Protection against accidental contact must be provided at voltages higher than low voltages (e.g., SELV/PELV) for the relevant application.

Board-to-Board Link

Connect LED modules quickly, easily and in a spacesaving manner.

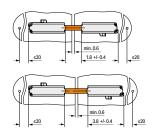
The 2065 Series Board-to-Board Link has a diameter of 1 mm (0.039 inch). To fit the requirements for clearances and creepage distances, the silver-plated metal pin is available in two different lengths: 15.6 and 17.6 mm (0.61 and 0.69 inch).

Design

The 2065 Series' elegant simplicity is an impressive feature. Contact frame and spring – more is not necessary to reliably connect solid and fine-stranded conductors. The silver rectangular contact with its seamless tunnel cover and rounded edges makes it particularly robust. The terminal block is also extremely slim and space-saving on the PCB – reducing on-board shadowing. Furthermore, an upward slanted conductor entry simplifies wiring. The frame's openings not only allow fine-stranded conductors to be terminated via the clamping unit, they also unveil the technology behind it.

2065 Series							
Board-to-Board Link	Item Number	Pin Length	PU	PU			
1	2065-131	15.6 mm	1500				
1	2065-133	17.6 mm	1500				







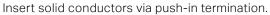
For Panel Feedthrough Connections

- Conductor range:
 0.14 ... 1.5 mm² (28 ... 14 AWG)
- Push-in CAGE CLAMP® connection
- Optionally available with in-line or staggered pins (3.5 and 5 mm pin spacing)
- SMD and THR versions available
- Delivery in tape-and-reel packaging for full integration into SMT soldering process
- Ideal for applications in the lighting industry
- Conductor connection and mating direction both parallel and perpendicular to the PCB











The 2086 Series is also available as a THR version with solder pins either with in-line or staggered pins (3.5 and 5 mm pin spacing).

<u>.</u>	0.5			0 1 1 0 1	
Pin spacing	3.5 mm			Conductor Data	
Ratings per	IEC/EN	50664-1		Connection technology	Push-in CAGE CLAMP®
Overvoltage category	11	11	1	Conductor cross-section: solid	0.14 1.5 mm² / 28 16 AWG
Pollution degree	3	2	2	Conductor cross-section: fine-stranded	0.14 1.5 mm² / 26 14 AWG
Rated voltage	160 V	160 V	320 V	Conductor cross-section: fine-stranded	0.25 0.75 mm ² (with insulated ferrule)
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV	Conductor cross-section: fine-stranded	0.25 1.5 mm ² (with uninsulated ferrule)
Rated current	17.5 A	17.5 A	17.5 A	Strip length	8 9 mm / 0.31 0.35 inch
Approvals per	UL 1059)			
Use group	В	С	D		
Rated voltage (UL)	300 V	-	300 V		
Rated current (solid)	10 A	-	10 A		
Rated current (fine-stranded)	14 A	-	10 A		
Pole No.	Item No			PU	
PCB terminal block in tape	-and-reel pa	ckaging			Reel diameter: 330 mm
2	2086-12	202/0700-	0650/0997-0604	515	
3	2086-12	203/0700-	0650/0997-0605	515	
4	2086-12	204/0700-	0650/0997-0605	515	
5	2086-12	205/0700-	0650/0997-0605	515	

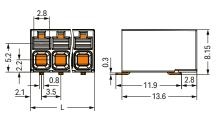
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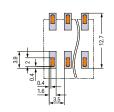
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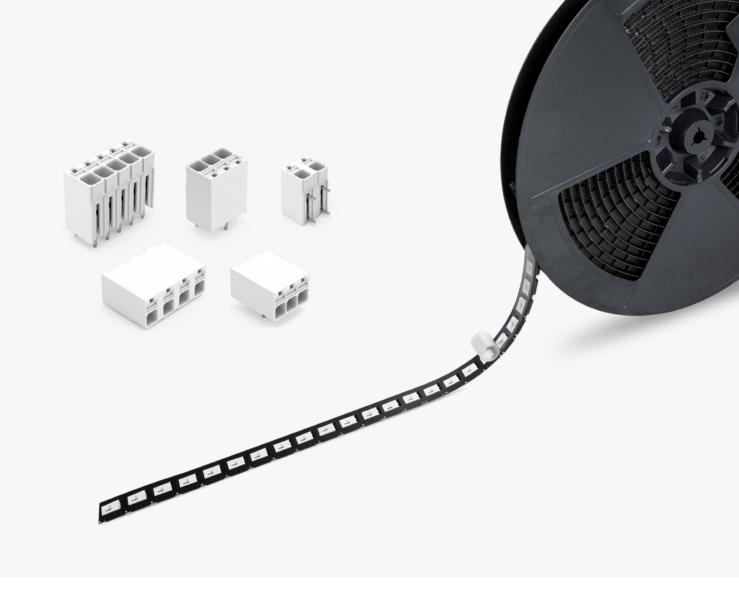
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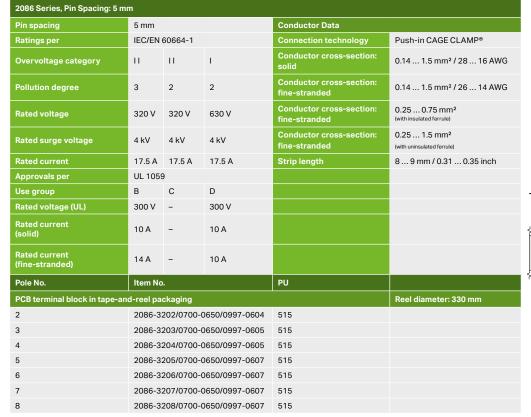
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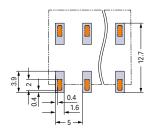
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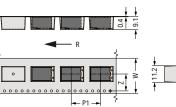








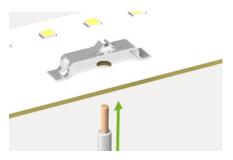




For Vertical Wiring

- Wiring performed on the back of the LED module simplifies lighting manufacturing
- Low profile minimizes on-board LED shadowing
- Compact design provides uniform light distribution
- An economical alternative to wire soldering
- Supports both manual and automated wiring systems





Insert solid conductors via push-in termination.



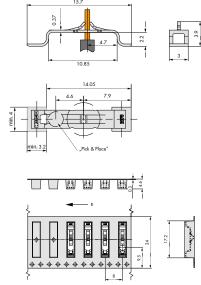
Simply twist and pull to remove conductors – no tools required.

2075 Series								
Technical Data		Conductor Data						
Ratings per	IEC/EN 606	664-1	Connection technology	PUSH WIRE®				
Overvoltage category	П	1	Conductor cross-section: solid	0.34 0.75 mm²				
Pollution degree	3	2	AWG	20 18				
Rated voltage*	200 V	500 V	Strip length	3.65 mm / 0.14 inch (min.)				
Rated surge voltage	4 kV	4 kV						
Rated current	9 A	9 A						
Pole No.	Item No.		PU					
Through-board SMD PCB termi	nal block in tape-	and-reel pack	aging	Reel diameter: 330 mm				
1	2075-381/	997-404	18000 (2000) pcs					

^{*} Rated voltage for 7 mm pin spacing Layout must meet the insulation coordination safety standards (EN/IEC 60664-1) or end device standard requirements.

NOTE: Terminal block without insulation housing!

Protection against accidental contact must be provided at voltages higher than low voltages (e.g., SELV/PELV) for the relevant application.



SMD Terminal Blocks – Also Available in Black

- Delivery in tape-and-reel packaging for full integration into SMT soldering process
- Recommended for industrial applications
- Also available as THR versions



2059 Series - for the Smallest Sizes

- SMD PCB terminal blocks with PUSH WIRE® connection technology
- Push-in termination of solid conductors
- Easy conductor removal via operating tool
- Side-by-side assembly without pole loss
- Low profile of just 2.7 mm



2060 Series - for Manual and Automated Wiring

- SMD PCB terminal blocks with Push-in CAGE CLAMP® connection technology and push-buttons
- Push-in termination of solid and ferruled conductors
- Convenient termination/removal of fine-stranded conductors via push-buttons
- Low profile of just 4.5 mm



2061 Series - for Direct Power System Feed-In

- SMD PCB terminal blocks with Push-in CAGE CLAMP® connection technology and push-buttons
- Push-in termination of solid and ferruled conductors
- Push-button for easy connection and disconnection of all conductor types
- Low profile of just 5.6 mm



Technical data is identical to the data of the white SMD terminal blocks.

2086 Series - for Panel Feedthrough Connections

- Push-in CAGE CLAMP® termination of solid and ferruled conductors
- Push-button moves parallel to conductor entry
- Conductor connection and mating direction both parallel and perpendicular to the PCB

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