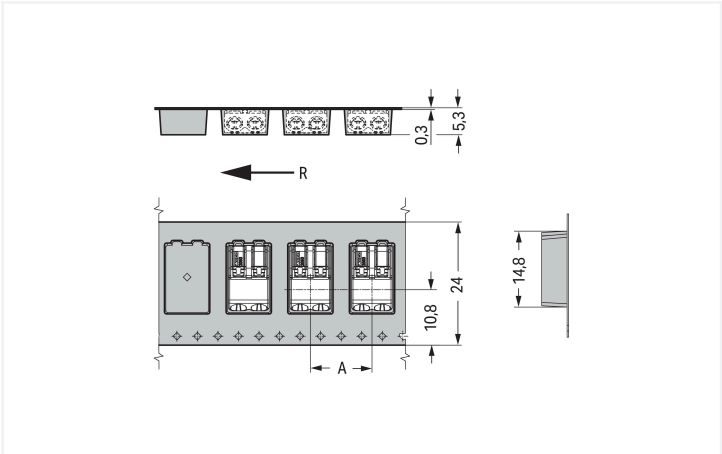
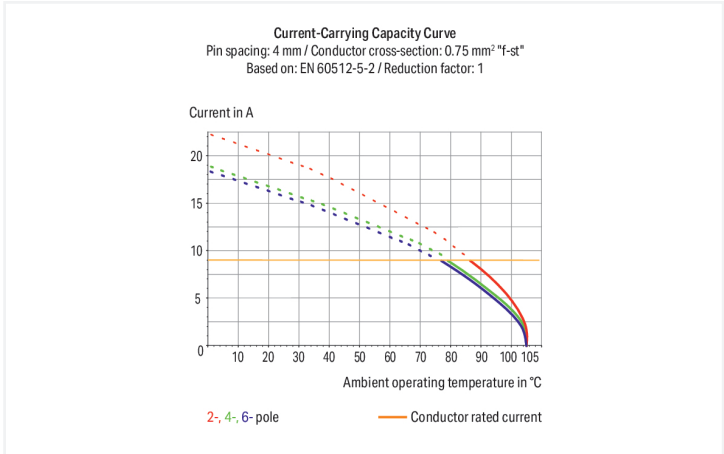
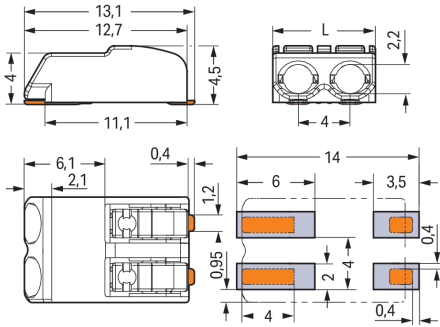




Color: ■ white





Dimensions in mm
L = (pole no. x pin spacing) – 0.1 mm

PCB terminal block, 2060 Series, 0 °conductor entry to board

Connecting conductors is quick and easy with this PCB terminal block (item number 2060-452/998-404). You can rely on tried and tested safety with these PCB terminal blocks, perfect for a wide range of applications when designing your devices. Ensure that the strip lengths are between 7 and 9 mm when connecting conductors to this PCB terminal block. This product features one conductor terminal and utilizes Push-in CAGE CLAMP®. Push-in CAGE CLAMP® connection technology is ideal for connecting all conductor types. Solid and fine-stranded conductors with ferrules can be inserted without needing to use any tools—all thanks to its pluggable design. The item's dimensions are (7.9 x 4.5 x 13.1) mm (width x height x depth). This PCB terminal block is suitable for conductor cross sections ranging from 0.2 mm² to 0.75 mm².

The contact surface is coated with tin. A push-button is used to operate this PCB terminal block. SMD is used to solder the PCB terminal block. Insert the conductor at a 0° angle..

Notes	
General safety information	NOTICE: Observe installation and safety instructions!
Note	To be sold only with installation instructions! 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. Depending on reflow soldering temperatures and times, color deviations may occur. These deviations will have no impact on functionality.
Recommendation	Recommendation for stencil: 150 µm material thickness; Pattern layout identical to solder pad layout

Electrical data				
Ratings per		IEC/EN 60664-1		
Overvoltage category		III	III	II
Pollution degree		3	2	2
Nominal voltage		63 V	160 V	320 V
Rated impulse withstand voltage		2.5 kV	2.5 kV	2.5 kV
Rated current		9 A	9 A	9 A
Ratings				
Approvals per		UL 1977		
Rated voltage		600 V		
Rated current		9 A		



Connection Data			
Clamping units	2	Connection 1	
Total number of potentials	2	Connection technology	Push-in CAGE CLAMP®
Number of connection types	1	Actuation type	Push-button
Number of levels	1	Solid conductor	0.2 ... 0.75 mm² / 24 ... 18 AWG
		Fine-stranded conductor	0.2 ... 0.75 mm² / 24 ... 18 AWG
		Fine-stranded conductor; with insulated fer- rule	0.25 ... 0.34 mm²
		Fine-stranded conductor; with uninsulated ferrule	0.25 ... 0.34 mm²
		Strip length	7 ... 9 mm / 0.28 ... 0.35 inches
		Conductor connection direction to PCB	0 °
		Pole number	2

Physical data		
Pin spacing		4 mm / 0.157 inches
Width		7.9 mm / 0.311 inches
Height		4.5 mm / 0.177 inches
Depth		13.1 mm / 0.516 inches
Reel diameter of tape-and-reel packaging		330 mm
Tape width		24 mm

PCB contact		
PCB contact		SMD
Solder pin arrangement		over the entire terminal strip (in-line)
Number of solder pins per potential		2

Material data		
Note (material data)		Information on material specifications can be found here
Color		white
Material group		I
Insulation material (main housing)		Polyphthalamide (PPA GF)
Flammability class per UL94		V0
Clamping spring material		Copper alloy
Contact material		Copper alloy
Contact Plating		Tin
Fire load		0.003 MJ
Weight		0.5 g
MSL per J-STD 020D		1

Environmental requirements			
Limit temperature range	-60 ... +105 °C	Environmental Testing	
		Test specification: Railway applications – Rolling stock – Electronic equipment	DIN EN 50155 (VDE 0115-200):2022-06
		Test procedure: Railway applications – Rolling stock equipment – Vibration and shock tests	DIN EN 61373 (VDE 0115-0106):2011-04
		Spectrum/Mounting location	Service life test, Category 1, Class A/B
		Functional test with noise-like oscillations	Test passed according to Section 8 of the standard



Environmental Testing	
Frequency	f ₁ = 5 Hz to f ₂ = 150 Hz
Acceleration	0.101g (highest test level used for all axes)
Test duration per axis	10 min.
Test directions	X, Y and Z axes
Monitoring of contact faults and interruptions	Passed
Voltage drop measurement before and after each axis	Passed
Simulated service life test through increased levels of noise-like oscillations	Test passed according to Section 9 of the standard
Frequency	f ₁ = 5 Hz to f ₂ = 150 Hz
Acceleration	0.572g (highest test level used for all axes)
Test duration per axis	5 h
Test directions	X, Y and Z axes
Extended testing: Monitoring of contact faults and interruptions	Passed
Extended testing: Voltage drop measurement before and after each axis	Passed
Shock test	Test passed according to Section 10 of the standard
Shock pulse form	Half sine
Acceleration	5g (highest test level used for all axes)
Shock duration	30 ms
Number of shocks (per axis)	3 pos. und 3 neg.
Test directions	X, Y and Z axes
Extended testing: Monitoring of contact faults and interruptions	Passed
Extended testing: Voltage drop measurement before and after each axis	Passed
Vibration and shock stress for rolling stock equipment	Passed

Commercial data	
Product Group	33 (SMT Terminal)
PU (SPU)	9000 (1000) pcs
Packaging type	Box
Country of origin	CH
GTIN	4055143888189
Customs tariff number	85369010000

Product Classification	
UNSPSC	39121409
eCl@ss 10.0	27-14-11-06
eCl@ss 9.0	27-14-11-06
ETIM 9.0	EC001284
ETIM 10.0	EC001284
ECCN	NO US CLASSIFICATION



Environmental Product Compliance	
RoHS Compliance Status	Compliant, No Exemption

Approvals / Certificates

General approvals			Declarations of conformity and manufacturer's declarations		
Approval	Standard	Certificate Name	Approval	Standard	Certificate Name
CCA DEKRA Certification B.V.	EN 60998	NTR NL 7725/M1	EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
CCA DEKRA Certification B.V.	EN 60838	NTR NL 2168246	Railway WAGO GmbH & Co. KG	-	Z00004396.000
CCA DEKRA Certification B.V.	EN 60947-7-4	NTR NL-7843/1	UK-Declaration of Conformity WAGO GmbH & Co. KG	-	-
cULus Underwriters Laboratories Inc.	UL 1977	E45171			
KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-108183			
KEMA/KEUR DEKRA Certification B.V.	EN 60998	71-109040			
KEMA/KEUR DEKRA Certification B.V.	EN 60947-7-4	71-114208			
UL Underwriters Laboratories Inc.	UL 1059	E45172			

Downloads

Environmental Product Compliance	
Compliance Search	
Environmental Product Compliance 2060-452/998-404	

Documentation

Safety Data Sheet			Additional Information		
Handling and Safety Instructions of PCB Terminal Blocks with Push-In Cage Clamp	pdf 393.90 KB		Technical Section	03.04.2019	pdf 2027.26 KB



CAD/CAE-Data	
CAD data	CAE data
2D/3D Models 2060-452/998-404	ZUKEN Portal 2060-452/998-404
PCB Design	
Symbol and Footprint via SamacSys 2060-452/998-404	
Symbol and Footprint via Ultra Librarian 2060-452/998-404	

1 Compatible Products
1.1 Optional Accessories
1.1.1 Board-to-board link
1.1.1.1 Board-to-board link



Item No.: 2060-952/028-004 Board-to-Board Link; Pin spacing 4 mm; 2-pole; Length: 28 mm; black	Item No.: 2060-952/028-000 Board-to-Board Link; Pin spacing 4 mm; 2-pole; Length: 28 mm; white
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1.1.2 Ferrule			
1.1.2.1 Ferrule			
			
Item No.: 216-301 Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow	Item No.: 216-131 Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated; silver-colored	Item No.: 216-302 Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise	Item No.: 216-132 Ferrule; Sleeve for 0.34 mm² / 22 AWG; uninsulated; electro-tin plated

1.1.3 Tool		
1.1.3.1 Operating tool		
		
<u>Item No.: 206-860</u> Operating tool; for 2060 Series; multi-coloured	<u>Item No.: 2060-189</u> Operating tool; made of insulating material; for 2060 Series; white	

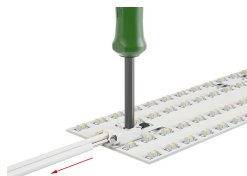
Installation Notes

Conductor termination



Insert solid conductors via push-in termination.

Conductor termination



Insert/remove fine-stranded conductors by lightly pressing on push-button, e.g., via optional operating tool (206-860).



Terminal blocks can be arranged side-by-side without loss of poles.