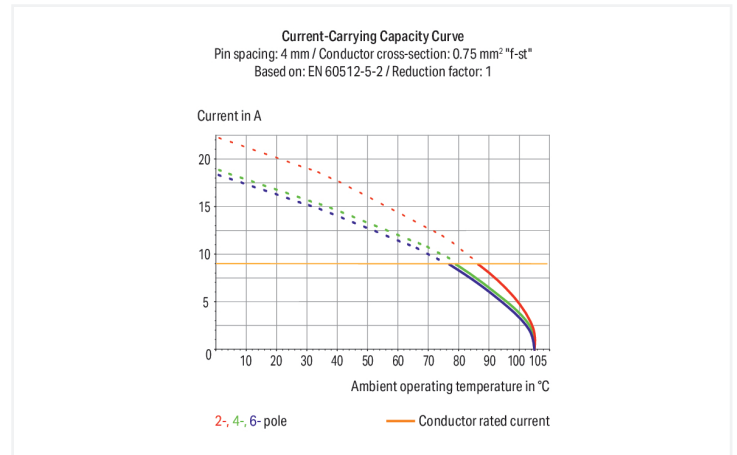


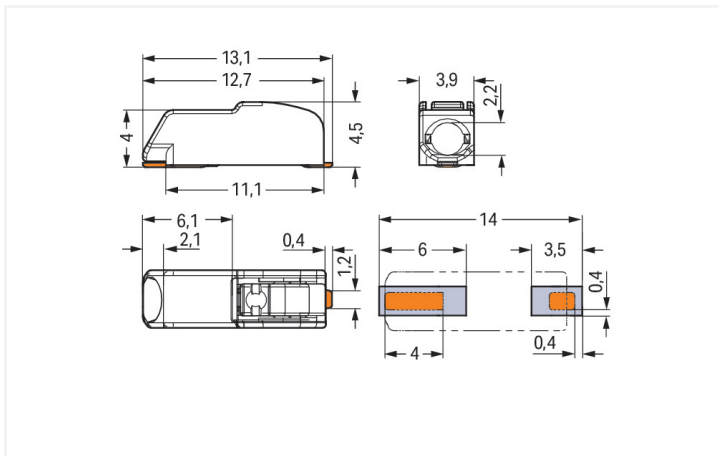
Data Sheet | Item Number: 2060-451/998-604
 SMD PCB terminal block; push-button; 0.75 mm²; Pin spacing 4 mm; 1-pole; Push-in
 CAGE CLAMP®; in tape-and-reel packaging; white



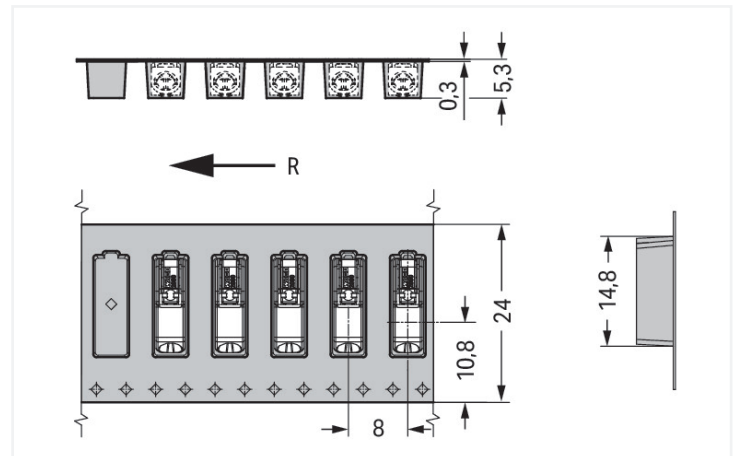
<https://www.wago.com/2060-451/998-604>



Color: ■ white



Dimensions in mm



Dimensions in mm
 R = feed direction

PCB terminal block, 2060 Series, with 4 mm pin spacing

Quick and easy connections are guaranteed with this PCB terminal block (item number 2060-451/998-604). It is a universal connector that can be used almost anywhere, for example, as a pluggable PCB connector, panel feedthrough header, connector for rail-mount terminal blocks, or a floating connector for different mounting methods. Strip lengths must be between 7 and 9 mm when connecting conductors to this PCB terminal block. Featuring one conductor terminal along with Push-in CAGE CLAMP®, this product is highly versatile. Push-in CAGE CLAMP® connection technology is ideal for connecting all conductor types. Both solid and fine-stranded conductors with ferrules can be inserted without the need for tools—all thanks to its pluggable design. Dimensions: (3.9 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. This PCB terminal block is operated with a push-button. The PCB terminal block is designed for SMD soldering. Insert the conductor into the board at an angle of 0°..

Notes

Note	<p>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.</p> <p>Depending on reflow soldering temperatures and times, color deviations may occur. These deviations will have no impact on functionality.</p>
Recommendation	<p>Recommendation for stencil: 150 µm material thickness; Pattern layout identical to solder pad layout</p>

Electrical data

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

Connection Data

Clamping units	1	Connection 1	
Total number of potentials	1	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 mm ² / 24 ... 18 AWG
		Fine-stranded conductor	0.2 ... 0.75 mm ² / 24 ... 18 AWG
		Fine-stranded conductor; with insulated ferrule	0.25 ... 0.34 mm ²
		Fine-stranded conductor; with uninsulated ferrule	0.25 ... 0.34 mm ²
		Strip length	7 ... 9 mm / 0.28 ... 0.35 inches
		Conductor connection direction to PCB	0°
		Pole number	1

Physical data

Pin spacing	4 mm / 0.157 inches
Width	3.9 mm / 0.154 inches
Height	4.5 mm / 0.177 inches
Depth	13.1 mm / 0.516 inches
Reel diameter of tape-and-reel packaging	380 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	0.007 MJ
Weight	0.2 g

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
		Frequency
		$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
		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
		$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
		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

PU (SPU)	20520 (2280) pcs
Packaging type	Box
Country of origin	CH
GTIN	4066966483369
Customs tariff number	85369010000

Product Classification

UNSPSC	39121409
ETIM 9.0	EC001284
ETIM 10.0	EC001284
ECCN	NO US CLASSIFICATION

Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
CCA DEKRA Certification B.V.	EN 60947-7-4	NTR NL-7843/1
UL Underwriters Laboratories Inc.	UL 1059	E45172

Declarations of conformity and manufacturer's declarations



Approval	Standard	Certificate Name
Railway WAGO GmbH & Co. KG	-	Z00004396.000

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 2060-451/998-604



Documentation

Additional Information

Technical Section	03.04.2019	pdf 2027.26 KB	
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1 Compatible Products

1.1 Optional Accessories

1.1.1 Board-to-board link

1.1.1.1 Board-to-board link



Item No.: 2060-951/028-000

Board-to-Board Link; Pin spacing 4 mm; 1-pole; Length: 28 mm; white

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 / AWG 24; uninsulated; electro-tin plated

1.1.3 Tool

1.1.3.1 Operating tool



Item No.: 206-860

Operating tool; for 2060 Series; multi-coloured



Item No.: 2060-189

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.