

# Data Sheet | Item Number: 2604-1109

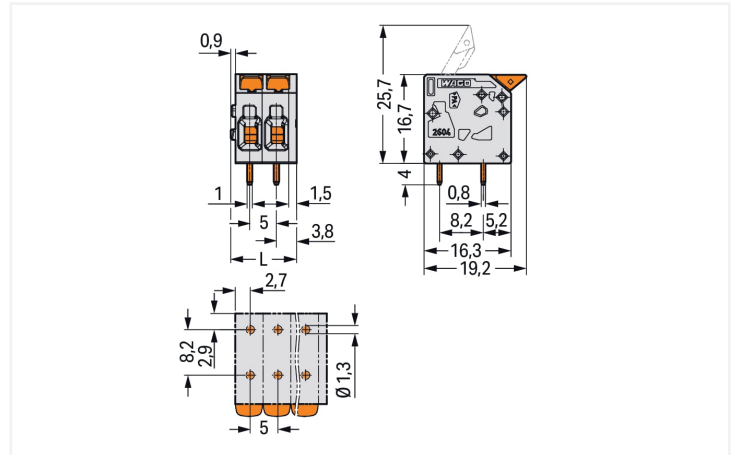
PCB terminal block; lever; 4 mm<sup>2</sup>; Pin spacing 5 mm; 9-pole; Push-in CAGE CLAMP®; 4,00 mm<sup>2</sup>; gray

<https://www.wago.com/2604-1109>



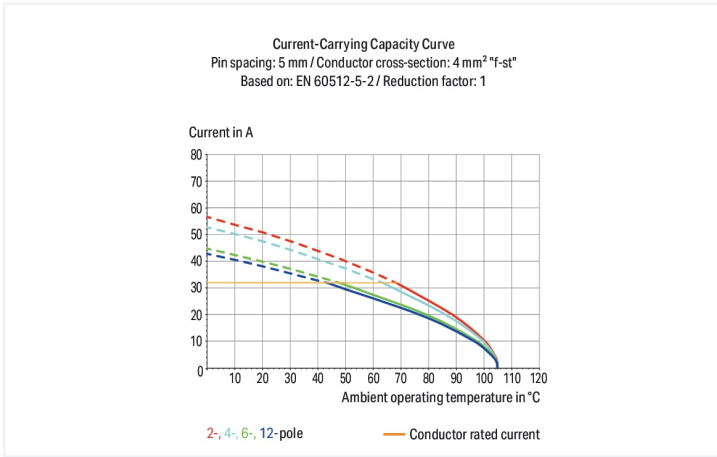
Color: ■ gray

Similar to illustration



Dimensions in mm

L = (pole no. - 1) x pin spacing + 7.4 mm



- PCB terminal blocks with Push-in CAGE CLAMP® connection and levers
- Push-in termination of solid and ferruled conductors
- Intuitive and tool-free operation
- Several clamping units can be held open simultaneously, simplifying the connection of multi-core cables
- Testing can be performed both parallel and perpendicular to conductor entry

## Notes

Variants:

Other versions (or variants) can be requested from WAGO Sales or configured at <https://configurator.wago.com/>.

Other pole numbers

Direct marking

Other colors

## Electrical data

Ratings per	IEC/EN 60664-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Nominal voltage	320 V	400 V	630 V
Rated surge voltage	4 kV	4 kV	4 kV
Rated current	32 A	32 A	32 A

Approvals per	UL 1059		
Use group	B	C	D
Rated voltage	300 V	-	300 V
Rated current	20 A	-	10 A

Approvals per	CSA		
	B	C	D
Use group	B	C	D
Rated voltage	300 V	-	300 V
Rated current	20 A	-	5 A

### Connection data

Clamping units	9
Total number of potentials	9
Number of connection types	1
Number of levels	1

### Connection 1

Connection technology	Push-in CAGE CLAMP®
Actuation type	Lever
Solid conductor	0.2 ... 4 mm <sup>2</sup> / 24 ... 12 AWG
Fine-stranded conductor	0.2 ... 4 mm <sup>2</sup> / 24 ... 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 ... 2.5 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 2.5 mm <sup>2</sup>
Fine-stranded conductor; with twin ferrule	0.25 ... 1.5 mm <sup>2</sup>
Strip length	9 ... 11 mm / 0.35 ... 0.43 inches
Conductor connection direction to PCB	0°
Pole number	9

### Physical data

Pin spacing	5 mm / 0.197 inches
Width	47.4 mm / 1.866 inches
Height	20.7 mm / 0.815 inches
Height from the surface	16.7 mm / 0.657 inches
Depth	19.2 mm / 0.756 inches
Solder pin length	4 mm
Solder pin dimensions	0.8 x 1 mm
Drilled hole diameter with tolerance	1.3 <sup>(+0.1)</sup> mm

### PCB contact

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

### Material data

Note (material data)	<a href="#">Information on material specifications can be found here</a>
Color	gray
Material group	I
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Clamping spring material	Chrome-nickel spring steel (CrNi)
Contact material	Electrolytic copper (E <sub>Cu</sub> )
Contact Plating	Tin
Fire load	0.351 MJ
Actuator color	orange
Weight	13.5 g

## Environmental requirements

Limit temperature range	-60 ... +105 °C
Processing temperature	-35 ... +60 °C
Continuous operating temperature	-60 ... +105 °C

## Environmental Testing (Environmental Conditions)

Test specification Railway applications – Rolling stock – Electronic equipment	DIN EN 50155 (VDE 0115-200):2022-06
Test procedure Railway applications – Rolling stock equipment – Shock and vibration tests	DIN EN 61373 (VDE 0115-0106):2011-04
Spectrum/Installation location	Service life test, Category 1, Class A/B
Function test with noise-like vibration	Test passed according to Section 8 of the standard
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$ $f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
Acceleration	0.101g (highest test level used for all axes) 0.572g (highest test level used for all axes) 5g (highest test level used for all axes)
Test duration per axis	10 min. 5 h
Test directions	X, Y and Z axes X, Y and Z axes X, Y and Z axes
Monitoring for contact faults/interruptions	Passed
Voltage drop measurement before and after each axis	Passed
Simulated service life test through increased levels of noise-like vibration	Test passed according to Section 9 of the standard
Extended test scope: Monitoring for contact faults/interruptions	Passed Passed
Extended test scope: Voltage drop measurement before and after each axis	Passed Passed
Shock test	Test passed according to Section 10 of the standard
Shock form	Half sine
Shock duration	30 ms
Number of shocks per axis	3 pos. und 3 neg.
Vibration and shock stress for rolling stock equipment	Passed

## Commercial data

eCl@ss 10.0	27-44-04-01
eCl@ss 9.0	27-44-04-01
ETIM 9.0	EC002643
ETIM 8.0	EC002643
PU (SPU)	40 pcs
Packaging type	Box
Country of origin	DE
GTIN	4055143564366
Customs tariff number	85369010000

**Environmental Product Compliance**

RoHS Compliance Status	Compliant, No Exemption
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**Approvals / Certificates**

**General approvals** **Declarations of conformity and manufacturer's declarations**



Approval	Standard	Certificate Name
CB DEKRA Certification B.V.	IEC 60947-7-4	NL-61583
KEMA/KEUR DEKRA Certification B.V.	EN 60947-7-4	71-100535
UL Underwriters Laboratories Inc.	UL 1059	E45172

Approval	Standard	Certificate Name
Railway WAGO GmbH & Co. KG	-	Z00004411.000

**Downloads**

**Environmental Product Compliance**

<b>Compliance Search</b>
Environmental Product Compliance 2604-1109 <a href="#">↓</a>

**Documentation**

<b>Additional Information</b>			
Technical Section	03.04.2019	pdf 2027.26 KB	<a href="#">↓</a>

**CAD/CAE-Data**

<b>CAD data</b>	<a href="#">↓</a>
2D/3D Models 2604-1109	<a href="#">↓</a>

<b>CAE data</b>	<a href="#">↓</a>
ZUKEN Portal 2604-1109	<a href="#">↓</a>

**PCB Design**

Symbol and Footprint via SamacSys 2604-1109	<a href="#">↓</a>
Symbol and Footprint via Ultra Librarian 2604-1109	<a href="#">↓</a>

## 1 Compatible Products

### 1.1 Optional Accessories

#### 1.1.1 Ferrule

##### 1.1.1.1 Ferrule



**Item No.: 216-241**

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white



**Item No.: 216-242**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray



**Item No.: 216-243**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red



**Item No.: 216-244**

Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black



**Item No.: 216-246**

Ferrule; Sleeve for 2.5 mm<sup>2</sup> / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue



**Item No.: 216-106**

Ferrule; Sleeve for 2.5 mm<sup>2</sup> / AWG 14; un-insulated; electro-tin plated; silver-colored

## Installation Notes

### Conductor termination



Insert fine-stranded conductors – and remove all conductors – via operating tool.

### Conductor termination



Insert solid conductors via push-in termination.