

Data sheet | Item number: 280-104

2-conductor through terminal block; 2.5 mm²; suitable for Ex i applications; lateral marker slots; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 2,50 mm²; blue

www.wago.com/280-104



Data

Electrical data

Subject to changes. Please also observe the further product documentation!

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Email: info.de@wago.com | Web: www.wago.com

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Ratings per IEC/EN

Ratings per	IEC/EN 60947-7-1
Nominal voltage (III/3)	800 V
Rated impulse voltage (III/3)	8 kV
Rated current	24 A
Legend (ratings)	(III / 3) ≙ Overvoltage category III / Pollution degree 3

Ratings per UL

Approvals per	UL 1059
Rated voltage UL (Use Group C)	600 V
Rated current UL (Use Group C)	20 A

Ratings per CSA

Approvals per	CSA 22.2 No 158
Rated voltage CSA (Use Group C)	600 V
Rated current CSA (Use Group C)	20 A

Power Loss

Power loss, per pole (potential)	0.766 W
Rated current I_N for specified power loss	24 A
Resistance value for specified, current-dependent power loss	0.001 Ω

Connection data

Connection points	2
Total number of potentials	1
Number of levels	1

Connection 1

Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Connectable conductor materials	Copper Aluminum
Connectable conductor materials (note)	

Subject to changes. Please also observe the further product documentation!



Terminating Aluminum Conductors

WAGO spring clamp terminal blocks are suitable for solid aluminum conductors up to 4 mm²/12 AWG if WAGO "Alu-Plus" Contact Paste 249-130 is used for termination.

"Alu-Plus" Contact Paste Advantages:

- Automatically destroys the oxide film during clamping.
- Prevents fresh oxidation at the clamping point.
- Prevents electrolytic corrosion between aluminum and copper conductors (in the same terminal block).
- Provides long-term protection against corrosion.

Using terminal blocks with CAGE CLAMP® Spring Pressure Connection Technology, **aluminum conductors must first be cleaned with a blade** and then immediately be inserted into the clamping units filled with "Alu-Plus" Contact Paste.

It is also possible to apply WAGO "Alu-Plus" **additionally** on the whole surface of the aluminum conductor before termination.

Please note that the nominal currents must be adapted to the reduced conductivity of the aluminum conductors::

2.5 mm² = 16 A

4 mm² = 22 A

Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Note (conductor cross-section)	12 AWG: THHN, THWN
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches
Wiring direction	Side-entry wiring

Physical data

Width	5 mm / 0.197 inches
Height	42.5 mm / 1.673 inches
Depth from upper-edge of DIN-rail	30.5 mm / 1.201 inches

Mechanical Data

Design	horizontal type
Mounting type	DIN-35 rail
Marking level	Side marking

Subject to changes. Please also observe the further product documentation!

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Material Data

Note (material data)

Information on material specifications can be found here

Color	blue
Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.083 MJ
Weight	3.9 g

Environmental requirements

Processing temperature	-35 ... +85 °C
Continuous operating temperature	-60 ... +105 °C

Commercial data

eCl@ss 10.0	27-14-11-20
eCl@ss 9.0	27-14-11-20
ETIM 8.0	EC000897
ETIM 7.0	EC000897
PU (SPU)	100 pcs
Packaging type	box
Country of origin	IN
GTIN	4045454044503
Customs tariff number	85369010000

Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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Approvals / Certificates

General approvals

Logo	Approval	Additional Approval Text	Certificate name
	CCA DEKRA Certification B.V.	EN 60947	2157201.01
	CSA DEKRA Certification B.V.	C22.2	1536071

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UL
UL International Germany GmbH

UL 1059

E45172

Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
	UK-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	EN 60947	20- HG1941090- PDA
	BV Bureau Veritas S.A.	EN 60947	07436/F0 BV
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2
	LR Lloyds Register	EN 60947	91/20112 (E9)

Required accessories

End plate

End plate	
Item no.: 280-302 End and intermediate plate; 2.5 mm thick; orange	www.wago.com/280-302
Item no.: 280-301 End and intermediate plate; 2.5 mm thick; gray	www.wago.com/280-301

Optional accessories

Plugs

Neon indicator module	
Item no.: 280-803/281-417 Component plug; 2-pole; 10 mm wide; gray	www.wago.com/280-803/281-417
Item no.: 280-803/281-418 Component plug; 2-pole; 10 mm wide; gray	www.wago.com/280-803/281-418

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Component module with LED	
Item no.: 280-803/281-414 Component plug; 2-pole; LED (red); 48 VDC; 10 mm wide; gray	www.wago.com/280-803/281-414
Item no.: 280-803/281-413 Component plug; 2-pole; LED (red); 24 VDC; 10 mm wide; gray	www.wago.com/280-803/281-413
Item no.: 280-803/281-415 Component plug; 2-pole; LED (red); 10 mm wide; gray	www.wago.com/280-803/281-415
Item no.: 280-803/281-416 Component plug; 2-pole; LED (red); 10 mm wide; gray	www.wago.com/280-803/281-416
Component module with diode	
Item no.: 280-803/281-411 Component plug; 2-pole; with diode 1N4007; 10 mm wide; gray	www.wago.com/280-803/281-411
Item no.: 280-803/281-420 Component plug; 2-pole; with rectifier diode and LED; 10 mm wide; gray	www.wago.com/280-803/281-420
Empty component plug housing	
Item no.: 280-803 Empty component plug housing; 10 mm wide; Type 4; 2-pole; gray	www.wago.com/280-803
End plate	
End plate	
Item no.: 281-333 Step-down intermediate plate; 1 mm thick; "only for 4 mm terminal blocks; gray	www.wago.com/281-333
Carrier rail	
Mounting accessories	
Item no.: 210-197 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715; silver-colored	www.wago.com/210-197
Item no.: 210-198 Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; copper-colored	www.wago.com/210-198
Item no.: 210-504 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715; silver-colored	www.wago.com/210-504
Item no.: 210-505 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715; silver-colored	www.wago.com/210-505
Item no.: 210-506	

Subject to changes. Please also observe the further product documentation!



Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715; silver-colored	www.wago.com/210-506
Item no.: 210-508 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715; silver-colored	www.wago.com/210-508
Item no.: 210-113 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored	www.wago.com/210-113
Item no.: 210-118 Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored	www.wago.com/210-118
Item no.: 210-112 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 25 mm; silver-colored	www.wago.com/210-112
Item no.: 210-114 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored	www.wago.com/210-114
Item no.: 210-115 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 18 mm; silver-colored	www.wago.com/210-115
Item no.: 210-196 Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored	www.wago.com/210-196

Mounting

Cover carrier	
Item no.: 709-167 Cover carrier; Type 1; incl. fixing/retaining screws and knurled nut; suitable for 279 to 282 and 880 Series rail-mounted terminal blocks; suitable for 264 Series miniature rail-mounted terminal blocks; suitable for 270 Series sensor and actuator terminal blocks; gray	www.wago.com/709-167
Cover	
Item no.: 709-153 Cover; Type 1; suitable for cover carrier, type 1; 1 m long; transparent	www.wago.com/709-153
Mounting accessories	
Item no.: 209-106 Mounting carrier; for isolated mounting on DIN 35 rails; gray	www.wago.com/209-106
Item no.: 249-116 Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray	www.wago.com/249-116

Protective warning marker

Cover	
Item no.: 280-405 Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow	www.wago.com/280-405

Ferrule

Ferrule	
Item no.: 216-101 Ferrule; Sleeve for 0.5 mm ² / AWG 22; uninsulated; electro-tin plated; silver-colored	www.wago.com/216-101

Subject to changes. Please also observe the further product documentation!



Item no.: 216-104 Ferrule; Sleeve for 1.5 mm ² / AWG 16; uninsulated; electro-tin plated; silver-colored	www.wago.com/216-104
Item no.: 216-102 Ferrule; Sleeve for 0.75 mm ² / AWG 20; uninsulated; electro-tin plated; silver-colored	www.wago.com/216-102
Item no.: 216-103 Ferrule; Sleeve for 1 mm ² / AWG 18; uninsulated; electro-tin plated	www.wago.com/216-103
Item no.: 216-203 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red	www.wago.com/216-203
Item no.: 216-202 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray	www.wago.com/216-202
Item no.: 216-204 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black	www.wago.com/216-204
Item no.: 216-201 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; white	www.wago.com/216-201
Item no.: 216-301 Ferrule; Sleeve for 0.25 mm ² / AWG 24; insulated; electro-tin plated; yellow	www.wago.com/216-301
Item no.: 216-302 Ferrule; Sleeve for 0.34 mm ² / 22 AWG; insulated; electro-tin plated; light turquoise	www.wago.com/216-302

Marking accessories

Marker	
Item no.: 2009-115/000-002 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow	www.wago.com/2009-115/000-002
Item no.: 2009-115/000-007 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray	www.wago.com/2009-115/000-007
Item no.: 2009-115/000-017 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; light green	www.wago.com/2009-115/000-017
Item no.: 2009-115/000-023 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green	www.wago.com/2009-115/000-023
Item no.: 2009-115/000-024 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet	www.wago.com/2009-115/000-024
Item no.: 2009-115 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	www.wago.com/2009-115
Item no.: 793-5501/000-007	

Subject to changes. Please also observe the further product documentation!



WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; gray

www.wago.com/793-5501/000-007

Item no.: 793-5501/000-012

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; orange

www.wago.com/793-5501/000-012

Item no.: 793-5501/000-017

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; light green

www.wago.com/793-5501/000-017

Item no.: 793-5501/000-023

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; green

www.wago.com/793-5501/000-023

Item no.: 793-5501/000-024

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; violet

www.wago.com/793-5501/000-024

Item no.: 793-501/000-002

WMB marking card; as card; not stretchable; plain; snap-on type; yellow

www.wago.com/793-501/000-002

Item no.: 793-501/000-007

WMB marking card; as card; not stretchable; plain; snap-on type; gray

www.wago.com/793-501/000-007

Item no.: 793-501/000-017

WMB marking card; as card; not stretchable; plain; snap-on type; light green

www.wago.com/793-501/000-017

Item no.: 793-501/000-012

WMB marking card; as card; not stretchable; plain; snap-on type; orange

www.wago.com/793-501/000-012

Item no.: 793-501/000-023

WMB marking card; as card; not stretchable; plain; snap-on type; green

www.wago.com/793-501/000-023

Item no.: 793-501/000-006

WMB marking card; as card; not stretchable; plain; snap-on type; blue

www.wago.com/793-501/000-006

Item no.: 793-501/000-005

WMB marking card; as card; not stretchable; plain; snap-on type; red

www.wago.com/793-501/000-005

Item no.: 793-501

WMB marking card; as card; not stretchable; plain; snap-on type; white

www.wago.com/793-501

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**Item no.: 793-501/000-024**

WMB marking card; as card; not stretchable; plain; snap-on type; violet

www.wago.com/793-501/000-024**Item no.: 793-5501/000-005**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; red

www.wago.com/793-5501/000-005**Item no.: 793-5501/000-002**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; yellow

www.wago.com/793-5501/000-002**Item no.: 793-5501/000-006**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; blue

www.wago.com/793-5501/000-006**Item no.: 793-5501**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white

www.wago.com/793-5501**Item no.: 2009-115/000-012**

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange

www.wago.com/2009-115/000-012**Item no.: 2009-115/000-006**

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue

www.wago.com/2009-115/000-006

Group marker carrier

Item no.: 209-142

Group marker carrier; gray

www.wago.com/209-142**Item no.: 209-141**

Group marker carrier; gray

www.wago.com/209-141**Item no.: 209-140**

Group marker carrier; gray

www.wago.com/209-140**Item no.: 249-105**

Group marker carrier; gray

www.wago.com/249-105

Push-in type wire jumper

Jumper

Item no.: 249-123Push-in type wire jumper; 0.75 mm²; insulated; 180 mm long; blackwww.wago.com/249-123**Item no.: 249-126**Push-in type wire jumper; 0.75 mm²; insulated; 110 mm long; blackwww.wago.com/249-126**Item no.: 249-127**Push-in type wire jumper; 0.75 mm²; insulated; 250 mm long; blackwww.wago.com/249-127**Item no.: 249-125**www.wago.com/249-125

Subject to changes. Please also observe the further product documentation!

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Push-in type wire jumper; insulated; 60 mm long; black

Tool

Operating tool

Item no.: 210-657 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured	www.wago.com/210-657
Item no.: 210-658 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short; multicoloured	www.wago.com/210-658
Item no.: 210-720 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured	www.wago.com/210-720

Jumpers

Jumper

Item no.: 210-123 Wire commoning chain; insulated; blue	www.wago.com/210-123
Item no.: 280-402 Jumper; insulated; gray	www.wago.com/280-402
Item no.: 210-103 Wire commoning chain; insulated; black	www.wago.com/210-103
Item no.: 280-409 Jumper; insulated; gray	www.wago.com/280-409
Item no.: 280-422 Jumper; insulated; yellow-green	www.wago.com/280-422
Item no.: 284-414 Step-down jumper; from 284/282 to 281/280/279 series; insulated; gray	www.wago.com/284-414
Item no.: 709-110 Wire commoning chain; 2.5 mm ² ; insulated; black	www.wago.com/709-110
Item no.: 709-112 Wire commoning chain; 2.5 mm ² ; insulated; black	www.wago.com/709-112
Item no.: 709-111 Wire commoning chain; 2.5 mm ² ; insulated; black	www.wago.com/709-111
Item no.: 780-454 Staggered jumper; from 1 to 4; insulated; gray	www.wago.com/780-454
Item no.: 780-452 Staggered jumper; from 1 to 2; insulated; gray	www.wago.com/780-452
Item no.: 780-453 Staggered jumper; from 1 to 3; insulated; gray	www.wago.com/780-453
Item no.: 780-457 Staggered jumper; from 1 to 7; insulated; gray	www.wago.com/780-457

Subject to changes. Please also observe the further product documentation!

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**Item no.: 780-456**

Staggered jumper; from 1 to 6; insulated; gray

www.wago.com/780-456**Item no.: 780-455**

Staggered jumper; from 1 to 5; insulated; gray

www.wago.com/780-455**Item no.: 780-458**

Staggered jumper; from 1 to 8; insulated; gray

www.wago.com/780-458**Testing and measuring**

Testing accessories

Item no.: 209-170Test plug adapter; 8.3 mm wide; for 4 mm Ø test plugs; suitable for 1.5 mm² - 10 mm² tbs; graywww.wago.com/209-170**Item no.: 281-407**Test plug; 6 mm wide; Nominal current 24 A; for 0.08 mm² - 2.5 mm²; 2,50 mm²; graywww.wago.com/281-407**Item no.: 280-404**Test plug adapter; 5 mm wide; for test plug (2.3 mm Ø); suitable for 1.5 mm² - 4 mm² tbs; graywww.wago.com/280-404**Downloads****Documentation****Bid Text**

280-104 X81 - Datei	2019 年2月19 日	xml 3.4 kB	Download
280-104 doc - Datei	2017 年5月31 日	doc 24.6 kB	Download

Additional Information

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CAD/CAE-Data**CAD data**

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CAE data

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Environmental Product Compliance

Compliance Search

Environmental Product Compliance 280-104

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2-conductor through terminal block; 2.5 mm²; suitable for Ex i applications; lateral marker slots; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 2,50 mm²; blue

Installation Notes

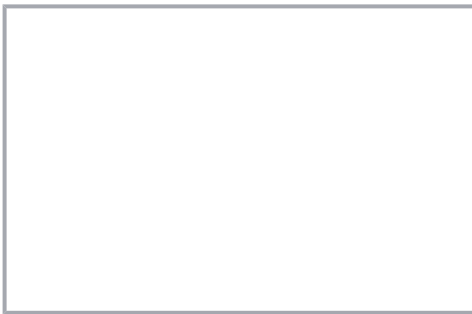
Installation



Snapping side-entry rail-mount terminal blocks onto the DIN-rail.



Quick assembly keys prevent reverse mounting.



Removing a terminal block from the assembly.

Conductor termination

Subject to changes. Please also observe the further product documentation!

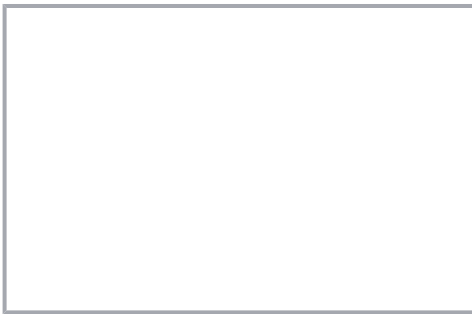


CAGE CLAMP® connection

Inserting a conductor.

With ferruled conductors, it is necessary to use a terminal block one size larger than the conductor's nominal cross-section.

Commoning



Commoning using an adjacent jumper (280-402).

Push jumper down until fully inserted.

Testing

Subject to changes. Please also observe the further product documentation!



Testing with a test plug.

Picture shows a test plug adapter (209-170).



When operating the handles beyond the locked position, the ratchet allows the tool to open and be removed from the terminal block.

Marking



Labeling via WMB Multi Marking System.

Subject to changes. Please also observe the further product documentation!