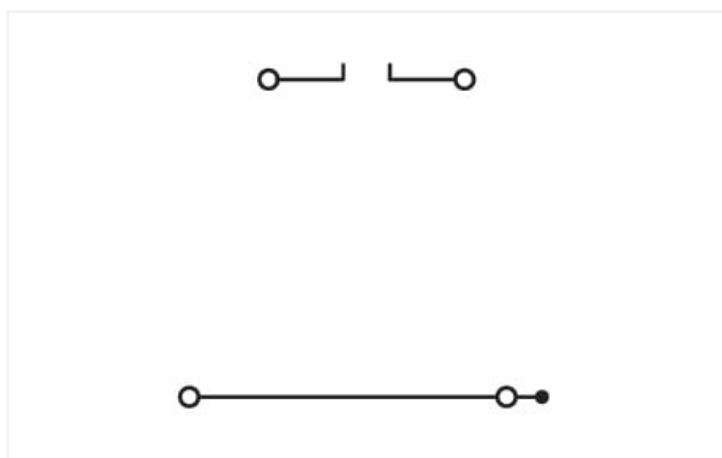


Color: ■ gray/gray

Similar to illustration



Similar to illustration

Double-deck terminal block, 280 Series, CAGE CLAMP®

This double-deck terminal block (item number 280-891) simplifies electrical installations. The double-deck terminal block also serves as carrier terminal block. Ensure that the strip lengths are between 8 mm and 9 mm when connecting conductors to this double-deck terminal block. Featuring conductor terminals along with CAGE CLAMP®, this product outperforms the competition. Our celebrated universal connection known as CAGE CLAMP® leads the way when it comes to connection technology and electrical interconnections. This double-deck terminal block is suitable for conductor cross sections ranging from 0.08 mm² to 2.5 mm². It comes with two levels and four clamping points that you can use to connect two potentials. The gray housing is made of polyamide (PA66) for insulation. These function terminal blocks are mounted using DIN-35 rails..

Electrical data

Ratings per			IEC/EN 60947-7-1			Power Loss		
Overvoltage category	III	III	II			Power loss, per pole (potential)	0.266 W	
Pollution degree	3	2	2			Rated current I_N for specified power loss	10 A	
Nominal voltage	400 V	-	-			Resistance value for specified, current-dependent power loss	0.00133 Ω	
Rated surge voltage	6 kV	-	-					
Rated current	10 A	-	-					
Current at conductor cross-section (max.) mm ²	20 A	-	-					

Connection data

Connection data			Connection 1		
Clamping units	4		Connection technology	CAGE CLAMP®	
Total number of potentials	2		Actuation type	Operating tool	
Number of levels	2		Connectable conductor materials	Copper Aluminum	

Connection 1

Connectable conductor materials (note)

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 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	Front-entry wiring
------------------	--------------------

Physical data

Width	5 mm / 0.197 inches
-------	---------------------

Height	74 mm / 2.913 inches
--------	----------------------

Depth from upper-edge of DIN-rail	39.5 mm / 1.555 inches
-----------------------------------	------------------------

Mechanical data

Design	horizontal type
--------	-----------------

Mounting type	DIN-35 rail
---------------	-------------

Marking level	without marking level
---------------	-----------------------

Material data

Note (material data)	Information on material specifications can be found here
----------------------	--

Color	gray/gray
-------	-----------

Material group	I
----------------	---

Insulation material (main housing)	Polyamide (PA66)
------------------------------------	------------------

Flammability class per UL94	V0
-----------------------------	----

Fire load	0.225 MJ
-----------	----------

Weight	9.9 g
--------	-------

Environmental requirements

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

Commercial data

Product Group	1 (Rail Mounted Terminal Blocks)
eCl@ss 10.0	27-14-11-20
eCl@ss 9.0	27-14-11-20
ETIM 9.0	EC000897
ETIM 8.0	EC000897
PU (SPU)	50 pcs
Packaging type	Box
Country of origin	DE
GTIN	4044918539111
Customs tariff number	85369010000

Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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Downloads**Environmental Product Compliance****Compliance Search**

Environmental Product Compliance 280-891	
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Documentation**Additional Information**

Technical Section	pdf 2246.92 KB	
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Bid Text

280-891	19.02.2019	xml 3.64 KB	
280-891	02.03.2017	doc 25.00 KB	

CAD/CAE-Data**CAD data**

2D/3D Models 280-891	
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CAE data

EPLAN Data Portal 280-891	
WSCAD Universe 280-891	
ZUKEN Portal 280-891	

1 Compatible Products

1.1 Required Accessories

1.1.1 End plate

**Item No.: 280-342**

End and intermediate plate; 2.5 mm thick; gray

Item No.: 280-343

End and intermediate plate; 2.5 mm thick; orange

Item No.: 280-369

Intermediate plate; 1.1 mm thick; orange

1.2 Optional Accessories

1.2.1 DIN-rail

1.2.1.1 Mounting accessories

**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

**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

**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

**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

**Item No.: 210-506**

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715; silver-colored

**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

**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

**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

**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

**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

**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

**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

1.2.2 Ferrule

1.2.2.1 Ferrule

**Item No.: 216-301**Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow**Item No.: 216-302**Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise**Item No.: 216-201**Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; acc. to DIN 46228, Part 4/09.90; white**Item No.: 216-101**Ferrule; Sleeve for 0.5 mm² / AWG 22; un-insulated; electro-tin plated; silver-colored**Item No.: 216-202**Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray**Item No.: 216-102**Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated; silver-colored**Item No.: 216-203**Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red**Item No.: 216-103**Ferrule; Sleeve for 1 mm² / AWG 18; un-insulated; electro-tin plated**Item No.: 216-204**Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black**Item No.: 216-104**Ferrule; Sleeve for 1.5 mm² / AWG 16; un-insulated; electro-tin plated; silver-colored

1.2.3 Installation

1.2.3.1 Cover



[Item No.: 709-154](#)

Cover; Type 2; suitable for cover carrier, type 2; 1 m long; transparent

1.2.3.2 Cover carrier



[Item No.: 709-168](#)

Cover carrier; Type 2; incl. fixing/retaining screws and knurled nut; suitable for 283 to 285 Series rail-mounted terminal blocks; suitable for 279 to 281 Series double- and triple-deck terminal blocks; suitable for 780 to 785, 775, 776 and 777 Series TOP-JOB® rail-mounted terminal blocks; suitable for 280 Series sensor and actuator terminal blocks; suitable for 282 Series disconnect/test terminal blocks for transformer circuits; gray

1.2.3.3 Mounting accessories



[Item No.: 209-106](#)

Mounting carrier; for isolated mounting on DIN 35 rails; gray



[Item No.: 249-116](#)

Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

1.2.4 Insulation stop

1.2.4.1 Insulation stop



[Item No.: 280-470](#)

Insulation stop; 0.08 - 0.2 mm² "s" (0.14 mm² "f-st"); 5 pieces/strip; white



[Item No.: 280-471](#)

Insulation stop; 0.25 - 0.5 mm²; 5 pieces/strip; light gray



[Item No.: 280-472](#)

Insulation stop; 0.75 - 1 mm²; 5 pieces/strip; black

1.2.5 Jumper

1.2.5.1 Jumper



[Item No.: 280-490](#)

Jumper; 10-way; insulated; gray



[Item No.: 280-482](#)

Jumper; 2-way; insulated; gray



[Item No.: 280-492](#)

Jumper; 2-way; insulated; gray



[Item No.: 280-483](#)

Jumper; 3-way; insulated; gray



[Item No.: 280-484](#)

Jumper; 4-way; insulated; gray



[Item No.: 280-485](#)

Jumper; 5-way; insulated; gray



[Item No.: 280-402](#)

Jumper; insulated; gray



[Item No.: 280-409](#)

Jumper; insulated; gray



[Item No.: 780-452](#)

Staggered jumper; from 1 to 2; insulated; gray



[Item No.: 780-453](#)

Staggered jumper; from 1 to 3; insulated; gray



[Item No.: 780-454](#)

Staggered jumper; from 1 to 4; insulated; gray



[Item No.: 780-455](#)

Staggered jumper; from 1 to 5; insulated; gray

1.2.5.1 Jumper

[Item No.: 780-456](#)

Staggered jumper; from 1 to 6; insulated; gray

[Item No.: 780-457](#)

Staggered jumper; from 1 to 7; insulated; gray

[Item No.: 780-458](#)

Staggered jumper; from 1 to 8; insulated; gray

[Item No.: 709-110](#)Wire commoning chain; 2.5 mm²; insulated; black[Item No.: 709-111](#)Wire commoning chain; 2.5 mm²; insulated; black[Item No.: 709-112](#)Wire commoning chain; 2.5 mm²; insulated; black[Item No.: 210-103](#)

Wire commoning chain; insulated; black

[Item No.: 210-123](#)

Wire commoning chain; insulated; blue

1.2.6 Marking

1.2.6.1 Marker

[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

[Item No.: 793-501](#)

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

[Item No.: 2009-115](#)

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

1.2.7 Plug

1.2.7.1 Fuse plug

[Item No.: 281-512/281-418](#)

Fuse plug; with pull-tab; for miniature metric fuses 5 x 20 mm and 5 x 25 mm; with blown fuse indication by neon lamp; 120 V; 6 mm wide; gray

[Item No.: 281-512/281-417](#)

Fuse plug; with pull-tab; for miniature metric fuses 5 x 20 mm and 5 x 25 mm; with blown fuse indication by neon lamp; 230 V; 6 mm wide; gray

[Item No.: 281-512/281-501](#)

Fuse plug; with pull-tab; for miniature metric fuses 5 x 20 mm and 5 x 25 mm; with LED indicator; 24 V AC/DC; 6 mm wide; gray

[Item No.: 281-512](#)

Fuse plug; with pull-tab; for miniature metric fuses 5 x 20 mm and 5 x 25 mm; with port for LED; 6 mm wide; gray

[Item No.: 281-511](#)

Fuse plug; with pull-tab; for miniature metric fuses 5 x 20 mm and 5 x 25 mm; without blown fuse indication; 6 mm wide; gray

[Item No.: 280-854](#)

Fuse plug; with soldered miniature fuse; 1 A FF; 5 mm wide; gray

[Item No.: 280-856](#)

Fuse plug; with soldered miniature fuse; 2 A FF; 5 mm wide; gray

[Item No.: 280-850](#)

Fuse plug; with soldered miniature fuse; 250 mA FF; 5 mm wide; gray

[Item No.: 280-852](#)

Fuse plug; with soldered miniature fuse; 500 mA FF; 5 mm wide; gray

[Item No.: 280-854/281-415](#)

Fuse plug; with soldered miniature fuse; with indicator lamp; LED (red); AC 15 - 30 V; 1 A FF; 5 mm wide; gray

[Item No.: 280-856/281-415](#)

Fuse plug; with soldered miniature fuse; with indicator lamp; LED (red); AC 15 - 30 V; 2 A FF; 5 mm wide; gray

[Item No.: 280-850/281-415](#)

Fuse plug; with soldered miniature fuse; with indicator lamp; LED (red); AC 15 - 30 V; 250 mA FF; 5 mm wide; gray

[Item No.: 280-852/281-415](#)

Fuse plug; with soldered miniature fuse; with indicator lamp; LED (red); AC 15 - 30 V; 500 mA FF; 5 mm wide; gray

[Item No.: 280-854/281-413](#)

Fuse plug; with soldered miniature fuse; with indicator lamp; LED (red); DC 15 - 30 V; 1 A FF; 5 mm wide; gray

[Item No.: 280-856/281-413](#)

Fuse plug; with soldered miniature fuse; with indicator lamp; LED (red); DC 15 - 30 V; 2 A FF; 5 mm wide; gray

[Item No.: 280-850/281-413](#)

Fuse plug; with soldered miniature fuse; with indicator lamp; LED (red); DC 15 - 30 V; 250 mA FF; 5 mm wide; gray

[Item No.: 280-852/281-414](#)

Fuse plug; with soldered miniature fuse; with indicator lamp; LED (red); DC 15 - 30 V; 500 mA FF; 5 mm wide; gray

[Item No.: 280-854/281-414](#)

Fuse plug; with soldered miniature fuse; with indicator lamp; LED (red); DC 30 - 65 V; 1 A FF; 5 mm wide; gray

[Item No.: 280-856/281-414](#)

Fuse plug; with soldered miniature fuse; with indicator lamp; LED (red); DC 30 - 65 V; 2 A FF; 5 mm wide; gray

[Item No.: 280-850/281-414](#)

Fuse plug; with soldered miniature fuse; with indicator lamp; LED (red); DC 30 - 65 V; 250 mA FF; 5 mm wide; gray

1.2.8 Protective warning marker

1.2.8.1 Cover



Item No.: 280-415

Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow

1.2.9 Push-in type wire jumper

1.2.9.1 Jumper



Item No.: 249-126

Push-in type wire jumper; 0.75 mm²; insulated; 110 mm long; black



Item No.: 249-123

Push-in type wire jumper; 0.75 mm²; insulated; 180 mm long; black



Item No.: 249-127

Push-in type wire jumper; 0.75 mm²; insulated; 250 mm long; black



Item No.: 249-125

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

1.2.10 Test and measurement

1.2.10.1 Testing accessories



Item No.: 249-142

L-type end module; modular; with rigid contact pin; End module; 1,50 mm²; gray

Item No.: 249-141

L-type test plug module; modular; with spring-loaded contact pin; Center module; 1,50 mm²; gray

1.2.11 Tool

1.2.11.1 Operating tool



Item No.: 210-658

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short; multicoloured

Item No.: 210-720

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Item No.: 210-657

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured

Installation Notes

Installation



Snapping a terminal block onto the DIN-rail.



Removing a terminal block from the assembly.



Double-deck terminal blocks accommodate two circuits of different potentials on two decks; different circuits can be differentiated by color coding either deck (280 Series). The lower deck is wider than the upper for easier wiring.

Conductor termination



The flexible marker carrier, which is placed above the wiring level, can be pushed aside during wiring or commoning. The carrier has two staggered levels for WMB markers that perfectly align with the terminal block decks.

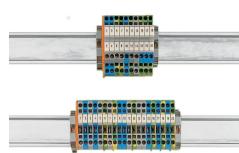
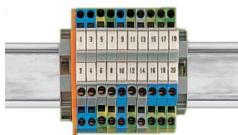
Commoning



Commoning using an adjacent jumper.
Push jumpers down until fully inserted!



Example of a mixed assembly with double-deck terminal blocks.
The 280 Series Double-Deck Terminal Blocks are available with decks of same or different color according to their function. This is an additional visual aid during wiring, service or maintenance.



With a terminal block width of just 5 mm, an effective width of just 2.5 mm for terminal blocks of same or different potentials can be realized for conductors ranging 0.08 mm² ... 2.5 mm² (28 ... 14 AWG).

Use 50% less rail space with double-deck terminal blocks.

Marking



Labeling via WMB Multi Marking System.

