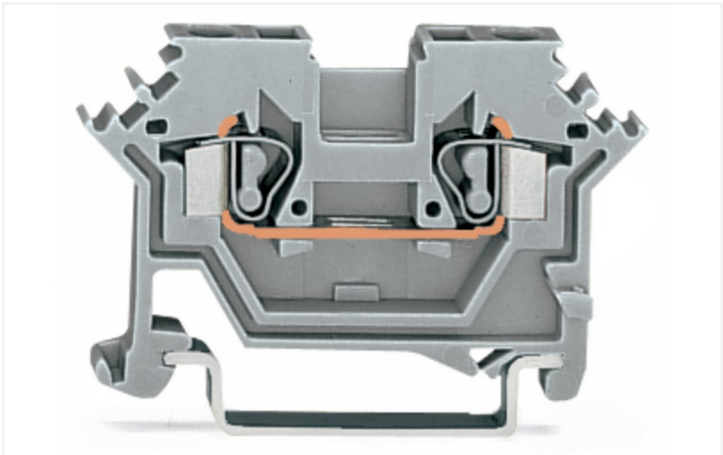


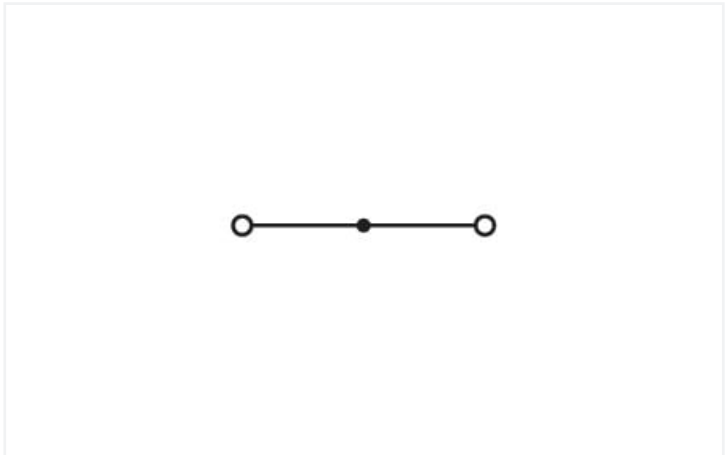
Data Sheet | Item Number: 280-691

2-conductor through terminal block; 2.5 mm²; suitable for Ex e II applications; LATE-RAL MARKING; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 2,50 mm²; light gray
<https://www.wago.com/280-691>



Color: ■ light gray

Similar to illustration



Similar to illustration

Through terminal block, 280 Series, CAGE CLAMP®

Connecting conductors is quick and easy with this through terminal block (item number 280-691). Whether in industrial or building applications, our rail-mount through terminal blocks are the perfect solution to quickly and securely connect electrical conductors. Depending on the variant, you can use them for either typical through-wiring or potential distribution. Ensure that the strip lengths are between 8 mm and 9 mm when connecting conductors to this through terminal block. Featuring conductor terminals along with CAGE CLAMP®, this connector is highly versatile. Our reliable and maintenance-free CAGE CLAMP® connection makes it easy to connect all conductor types without having to prepare the conductor. For example, you don't need to crimp ferrules. This through terminal block is suitable for conductor cross sections ranging from 0.08 mm² to 2.5 mm². It has one level. You can connect a single potential using the two clamping points. The light gray housing is made of polyamide (PA66) for insulation. An operating tool is used to operate this through rail-mount terminal block. These through rail-mount terminal blocks are mounted using DIN-35 rails.. Conductors made of copper can be connected via front-entry wiring.

Electrical data				
Ratings per		IEC/EN 60947-7-1		
Overvoltage category		III	III	II
Pollution degree		3	2	2
Nominal voltage		-	-	-
Rated surge voltage		-	-	-
Rated current		-	-	-
Approvals per		UL 1059		
Use group		B	C	D
Rated voltage		-	600 V	-
Rated current		-	20 A	-
Approvals per		CSA 22.2 No 158		
Use group		B	C	D
Rated voltage		-	600 V	-
Rated current		-	24 A	-
Ex information				
Reference hazardous areas		See application instructions in section "Knowledge and Downloads – Documentation – Additional Information: Technical Section; Technical Explanations"		
Rated voltage EN (Ex e II)		550 V		
Note (rated voltage)		Using staggered jumpers reduces the maximum rated voltage to 275 V.		
Rated current (Ex e II)		23 A		

Power Loss	
Power loss, per pole (potential)	0.7036 W
Rated current I _N for specified power loss	23 A
Resistance value for specified, current-dependent power loss	0.00133 Ω

Physical data	
Width	5 mm / 0.197 inches
Height	50 mm / 1.969 inches
Depth from upper-edge of DIN-rail	28 mm / 1.102 inches




Material data	
Note (material data)	Information on material specifications can be found here
Color	light gray
Material group	I
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.093 MJ
Weight	4.8 g

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)	100 pcs
Packaging type	Box
Country of origin	DE
GTIN	4044918467834
Customs tariff number	85369010000





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 60947	2157201.01	ATEX-Attestation of Con- formity WAGO GmbH & Co. KG	-	-
CSA DEKRA Certification B.V.	C22.2	1536071	EU-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-
UL Underwriters Laboratories Inc.	UL 1059	E45172	UK-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-

Approvals for marine applications			Approvals for hazardous areas		
  			  		
Approval	Standard	Certificate Name	Approval	Standard	Certificate Name
ABS American Bureau of Ship- ping	EN 60947	20-HG1941090-PDA	AEx UL International Germany GmbH c/o Physikalisch Technische Bundesanstalt	UL 60079	E185892 (AEx e II resp. Ex e II)
BV Bureau Veritas S.A.	EN 60947	07436/F0 BV	ATEX Physikalisch Technische Bundesanstalt	IEC 60079-0	PTB 99 ATEX 3109 U (Ex eb IIC, IM 2 Ex eb IMb)
DNV GL Det Norske Veritas, Ger- manischer Lloyd	-	TAE00001V2	IECEx Physikalisch Technische Bundesanstalt	IEC 60079-0	IECEx PTB 03.0004U (Ex eb IIC Gb or Ex eb I Mb)

Downloads	
Environmental Product Compliance	
Compliance Search	
Environmental Product Compliance 280-691	

Documentation		
Additional Information		
Technical Section	pdf 2246.92 KB	







CAD/CAE-Data	
CAD data	CAE data
2D/3D Models 280-691	EPLAN Data Portal 280-691
	WSCAD Universe 280-691
	ZUKEN Portal 280-691

1 Compatible Products

1.1 Required Accessories

1.1.1 End plate

1.1.1.1 End plate

			
Item No.: 280-362 End and intermediate plate; 2.5 mm thick; light gray	Item No.: 209-191 Separator for Ex e/Ex i applications; 3 mm thick; 120 mm wide; orange	Item No.: 209-190 Separator for Ex e/Ex i applications; 3 mm thick; 90 mm wide; orange	Item No.: 280-363 Separator plate; 2 mm thick; oversized; light gray

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; un-insulated; 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.: 709-153
Cover; Type 1; suitable for cover carrier, type 1; 1 m long; transparent

1.2.3.2 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

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.: 280-422](#)
Jumper; insulated; yellow-green



[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



[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

1.2.6 Marking

1.2.6.1 Double marker carrier



[Item No.: 209-128](#)
Adaptor; gray

1.2.6.2 Group marker carrier



[Item No.: 209-140](#)
Group marker carrier; gray



[Item No.: 209-141](#)
Group marker carrier; gray



[Item No.: 209-142](#)
Group marker carrier; gray



[Item No.: 249-105](#)
Group marker carrier; gray

1.2.6.3 Marker



[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



[Item No.: 793-5501/000-007](#)
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; gray



[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



[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



[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



[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



[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



[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



1.2.6.3 Marker



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



Item No.: 793-501/000-006
WMB marking card; as card; not stretchable; plain; snap-on type; blue



Item No.: 793-501/000-007
WMB marking card; as card; not stretchable; plain; snap-on type; gray



Item No.: 793-501/000-023
WMB marking card; as card; not stretchable; plain; snap-on type; green



Item No.: 793-501/000-017
WMB marking card; as card; not stretchable; plain; snap-on type; light green



Item No.: 793-501/000-012
WMB marking card; as card; not stretchable; plain; snap-on type; orange



Item No.: 793-501/000-005
WMB marking card; as card; not stretchable; plain; snap-on type; red



Item No.: 793-501/000-024
WMB marking card; as card; not stretchable; plain; snap-on type; violet



Item No.: 793-501
WMB marking card; as card; not stretchable; plain; snap-on type; white



Item No.: 793-501/000-002
WMB marking card; as card; not stretchable; plain; snap-on type; yellow



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



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



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



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



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



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



Item No.: 2009-115
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white



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

1.2.7 Protective warning marker

1.2.7.1 Cover



Item No.: 280-415
Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow

1.2.8 Push-in type wire jumper

1.2.8.1 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

1.2.9 Tool

1.2.9.1 Operating tool



Item No.: 210-658
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short; multicoloured



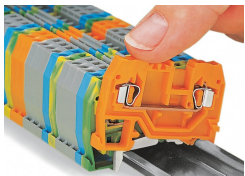
Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured



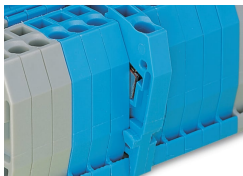
Item No.: 210-657
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured

Installation Notes

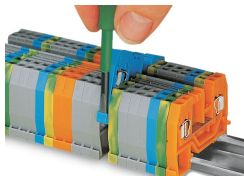
Installation



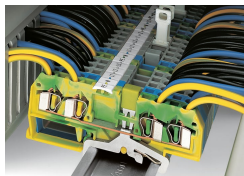
Snapping a terminal block onto the DIN-rail.



Quick assembly keys prevent reverse mounting.

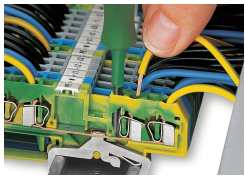


Removing a terminal block from the assembly.

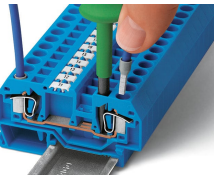


Steel DIN-rails are not suited for PEN (ground and N-conductor) applications per EN 60947-7-2 (VDE 0611, Part 3).

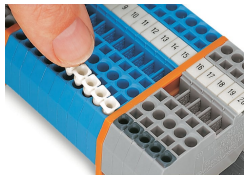
Conductor termination



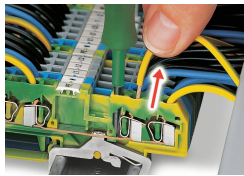
CAGE CLAMP® connection
Inserting a conductor.



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.



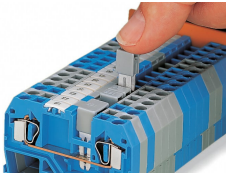
Inserting insulation stops.



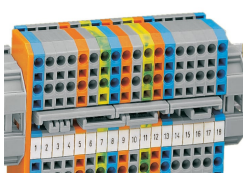
CAGE CLAMP® connection
Removing a solid conductor.



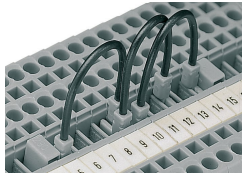
Commoning



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



Staggered jumpers are suitable for sophisticated circuit requirements. Push jumpers down until fully inserted!



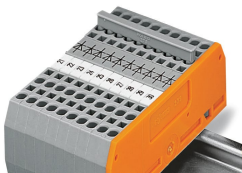
Push-In Type Wire Jumpers
When installing machines or control systems, it is often necessary to make an additional connection between two terminal blocks that are not next to each other on the rail. In such cases, WAGO's touch-proof, push-in type wire jumpers are the ideal solution.

These jumpers are compatible with the following rail-mount terminal blocks:

- 279 Series (1.5 mm²/16 AWG),
- 280/775/780 Series (2.5 mm²/14 AWG)
- 281/769/776/777/781 and 880 Series (4 mm²/12 AWG)

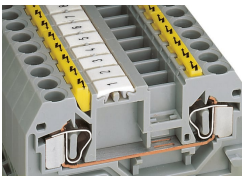
They are available in three conductor lengths (60, 110 and 250 mm), allowing up to 60 terminal blocks to be commoned depending on their width (see table on the right).

The 280/775/780 and 281/776/777/781 Series Terminal Blocks accept two wire jumpers, allowing the use of commoning chains. Furthermore, the 280/769/775/780/880 and 281/776/777/781 Series allow both wire jumper and adjacent jumper to be simultaneously plugged into a same terminal block.



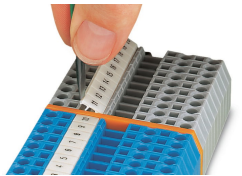
Commoning using comb-style jumper bars: Push comb-style jumper bars down until fully inserted.

Cover

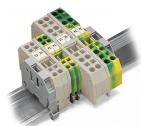
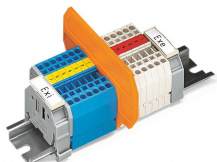


Protective warning markers inserted into the operating slots

Marking



Labeling via WMB Multi Marking System.

Ex application**Separator plate for Ex e/Ex i applications**

According to EN 50020, a minimum distance of 50 mm must be kept between live parts of Ex e and Ex i circuits. The use of Ex e/Ex i separators is a space-saving solution when Ex e and Ex i terminal blocks are mounted on a common DIN-rail.

For 279 ... 282 Series:

209-190 for 2-conductor terminal blocks

209-191 for 2-, 3-, 4-conductor terminal blocks

End and intermediate plate

In order to meet creepage and clearance requirements for Ex e applications, it is necessary to insert an end or intermediate plate between a through and a ground conductor terminal block.