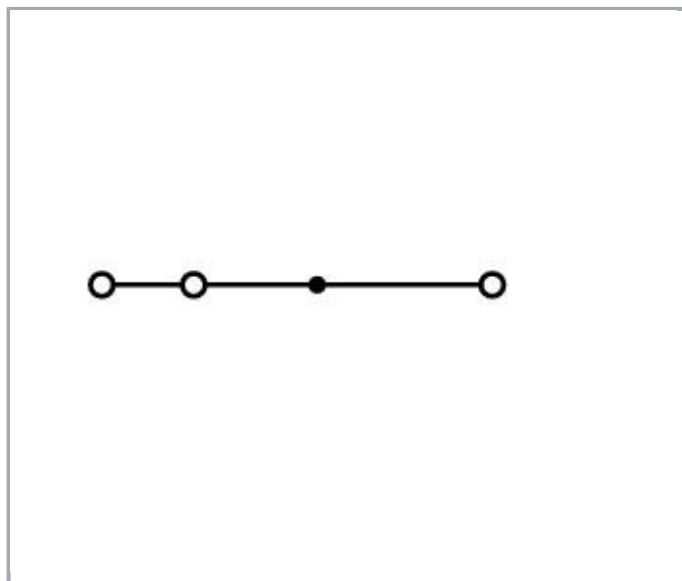
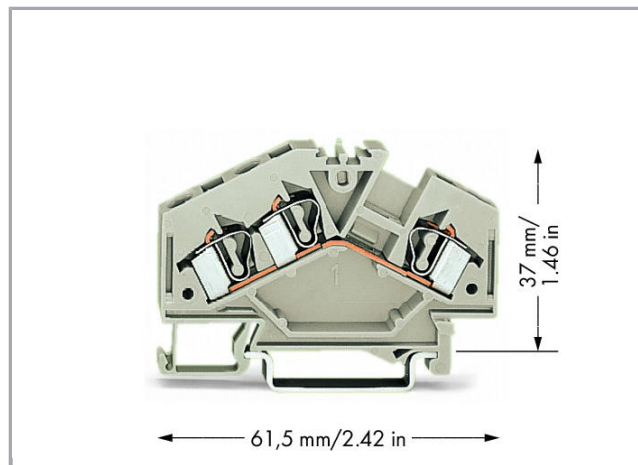
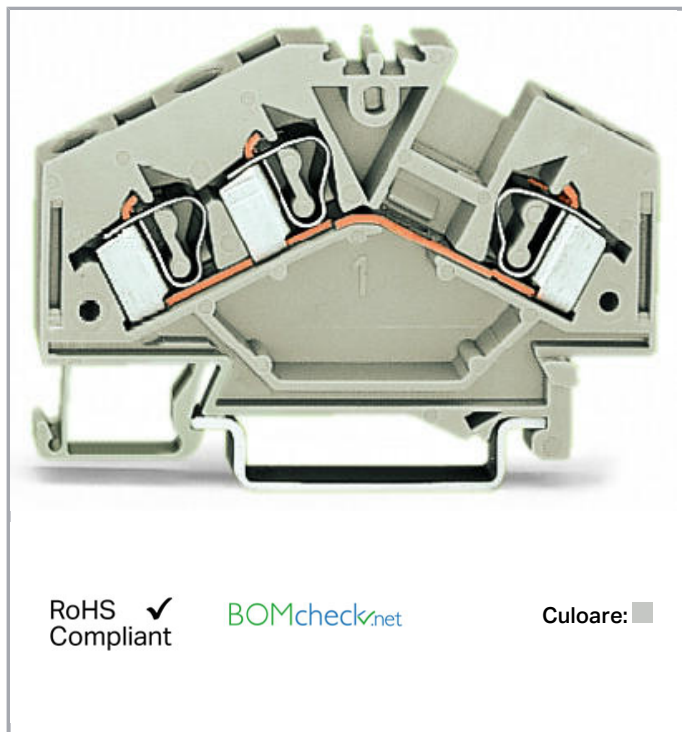


Fișă tehnică | Număr articol: 281-998

3-conductor through terminal block; 4 mm²; suitable for Ex e II applications;
center marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 4,00 mm²;
light gray



www.wago.com/281-998



Descriere articol

Supus modificărilor.

WAGO Kontakttechnik GmbH & Co. KG
/Representative Office Romania
Sos. Pipera-Tunari nr. 1/1
building 1, 2nd floor | 077190 Voluntari, Ilfov
Tel.: +40-(0)31 421 85 68 | Email: info-RO@wago.com

Aveți întrebări despre produsele noastre?
Vă stăm la dispoziție pentru preluarea apelului la +40 (0) 31 421 85 68.

**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 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 (14 AWG) = 16 A

4 mm² (12 AWG) = 22 A

Date**Electrical data****Ratings per IEC/EN 60664-1**

Ratings per	IEC/EN 60947-7-1
-------------	------------------

Approvals Ex

Rated voltage EN (Ex e II)	550 V
----------------------------	-------

Rated current (Ex e II)	30 A
-------------------------	------

Connection data

Connection technology	CAGE CLAMP®
-----------------------	-------------

Actuation type	Operating tool
----------------	----------------

Connectable conductor materials	Copper Aluminum
---------------------------------	--------------------

Solid conductor	0.08 ... 4 mm ² / 28 ... 12 AWG
-----------------	--

Fine-stranded conductor	0.08 ... 4 mm ² / 28 ... 12 AWG
-------------------------	--

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Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Total number of connection points	3
Total number of potentials	1
Number of levels	1
Wiring type	Front-entry wiring

Geometrical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	37 mm / 1.457 inch
Depth	61.5 mm / 2.421 inch

Mechanical data

Design	angled
Mounting type	DIN-35 rail
Marking level	Center marking

Material Data


Color	light gray
Insulation material	Polyamide 66 (PA 66)
Fire load	0,185 MJ
Weight	10,2 g

Commercial data

Product Group	1 (Rail Mounted Terminal Blocks)
Packaging type	BOX
Country of origin	DE
GTIN	4044918325400
Customs tariff number	85369010000

Aprobări / certificate




Ex-Approvals

Emblemă	Aprobare	Text de aprobare suplimentar	Nume certificat
	ATEX Physikalisch Technische Bundesanstalt (PTB)	-	PTB 00 ATEX




Supus modificărilor.

3110 U
(II 2 G
EEx e II)

Country specific Approvals

Emblemă	Aprobare	Text de aprobare suplimentar	Nume certificat
	CCA DEKRA Certification B.V.	EN 60947, IEC 60947	NTR NL-7454/A1
	CSA DEKRA Certification B.V.	C22.2 No. 158	1505034
	KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-107288

Ship Approvals

Emblemă	Aprobare	Text de aprobare suplimentar	Nume certificat
	ABS American Bureau of Shipping	-	20-HG1941090-PDA
	BV Bureau Veritas S.A.	EN 60947	07436/E0 BV
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2
	LR Lloyds Register	EN 60947	91/20112 (E9)

UL-Approvals

Emblemă	Aprobare	Text de aprobare suplimentar	Nume certificat
	UL	UL 1059	20170731-

Supus modificărilor.

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/Representative Office Romania
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building 1, 2nd floor | 077190 Voluntari, Ilfov
Tel.: +40-(0)31 421 85 68 | Email: info-RO@wago.com

Aveți întrebări despre produsele noastre?
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Underwriters Laboratories Inc.

E45172

Counterpart

Produce compatibile

Jumper

	Nr. articol: 249-123 Push-in type wire jumper; insulated; wire length 180 mm; Conductor cross section 0.75 mm ²	www.wago.com/249-123
	Nr. articol: 249-125 Push-in type wire jumper; insulated; wire length 60 mm; Conductor cross section 0.75 mm ²	www.wago.com/249-125
	Nr. articol: 249-126 Push-in type wire jumper; insulated; wire length 110 mm; Conductor cross section 0.75 mm ²	www.wago.com/249-126
	Nr. articol: 249-127 Push-in type wire jumper; insulated; wire length 250 mm; Conductor cross section 0.75 mm ²	www.wago.com/249-127
	Nr. articol: 281-402 Adjacent jumper; insulated; IN = IN terminal block; gray	www.wago.com/281-402
	Nr. articol: 281-409 Alternate jumper; insulated; IN = IN terminal block; gray	www.wago.com/281-409
	Nr. articol: 281-422 Adjacent jumper; insulated; IN = IN terminal block; yellow-green	www.wago.com/281-422
	Nr. articol: 281-482 Comb-style jumper bar; insulated; 2-way; IN = IN terminal block; gray	www.wago.com/281-482
	Nr. articol: 281-483 Comb-style jumper bar; insulated; 3-way; IN = IN terminal block; gray	www.wago.com/281-483
	Nr. articol: 281-485 Comb-style jumper bar; insulated; 5-way; IN = IN terminal block; gray	www.wago.com/281-485

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Tel.: +40-(0)31 421 85 68 | Email: info-RO@wago.com

Aveți întrebări despre produsele noastre?
Vă stăm la dispoziție pentru preluarea apelului la +40 (0) 31 421 85 68.



Nr. articol: 281-490
Comb-style jumper bar; insulated; 10-way; IN = IN terminal block; gray

www.wago.com/281-490



Nr. articol: 281-492
Alternate comb-style jumper bar; insulated; 2-way; IN = IN terminal block; gray

www.wago.com/281-492



Nr. articol: 781-452
Staggered jumper; insulated; from 1 to 2; Spacing: 6 mm; gray

www.wago.com/781-452



Nr. articol: 781-453
Staggered jumper; insulated; from 1 to 3; Spacing: 6 mm; gray

www.wago.com/781-453



Nr. articol: 781-454
Staggered jumper; insulated; from 1 to 4; Spacing: 6 mm; gray

www.wago.com/781-454



Nr. articol: 781-455
Staggered jumper; insulated; from 1 to 5; Spacing: 6 mm; gray

www.wago.com/781-455



Nr. articol: 781-456
Staggered jumper; insulated; from 1 to 6; Spacing: 6 mm; gray

www.wago.com/781-456

Marking accessories



Nr. articol: 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



Nr. articol: 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



Nr. articol: 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



Nr. articol: 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



Nr. articol: 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



Nr. articol: 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



Nr. articol: 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



Nr. articol: 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

Supus modificărilor.

	Nr. articol: 209-140 Group marker carrier; gray	www.wago.com/209-140
	Nr. articol: 209-141 Group marker carrier; gray	www.wago.com/209-141
	Nr. articol: 209-142 Group marker carrier; gray	www.wago.com/209-142
	Nr. articol: 209-185 Adaptor; gray	www.wago.com/209-185
	Nr. articol: 249-105 Group marker carrier; gray	www.wago.com/249-105
	Nr. articol: 793-501 WMB marking card; as card; not stretchable; plain; snap-on type; white	www.wago.com/793-501
	Nr. articol: 793-501/000-002 WMB marking card; as card; not stretchable; plain; snap-on type; yellow	www.wago.com/793-501/000-002
	Nr. articol: 793-501/000-005 WMB marking card; as card; not stretchable; plain; snap-on type; red	www.wago.com/793-501/000-005
	Nr. articol: 793-501/000-006 WMB marking card; as card; not stretchable; plain; snap-on type; blue	www.wago.com/793-501/000-006
	Nr. articol: 793-501/000-007 WMB marking card; as card; not stretchable; plain; snap-on type; gray	www.wago.com/793-501/000-007
	Nr. articol: 793-501/000-012 WMB marking card; as card; not stretchable; plain; snap-on type; orange	www.wago.com/793-501/000-012
	Nr. articol: 793-501/000-017 WMB marking card; as card; not stretchable; plain; snap-on type; light green	www.wago.com/793-501/000-017
	Nr. articol: 793-501/000-023 WMB marking card; as card; not stretchable; plain; snap-on type; green	www.wago.com/793-501/000-023
	Nr. articol: 793-501/000-024 WMB marking card; as card; not stretchable; plain; snap-on type; violet	www.wago.com/793-501/000-024
	Nr. articol: 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

Supus modificărilor.

**Nr. articol: 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**Nr. articol: 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**Nr. articol: 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**Nr. articol: 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

www.wago.com/793-5501/000-007**Nr. articol: 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**Nr. articol: 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; green

www.wago.com/793-5501/000-017**Nr. articol: 793-5501/000-023**

















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www.wago.com/793-5501/000-023**Nr. articol: 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**ferrule****Nr. articol: 216-106**Ferrule; Sleeve for 2.5 mm² / AWG 14; uninsulated; electro-tin platedwww.wago.com/216-106**Nr. articol: 216-201**Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; whitewww.wago.com/216-201**Nr. articol: 216-202**Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; graywww.wago.com/216-202**Nr. articol: 216-203**Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; redwww.wago.com/216-203**Nr. articol: 216-204**Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; blackwww.wago.com/216-204**Nr. articol: 216-205**Ferrule; Sleeve for 2.08 mm² / AWG 14; insulated; electro-tin plated; yellowwww.wago.com/216-205**Nr. articol: 216-206**Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; bluewww.wago.com/216-206

Supus modificărilor.

	Nr. articol: 216-241 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white	www.wago.com/216-241
	Nr. articol: 216-242 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	www.wago.com/216-242
	Nr. articol: 216-243 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red	www.wago.com/216-243
	Nr. articol: 216-244 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	www.wago.com/216-244
	Nr. articol: 216-246 Ferrule; Sleeve for 2.5 mm ² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue	www.wago.com/216-246
	Nr. articol: 216-301 Ferrule; Sleeve for 0.25 mm ² / AWG 24; insulated; electro-tin plated; yellow	www.wago.com/216-301
	Nr. articol: 216-302 Ferrule; Sleeve for 0.34 mm ² / 22 AWG; insulated; electro-tin plated; green	www.wago.com/216-302
Carrier rail		
	Nr. articol: 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	www.wago.com/210-112
	Nr. articol: 210-113 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715	www.wago.com/210-113
	Nr. articol: 210-114 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715	www.wago.com/210-114
	Nr. articol: 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	www.wago.com/210-115
	Nr. articol: 210-118 Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715	www.wago.com/210-118
	Nr. articol: 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
	Nr. articol: 210-197 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715	www.wago.com/210-197
	Nr. articol: 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
	Nr. articol: 210-504 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715	www.wago.com/210-504
	Nr. articol: 210-505 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715	www.wago.com/210-505


Supus modificărilor.


	Nr. articol: 210-506 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715	www.wago.com/210-506
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	Nr. articol: 210-508 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715	www.wago.com/210-508
--	---	--


Insulation stop


	Nr. articol: 281-470 Insulation stop; 0.08 - 0.2 mm ² "s" (0.14 mm ² "f-st"); 5 pieces/strip; white	www.wago.com/281-470
--	---	--

	Nr. articol: 281-471 Insulation stop; 0.25 - 0.5 mm ² ; 5 pieces/strip; light gray	www.wago.com/281-471
--	---	--

	Nr. articol: 281-472 Insulation stop; 0.75 - 1.5 mm ² ; 5 pieces/strip; dark gray	www.wago.com/281-472
--	--	--

End plate


	Nr. articol: 209-191 Separator for Ex e/Ex i applications; 3 mm thick; 120 mm wide; orange	www.wago.com/209-191
--	--	--


	Nr. articol: 209-192 Separator for Ex e/Ex i applications; 3 mm thick; 125.5 mm wide; orange	www.wago.com/209-192
--	--	--

	Nr. articol: 281-357 End and intermediate plate; 2.5 mm thick; light gray	www.wago.com/281-357
--	---	--


	Nr. articol: 281-358 Separator plate; 2 mm thick; oversized; light gray	www.wago.com/281-358
---	---	--


assembling


	Nr. articol: 209-106 Mounting carrier; for isolated mounting on DIN 35 rails; gray	www.wago.com/209-106
--	--	--

	Nr. articol: 709-153 Cover; Type 1; suitable for cover carrier, type 1; 1 m long; transparent	www.wago.com/709-153
--	---	--


tools

	Nr. articol: 210-657 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short	www.wago.com/210-657
--	---	--

	Nr. articol: 210-658 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short	www.wago.com/210-658
--	---	--

	Nr. articol: 210-720 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft	www.wago.com/210-720
--	--	--

Protective Warning Marker

	Nr. articol: 281-415 Protective warning marker; with high-voltage symbol, black; for 5 terminal blocks; yellow	www.wago.com/281-415
--	--	--

Supus modificărilor.



Descărcări Documentation

Additional Information

Technical explanations	Apr 3, 2019	pdf 2,1 MB	Descărcare
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CAD/CAE-Data

CAD data

2D/3D Models 281-998	URL	Descărcare
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CAE data

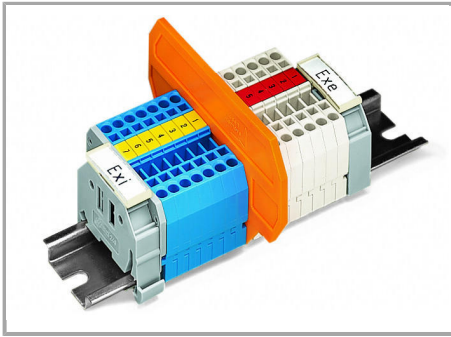
EPLAN Data Portal 281-998	URL	Descărcare
---------------------------	-----	------------

WSCAD Universe 281-998	URL	Descărcare
------------------------	-----	------------

Installation Notes

Assembly

Supus modificărilor.



Separator 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 carrier rail.

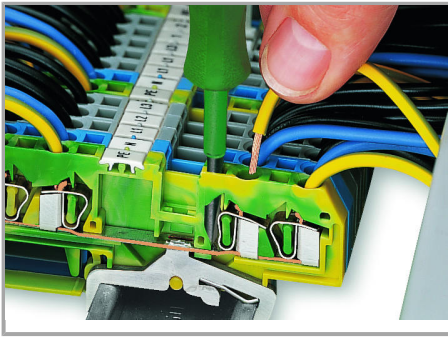
Compatible with 279 to 282 Series:

209-190 for 2-conductor terminal blocks

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

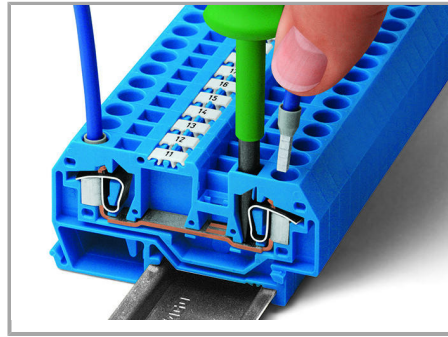
Inserting a conductor

Supus modificărilor.



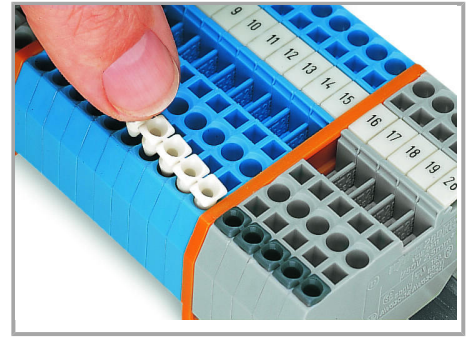
CAGE CLAMP® connection

Inserting a conductor.



CAGE CLAMP® connection

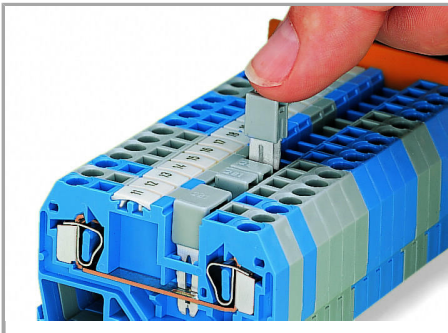
Inserting a conductor.



Inserting insulation stops.

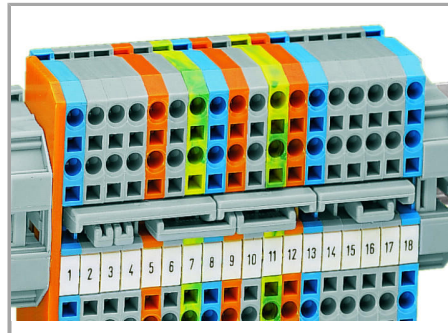
With ferruled conductors, it is necessary to use a terminal block one size larger than the conductor's nominal cross-section.

Commoning



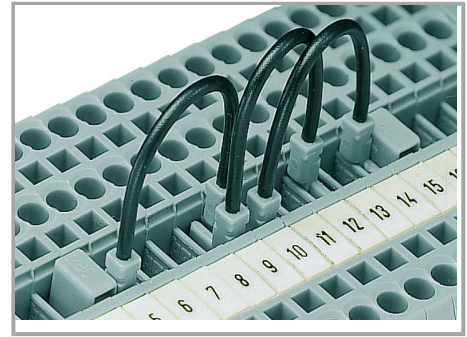
Commoning using an adjacent jumper (280-402).

Push jumper down until fully inserted.



Staggered jumpers for sophisticated circuit requirements – push jumpers down until fully inserted.

Supus modificărilor.



Supus modificărilor.

WAGO Kontakttechnik GmbH & Co. KG
/Representative Office Romania
Sos. Pipera-Tunari nr. 1/1
building 1, 2nd floor | 077190 Voluntari, Ilfov
Tel.: +40-(0)31 421 85 68 | Email: info-RO@wago.com

Aveți întrebări despre produsele noastre?
Vă stăm la dispoziție pentru preluarea apelului la +40 (0) 31 421 85 68.



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

Compared with the 279 Series, the 280/775/780 and 281/776/777/781 Series can also accommodate 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.

Supus modificărilor.