Rail-Mounted Quadruple Deck Terminal Blocks or Rail-Mounted Terminal Blocks for Wiring of Electric Motors, Series 281
Description and Handling

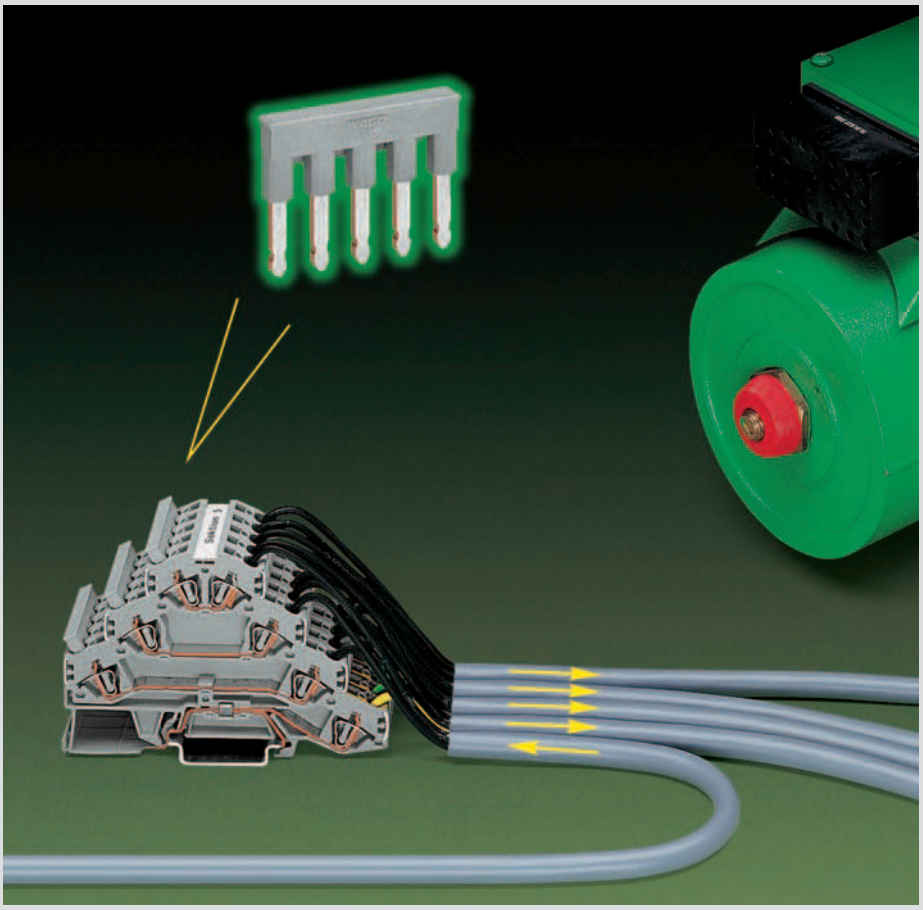
In addition to the rail-mounted terminal blocks for electric motor wiring, new versions are now available.

– Terminal block **without** ground (earth) contact and with only **2** potentials.

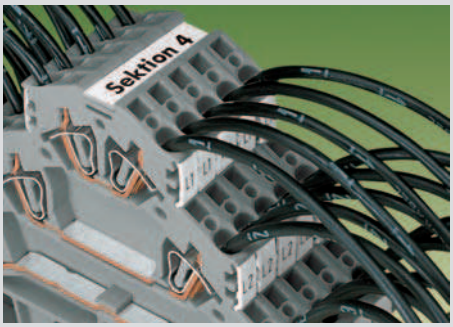
Especially for additional functions such as engine brakes or temperature probes. Having the same shape, this type can be put next to the appropriate terminal block for electric motor wiring without having to use separator plates. That makes the rail assembly clearer and wiring is easier. Since no clamping unit remains unwired, wiring errors are avoided.

– Terminal block **without** ground (earth) contact and with **3** potentials.

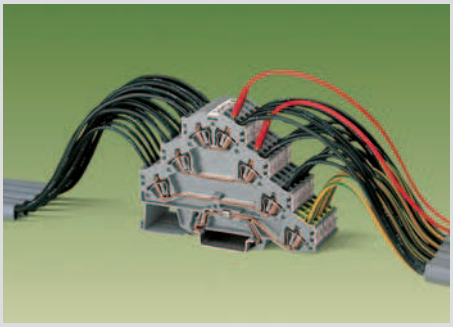
Clear and unambiguous assignment of clamping units is also the main advantage with this type. When using devices with protective insulation for example, there are no open ground (earth) clamping units that could lead to confusion.



Marking

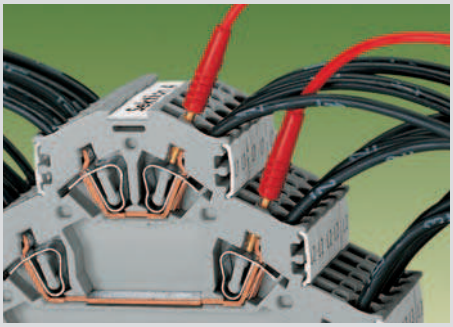


Marking clamping units with WMB multi-marking system or WSB quick marking system.
(see section 14)
Group marking with marking strips
Item No. 709-196.



3 phases and ground (earth) conductor in one terminal block
Compact design

Testing



Testing with test plug 2 mm/0.079 in Ø

❶ 400 V = rated voltage
6 kV = rated surge voltage
3 = pollution degree
(see also section 15)

❷ See application notes on pages 2.43 and 2.44

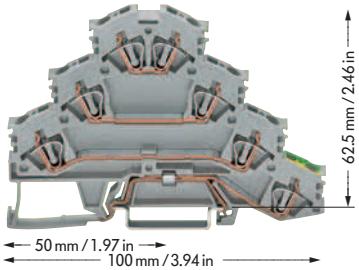
CAGE CLAMP® clamps the following copper wires:*

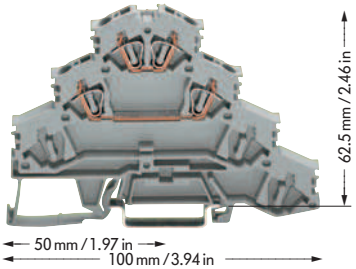
solid	fine-stranded wire – tip bonded	stranded	fine-stranded wire with crimped ferrule**	fine-stranded, also with tinned single strands	fine-stranded wire with crimped pin terminal

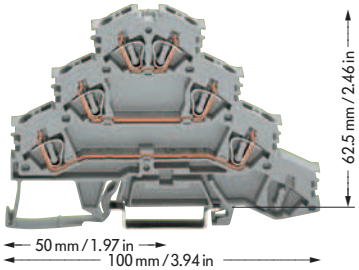
* For aluminum wire see notes in section 15!
** When using wires with ferrules, it is necessary to use a terminal block one size larger than the nominal cross section of the wire.

Rail-Mounted Quadruple Deck Terminal Blocks or Rail-Mounted Terminal Blocks for Wiring of Electric Motors Series 281

0.08 – 4 mm² / AWG 28 – 12 400 V/6 kV/3 ❶ 20 A (2.5 mm²) 25 A (4 mm²) / 300 V, 20 A Terminal block width 6 mm / 0.236 in 8 – 9 mm / 0.33 in * cULus GL CCA KEMA BV LR NV	0.08 – 4 mm² / AWG 28 – 12 400 V/6 kV/3 ❶ 20 A (2.5 mm²) 25 A (4 mm²) Terminal block width 6 mm / 0.236 in 8 – 9 mm / 0.33 in	0.08 – 4 mm² / AWG 28 – 12 400 V/6 kV/3 ❶ 20 A (2.5 mm²) 25 A (4 mm²) Terminal block width 6 mm / 0.236 in 8 – 9 mm / 0.33 in







	Item No.	Pack. unit pcs
Rail-mounted terminal block for wiring of electric motors or rail-mounted quadruple deck terminal block, for DIN 35 rail, L1 – L2 – L3 – PE, grey	**281-530**	50
Rail-mounted terminal block for wiring of electric motors or rail-mounted quadruple deck terminal block, for DIN 35 rail, L1 – L2, grey	**281-531**	50
Rail-mounted terminal block for wiring of electric motors or rail-mounted quadruple deck terminal block, for DIN 35 rail, L1 – L2 – L3, grey	**281-532**	50

	Item No.	Pack. unit pcs
End and intermediate plate, 1 mm / 0.039 in thick		
orange	**281-366**	100 (4 x 25)
grey	**281-365**	100 (4 x 25)

Accessories Series 281

Appropriate marking system **WMB/WSB** (see section 14)

	Item No.	Pack. unit pcs
Insulation stop ❷, 5 pcs / strip		
white	**281-470**	200 strips
light grey	**281-471**	200 strips
dark grey	**281-472**	200 strips
Comb type jumper bar ❷, insulated, $I_N = I_N$ of terminal block		
2-way	**281-482**	100 (4 x 25)
3-way	**281-483**	100 (4 x 25)
5-way	**281-485**	100 (4 x 25)
10-way	**281-490**	50 (2 x 25)
Alternate comb type jumper bar ❷, insulated, $I_N = I_N$ of terminal block		
2-way	**281-492**	100 (4 x 25)
Operating tool, insulated		
2-way	**280-432**	1
3-way	**280-433**	1
5-way	**281-440**	1
Test plug, with cable 500 mm / 1'7.7"		
2 mm Ø, red	**210-136**	50 (5 x 10)
2.3 mm Ø, yel.	**210-137**	50 (5 x 10)
WMB multi-marking system, 10 strips with 10 markers each, white with black printing, see section 14		
WSB quick marking system, 10 strips with 10 markers each, white with black printing, see section 14		
Marker strips, transparent, plain, for central marking – group marking – 1 m / 3'33" long, 7.5 mm / 0.295 in wide		
on roll 50 m	**709-177**	1
on roll 300 m	**709-187**	1

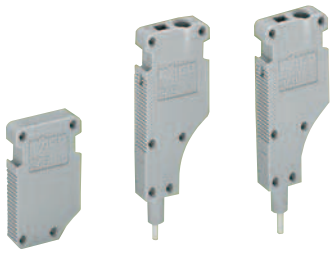
	Item No.	Pack. unit pcs
End and intermediate plate, 1 mm / 0.039 in thick		
orange	**281-366**	100 (4 x 25)
grey	**281-365**	100 (4 x 25)
Insulation stop ❷, 5 pcs / strip		
white	**281-470**	200 strips
light grey	**281-471**	200 strips
dark grey	**281-472**	200 strips
Comb type jumper bar ❷, insulated, $I_N = I_N$ of terminal block		
2-way	**281-482**	100 (4 x 25)
3-way	**281-483**	100 (4 x 25)
5-way	**281-485**	100 (4 x 25)
10-way	**281-490**	50 (2 x 25)
Alternate comb type jumper bar ❷, insulated, $I_N = I_N$ of terminal block		
2-way	**281-492**	100 (4 x 25)
Operating tool, insulated		
2-way	**280-432**	1
3-way	**280-433**	1
5-way	**281-440**	1
Test plug, with cable 500 mm / 1'7.7"		
2 mm Ø, red	**210-136**	50 (5 x 10)
2.3 mm Ø, yel.	**210-137**	50 (5 x 10)
WMB multi-marking system, 10 strips with 10 markers each, white with black printing, see section 14		
WSB quick marking system, 10 strips with 10 markers each, white with black printing, see section 14		
Marker strips, transparent, plain, for central marking – group marking – 1 m / 3'33" long, 7.5 mm / 0.295 in wide		
on roll 50 m	**709-177**	1
on roll 300 m	**709-187**	1

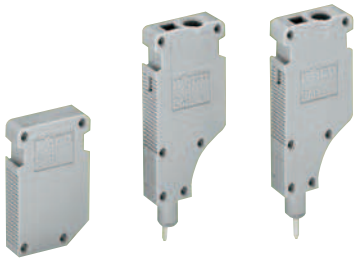
	Item No.	Pack. unit pcs
End and intermediate plate, 1 mm / 0.039 in thick		
orange	**281-366**	100 (4 x 25)
grey	**281-365**	100 (4 x 25)
Insulation stop ❷, 5 pcs / strip		
white	**281-470**	200 strips
light grey	**281-471**	200 strips
dark grey	**281-472**	200 strips
Comb type jumper bar ❷, insulated, $I_N = I_N$ of terminal block		
2-way	**281-482**	100 (4 x 25)
3-way	**281-483**	100 (4 x 25)
5-way	**281-485**	100 (4 x 25)
10-way	**281-490**	50 (2 x 25)
Alternate comb type jumper bar ❷, insulated, $I_N = I_N$ of terminal block		
2-way	**281-492**	100 (4 x 25)
Operating tool, insulated		
2-way	**280-432**	1
3-way	**280-433**	1
5-way	**281-440**	1
Test plug, with cable 500 mm / 1'7.7"		
2 mm Ø, red	**210-136**	50 (5 x 10)
2.3 mm Ø, yel.	**210-137**	50 (5 x 10)
WMB multi-marking system, 10 strips with 10 markers each, white with black printing, see section 14		
WSB quick marking system, 10 strips with 10 markers each, white with black printing, see section 14		
Marker strips, transparent, plain, for central marking – group marking – 1 m / 3'33" long, 7.5 mm / 0.295 in wide		
on roll 50 m	**709-177**	1
on roll 300 m	**709-187**	1

* For further approvals with corresponding ratings see section 15.

Test Plug Modules with CAGE CLAMP®, for Testing of Rail-Mounted Terminal Blocks 2.5 mm²/AWG 14 and 4 mm²/AWG 12, Using the Conductor Wire Opening

Test plug for rail-mounted terminal blocks of series 280 **Module width 5 mm / 0.197 in** **Test voltage 630 V** **Test current 6 A**	**Test plug for rail-mounted terminal blocks of series 281** **Module width 6 mm / 0.236 in** **Test voltage 630 V** **Test current 6 A**	**Note:** **These test plugs are not suitable for Ex e applications**





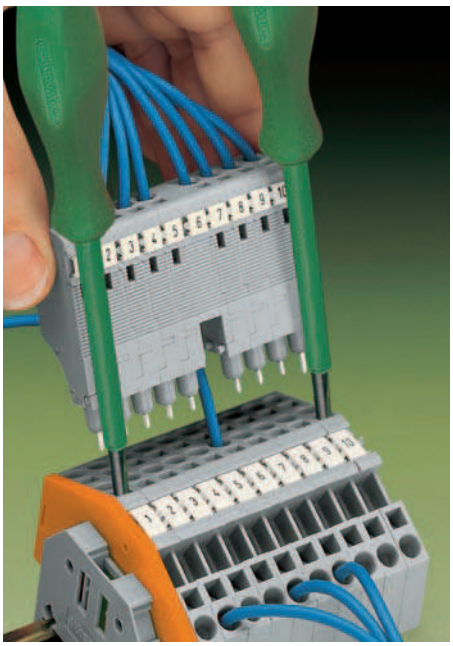
	Item No.	Pack. unit pcs
Test plug module with spring loaded contact pin with CAGE CLAMP®, center module, grey, module width 5 mm / 0.197 in	**249-141**	100 (4 x 25)
End module with rigid contact pin with CAGE CLAMP®, external module, grey, module width 5 mm / 0.197 in	**249-142**	100 (4 x 25)
Spacer module, for bridging over wired terminal blocks, grey, module width 5 mm / 0.197 in	**249-143**	100 (4 x 25)

	Item No.	Pack. unit pcs
Test plug module with spring loaded contact pin with CAGE CLAMP®, center module, grey, module width 6 mm / 0.236 in	**249-144**	100 (4 x 25)
End module with rigid contact pin with CAGE CLAMP®, external module, grey, module width 6 mm / 0.236 in	**249-145**	100 (4 x 25)
Spacer module, for bridging over wired terminal blocks, grey, module width 6 mm / 0.236 in	**249-146**	100 (4 x 25)

Accessories

	**Miniature WSB quick marking system or WMB multi-marking system,** 10 strips with 10 markers each, white with black printing see section 14	
	**Miniature WSB quick marking system or WMB multi-marking system,** 10 strips with 10 markers each, white with black printing see section 14	

Application notes

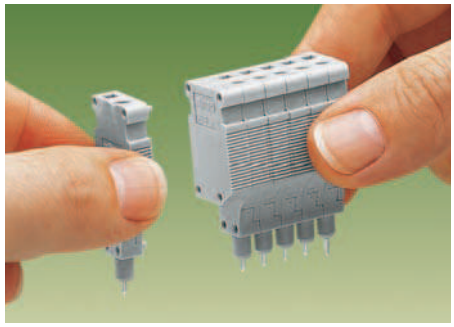


For simple testing of terminal block assemblies, the test plug modules with CAGE CLAMP® (version for testing using the conductor wire opening) may be used for testing unwired terminal blocks. For testing, the module is assembled with spring loaded pins in the center positions and rigid pin modules at the ends.

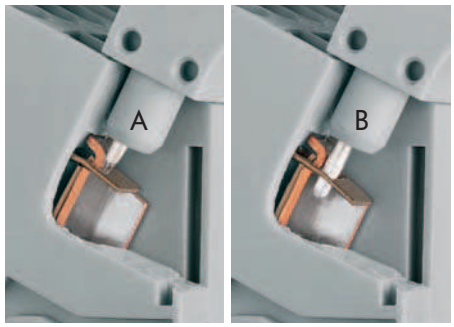
The terminal blocks corresponding to the end position modules are opened using screwdrivers (as shown), these rigid pins are then held in place by the CAGE CLAMP®, the intermediate pins are spring loaded and make contact with the current bars, for test currents up to 6 amps.

Clamping units which need to remain wired may be skipped over by assembling a spacer in the test plug module.

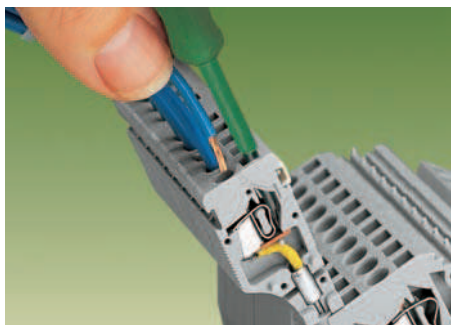
Attention!
Mating direction must be observed (see ill.)



Snapping together of test plug, end and spacer modules to assemble a multipole test plug strip (10-pole max.)



A = center module with spring loaded contact pin
B = external module with rigid contact pin



CAGE CLAMP®
0.08 mm² – 1.5 mm² (AWG 28 – 16), module width 5 mm / 0.197 in
0.08 mm² – 2.5 mm² (AWG 28 – 14), module width 6 mm / 0.236 in

Test Plug Modules with CAGE CLAMP®, for Testing of Rail-Mounted Terminal Blocks 2.5 mm²/AWG 14 and 4 mm²/AWG 12, Using Jumper Contact Position in Current Bar

Test plug for rail-mounted terminal blocks of series 280 **Module width 5 mm / 0.197 in** **Test voltage 630 V** **Test current 10 A**	**Test plug for rail-mounted terminal blocks of series 281** **Module width 6 mm / 0.236 in** **Test voltage 630 V** **Test current 10 A**	**Note:** **These test plugs are not suitable for Ex e applications**





	Item No.	Pack. unit pcs
Test plug module with CAGE CLAMP®, version using jumper contact position in current bar, grey, module width 5 mm / 0.197 in, suitable for all rail-mounted terminal blocks series 280 with jumper contact slots in the current bar	**249-106**	100 (4 x 25)
Spacer module, for bridging over commoned terminal blocks, grey, module width 5 mm / 0.197 in	**249-107**	100 (4 x 25)

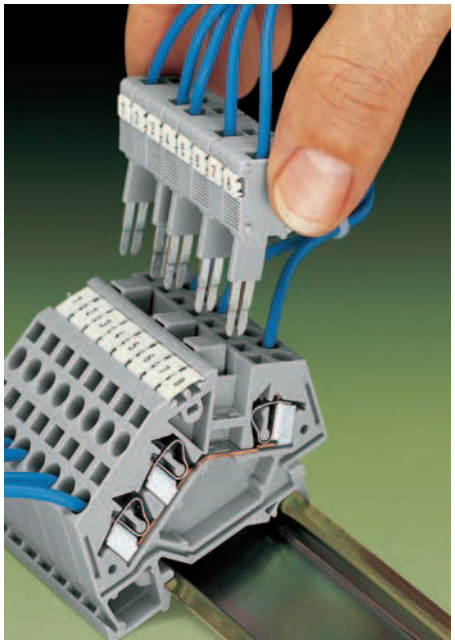
	Item No.	Pack. unit pcs
Test plug module with CAGE CLAMP®, version using jumper contact position in current bar, grey, module width 6 mm / 0.236 in, suitable for all rail-mounted terminal blocks series 281 with jumper contact slots in the current bar	**249-147**	100 (4 x 25)
Spacer module, for bridging over commoned terminal blocks, grey, module width 6 mm / 0.236 in	**249-148**	100 (4 x 25)

Accessories

	Item No.	Pack. unit pcs
Miniature WSB quick marking system or WMB multi-marking system, 10 strips with 10 markers each, white with black printing, see section 14		

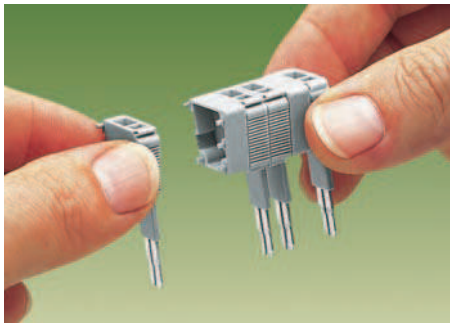
	Item No.	Pack. unit pcs
Miniature WSB quick marking system or WMB multi-marking system, 10 strips with 10 markers each, white with black printing, see section 14		

Application notes

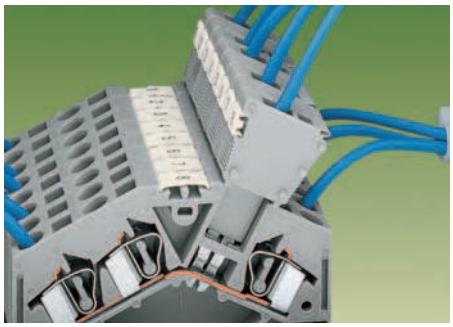


For testing of individual circuits WAGO offers a single-pole test plug accessory with CAGE CLAMP® - up to 2.5 mm²/AWG 14 for direct contact with the current bar of a terminal block, or 1-pole test plug adapters for test plugs 4 mm dia.

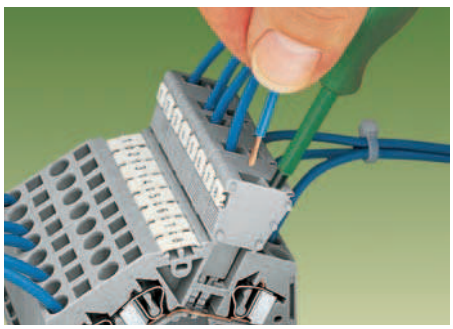
For serial testing on assembled terminal block assemblies WAGO has developed special multi-pole (max. 10) modular test plug modules. For testing completely wired terminal blocks (even when using horizontal jumpers) the test plug modules with CAGE CLAMP® (version with testing using jumper contact position in current bar) are the ideal solution. For this type of testing, the structure of the testing plug modules is exactly adaptable to that of the terminal block assembly. The test plug modules make direct contact to the jumper contact slot of the terminal blocks to be tested.



Snapping together of test plug and spacer modules to assemble multi-pole test plug modules (10-pole max.)



Test plug modules are directly inserted into the jumper contact slots in the current bar



CAGE CLAMP®
0.08 mm² – 1.5 mm² (AWG 28 – 16), module width 5 mm / 0.197 in
0.08 mm² – 2.5 mm² (AWG 28 – 14), module width 6 mm / 0.236 in

Modular Test Plugs for Rail-Mounted Terminal Blocks 2.5 mm²/AWG 14 and 4 mm²/AWG 12

Test plug for rail-mounted terminal blocks of series 280 Module width 5 mm / 0.197 in Test voltage 400 V Test current 6 A	Test plug for rail-mounted terminal blocks of series 281 Module width 6 mm / 0.236 in Test voltage 400 V Test current 6 A	Note: These test plugs are not suitable for Ex e applications





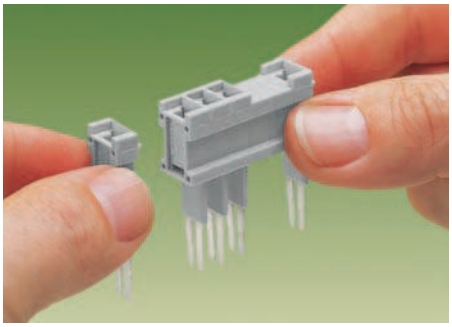
	Item No.	Pack. unit pcs
Test plug, modular, grey, module width 5 mm / 0.197 in, suitable for all rail-mounted terminal blocks series 280 with jumper slots in the current bar	**280-418**	100 (4 x 25)
Spacer, modular, grey, module width 5 mm / 0.197 in, for bridging over alternate or multiple terminal blocks	**280-419**	100 (4 x 25)

	Item No.	Pack. unit pcs
Test plug, modular, grey, module width 6 mm / 0.236 in, suitable for all rail-mounted terminal blocks series 281 with jumper slots in the current bar	**281-418**	100 (4 x 25)
Spacer, modular, grey, module width 6 mm / 0.236 in, for bridging over alternate or multiple terminal blocks	**281-419**	100 (4 x 25)

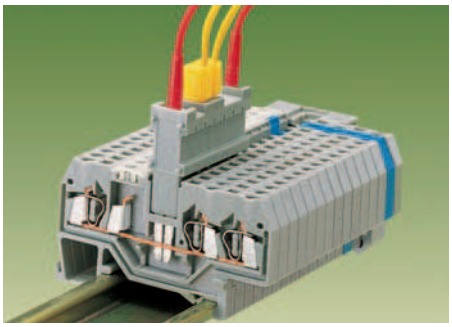
Accessories

	Item No.	Pack. unit pcs
Test plug, with cable 500 mm / 17.7" 2 mm Ø, red	**210-136**	50 (5 x 10)
2.3 mm Ø, yel.	**210-137**	50 (5 x 10)

	Item No.	Pack. unit pcs
Test plug, with cable 500 mm / 17.7" 2 mm Ø, red	**210-136**	50 (5 x 10)
2.3 mm Ø, yel.	**210-137**	50 (5 x 10)



Assembly of modular test plugs and spacers to multipole test plug strips



The modular test plugs are directly pushed into the jumper slots of the current bar

Test Plug Modules with CAGE CLAMP®, for Testing of Rail-Mounted Terminal Blocks 6 mm²/AWG 10 and 10 mm²/AWG 8, Using Jumper Contact Position in Current Bar

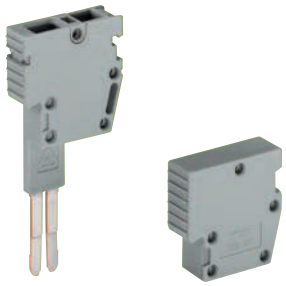
Test plug module ❶ for rail-mounted terminal blocks of series 282
0.2 – 6 mm² | AWG 24 – 10
Module width 8 mm / 0.315 in

12 mm / 0.472 in

Spacer plate for test plug module for testing rail-mounted terminal blocks of series 284
Module width 2 mm / 0.079 in

❶ Test voltage 800 V/ 8 kV
Test current 32 A

Note:
These test plugs are not suitable for Ex e applications





	Item No.	Pack. unit pcs
Test plug module with CAGE CLAMP®, version using jumper contact position in current bar, grey, module width 8 mm/0.315 in, suitable for all rail-mounted terminal blocks series 282 with jumper slots in the current bar	**709-310**	100 (4 x 25)
Spacer module, for bridging over commoned terminal blocks, grey, module width 8 mm/0.315 in	**709-311**	100 (4 x 25)

	Item No.	Pack. unit pcs
Spacer plate, modular, grey, module width 2 mm/0.079 in, snap on test plug modules 709-310 and spacer module 709-311 for testing of rail-mounted terminal blocks series 284	**709-312**	100 (4 x 25)

Accessories

Miniature WSB quick marking system or



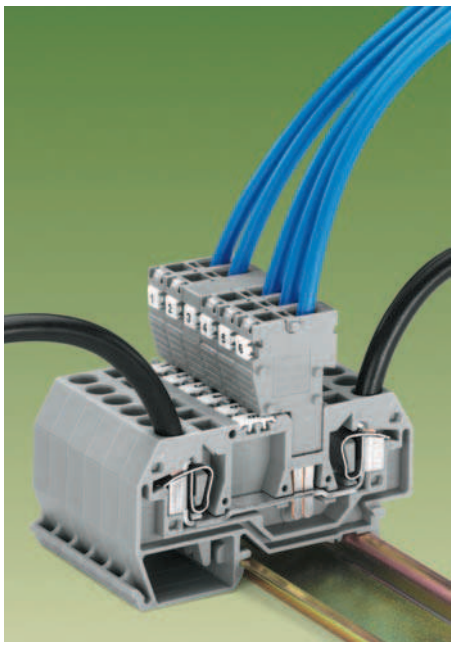
WMB multi-marking system,
10 strips with 10 markers each,
white with black printing
see section 14

Strain relief plate



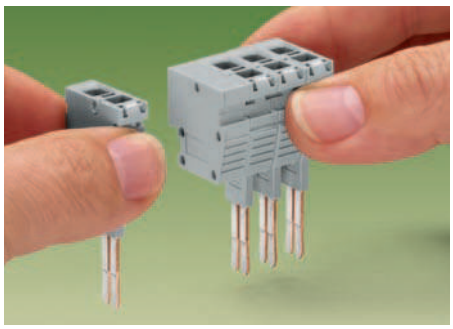
	6 mm²	10 mm²
2-way	**709-332**	**709-322**
4-way	**709-334**	**709-324**
6-way	**709-336**	**709-326**

Application notes

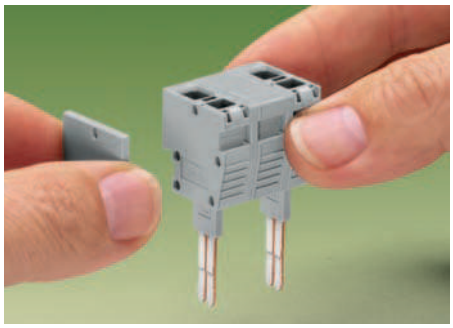


For testing of individual circuits WAGO offers as accessory the single-pole test plugs with CAGE CLAMP® up to 6 mm²/AWG 10 for direct contact with the current bar of a terminal block, or single-pole test plug adapters for test plugs 4 mm dia.

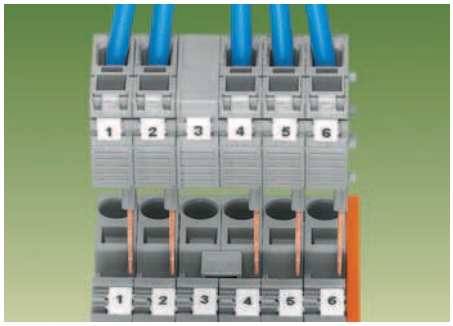
For serial testing on assembled terminal strips WAGO has developed special multipole (max. 10) modular test plug strips. For testing completely wired terminal strips (also when using horizontal jumpers) the test plug modules with CAGE CLAMP® (version with testing using jumper contact position in current bar) are the ideal solution. For this type of testing the structure of the testing strips is exactly adapted to that of the terminal strip. The contacting of the test plug modules is made directly in the jumper contact position of the terminal blocks to be tested.



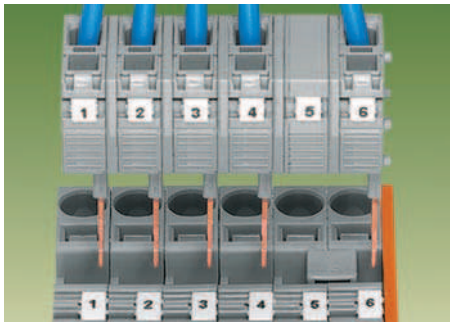
Snapping together of test plug and spacer modules to assemble a multipole test plug strip for series 282 (max. 10 poles)



Snapping together of test plug and spacer modules with spacer plates to assemble a multipole test plug strip for series 284 (max. 10 poles)



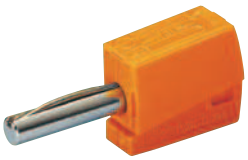
Test plug strips are directly inserted into the jumper contact slots in the current bar (picture shows series 282)



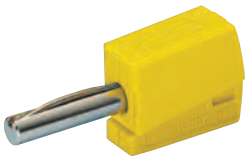
Test plug strip with **spacer plates** for testing of rail-mounted terminal blocks series 284
CAGE CLAMP®
0.2 mm² – 6 mm² AWG 24 – 10

Banana Plugs (Only for Safety Extra-Low Voltage)

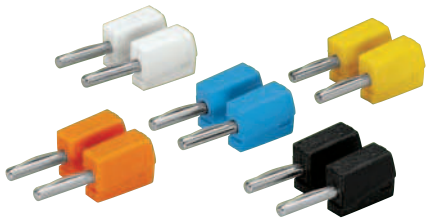
For sockets Ø 4 mm / 0.157 in
0.08 – 2.5 mm² | AWG 28 – 14
42 V
20 A
9 – 11 mm / 0.39 in



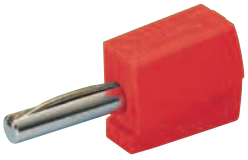
Color	Item No.	Pack. unit pcs
Banana plug, for sockets Ø 4 mm/0.157 in		
orange	**215-211**	50



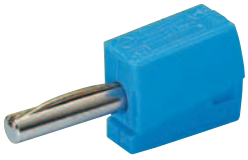
Color	Item No.	Pack. unit pcs
Banana plug, for sockets Ø 4 mm/0.157 in		
yellow	**215-511**	50



	Item No.	Pack. unit pcs
Banana plugs, for sockets Ø 4 mm/0.157 in		
color mixed	**215-111**	50
10 each – orange, white, black, blue, yellow		



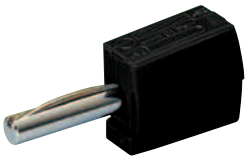
Color	Item No.	Pack. unit pcs
Banana plug, for sockets Ø 4 mm/0.157 in		
red	**215-212**	50



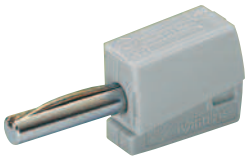
Color	Item No.	Pack. unit pcs
Banana plug, for sockets Ø 4 mm/0.157 in		
blue	**215-711**	50



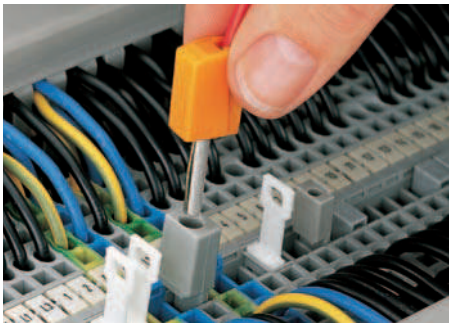
To connect: Press button fully and insert stripped conductor into square entry hole and release.



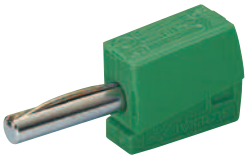
Color	Item No.	Pack. unit pcs
Banana plug, for sockets Ø 4 mm/0.157 in		
black	**215-311**	50



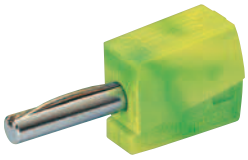
Color	Item No.	Pack. unit pcs
Banana plug, for sockets Ø 4 mm/0.157 in		
grey	**215-811**	50



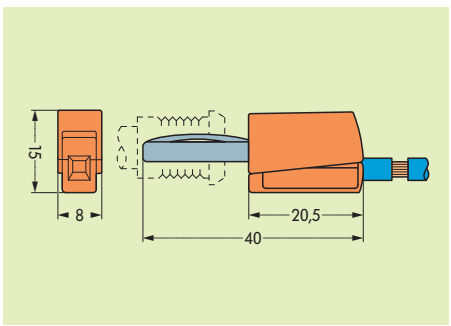
Banana plug used as test plug
Picture shows test adapter 209-170



Color	Item No.	Pack. unit pcs
Banana plug, for sockets Ø 4 mm/0.157 in		
green	**215-411**	50
white	**215-611**	50



Color	Item No.	Pack. unit pcs
Banana plug, for sockets Ø 4 mm/0.157 in		
green-yellow	**215-911**	50



Insulation Stops for Conductors
0.08 mm² – 1.5 mm² / AWG 28 – 16

Insulation stop, **suitable for all front-entry rail-mounted terminal blocks of series 279** **Terminal block width 4 mm / 0.157 in** **8 – 9 mm / 0.33 in**	**Insulation stop,** **suitable for all front-entry rail-mounted term. blocks of series 280/870 and 880** **Terminal block width 5 mm / 0.197 in** **8 – 9 mm / 0.33 in**	**Insulation stop,** **suitable for all front-entry rail-mounted terminal blocks of series 281** **Terminal block width 6 mm / 0.236 in** **9 – 10 mm / 0.37 in**







Item No.	Pack. unit pcs
Insulation stop, 5 pcs / strip	
white **279-470**	200 strips
0.08 – 0.2 mm² ❶ / AWG 28 – 24	
dark grey **279-471**	200 strips
0.25 mm² / AWG 22	
❶ 0.2 mm² / AWG 24 solid 0.14 mm² / AWG 26 fine-stranded	

Item No.	Pack. unit pcs
Insulation stop, 5 pcs / strip	
white **280-470**	200 strips
0.08 – 0.2 mm² ❶ / AWG 28 – 24	
light grey **280-471**	200 strips
0.25 – 0.5 mm² / AWG 22 – 20	
dark grey **280-472**	200 strips
0.75 – 1 mm² / AWG 18	
❶ 0.2 mm² / AWG 24 solid 0.14 mm² / AWG 26 fine-stranded	

Item No.	Pack. unit pcs
Insulation stop, 5 pcs / strip	
white **281-470**	200 strips
0.08 – 0.2 mm² ❶ / AWG 28 – 24	
light grey **281-471**	200 strips
0.25 – 0.5 mm² / AWG 22 – 20	
dark grey **281-472**	200 strips
0.75 – 1.5 mm² / AWG 18 – 16	
❶ 0.2 mm² / AWG 24 solid 0.14 mm² / AWG 26 fine-stranded	

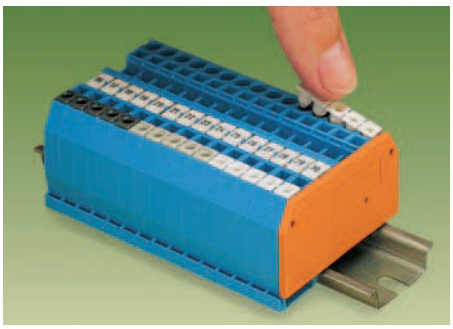
Application notes

For the wiring of programmable logic controllers and microprocessor operated control circuits very small cross sections of fine-stranded conductors are frequently used. These small conductors are so flexible that they deform when pushed against the conductor stop in the terminal blocks. As a result, the conductor insulation may be clamped instead of the copper conductor, resulting in no or very intermittent contact. This problem exists with all types of terminal blocks currently offered on the market. Unnecessary time is spent on fault-tracing as a consequence.

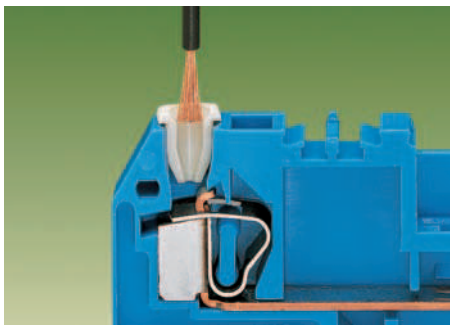
The insulation stop for rail-mounted terminal blocks is the answer to solve these problems. It bundles the cores of fine-stranded conductors automatically when introduced into the clamping unit without any splaying and reduces the conductor entry hole to a defined cross sectional area so that the insulation of these conductors cannot be introduced into the clamping unit.

The insulation stop is available as dividable 5-pole strip for rail-mounted terminal blocks of series 279, 280/870/880 and 281.

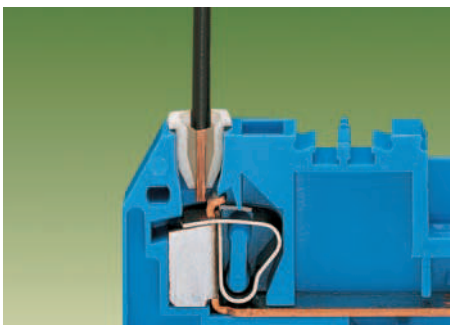
With the use of the insulation stop the conductor stripped lengths related to the respective rail-mounted terminal block, remain unchanged.



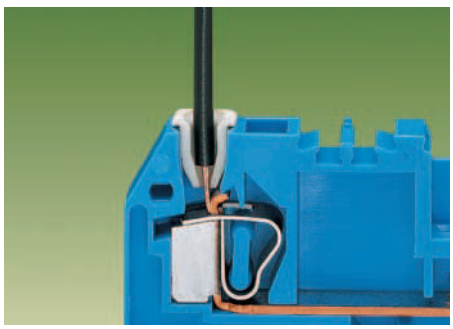
Push insulation stop into the conductor entry holes of front-entry rail-mounted terminal blocks.



Introduce stripped, untwisted conductor into insulation stop . . .



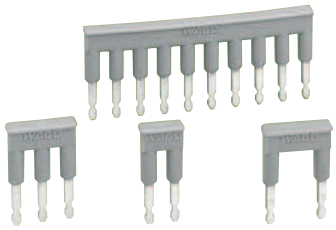
. . . the conductor is bundled . . .

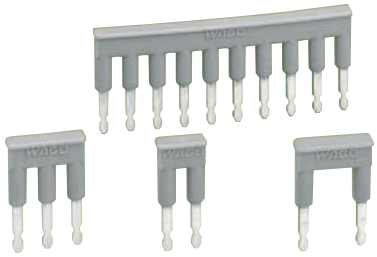


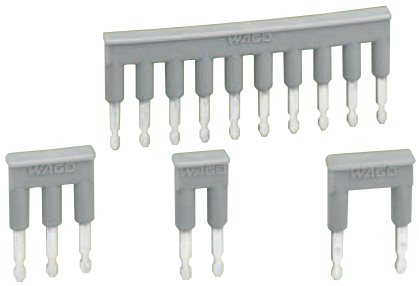
. . . and the conductor insulation is prevented from being pushed into the clamping unit by the positive stop.

Comb Type Jumper Bars and Alternate Comb Type Jumper Bars Operating Tools

Comb type jumper bar and alternate comb type jumper bar for series 279 $I_N = I_N$ of terminal block Operating tool	Comb type jumper bar and alternate comb type jumper bar for series 280/769/880 $I_N = I_N$ of terminal block Operating tool	Comb type jumper bar and alternate comb type jumper bar for series 281 $I_N = I_N$ of terminal block Operating tool

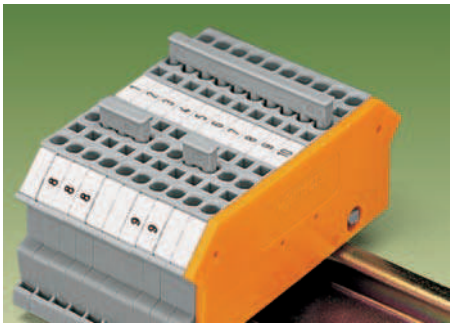




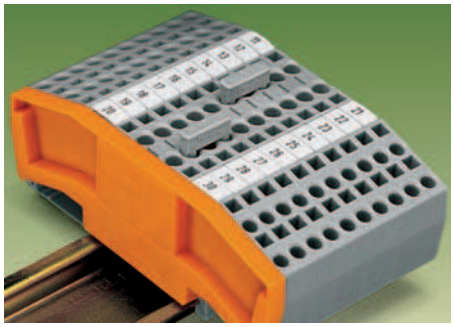


	Item No.	Pack. unit pcs		Item No.	Pack. unit pcs		Item No.	Pack. unit pcs
Comb type jumper bar, insulated			**Comb type jumper bar,** insulated			**Comb type jumper bar,** insulated		
2-way	**279-482**	200 (8 x 25)	2-way	**280-482**	200 (8 x 25)	2-way	**281-482**	100 (4 x 25)
3-way	**279-483**	200 (8 x 25)	3-way	**280-483**	200 (8 x 25)	3-way	**281-483**	100 (4 x 25)
10-way	**279-490**	50 (2 x 25)	10-way	**280-490**	50 (2 x 25)	5-way	**281-485**	100 (4 x 25)
						10-way	**281-490**	50 (2 x 25)
Alternate comb type jumper bar, insulated			**Alternate comb type jumper bar,** insulated			**Alternate comb type jumper bar,** insulated		
2-way	**279-492**	200 (8 x 25)	2-way	**280-492**	200 (8 x 25)	**2-way**	**281-492**	100 (4 x 25)
Operating tool, insulated			**Operating tool,** insulated			**Operating tool,** insulated		
2-way	**279-432**	1	2-way	**280-432**	1	2-way	**280-432**	1
3-way	**279-433**	1	3-way	**280-433**	1	3-way	**280-433**	1
10-way	**279-440**	1	10-way	**280-440**	1	5-way	**281-440**	1
see also section 14			see also section 14			see also section 14		

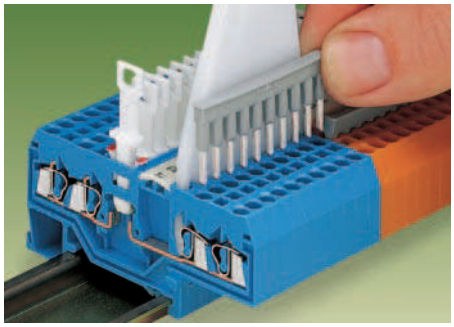
Applications



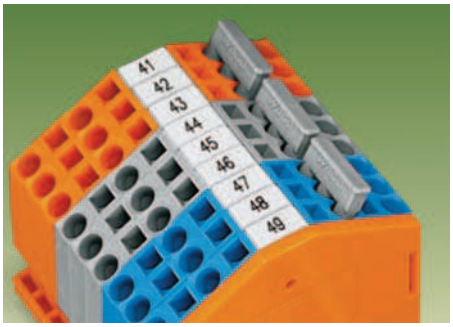
Double potential terminal blocks
2-way, 3-way and 10-way comb type jumper bars



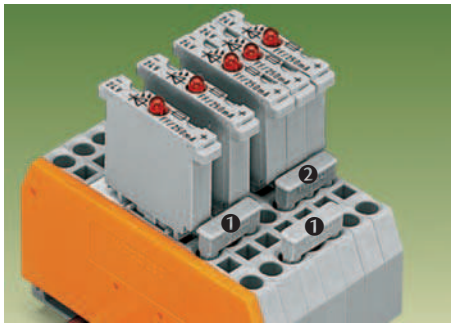
3-conductor double potential terminal blocks
Alternate comb type jumper bars



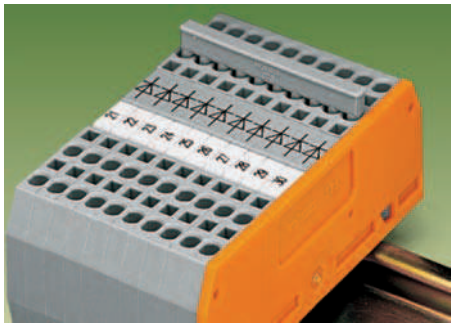
Disconnect terminal blocks for test purposes
10-way comb type jumper bar



4-conductor through terminal blocks, angled version
Formation of groups with 3-way comb type jumper bars



Carrier terminal blocks with component plugs
❶ Alternate comb type jumper bars
❷ 3-way comb type jumper bar



Diode terminal blocks
10-way comb type jumper bar

Push-in Type Wire Jumpers
Staggered Jumpers

Wire jumpers **Nominal voltage:** 800 V/8 kV/3 **Nominal current:** 9 A **Nominal cross section:** 0.75 mm²/AWG 18 **Conductor lengths:** 60/110/250 mm	**Staggered jumpers** **Nominal voltage:** 400 V/6 kV/3 Ex 275 V	





Item No.	Pack. unit pcs
Push-in type wire jumpers,	
insulated, grey, conductor cross section	
0.75 mm²/AWG 18,	
suitable for rail-mounted terminal blocks	
series 279 (1.5 mm²/AWG 16),	
280 (2.5 mm²/AWG 14) and	
281/769/880 (4 mm²/AWG 12)	
Wire length	
60 mm/2.362 in 249-125	10
Wire length	
110 mm/4.331 in 249-126	10
Wire length	
250 mm/9.843 in 249-127	10
Note:	
Push wire jumper down FIRMLY until FULLY inserted!	

	Item No.	Pack. unit pcs
Staggered jumpers, insulated,		
for terminal blocks series 280, 769 and 880		
I_N 24 A, Ex 23 A – 2-conductor terminal blocks		
22 A – 3-conductor terminal blocks		
20 A – 4-conductor terminal blocks		
from 1 to 2	**780-452**	100 (4 x 25)
from 1 to 3	**780-453**	100 (4 x 25)
from 1 to 4	**780-454**	100 (4 x 25)
from 1 to 5	**780-455**	50 (2 x 25)
from 1 to 6	**780-456**	50 (2 x 25)
from 1 to 7	**780-457**	50 (2 x 25)
from 1 to 8	**780-458**	50 (2 x 25)
for terminal blocks series 281		
I_N 32 A, Ex 26 A		
from 1 to 2	**781-452**	100 (4 x 25)
from 1 to 3	**781-453**	100 (4 x 25)
from 1 to 4	**781-454**	100 (4 x 25)
from 1 to 5	**781-455**	50 (2 x 25)
from 1 to 6	**781-456**	50 (2 x 25)

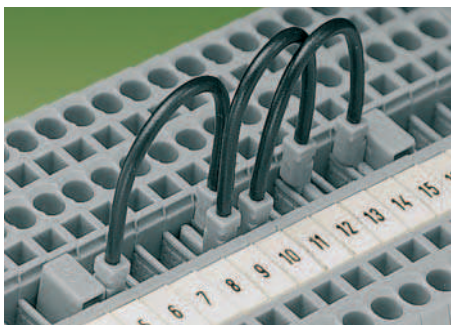
Application notes

Wire jumpers

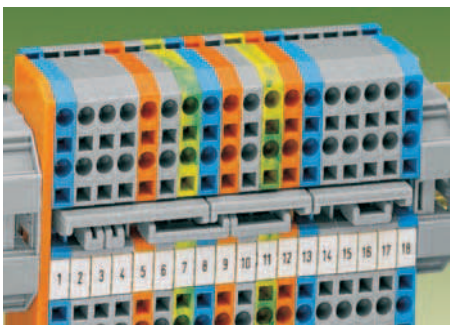
When installing machines or control systems, it is often necessary to make an additional connection between two terminal blocks that are not directly adjacent on the rail. In such cases, the new plug-in, touchproof wire jumper is of great help.

Suitable for rail-mounted terminal blocks series 279 (1.5 mm²/AWG 16), 280 (2.5 mm²/AWG 14) and 281/769 and 880 (4 mm²/AWG 12), this jumper is available in 3 different wire lengths: 60 mm, 110 mm and 250 mm. This allows up to 60 terminal blocks between the two blocks being commoned (see table below).

"n" = number of series 279, 280/769/880 and 281 terminal blocks which can be skipped with a wire jumper.



Series 280 and 281 will accept two wire jumpers, so it is possible to bridge several terminal blocks together. Since series 279 will only accept one wire jumper per terminal block, the bridging of several terminal blocks is not possible. Series 280, 769, 281 and 880 permit the introduction of a wire jumper and a adjacent jumper into the same block at the same time.



Staggered jumper for sophisticated wiring jobs

Terminal blocks Series	Wire jumpers Item No.	"n"
279 1.5 mm²/AWG 16	249-125 249-126 249-127	13 25 60
280 2.5 mm²/AWG 14 769, 880 4 mm²/AWG 12	249-125 249-126 249-127	10 20 48
281 4 mm²/AWG 12	249-125 249-126 249-127	9 17 40