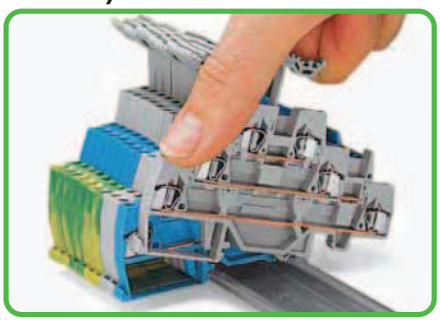
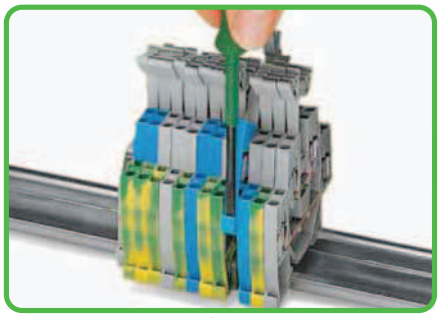
Double- and Triple-Deck Terminal Blocks, 280 and 281 Series
– Description and Handling –

Assembly



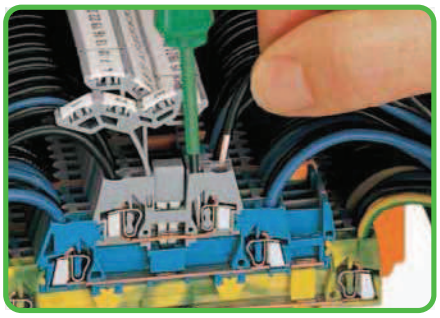
Snapping a terminal block onto the carrier rail.

Removal



Removing a terminal block from the assembly.

Conductor termination



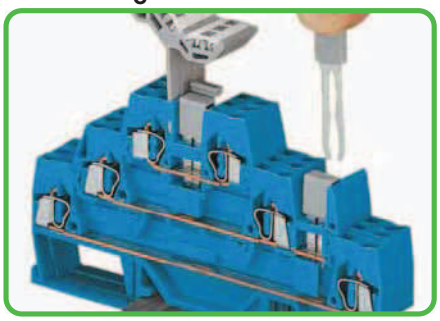
Conductor termination

Commoning

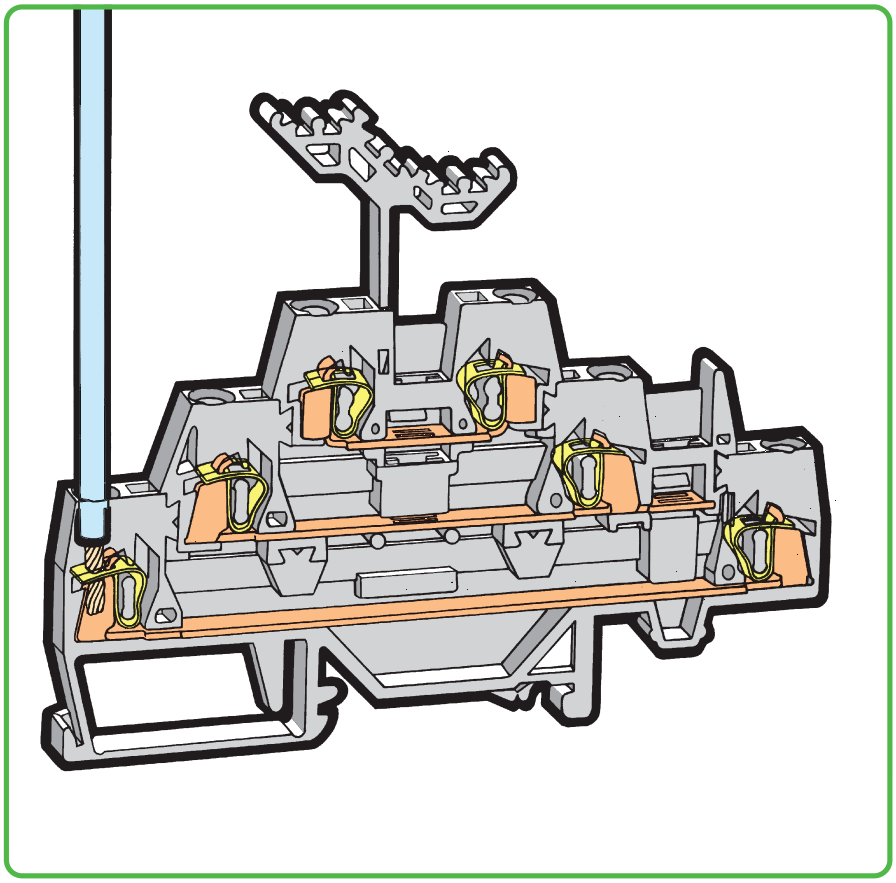


Commoning with 280-402 adjacent jumpers.
Push down the adjacent jumper until fully inserted.

Commoning



Commoning with vertical and adjacent jumpers.

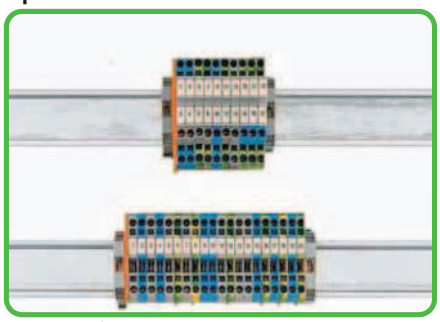


Marking



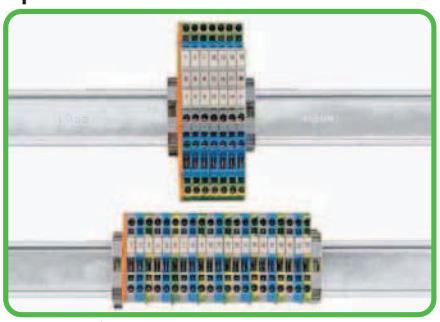
Marking with WMB Multi marking system.
For other systems, see Section 13.

Space saver



Save 50% of rail space when using double-deck terminal blocks.

Space saver



Save 67% of rail space when using triple-deck terminal blocks.

CAGE CLAMP® clamps the following copper conductors:*

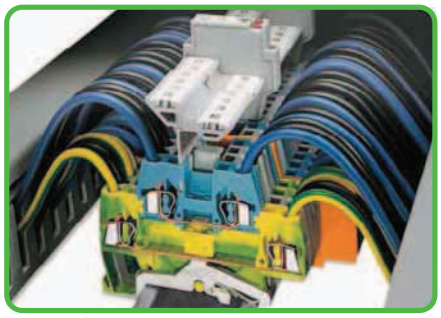
solid	stranded	fine-stranded, also with tinned single strands	fine-stranded, tip-bonded	fine-stranded, with ferrule ❶ (gastight crimped)	fine-stranded, with pin terminal (gastight crimped)

* For aluminum conductors, see notes in Section 14.

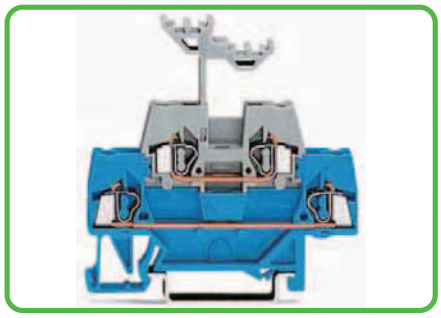
❶ When using ferrules, the max. conductor cross section accommodated is one size smaller than max. rating of terminal block.



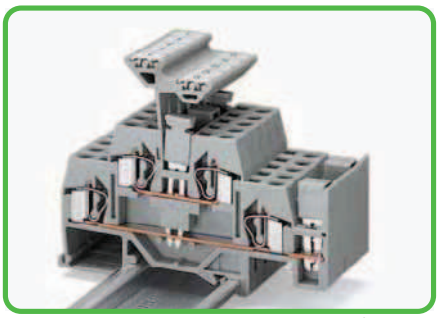
The flexible marker carrier, which is placed above the wiring level, can be pushed aside during wiring or commoning. The marker carrier has two levels for two different markers relating to double-deck terminal blocks.



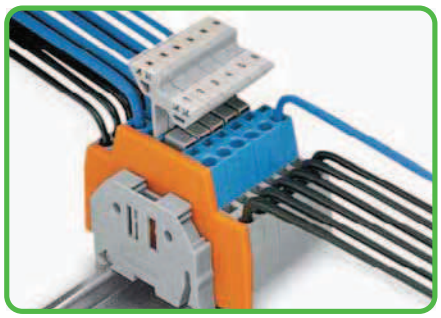
Example of a mixed assembly with double-deck terminal blocks.
The 280 Series double-deck terminal blocks, are available with decks of same or different color according to the function. This is an additional visual aid during wiring or possible service/maintenance.



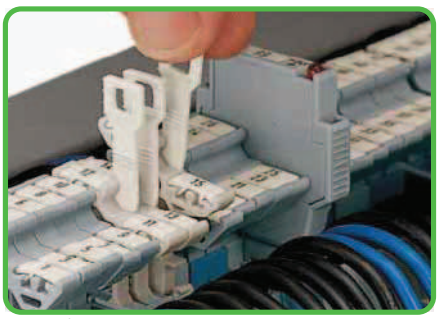
Double-deck terminal blocks accommodate two circuits of different potentials in one 2-level terminal block; different circuits can be differentiated by color coding either level for the 280 Series. The lower deck is wider than the upper, for ease of wiring.



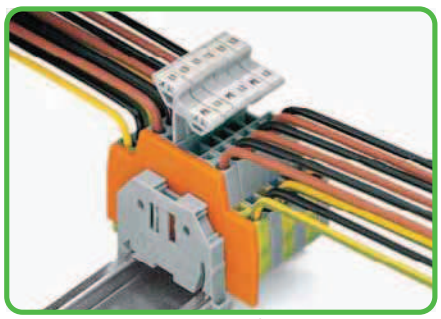
Standard insulated push-in jumpers can be used for commoning. A vertical jumper allows commoning of upper and lower level, providing a 4-conductor feedthrough terminal block in one housing. Two adjacent terminals may be commoned together on the same level using a push-in adjacent jumper.



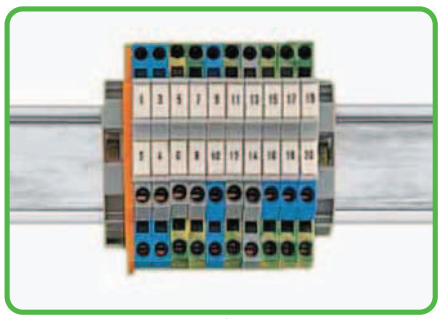
Double-deck terminal blocks used as control wire terminals; e.g., for magnetic valves. Upper deck commoned.



Pulling of disconnecting tab (also see page 207).



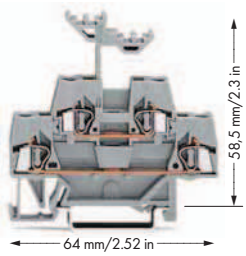
Double-deck terminal blocks used for connecting a three-phase motor.



With a terminal block width of only 5 mm/0.197 in, an effective width of only 2.5 mm/0.098 in for terminal blocks of same or different potential can be realized at a cross sectional area of 0.08 mm² to 2.5 mm² (AWG 28 - 14)!

Double-Deck Terminal Blocks 2.5 mm²
280 Series

0.08 - 2.5 mm²	AWG 28 - 12 *	
500 V/6 kV/3 ❶	300 V, 15 A	
I_N 20 A	300 V, 20 A	
Terminal block width 5 mm / 0.197 in		
8 - 9 mm / 0.33 in ❷		



Item No.		Pack. Unit
Through/through terminal block		
gray	**280-519**	50
blue	**280-529** ❸	50
Other terminal blocks with the same profile:		
Diode	**280-940/281-410** Page 260	
LED	**280-943/281-434** Page 260	

Item-Specific Accessories

End and intermediate plate, 2.5 mm thick

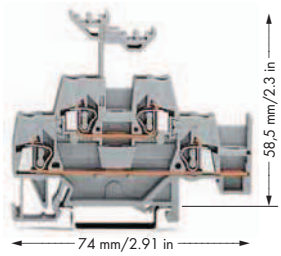
orange	**280-341**	100 (4x25)
gray	**280-340**	100 (4x25)

Intermediate plate,

1.1 mm thick

orange	**280-366**	100 (4x25)

0.08 - 2.5 mm²	AWG 28 - 12 *	
500 V/6 kV/3 ❶	300 V, 15 A	
I_N 20 A	300 V, 20 A	
Terminal block width 5 mm / 0.197 in		
8 - 9 mm / 0.33 in ❷		



Item No.		Pack. Unit
Through/through terminal block with horizontal jumpering on lower level		
gray	**280-520**	50
blue	**280-530** ❸	50

Item-Specific Accessories

End and intermediate plate, 2.5 mm thick

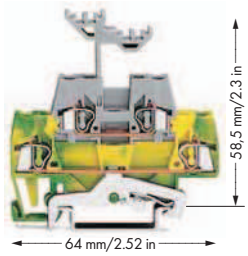
orange	**280-343**	100 (4x25)
gray	**280-342**	100 (4x25)

Intermediate plate,

1.1 mm thick

orange	**280-369**	100 (4x25)

0.08 - 2.5 mm²	AWG 28 - 12 *	
500 V/6 kV/3 ❶		
I_N 20 A	300 V, 20 A	
Terminal block width 5 mm / 0.197 in		
8 - 9 mm / 0.33 in ❷		



Item No.		Pack. Unit
Ground conductor/through terminal block		
green-yellow/gray	**280-527**	50
green-yellow/blue	**280-537**	50

Item-Specific Accessories

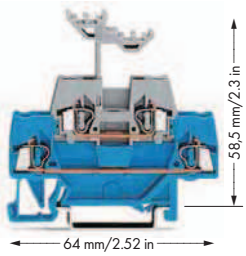
End and intermediate plate, 2.5 mm thick

orange	**280-341**	100 (4x25)
gray	**280-340**	100 (4x25)

Intermediate plate,

1.1 mm thick

orange	**280-366**	100 (4x25)



Item No.		Pack. Unit
Through/through terminal block		
blue/gray	**280-523**	50
gray/blue	**280-533**	50

Item-Specific Accessories

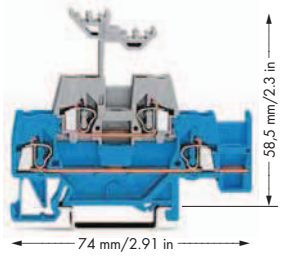
End and intermediate plate, 2.5 mm thick

orange	**280-341**	100 (4x25)
gray	**280-340**	100 (4x25)

Intermediate plate,

1.1 mm thick

orange	**280-366**	100 (4x25)



Item No.		Pack. Unit
Through/through terminal block with horizontal jumpering on lower level		
blue/gray	**280-524**	50
gray/blue	**280-534**	50

Item-Specific Accessories

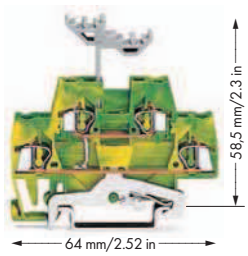
End and intermediate plate, 2.5 mm thick

orange	**280-343**	100 (4x25)
gray	**280-342**	100 (4x25)

Intermediate plate,

1.1 mm thick

orange	**280-369**	100 (4x25)



Item No.		Pack. Unit
4-conductor ground terminal block, internal commoning		
green-yellow	**280-517**	50

Item-Specific Accessories

End and intermediate plate, 2.5 mm thick

orange	**280-341**	100 (4x25)
gray	**280-340**	100 (4x25)

Intermediate plate,

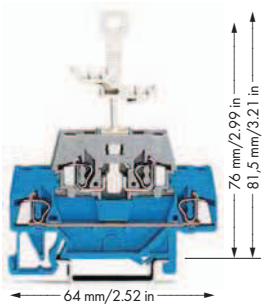
1.1 mm thick

orange	**280-366**	100 (4x25)

For list of approvals and user guide, see pages 634 to 637.

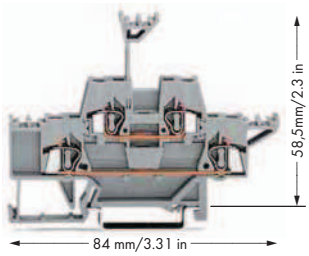
0.08 - 2.5 mm²	AWG 28 - 12 *
400 V/6 kV/3 ❶	300 V, 15 A
I_N 10 A	300 V, 20 A

Terminal block width 5 mm / 0.197 in
8 - 9 mm / 0.33 in ❷



0.08 - 2.5 mm²	AWG 28 - 12 *
500 V/6 kV/3 ❶	300 V, 15 A
I_N 20 A	300 V, 20 A

Terminal block width 5 mm / 0.197 in
8 - 9 mm / 0.33 in ❷



* AWG 12: THHN, THWN

❶ 500 V/400 V = rated voltage
6 kV = rated surge voltage
3 = pollution degree
(also see Section 14)

❷ Strip length, see packaging or instructions.

❸ Suitable for Ex i applications

❹ See application notes for:
Insulation stop, page 199
Comb-style jumper bar, page 200
Operating tool, page 200

	Item No.	Pack. Unit
Through/disconnect terminal block		
blue/gray	**280-525**	50
gray/gray	**280-521**	50

Item-Specific Accessories

End and intermediate plate, 2.5 mm thick



orange	**280-341**	100 (4x25)
gray	**280-340**	100 (4x25)

Intermediate plate,



1.1 mm thick

orange	**280-366**	100 (4x25)

	Item No.	Pack. Unit
Through/through terminal block with additional marking options on both sides of the terminal block		
gray	**280-513**	50

Item-Specific Accessories

End and intermediate plate, 2.5 mm thick



orange	**280-341**	100 (4x25)
gray	**280-340**	100 (4x25)

Intermediate plate,



1.1 mm thick

orange	**280-366**	100 (4x25)

280 Series Accessories

Appropriate marking systems (see Section 13)

Insulation stop, ❹



5 pcs/strip,
0.08 - 0.2 mm² "s" (0.14 mm² "f-st")

white	**280-470**	200 (8x25)

Insulation stop, ❹



5 pcs/strip,
0.25 - 0.5 mm²

light gray	**280-471**	200 (8x25)

Insulation stop, ❹



5 pcs/strip,
0.75 - 1 mm²

dark gray	**280-472**	200 (8x25)

Adjacent jumper, insulated,



I_N = I_N terminal block

gray	**280-402**	200 (8x25)
yellow-green	**280-422**	200 (8x25)

Alternate jumper, insulated,



I_N = I_N terminal block

gray	**280-409**	100 (4x25)

Vertical jumper, insulated,



I_N 24 A

gray	**281-421**	200 (8x25)

Comb-style jumper bar, insulated, ❹



I_N = I_N terminal block

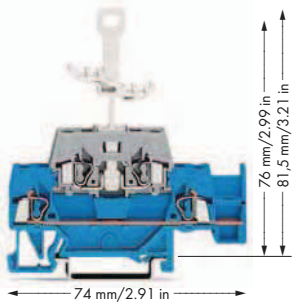
2-way	**280-482**	200 (8x25)
3-way	**280-483**	200 (8x25)

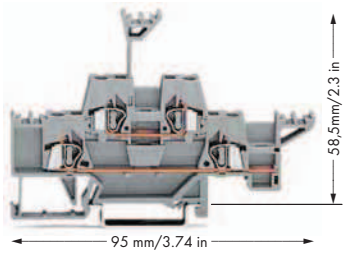
Comb-style jumper bar, insulated,



I_N = I_N terminal block

10-way	**280-490**	50 (2x25)





	Item No.	Pack. Unit
Through/disconnect terminal block with horizontal jumpering on lower level		
blue/gray	**280-526**	50
gray/gray	**280-522**	50

Item-Specific Accessories

End and intermediate plate, 2.5 mm thick



orange	**280-343**	100 (4x25)
gray	**280-342**	100 (4x25)

Intermediate plate,



1.1 mm thick

orange	**280-369**	100 (4x25)

	Item No.	Pack. Unit
Through/through terminal block with horizontal jumpering on lower level		
gray	**280-543**	50

Item-Specific Accessories

End and intermediate plate, 2.5 mm thick



orange	**280-343**	100 (4x25)
gray	**280-342**	100 (4x25)

Intermediate plate,



1.1 mm thick

orange	**280-369**	100 (4x25)

Alternate comb-style jumper bar,



insulated,
I_N = I_N terminal block

2-way	**280-492**	200 (8x25)

Operating tool, of insulating material



2-way	**280-432**	1
3-way	**280-433**	1

Operating tool, of insulating material



10-way	**280-440**	1

Screwless end stop,

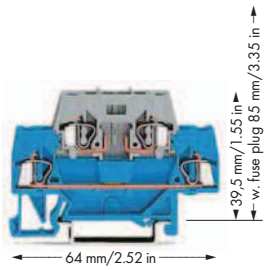


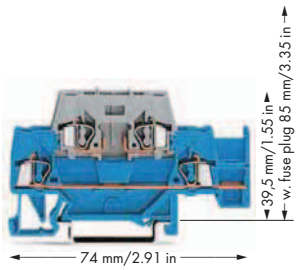
for DIN 35 rail,
6 mm wide

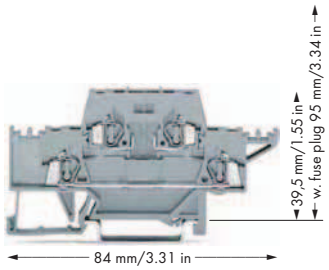
gray	**249-116**	100 (4x25)

Carrier Double- and Triple-Deck Terminal Blocks for Fuse Plugs 2.5 mm²
280 Series

0.08 - 2.5 mm² / AWG 28 - 12 *	0.08 - 2.5 mm² / AWG 28 - 12 *	0.08 - 2.5 mm² / AWG 28 - 12 *
400 V/6 kV/3 ❶ ❷ / 300 V, 15 A	400 V/6 kV/3 ❶ ❷ / 300 V, 15 A	400 V/6 kV/3 ❶ ❷
I_N 10 A (20 A) / 300 V, 20 A	I_N 10 A (20 A) / 300 V, 20 A	I_N 10 A (10 A)
Terminal block width 5 mm / 0.197 in	Terminal block width 5 mm / 0.197 in	Terminal block width 5 mm / 0.197 in
8 - 9 mm / 0.33 in ❸	8 - 9 mm / 0.33 in ❸	8 - 9 mm / 0.33 in ❸







	Item No.	Pack. Unit
Through/carrier terminal block for pluggable fuse modules		
blue/gray	**280-531**	50
gray/gray	**280-514**	50

	Item No.	Pack. Unit
Through/carrier terminal block for pluggable fuse modules with horizontal jumpering on lower level		
blue/gray	**280-532**	50
gray/gray	**280-891**	50

	Item No.	Pack. Unit
Through/carrier terminal block for pluggable fuse modules		
gray/gray	**280-528**	50

Item-Specific Accessories

End and intermediate plate, 2.5 mm thick



orange	**280-341**	100 (4x25)
gray	**280-340**	100 (4x25)

Intermediate plate,



1.1 mm thick

orange	**280-366**	100 (4x25)

Item-Specific Accessories

End and intermediate plate, 2.5 mm thick



orange	**280-343**	100 (4x25)
gray	**280-342**	100 (4x25)

Intermediate plate,



1.1 mm thick

orange	**280-369**	100 (4x25)

Adjacent jumper, insulated,



$I_N = I_N$ terminal block

gray	**280-402**	200 (8x25)

Alternate jumper, insulated,



$I_N = I_N$ terminal block

gray	**280-409**	100 (4x25)

Item-Specific Accessories

End and intermediate plate, 2.5 mm thick



orange	**280-341**	100 (4x25)
gray	**280-340**	100 (4x25)

Intermediate plate,



1.1 mm thick

orange	**280-366**	100 (4x25)

Accessories

Appropriate marking system for fuse plugs
WSB Quick marking system

Insulation stop,

❹

5 pcs/strip,
0.08 - 0.2 mm² "s" (0.14 mm² "f-st")

white	**280-470**	200 (8x25)

Insulation stop,

❹ 

5 pcs/strip,
0.25 - 0.5 mm²

light gray	**280-471**	200 (8x25)

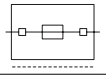
Insulation stop,

❹ 

5 pcs/strip,
0.75 - 1 mm²

dark gray	**280-472**	200 (8x25)

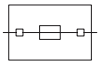
Fuse plug with pull-tab,



6 mm wide

281-511	50

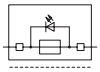
Fuse plug with pull-tab,



6 mm wide

281-512	50

Fuse plug with pull-tab, 24 V AC/DC,



with LED indicator, 6 mm wide

281-512/281-501	50

Comb-style jumper bar, insulated,

❹ 

$I_N = I_N$ terminal block

2-way	**280-482**	200 (8x25)
3-way	**280-483**	200 (8x25)

Alternate comb-style jumper bar,



insulated,
$I_N = I_N$ terminal block

2-way	**280-492**	200 (8x25)

Operating tool, of insulating material



2-way	**280-432**	1
3-way	**280-433**	1

WSB Quick marking system,



for fuse plug 281-5..,
WSB Markers 4 mm wide

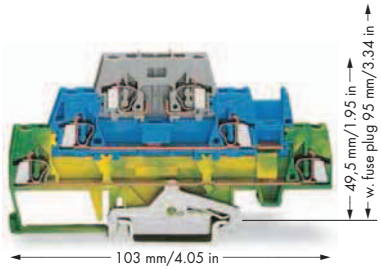
F1, ..., F10 (10x)	**209-787**	5
F11, ..., F20 (10x)	**209-700/209-124**	
F21, ..., F30 (10x)	**209-700/209-125**	
F31, ..., F40 (10x)	**209-700/209-126**	
F41, ..., F50 (10x)	**209-700/209-127**	

5

For list of approvals and user guide, see pages 634 to 637.

0.08 - 2.5 mm²	AWG 28 - 12 *
400 V/6 kV/3 ❶ ❷	300 V, 15 A
I_N 20 A (20 A)	600 V, 20 A

Terminal block width 5 mm / 0.197 in
8 - 9 mm / 0.33 in ❸



* AWG 12: THHN, THWN

❶ 400 V = rated voltage
6 kV = rated surge voltage
3 = pollution degree
(also see Section 14)

❷ Electrical ratings are given by the fuse or nominal voltage of the LED (also see pages 234 – 235).

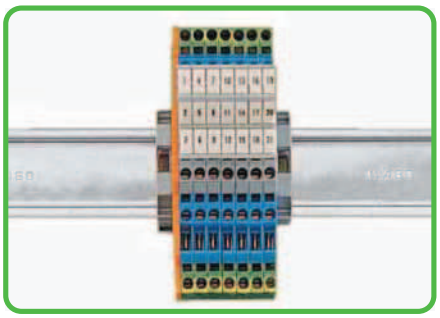
❸ Strip length, see packaging or instructions.

❹ See application notes for:
Insulation stop, page 199
Comb-style jumper bar, page 200
Operating tool, page 200

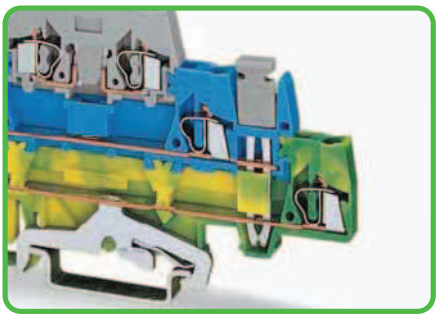
	Item No.	Pack. Unit
Ground conductor/through/carrier terminal block for fuse plugs		
green-yellow/blue/gray	**280-510**	50
Through/through/carrier terminal block for fuse plugs		
gray/gray/gray	**280-889**	50

Item-Specific Accessories

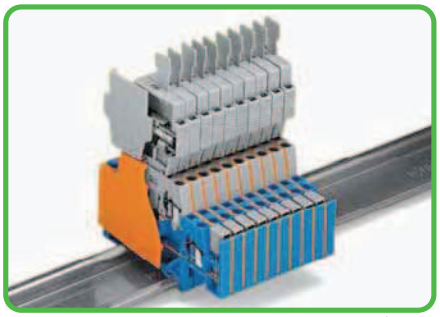
End and intermediate plate, 2.5 mm thick			
	orange	**280-304**	50 (2x25)
	gray	**280-303**	50 (2x25)
Intermediate plate,			
	1.1 mm thick		
	orange	**280-336**	50 (2x25)
Adjacent jumper, insulated,			
	I_N = I_N terminal block		
	gray	**280-402**	200 (8x25)
Alternate jumper, insulated,			
	I_N = I_N terminal block		
	gray	**280-409**	100 (4x25)
Vertical jumper, insulated,			
	I_N 24 A		
	gray	**281-421**	200 (8x25)
WSB Quick marking system,			
	10 strips with 10 markers per card, WSB Markers 4 mm wide		
	plain	**209-701**	5
WSB Quick marking system, plain,			
	10 strips with 10 markers per card, WSB Markers 4 mm wide		
	yellow	**209-701/000-002**	
	red	**209-701/000-005**	
	blue	**209-701/000-006**	
	gray	**209-701/000-007**	
	orange	**209-701/000-012**	
	light green	**209-701/000-017**	
	green	**209-701/000-023**	
	violet	**209-701/000-024**	
			5



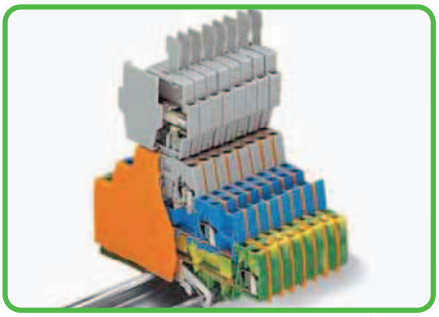
Double- (triple-) deck terminal blocks accommodate two (three) circuits of different potentials in one 2-(3-) level terminal block; different circuits can be differentiated by color coding either level for the 280 Series. The lower deck is wider than the upper, for ease of wiring.



Grounding to carrier rail.
Connecting N-level to ground level via vertical jumper



When double-deck terminal blocks are used with a fuse plug (width 6 mm/0.236 in) in the receptacle (top) level, the extra width can be compensated for the 280 Series (width 5 mm/0.197 in) via an intermediate plate (thickness 1.1 mm/0.043 in). If required, this special intermediate plate still allows jumpering on the lower level via push-in adjacent jumpers (280-402).



When triple-deck terminal blocks are used with a fuse plug (width 6 mm/0.236 in) in the receptacle (top) level, the extra width can be compensated for the 280 Series (width 5 mm/0.197 in) via an intermediate plate (thickness 1.1 mm/0.043 in).